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City of Scappoose
Water Management and Conservation Plan

November 2012

Submitted to:

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271

Prepared for

City of Scappoose
33568 E. Columbia Ave.
Scappoose, OR 97056

K/J Project No. 0791018.00

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Section 1: Introduction

1.1 Purpose

The purpose of this Water Management and Conservation Plan (WMCP) is to define the City of Scappoose's current and future water resource needs and the management of its existing resources through conservation and, during times of water shortage, curtailment.

In Oregon, water conservation is now considered a critical element in the State's water resource inventory. As such, municipal water suppliers are required to have a current, WRD approved, WMCP or complete one within three years of approval of extension of water rights. The WMCP is a mechanism for utilities to demonstrate that they have minimized their needs and are developing resources in an environmentally responsible manner. This WMCP is designed to meet the regulatory requirements outlined by Oregon Administrative Rules (OAR) 690-086.

This WMCP describes the City's:

- Source of supply reliability and capacity
- Current and future estimated population and water demands
- Existing water rights inventory
- Current and planned Water Conservation Program
- The City's Water Curtailment Plan

1.2 Regulatory Requirement

Oregon Administrative Rule (OAR) 690-086 sets forth the requirement for the development of WMCP's. This requirement is tied to OAR 690-315 which sets forth the requirement for suppliers serving populations greater than 1,000 to complete a WMCP in association with water permit extensions. This WMCP has been developed to meet all applicable OAR requirements for WMCPs.

1.3 Progress Report

This WMCP is the first completed by the City of Scappoose and serves as a baseline for measurement. All water conservation and curtailment program elements described within this WMCP reflect the City's current activities. This WMCP lays out additional future activities that the City will be undertaking and a proposed schedule for implementation.

1.4 Summary of Data Sources

Throughout this WMCP are references to data, most of which were obtained from City files and records including population projections, customer billing rates, and conservation program implementation. Historical data related to service areas, such as connections and demands were obtained from the City's water production and demand management software (SCADA) and Water System Master Plan. Historic and future demographic data was also obtained from the Water System Master Plan

1.5 Plan Checklist

Table 1.1 summarizes WMCP requirements, indicates inclusion in this document, and identifies the location of the pertinent information.

Table 1-1: Checklist of Required WMCP Contents

Required	Included	WMCP Topic	Section Location in WMCP
		Water Supply System	
X	X	Description of Water Source	2.2
X	X	Delineation of Current Service Area	2.4
X	X	Adequacy and Reliability of Existing Supplies	3.6, 3.7
X	X	Present and Historic Use	3.2,3.3
X	X	Water Rights Summary	3.5
X	X	Customers Served and Water Use Patterns	2.5, 3.2, 3.4
X	X	Interconnections with Other Suppliers	2.3
X	X	System Schematic	2.2
X	X	System Leakage	3.8
		Water Conservation Element	
X	X	Full System Metering	4.2
X	X	Meter Testing and Maintenance	4.3
X	X	Annual Water Audit	4.4
	X	Leak Detection Program	4.5
	X	Leak Repair or Line Replacement Program	4.6
X	X	Rate Structure Based on Metering	4.7
	X	Rate Structure Effect on Conservation	4.8
X	X	Public Education	4.9
	X	Technical and Financial Assistance Program	4.10
	X	Retrofit and Replacement Program	4.11
	X	Reuse, Recycle, Non-potable Uses	4.12
	X	Other Conservation Measures	4.13
X	X	Progress Report on Previous WMCP	1.3
X	X	Documentation on Water Use Measurement and Reporting	4.14
X	X	List of Measure Already Implemented	4.15
		Water Curtailment Element	
X	X	Assessing Water Supply	3.9
X	X	Stages of Alert	5.3
X	X	Alert Triggers	5.3

Required	Included	WMCP Topic	Section Location in WMCP
X	X	Curtailment Actions	5.3
		Water Supply Needs	
X	X	Current and Future Service Areas	2.4
X	X	Population Projections	3.3
X	X	Schedule to Fully Exercise Each Permit	3.5
X	X	Demand Forecast	3.4
X	X	Projected Need and Available Sources	3.7
	X	Alternative Sources	3.9
	X	Maximum Rate and Monthly Volume	6.2
	X	Mitigation Actions Under State and Federal Law	6.3
		Other	
X	X	Affected Local Governments	6.4
X	X	Date to Submit Next Update	6.5
	X	Documentation	Appendix

Section 2: Water Supplier Description

2.1 Introduction

This Section provides recent and current information about the water rights that comprise both surface and ground water. A forecast of future water supply needs has been developed based projected present and future customers. Table 2.1 summarizes the contents of this section:

Table 2-1: Contents of Section 2

2.2 Sources-of-Supply and System Description

The City of Scappoose uses both surface water and groundwater sources to meet potable water demands. The City's surface water sources consist of South Fork Scappoose Creek, Lazy Creek, and Gourlay Creek. Water from each of these sources is diverted at an impoundment on each of the sources. The City holds senior water rights to withdraw a combined total of 9.0 million gallons per day (MGD) from all three sources. The capacity of the transmission main from the three diversions is currently 2.0 MGD. The Oregon Department of Environmental Quality's *Water Quality Assessment Database – 2010 Integrated Report* lists the South Fork Scappoose Creek as water quality impaired due to sedimentation.

City's surface water sources are listed by the Oregon Department of Fish and Wildlife (ODFW) as located within the Lower Willamette 4th Field Hydrologic Unit. ODFW's Sensitive Species List shows that the following streamflow-dependent species are listed for the Lower Willamette 4th Field Hydrologic Unit:

- **Lower Willamette Chum Salmon**
  (Columbia River ESU) [*Oncorhynchus keta*]
  State of Oregon Listing Status: Sensitive – Critical

- **Lower Willamette Steelhead**
  (Lower Columbia ESU/SMU, winter run) [*Oncorhynchus mykiss*]
  State of Oregon Listing Status: Sensitive – Critical

- **Lower Willamette Chinook Salmon**
  (Lower Columbia River Chinook ESU/MSU, fall run) [*Oncorhynchus tshawytscha*]
  State of Oregon Listing Status: **Sensitive – Critical**

- **Lower Willamette Coastal Cutthroat Trout**
  (Lower Columbia Coastal Cutthroat ESU/MSU, fall run) [*Oncorhynchus tshawytscha*]
  State of Oregon Listing Status: **Sensitive - Critical**

The National Oceanic and Atmospheric Administration's (NOAA) identifies the City's surface water sources possibly located within the Lower Columbia River Evolutionary Significant Unit (ESU). NOAA's Endangered Species Act (ESA) salmon listing shows the following streamflow-dependent species listed for the Lower Columbia River Evolutionary Significant Unit:

- **Lower Columbia River Chinook Salmon ESU**
  [*Oncorhynchus tshawytscha*]
  Federal Listing Status: Threatened
- **Columbia River Chum Salmon ESU**
  [*Oncorhynchus keta*]
  Federal Listing Status: Threatened
- **Lower Columbia River Coho ESU**
  [*Oncorhynchus kisutch*]
  Federal Listing Status: Threatened
- **Lower Columbia River Steelhead Distinct Population Segment (DPS)**
  [*Oncorhynchus mykiss*]
  Federal Listing Status: Threatened

The City also exercises ground water rights for four production wells within the system. Those well sources include Dutch Canyon Well and Miller Road Wells #1, #2, and #3 with rights to withdraw a combined total of 2.8 MGD. The City also has a water claim on 0.07 MGD on another well that is not in use. The City's groundwater wells are not located within the designated boundaries of any critical groundwater area according to OWRD information.

Water from the three surface water sources, as well as water from Dutch Canyon Well, is diverted to the Keys Road Water Treatment Plant (WTP). A 12.75-inch steel transmission line transports raw water from the three surface water diversions to the treatment plant. Water from the Dutch Canyon Well is transported through a 12-inch C-900 polyvinyl chloride (PVC) to the junction of Dutch Canyon Road and E.M. Watts Road and up to the treatment plant.

The surface water sources are treated using conventional filtration and chlorine disinfection. The Dutch Canyon ground water is treated separately using greensand filtration to remove iron with chlorine and potassium permanganate addition. Both sources undergo fluoride addition for dental health and caustic soda addition for pH adjustment. Following treatment, both waters are blended and flow by gravity to one of the system's three finished water storage reservoirs in the main pressure zone prior to distribution.

The City operates three finished water storage reservoirs in the main pressure zone that provide system-wide storage. All three reservoirs are located at the Keys Road WTP

with capacities of 1.0 MG, 2.0 MG and 300,000 gallons. Currently, the 0.3 MG reservoir is not in use. These reservoirs service the City's low zone at elevations below 80 feet. There are two other reservoirs located on NE Bella Vista Road, a capacity of 0.3 and 0.37 MG and they services the City's three upper pressure zones at elevations up to 260 feet.

The Miller Road groundwater sources (Wells #1, #2 and #3) are treated at the Miller Road WTP using greensand filtration to remove iron with chlorine and potassium permanganate addition, and fluoride and caustic soda addition. Treated water from the Miller Road WTP is pumped directly into the distribution system.

The City's distribution system includes 20 miles of pipe, ranging in size from 4-inch to 18-inch diameter. The majority of the pipe is PVC, although there is a significant percentage of older steel pipe and some cast iron pipe.

The City's distribution system consists of five pressure zones. Service pressures in the five zones vary from 40 - 80 psi. The main pressure zone serves the majority of the residential, commercial, and some industrial customers. Static pressure in this zone ranges from 40 to 80 psi and is regulated by the three reservoirs located at Keys Road WTP. The other pressure zones are exclusively residential. Pressure is regulated by the High Level Reservoirs, a series of PRV stations and one booster pump station, and varies from 40 to 80 psi. A booster pump station is located near the Keyes Road WTP to elevate water to the higher zone's reservoirs. A second booster pump station located at the corner of Glen View Lane and Dutch Canyon Road is used to service seven houses on Glen View Lane and further up Dutch Canyon Road.

Figure 2.1 provides a schematic of the system and hydraulic profile.

2.3 Interconnections with Other Municipal Supply Systems

The existing sources of water supply, treatment, storage, and distribution are owned and operated by the City of Scappoose. The closest neighboring water systems are the Warren Water Association and the City of St. Helens. At this time, there are no water system interconnections with other water systems.

2.4 Current Service Area

Ending 2009, the City was serving a population of 6,204 on 2,338 accounts. The City's existing service area is within the current city limits with the exception of a small number of customers off of Dutch Canyon Road. The City's Urban Growth Boundary (UGB) still allows for development and expansion. Figure 2.2 shows the City's current water system, service area, city limits and UGB.

2.5 Water Customer Characteristics

The City of Scappoose serves a customer base that is a mix of residential and commercial users. The City also provides water for operational and municipal uses such as park, ball field, and landscape irrigation that is metered. Customer accounts by percentage of total and usage is illustrated in Figure 2.3.

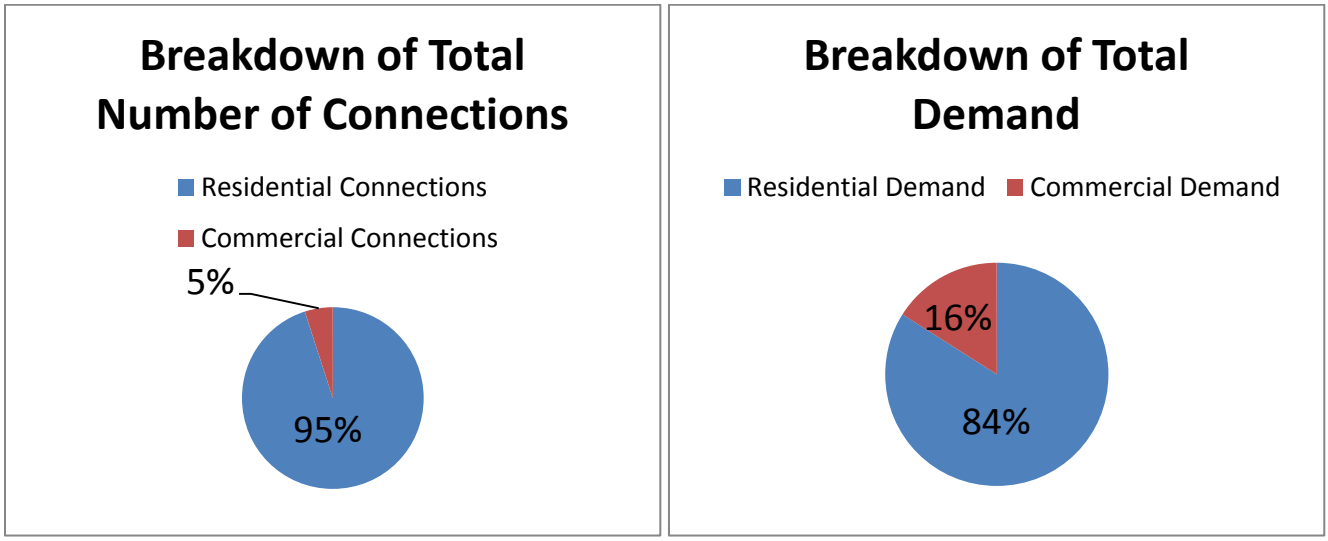


Figure 2.3: Breakdown of Connections and Water Usage by Customer Class

Residential customers in the City are typically single/multi-family residences with typical residential landscaping common to the region. Seasonal water demand varies the most in this customer class. The City's commercial customers are restaurants, bars, and retail establishments with indoor water needs and little outdoor water usage. Commercial customer demand is typically consistent throughout the year and diurnal use patterns are consistent as well. It is anticipated that the relative ratio of these two customer classes will remain generally unchanged into the foreseeable future. Figure 2.4 shows the City's zoning map.

The City supplies water the Industrial Airpark owned by the Port of St. Helens. This facility is a small airfield that does not exert any industrial demands on the City's system. The service to the site is for small commercial uses such as a restaurant and public restrooms. This connection and its demands are included under the City's commercial demands.

Section 3: Water System Supply and Demand Assessment

3.1 Introduction

This section of the WMCP describes the City's sources-of-supply, reliability of the sources, water rights held by the City, current and future estimated system demands, alternative sources-of-supply and a comparison of demand and supply. Table 3.1 summarizes the contents of this section.

Table 3-1: Contents of Section 3

3.2 Demand and Production History

The City's raw water flow meter data from each of its seven sources was summed to develop total annual production for the period 2004-2008. The total annual figures were then divided by 365 to estimate the average annual daily production of treated water.

City meter and billing records for 2004-2008 were used to develop annual average daily demand data for the five year period. Data from each of the two-month billing cycles was used to approximate monthly demand. Total monthly demand for each year was then divided by the appropriate number of days to approximate average daily demand. Finally, a non-revenue demand was approximated based on process water volumes consisting of backwash, filter-to-waste, turbidimeter operation, and continuous sink flows. This data was based on February 2010 use and was calculated to be 32% of total production. This figure does not include system flushing conducted a reported six times per year. This figure was applied back to the historical to provide some estimation of non-revenue water demand as no more reliable data was available. Table 3.2 provides a summary comparison of annual average daily production versus demand. Figure 3.1 shows the resulting comparison

Table 3-2: 2004-08 Annual Average Daily Water Demand

	Year				
	2004	**2005**	**2006**	**2007**	**2008**
Annual Average Day Production (MGD)	0.56	0.56	0.65	0.67	0.71
Annual Average Day Revenue Demand (MGD)	0.48	0.47	0.50	0.51	0.53

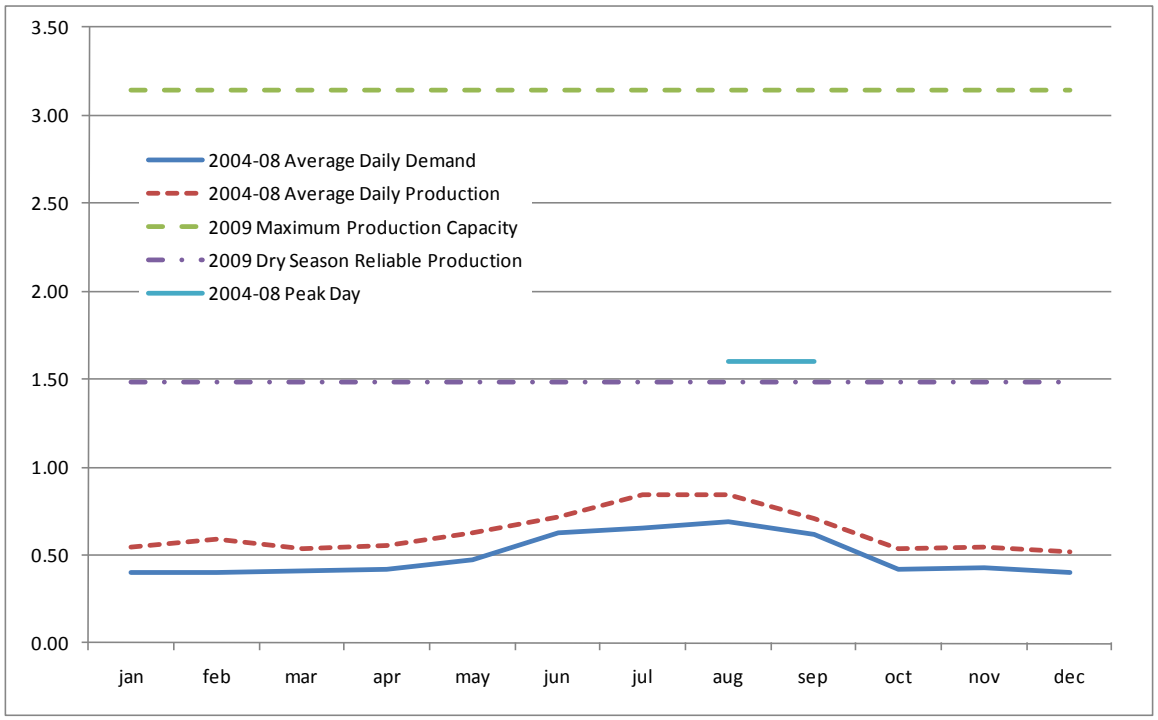


Figure 3.1: 2003-09 Monthly Average Day Production vs. Monthly Average Day Demand and 2009 Peak Day Demand

When seasonal fluctuations in demand are taken into account by evaluating demand on a monthly basis, a different picture emerges. When compared on a monthly basis, the system demand and production intersect. This intersection occurs in the late summer (August-September) when demand is highest. The decline in production during the highest demand months indicates that supply is not available to meet demand. If supply were reliable all year as the annual average annual reliable production shows, a decrease in production during high demand months would not be necessary. This intersection indicates a potential water shortage condition and reflects past experience of the City.

3.3 Service Area Population Projections

The most recent population figures available for the water service area were those used in the 2001 Water Master Plan Update. The City's population estimates for 2000-2050

show a growth rate that decreases gradually from an annual growth rate of 2.4% in 2000 to 1.8% in 2030. These growth rates were developed in the 2001 Plan by fitting a curve to the certified census figures between 1930 and 2000. The best-fit curve projected a rate of population growth that is between population projections made by Columbia County and estimates from the 1997 Water Master Plan.

These estimates were compared to estimates developed by the Portland State University Population Research Center (PSU PRC) (2008) to determine validity for 2010. The population projection developed by the PRC assumes a continuous medium growth rate. The population projection and annual growth rate from the 2001 Water Master Plan and PSU PRC are shown in Table 3.3.

Table 3-3: Comparison of 2001 Master Plan Projected Population and PSU PRC Projections

Year	Population Projections	
	Per 2001 WMP update*	**Per PSU. PRC 2008***
2005	5,667	*5,785*
2009	*6,204*	*6,438*
2010	6,338	6,601
2015	7,152	*7,418*
2020	7,961	8,234
2030	9,713	10,022
2040	11,641	*11,810*
2050	13,747	*13,598*
Buildout	14,677	-

Note:

**Numbers in Italics have been extrapolated*

After evaluating the 2001 Master Plan and PSU estimates, the recent slowdown in development, and new connection data, it was decided that the 2001 Master Plan estimates provide an accurate estimate and provide consistency in the 2001 Plan and this WMCP.

3.4 Water Demand Forecast

The City's annual average day demand for 2004 through 2008 is shown is Table 3.2. The per capita average day demand of 124 gallons and a peaking factor of 2.1 were based on data included in the 2001 Plan. The per capita peak day demand of 260 gallons was calculated based on these numbers. Using this data, future demands were calculated by taking the average demand and peak demand per capita (gpcd) and multiplying it by the projected population projections in Table 3.3. Table 3.4 provides a summary of the projected average and peak daily demands.

Table 3-4: Future Average and Peak Day Demand Projections

	Population Projection	Projected Average Daily Demand (MGD)	Projected Peak Daily Demand (MGD)
2009	6,204	0.77	1.61
2010	6,338	0.79	1.65
2015	7,152	0.89	1.86
2020	7,961	1.0	2.10
2030	9,713	1.2	2.53
2040	11,641	1.44	3. 0
2050	13,747	1.70	3.57
Buildout	14,677	1.82	3.82

3.5 Water Rights Summary

The City holds total water permits for 11.93 MGD in the South Scappoose and Jackson Creek Basins. Within the South Scappoose Basin, the City holds surface water rights for 9.05 MGD and groundwater rights for another 0.94 MGD. Within the Jackson Creek Basin, the City holds groundwater rights for 1.94 MGD. Table 3.5 summarizes the City's existing water rights. The detailed summary of the existing water rights and copies of the water right permits and certificates are documented in Appendix C. Table 3.6 summarizes the average and average day diversion by water right as possible. The available data is not recorded by individual water right but is combined by point-of-diversion location. Data reflecting maximum instantaneous rate by individual water right is not available.

The City currently operates three surface water sources and four wells under five separate water rights, all of which allow for municipal use. Of the five municipal rights, only two have been certified. The City has been in the process of perfecting the other water rights through the development of groundwater sources. To date, the City has not been able to completely perfect these water rights due to a lack of success in identifying a productive well(s). As a result the full beneficial use for the following permits was not accomplished by the specified completion dates:

- G-8615 (0.89 cfs) – October1, 1985
- G-15295 (0.557 cfs) – October 1, 2007
- G-15491 (2.9 cfs) – October 1, 2007

The City has taken actions for applying for a Permit Extension of Time for permits G-15295 and G-15491. Applications were filed with WRD on November 30, 2010. The applications were subsequently returned to the City for additional detail on December 1, 2010.

Table 3-5: City of Scappoose Existing Municipal Water Rights Summary

Point of Diversion (POD) Description	Approximate POD Location	Application Number	Permit Number	Permitted Allocation		Permit Date	Certificate Number	Certificate Date	Certified Allocation		Priority Date
				cfs	MGD				cfs	MGD	
Gourlay Creek (tributary to South Scappoose Creek)	NE ¼ SE ¼ , Section 12, T3N, R2W	S-8815	S-5813	10.00	6.46	4/12/1923	5573	11/30/1925	10.00	6.46	1/24/1923
Lazy Creek (tributary to South Scappoose Creek)	POD 1: SE ¼ NW ¼ , Section 18, T3N, R2W	S-27859	S-25918	1.50	0.97	3/16/1959	42700	12/5/1975	1.50	0.97	11/24/1958
South Fork Scappoose Creek (tributary to Scappoose Creek)	POD 2: NW ¼ SE ¼ , Section 7, T3N, R2W			2.50	1.62				2.50	1.62	
Dutch Canyon Area (1 well under each permit in South Scappoose Creek Basin)	NE ¼ SW ¼ , Section 13, T3N, R2W	G-9218	G-8615	0.89	0.58	8/31/1979	N/A	N/A	0.40	N/A	4/30/1979
	NE ¼ SW ¼ , Section 13, T3N, R2W	G-15135	G-15295	0.55	0.36	12/20/2002	N/A	N/A	N/A	N/A	3/10/2000
Miller Road Area (2 wells in Jackson Creek basin)	POD 1 & 2: SE ¼ NW ¼ , Section 7, T3N, R1W	G-15792	G-15491	2.23 Well #1	1.44	9/15/2003	N/A	N/A	N/A	N/A	7/5/2002
				0.67 Well #2	0.43		N/A	N/A	N/A	N/A	
Oak Street Area (a well in Jackson Creek Basin)	NE ¼ SE ¼ , Section 12, T3N, R2W	GR-926 (claim)	GR-926 (claim)	0.11	0.07	N/A	N/A	N/A	N/A	N/A	12/31/1950
Total				18.46	11.93				14.00	9.05	

Table 3-6: Average Monthly and Daily Diversions by Water Right

		Average Month (Day) in MGD[a]						
Point of Diversion (POD) Description	**Permit Number**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Gourlay Creek	S-5813	3.5 (0.12)	0.7 (0.02)	1.6 (0.05)	5.0 (0.16)	2.0 (0.07)	4.0 (0.13)	6.8 (0.22)
Lazy Creek	S-25918							
South Fork Scappoose Creek								
Surface Water Subtotal		*43.4*	*8.0*	*20.0*	*60.7*	*57.3*	*47.4*	*81.5*
Dutch Canyon Area	G-8615	3.9 (0.13)	1.1 (0.04)	1.4 (0.05)	3.2 (0.11)	1.3 (0.04)	5.2 (0.17)	7.1 (0.23)
	G-15295							
Dutch Canyon Subtotal		*48.5*	*14.1*	*17.2*	*40.5*	*54.7*	*62.5*	*84.8*
Miller Road Area	G-15491	9.7 (0.32)	18.1 (0.59)	17.4 (0.57)	13.5 (0.44)	6.6 (0.22)	11.4 (0.37)	1.7 (0.06)
Miller Road Subtotal		*117.7*	*219.5*	*211.5*	*163.6*	*129.6*	*136.8*	*108.0*
Oak Street Area	GR-926 (claim)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual Total All Sources		20.6	241.5	248.7	264.8	241.5	246.7	274.3

Notes

a. Average month is calculated by dividing annual demand by 12. Average day is calculated by dividing annual demand by 365.

Maximum instantaneous diversion data was not available for reporting in this WMCP. In 2012 The City plans to begin the collection of maximum instantaneous rate diversion data for each water right to meet monitoring requirements.

3.6 Supply Reliability Assessment

The City holds water rights that are sufficient to meet demand beyond a 50 year planning horizon. However, facility capacity limitations and seasonal lack of availability during the summer months limit available reliable supply to approximately 3.14 MGD during the wet weather season and 1.48 MGD during the dry weather season.

The surface water sources currently provide a combined quantity in the winter that is limited by the pipe line capacity. The surface water supply is restricted to 2 MGD due to the hydraulic limitations of the transmission line from the surface water source. The City's two surface water

rights on Gourlay Creek (S-5813) and South Fork Scappoose Creek (S-25918) are seasonally limited in order to maintain instream flow for the purpose of supporting aquatic life as outlined by the In-stream Water Right Certificates (Appendix C). As a result during summers, the surface water source supply is restricted to as low as 250 GPM to provide adequate flow for native fish populations.

The Dutch Canyon Well has been unable to produce at capacity without danger of well failure, and currently pumps at 330 gpm to prevent stress on the well. The three wells at the Miller Road site currently provide approximately 450 GPM. The City operates all three sources simultaneously (holding the Miller Road #1 well in reserve) to meet demands. During peak summer months, demand has exceeded 1,000 GPM or nearly 100% of production.

In reality, the City's largest water right is for water that currently isn't accessible all year and potentially not available during periods of high demand, even if facilities were available. In addition, the wells are not able to produce up to the water permit capacity.

Table 3.7 summarizes the City's production capacities from each source and the percentage of the water right currently being put to use.

Table 3-7: Comparison of Maximum and Reliable Source Capacity and Percentage of Water Rights in Use

Source	Maximum Production Capacity (GPM)	Million Gallons per Day (MGD)	Percentage of Water Right Exercised	Comments
Dutch Canyon Well	330	0.47	50%	Limited by stresses on well
Miller Road Wells #1, #2 and #3	450	0.65	35%	
Combined surface water source of South Scappoose Creek, Gourlay Creek, and Lacey Creek.	1,400 winter	2.00	22%	Limited by pipe capacity to 2 MGD
	As low as 250 gpm in peak season	0.36	4%	Also, Limited by creek flow in the summer
Total Capacity	2180	3.14	26%	
Total Reliable Production in Summer Months	1030	1.48	12%	

3.7 Water Supply versus Demand Comparison

The previous sections have evaluated the City's historical demand, production, projected population and demand growth, water rights, and source reliability and production. To determine the adequacy of supply to meet demand, these factors need to be evaluated simultaneously. Figure 3.2 shows the comparison of water rights, production capabilities, projected average day demand and projected peak day demands.

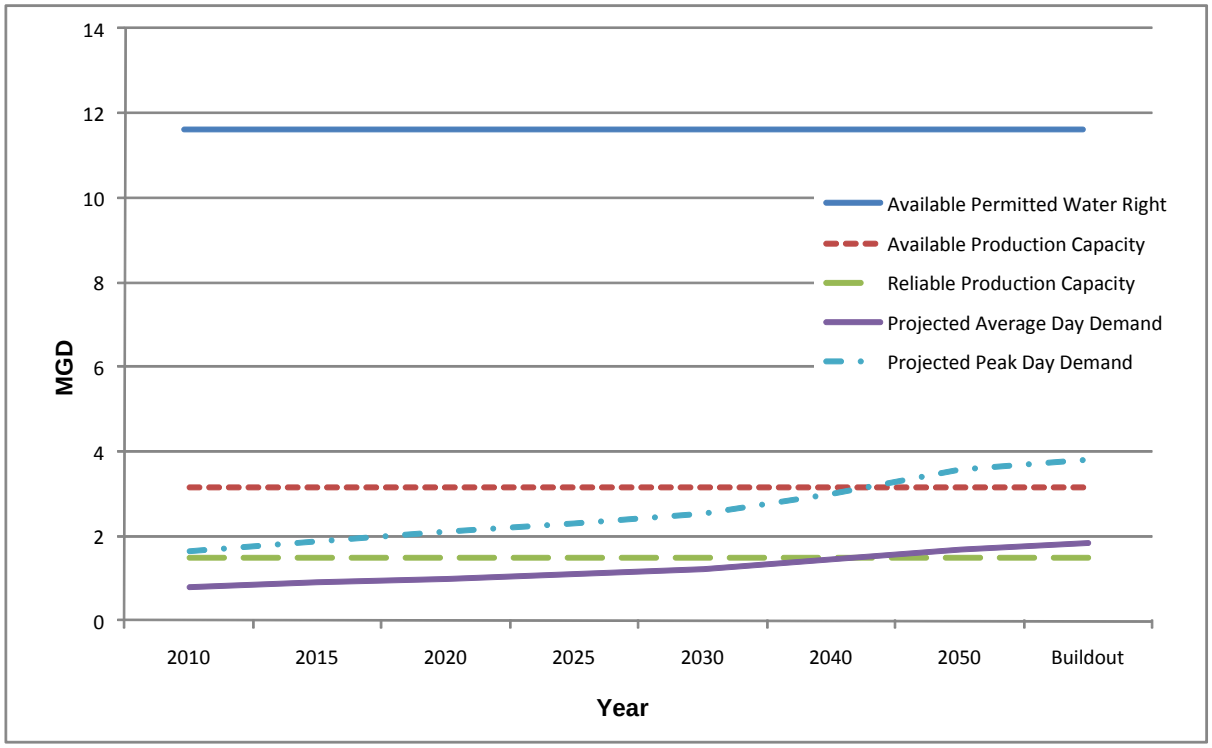


Figure 3.2: Comparison of Water Rights, Availability, and Demands

The data illustrate the City's supply challenges. The City holds sufficient water rights to meet their needs at the current rates of growth beyond any realistic planning horizons. However, there are issues that prevent the City from accessing that water. First, at certain times of the year the water simply isn't available for use from the source. When it is available, the city lacks the facilities to fully utilize the water rights. Lastly, issues with the existing production facilities, such as well withdraw rates prevent the City from operating treatment production at full capacity.

While the annual average data and projections show sufficient supply to meet demand, even in light of the limitations, Section 3.2 showed that, on a monthly basis, the City risks water shortages during high demand months. These shortages were experienced in 2005. The projected shortage of available raw water capacity is shown on Table 3.8.

It is the City's intention to develop its water right to their full extent over the planning period of this WMCP. It is the City's intention to develop its sources of supply concurrently with cost effective conservation measures so to maximize the social, environmental and business benefits.

Table 3-8: Projected Shortage of Available Raw Water Source

	Population Projection	Projected Peak Daily Demand (MGD)	Projected Peak Daily Demand Shortfall (MGD)
2009	6,204	1.61	0.14 (98 gpm)
2010	6,338	1.65	0.18 (126 gpm)
2015	7,152	1.86	0.39 (273 gpm)
2020	7,961	2.10	0.63 (440 gpm)
2030	9,713	2.53	1.06 (741 gpm)
2040	11,641	3.00	1.53 (1,020 gpm)
2050	13,747	3.57	2.10 (1,469 gpm)
Buildout	14,677	3.82	2.35 (1,644gpm)

3.8 Assessment of Alternative Sources of Supply

The City recognizes the potential shortfall in the current source-of-supply. The City posses the treatment capacity and water rights to meet demand, but as discussed above during critical times lacks availability from existing sources. The City plans to alleviate this issue through relocation of the points of withdraw.

To avoid the shortfall the City is taking action to make better use of its existing water rights. As described in Section 3.5 the City has made application with OWRD for an extension of time for the full development of beneficial use for permits G-8615, G-15292, and G-15491. Upon approval of an extension, the City plans to request a transfer the water rights to a new point of withdraw in order to develop a groundwater source that will enable the City to produce water to the full extent of the water right.

The City first option the City will investigate will be transfer of the groundwater rights to a location in the vicinity of the Miller Road Water Treatment Plant. Currently the treatment facility is only at fifty percent capacity.

The City's second option will be transference of the surface water rights first to a location further downstream on the Scappoose Creek where more water is available. The second option would be transference of the rights all the way the Columbia River. Both of these alternate points of withdraw would be located within the same basin as the current point of withdraw.

The City has begun the initial process by applying for and extension of time for exercising the water rights. The City plans to then follow immediately with application for transference of those rights followed by development. At this time the City anticipates the water rights to be fully exercised by December 31, 2022.

The 1997 and 2001 Water System Plans addressed alternative sources-of-supply. Potential sources addressed at that time included:

- Sub-surface collection (Ranney system) from Multnomah Channel and Columbia River
- Direct withdrawal from the Multnomah Channel
- South Scappoose Creek supply supplemented by wells or springs.

At that time, sub-surface collection was rejected following a feasibility study that failed to identify suitable sites for a Ranney well. Direct withdrawal from Multnomah Channel continues to present challenges of unreliable water quality and, potentially, expensive treatment. Direct withdraw is still considered an expensive option for the City. The 1997 Plan recommended supplementing the existing surface supply with wells. The recommendation was for additional studies of potential well supplies and suggested three 1,000 gpm capacity wells south of the high school.

A geotechnical study was performed in 1996 by AGI to determine possible well sites and production capacities. Three areas were noted for potentially supporting reliable quality wells with productions of 500 gpm. These areas were within 1,000 feet of Highway 30 and included a second well at Dutch Canyon Road, the Scappoose High School area, and the northeast Scappoose area.

Additional wells continue to be a viable alternative for additional source, particularly in the vicinity of the Miller Road WTP. Currently, the wells are producing 450 gpm and the WTP is rated at 1,000 gpm. This leaves 550 gpm of unused treatment capacity. It also appears that the groundwater treatment plant at the Keys Road site has additional capacity. The Dutch Canyon well produces 330 gpm and the treatment plant is rated 800 gpm. This leaves 470 gpm of unused treatment capacity.

The combined additional capacity in the groundwater treatment plants is 1,020 gpm (1.47 MGD). The treatment capacity of both of these facilities is dependent upon the iron content of any new well. The capacities shown here assume that the raw water will be similar to what is already being treated.

The combined (Dutch Canyon and Miller Road sites) groundwater right that is available to be transferred, due to limitation on existing wells, is 1,170 gpm (1.68 MGD). Therefore, it is theoretically possible to utilize the remaining groundwater treatment capacity if appropriate wells can be developed in locations relatively close to the two existing treatment plants.

If the treatment capacity of the two groundwater treatment plants could be maximized, it would supply sufficient water in combination with the surface water rights to meet the projected daily demand of 3 MGD in the year 2040.

This would still leave 150 gpm of groundwater water right unused. If additional treatment capacity is constructed at these two sites and additional wells developed to fully utilize the remaining ground water right, then the peak supply would be 3.16 MGD. This is slightly less than the projected peak daily demand for buildout (3.82 MGD).

The City also has a significant surface water right that is largely unavailable due to reduced creek flows during the summer and hydraulic limitations of the transmission line. In the long term, it would be prudent for the City to investigate methods of accessing this water right. Potential options include:

- Moving the water right downstream to a location where there is more water available during the summer. This would require an evaluation with regard to the availability of the water, location of an intake structure, impact to other water rights and required infrastructure improvements.

- Transferring the water rights to either the Multnomah Channel or Columbia River. This may be allowable as Scappoose Creek is a tributary to the Columbia River. This would require an evaluation with regard to the ability to make the transfer, location of an intake structure, impact to other water rights, water quality and required infrastructure improvements.

- Transferring the surface water rights to a groundwater rights. This would require an evaluation with regard to water law, location, impact to other water rights and required infrastructure improvements.

None of these options for using the surface water rights are straight forward, and they will require evaluation with regard to water law, infrastructure needs and cost.

Afinal option that has become available to the City is the connection to the City of St. Helens, which is approximately seven miles from Scappoose. In February 2006, St. Helens brought on-line a new membrane filtration water treatment plant. A connection to the St. Helens system may be an economically viable option for the City should supply not be available under the City's water rights. At this time it is not clear that St. Helens has the excess capacity to supply water to Scappoose. The City will investigate the potential for obtaining treated water from the City of St. Helens in the next master planning effort.

3.9 Recovery of Water Loss as Source-of-Supply

Lost water impacts utilities financially in two ways. First, through the cost of treatment and distribution; second, through the loss of revenue for product that never reaches the intended customer. Utilities now operate in an era when water resources are increasingly difficult to come by, customers are asked to conserve water as a vital resource, budgets require ever tighter control, and there is often political resistance to increasing rates. Under these conditions a utility must take financially responsible actions to optimize the resource if it expects to encourage customers to do the same.

No water distribution system can be expected to achieve a zero water loss, however operating under a water loss condition where a significant percentage of the product is unaccounted or failing to produce revenue compounds a utility's challenges. The American Water Works Association (AWWA) has suggested a target goal of 5-15% water loss as achievable and realistic depending on the specifics of the distribution system. If a lower percent loss can be achieved all the better, however, if major losses have been addressed "chasing" leaks to reduce water loss beyond this point is often not financially prudent.

A simple annual production versus demand comparison was conducted using data from 2004-2008. Table 3.9 summarizes the data.

Table 3-9: Calculation of Annual Percent Unaccounted Water

	Year				
	2004	**2005**	**2006**	**2007**	**2008**
Annual Production (MG)	203.1	205.2	237.9	244.8	259.9
Annual Demand (MG)	176.8	170.6	181.6	184.7	192.8
Unaccounted Water (MG)	26.2	34.6	56.3	60.1	67.1
% Unaccounted	13%	17%	24%	25%	26%

The data shows and increasing trend from within an acceptable range to a twenty-six percent loss in 2008. The significant jump between 2005 and 2006 was due to a new accounting of unaccounted for water that more accurately reflected conditions. It can be estimated that the water system is, and has been, experiencing an annual unaccounted water percentage of 25%.

The City has taken preliminary steps to identify truly unaccounted-for-water by identifying revenue water and non-revenue water. An initial qualitative evaluation identified a significant percentage of previously defined unaccounted-for-water that is actually non-revenue process water used for operation of the treatment facilities. These uses include system flushing, filter backwash, filter-to-waste, turbidimeters, and continuous run sample taps. Preliminary estimations indicated that filter-to-waste and continuous flow turbidimeter water may account for as much as 10% of the previously unaccounted-for-water. Currently, this water, along with filter backwash, is dumped to the sanitary sewer. If these sources can be recycled to the head of the treatment process it is anticipated that the City could reduce unaccounted-for-water to within acceptable levels and reduce demand on source of supply.

When addressing water loss, it is important to understand what type of water losses the system is experiencing. Water loss occurs either as “real” loss or “apparent” loss. Real losses are typically characterized by system leaks. Apparent losses are characterized by meter, human, and computer errors or water theft. Taken as a whole, water loss (unaccounted water) is calculated as follows:

Water Loss = Water Produced – (Non-Revenue Water + Revenue Water)

Scappoose staff has identified potential sources of apparent losses as hydrant testing, water treatment plant operational demands, unmetered water use such as use by contractors in construction activities and erroneous meters. A random test of residential meters indicated an average 9% error in flow recording. The City is not aware of any significant real losses within the distribution system associated with specific age or material of pipes that indicate any particular susceptibility to leakage. It is the opinion of the City that leakage rates for 2009-2011 are on par with those reported for 2004-08.

A water loss reduction program requires a verification and resolution of apparent losses and reduction of real losses. A comprehensive water loss reduction program should address immediate water loss as well as establish a baseline for long-term leak management.

In discussion of water losses a standardization of terminology is helpful. In moving forward, the City will use the following industry accepted terminology for defining water loss within the City of Scappoose.

Table 3-10: Water Loss Terminology

Produced water	Water that is produced and sent to the distribution system.
Revenue water	Water that is accounted for and for which the City receives revenue (i.e., metered water and bulk sales).
Non-revenue water	Water that is accounted for but the City does not receive revenue (i.e., flushing, municipal landscaping, fire, etc).
Real losses	Water that is lost from the system, after production but before delivery to the customer.
Apparent losses	Water that is produced and delivered to users but is recorded as a loss due to meter inaccuracy, human error in recording data, computing errors, and theft.
Unaccounted-for-water	The sum total of "real" and "apparent" losses.
Accounted-for-water	The sum total of revenue and non-revenue water.

Table 3.11 summarizes activities applicable to the City system for reducing and real and apparent water losses.

Table 3-11: Water Loss Management Activities to Address Real and Apparent Losses

Real Water Loss Reduction Elements	
Transmission Main Inspections	Transmission main inspections are the first activity designed to detect real water loss occurring in large transmission mains between treatment and distribution.
Reservoir Inspections	Inspection of finished water storage reservoirs identifies leaks within storage facilities.
Distribution and Service Line Leak Detection	Distribution and service line leak detection surveys that locate actual leaks in pipes, valves, hydrants, and customer meters and premises.
System Service Pressure Management	This is an operational activity that reduces system pressure to minimize water losses from leaks.
Apparent Water Loss Reduction Elements	
Verification of Water Accounting	This activity is designed to accurately account for all finished water uses, verify accuracy of metered use, and account for un-metered uses.
Master and Large Meter Calibration	This activity verifies the accuracy of water entering the distribution system. This verification provides a baseline to measure water loss against.

Real Water Loss Reduction Elements	
Service Meter Testing and Replacement	Meter testing and replacement is an on-going program to inspect and replace small service meters in order to reduce inaccurate measurements.
Water Theft Reduction	This is an activity designed to restrict unauthorized water uses.

Some elements can be implemented for little to no cost and others will require a commitment of resources. Some recommendations address activities to reduce substantial losses while other are targeted at more refined potential losses. Understanding that time and resources will be needed to fully implement the recommendations, yet knowing that there is a condition of substantial water loss occurring, a prioritization of the water loss reduction activities was prepared.

Table 3.12 presents a qualitative prioritization of the recommended activities. The program activities have been prioritized to assist the City in focusing efforts and resources. The criteria considered in this initial prioritization were:

- Cost
- Potential for water recovery/dollar spent
- Ease of implementation
- Capital and training costs
- Additional staff training

Table 3-12: Water Loss Reduction Activity Prioritization Matrix

Activity	Water Loss Reduction Activity Criteria					Priority Rank
	Cost	Potential for water recovery/dollar spent	Ease of Implementation	Capital and Training Costs	Additional Staff Training	
Master Supply Meter Calibration	Low	Good	Easy	None	No	1
Large Service Meter Calibration	Moderate	Excellent	Difficult	Low	Yes	2
Unbilled Water Accounting	Moderate	Moderate	Moderate	None	No	3
Transmission Inspection	Low	Low	Easy	None	No	4
Reservoir Inspection	Low	Good	Easy	None	No	5
Service Line Leak Detection	High	Excellent	Difficult	High	Yes	6
Water Theft Analysis	Low	Low	Moderate	None	No	7

Activity	Water Loss Reduction Activity Criteria					Priority Rank
	Cost	Potential for water recovery/dollar spent	Ease of Implementation	Capital and Training Costs	Additional Staff Training	
Small Service Meter Testing	High	Good	Difficult	Low	Yes	8

Based on the comparison of recommended activities, the priority of implementation by real loss and apparent loss reduction activities is:

Prioritized Real Loss Reduction Activities

1. Transmission Inspection
2. Reservoir Inspection
3. Service Line Leak Detection

Prioritized Apparent Loss Reduction Activities

1. Master Supply Meter Calibration
2. Large Service Meter Calibration
3. Unbilled Water Accounting
4. Water Theft Analysis
5. Small Service Meter Testing

These priorities are designed to simultaneously address anticipated points of real and apparent water loss while doing so in a priority that provides maximum potential benefit for resources invested.

While these recommendations are presented in a linear fashion, one activity is not necessarily dependent on another. Therefore, the list should not be interpreted to mean that each preceding activity must be completed before the next commences. The priorities are meant to provide guidance and structure to the formation of the final comprehensive program.

Section 4: System Water Conservation

4.1 Introduction

This is the first WMCP prepared by the City of Scappoose and the first evaluation of programmatic water conservation activities. While the City has not had a formalized water conservation program in place, it has implemented several of the required conservation elements as outlined by OAR 690-086.

This section describes the City's past, current, and planned conservation activities, compares them to the required and additional program elements and packages them in a programmatic fashion. It demonstrates the City's commitment to implement both supply- and demand-side conservation measures that make economic and environmental sense. Table 4.1 summarizes the contents of this section.

Table 4-1: Contents of Section 4

4.2 System Metering Practices

The City of Scappoose is a 100 percent metered water system. The City has had a long standing informal policy for testing, repairing, and replacing meters on a regular cycle. Every meter is checked once a year. In 2007, the City implemented a program to replace customer meters with AMR capable meters. This investment will reduce staff meter reading time and increase accuracy. To date, fifty percent have been replaced. The program is scheduled for completion by 2015.

4.3 Meter Testing and Replacement Program

The City of Scappoose currently has an informal process to calibrate, test, and maintain customer account water meters when meters fail or accuracy is suspect. This has been curtailed in the last three years as they began a process of changing out all the meters. When the City has completed the installation of the new meters described in Section 4.2, a program with protocol for calibration, testing, and maintenance of the system meters according to manufacturer's recommendations will be developed and implemented.

The City has a documented standard operating procedure for the testing and calibration of its source production meters. The City contracts with Measure Tech to conduct the testing and calibration on an annual schedule. Meters are replaced based on the findings of the annual testing and manufacturer's recommendations.

The City is also in the process of upgrading the metering of non-customer water use at the water treatment plants.

4.4 Water Audit Program

The City does not currently conduct a formal annual system water audit. The City is planning to perform an annual audit starting in 2012 by comparing the water produced to the water sold, and tracking unmetered uses. The audit is designed to identify truly unaccounted-for-water from and define losses as real or apparent as discussed in Section 3.

4.5 Leak Detection Program

OAR 86-0150 (4) (e) requires water suppliers with unaccounted-for water losses in excess of 10 percent to implement a leak detection program. The City currently has a calculated water loss in excess of 10 percent; however, the reliability of that figure and the methodology of reaching that conclusion are in question.

As described in Section 3.9 and 4.4, the City will be conducting a water system audit to better define where real and apparent water losses are occurring. Based on the results of that audit, the City will undertake a leak detection program as appropriate. At a minimum, the City will do a leak detection survey every five years.

4.6 Leak Repair and Pipe Replacement Program

The City of Scappoose currently addresses distribution leakage issues using a two tiered system. First-tier repair/replacement (R/R) applies to emergency pipeline ruptures that prevent the City from providing a minimally acceptable level of service to customers or presents a risk to public safety or property. These issues receive immediate attention and are typically repaired within 24 hours.

Second-tier R/R activities address those pipelines known or suspected to be a source of water loss but do not pose any risk to public safety, public health, or property. These pipelines are prioritized and addressed through annual operation and maintenance budgets.

It is the City's intention to continue this program of pipeline repair and replacement. Should the water audit or future leak detection survey show that substantial water loss reductions can be cost effectively achieved by modification of this program, the City will revise its approach accordingly.

4.7 Water Utility Rate Structure

The City of Scappoose has a uniform rate structure in place for all customer classes. Under this structure, each customer is charged a flat "meter" fee and "infrastructure" fee each month based on meter size. In addition to these flat fees, customers are charged a "commodity" fee of $0.33 for every 100 gallons. Table 4.2 summarizes the current water utility rate structure.

Table 4-2: City of Scappoose Water Utility Rate Structure

Type of User	Meter Fee	Infrastructure Fee	Total Fee	Additional Commodity Fee
3/4" or 1" meter	$8.00	$7.70	$15.70	All Users $0.33 per 100 gallons of water used per month
1.5" or 2" meter not requiring max fire flow	$35.00	$33.60	$68.60	
1.5" or 2 " meter requiring max fire flow	$59.00	$56.65	$115.65	
3" meter	$164.00	$157.45	$321.45	
4" or greater meter	$230.00	$220.80	$450.80	
Any service outside the City, except Dutch Canyon area	$18.00	$17.30	$35.30	
Dutch Canyon area service	$12.00	$7.70	$19.70	

This rate structure meets the requirements of OAR Division 86 rules that require a contemporary rate structure that includes both a commodity rate and fixed charge structure.

In addition to this rate structure, Chapter 13.08 of the Scappoose Municipal Code allows the Mayor, with majority consent of the City Council, to raise rates during water shortage emergencies to promote conservation. This may be done in anticipation of water shortages and during periods of curtailment.

4.8 Water Utility Billing Practices

The City uses a two month billing cycle. This frequency is not optimal for using billing practices as a conservation tool. A two month frequency does not communicate usage to customers in a timely manner to enable them to reduce usage during high demand months. A monthly billing cycle more effectively communicates to customers their usage and effects change.

The City will evaluate revisions to the billing cycle as an appropriate and effective conservation measure for its water system.

4.9 Public Education Program

The City recognizes the value of a Water Conservation Public Education Program to raise and maintain public awareness. The City is planning a program of water conservation literature distribution in utility invoices on a bi-annual basis. The City will investigate the optimum time for distribution of such literature such as every six months or leading up to and during high demand summer months. Literature will include tips on how to conserve water for the period that the information is distributed so that it is timely. Additional literature promoting water conservation shall be available at City Hall and the public library.

The City is investigating the most cost effective manner for obtaining the information and will be considering producing the information in-house or purchasing pamphlets and brochures and bill stuffers from other industry and state sources such as AWWA, APWA, WRD, Oregon Health Division, DEQ, etc. The City is also investigating the posting of conservation materials on the City's website. The City plans to roll-out a public education program in advance of summer 2012.

4.10 Technical and Financial Assistance Programs

The City of Scappoose has limited resources to provide technical and financial assistance programs. Rebate and financial assistance programs are not practical for the City at this time.

The City intends to develop a customer request program to assist customer with ideas for water saving opportunities such as replacing existing water fixtures with efficient fixtures, outdoor irrigation needs, modifying old fixtures without replacement, and household water use practices. A visual and audio inspection for leaks will be conducted and water conservation literature will also be provided. This service will be promoted through the City's Water Conservation Public Education Program materials.

4.11 Retrofit/Replacement Program

In 2008 the City distributed low flow shower heads for customer installation. The implementation rate of that program is unknown. The City has not undertaken additional retrofit/replacement program activities due to budgetary constraints. Other examples of customer distribution programs that may be considered when funding becomes available, include toilet tank bags and rain gauges. Each of these programs will include method of implementation tracking to determine effectiveness.

4.12 Identification of Reuse, Recycle, Non-potable Use Opportunities

The City does not currently have reuse or recycle practices in place; however, some opportunities may exist. The City's wastewater treatment facility could be upgraded to produce Class B reclaimed water which could be potentially used for beneficial uses such as non-food producing irrigation and industrial uses.

The City's two water treatment plants are not currently designed for directing filter backwash or filter start-up water back to the head of the facility. Doing so would reduce once through filter backwash and filter to waste practices. The City has not previously distributed customer information explaining the use of grey water for in-home uses such as plant watering and toilet flushing.

The City will be investigating the potential application reuse and recycle opportunities within the system. The City will identify potential users, ability to deliver, and cost/benefit of producing reclaimed water for irrigation and industrial uses. The City will also investigate the cost/benefit of filter backwash and filter-to-waste recycling at the water treatment plants. Finally, the City Public education program will include information household uses of grey water.

4.13 Summary of Additional Conservation Measures

Outside of the water conservation requirements for a utility serving a population under 7,500 as outlined by OAR 690-086-0150(6) and OAR 690-086-140(5)(i), the City does not have additional conservation activities underway.

4.14 Documentation of Water Use Measurement and Reporting

As per the requirements of OAR 690-85 for a municipality holding water rights, the City annually submits a Water Use Measurement Report to the state. OWRD records show an incomplete data set between 2006 and 2010. Appendix A water use reports obtained from the OWRD website supplemented with an internal City spread sheet for all year 2004-2011 by source of supply.

4.15 Conservation Plan Progress Report

This WMCP is the first for the City and the first opportunity to formalize is Water Conservation Plan. Because a previous conservation plan and implementation objectives is not available, there is not a baseline on which to base progress. Therefore, the conservation planning activities previously outlined and summarized in Table 4.3 serves as that baseline to measure progress in the future. Table 4.3 includes each conservation element, whether it is a requirement for the City of Scappoose, the City's proposed actions and target date for implementation. The City has set a goal of reducing its 2009 demand by 10% by 2020 through conservation.

The City does not currently serve a population greater than 7,500 nor does it plan to extend or initiate diversion of water under an extended permit. Therefore, the requirement for "additional conservation measures" as outlined in OAR 690-086-0150(6) and OAR 690-086-140(5)(i) do not apply.

Table 4-3: City of Scappoose Water Conservation Requirements and Planned Implementation

Conservation Plan Element	Required Element	Status or Proposed Action	Date for Implementation or Completed
Full metering of system	**X**	Complete	Prior to 2000
Meter Testing/Maintenance Program	**X**	In progress	2015
Annual water audit	**X**	In Progress	2012
Leak Detection Program	If >10% real loss	TBD based on water audit	TBD
Leak Repair/ Line Replacement Program		On-going	As funding permits
Conservation Rate Structure	**X**	Complete	1992
Conservation Billing Structure		Under evaluation	2011
Public Education Program	**X**	Under development	2012
Technical and Financial Assistance Program		Under development	2010
Retrofit/Replacement Program		Low flow shower heads distributed. Additional measures under evaluation	2008 TBD
Reuse/Recycle Program		Under evaluation	TBD
Water use measurement and reporting	**X**	In place	On-going
Other measures		No other conservation measures are currently underway or previously completed	

Section 5: Water Curtailment Plan

5.1 Introduction

Curtailment planning is required to address management of water supply when emergency conditions arise, such as when there are changes in groundwater/surface water supply availability, water quality or temporary failures in a water supply system. Table 5.1 summarizes the topics addressed in this section.

Table 5-1: Contents of Section 5

5.2 Existing Curtailment Plan

In April 2005, faced with the prospect of a summer water shortage due to an unseasonably dry winter, The City of Scappoose drafted and accepted into the City's Municipal Code SMC 13.08 - *Water Conservation Measures During Water Crises*. While this City code refers to "conservation," it is, for all practical purposes, the beginning of a Water Curtailment Plan. With the exception of summer 2005 the City has not experienced a water supply deficiency in the last decade.

The City's SMC 13.08 outlines:

- Authority of the Mayor and City Council in declaring a water emergency
- The process of notification, fines, and discontinuance of service
- Voluntary measures
- Tier 1 use restrictions
- Tier 2 use restrictions

Table 5.2 outlines each curtailment tier of the plan.

Table 5-2: Water Conservation Measures During Water Crises (SMC 13.08)

Curtailment Tier	Trigger	Usage Reduction Goal	Reduction Measures
Voluntary	Opinion of Mayor and Council	Not defined	• Restrict landscape watering to evening hours • Alternate watering based on address • Avoid pavement washing • Avoid vehicle washing outside of commercial facilities • Provide water where food is sold only when requested • Avoid building cleaning

Curtailment Tier	Trigger	Usage Reduction Goal	Reduction Measures
			• Refrigerate water for drinking to avoid running tap • Consider installing water efficient appliances
Tier 1	Opinion of Mayor and Council	Not defined	• Prohibit lawn watering between 7 am – 11pm • Require compliance with alternate day landscape watering plan • Restrict hydrant permit use to those already in effect
Tier 2	Opinion of Mayor and Council	Not defined	• Prohibit landscape watering except in special circumstances • Prohibit washing down of pavement • Prohibit vehicle washing outside of commercial facilities

Because SMC 13.08 was developed in response to a potential pending water shortage, the City understands there are elements that can be refined and added to develop a more comprehensive, effective, and measurable Water Curtailment Plan. A revised Draft Water Supply Curtailment Plan has been developed and will be considered by the City Council to replace SMC13.08.

5.3 Revised Draft Water Supply Curtailment Plan

The need for curtailment can result from unexpected loss of supply or facilities or from slowly developing supply issues. The rapid need for a curtailment plan results from unexpected events occurring quickly. These may be short lived and an endpoint can be identified. Conversely, curtailment plans can be phased in over time in anticipation of developing causes such as drought or low snow pack. In these cases, implementation can be planned for months in advance; however, an endpoint cannot be identified with certainty. Once codified, the City will conduct appropriate training so that staff are knowledgeable on Curtailment Plan activation procedures and timing for both anticipated and unexpected events.

The City has drafted a new Water Supply Curtailment Plan that includes the following elements:

- Quantitative trigger rather than “Mayor’s opinion” trigger
- Triggers for activation and increase of restrictions based on percent demand of actual capacity
- Elimination of measures that are long term conservation focused such as installation of water efficient appliances
- Identifies staff and responsibilities for implementing plan
- Methods of notification
- Voluntary conservation measures
- Tier 1 - Voluntary measures + Mandatory restrictions
- Tier 2 – Voluntary measures + Enhanced mandatory restrictions
- Tier 3 – Voluntary measures + Mandatory restrictions + Prohibited uses
- Demand reduction goals for each Tier
- Activation of Curtailment Plan for anticipated or controlled water shortages

- Activation of Curtailment Plan for uncontrolled events of unknown duration
- Staff responsibilities
- Notification procedures of Curtailment Plan activation
- Enforcement actions

The following tables outline staff and roles responsible for implementation the Water Curtailment Plan (Table 5.3) and the Draft Water Supply Curtailment Plan (Table 5.4). This plan will be considered by the City Council during 2010 and a new Plan approved. In addition to a final Curtailment Plan the City of Scappoose will develop appropriate enforcement tools such as fines and discontinuance of service resulting from failure to abide by restrictions.

Table 5-3: Roles and Responsibilities Associated with Water Curtailment Actions

Title	Responsibilities
City Manager	Initiation of Curtailment Plan and media relations
Superintendent of Water Treatment	Supply and demand data tracking
Field Services Supervisor	Reduction of City water uses
City Planner	Communication with businesses
Police Chief	Enforcement of prohibited practices

Table 5-4: Proposed Water Curtailment Plan

Curtailment Tier	Trigger	Usage Reduction Goal	Reduction Measures
Voluntary	Projected supply limitations	Awareness and 5% reduction in daily demand	• Implement Curtailment Plan • Public notification and awareness • Personal water conservation measure education • Voluntary irrigation reduction **Prioritized Notification Methods:** Door hangers/Bill stuffers/Web page
Tier 1 Mild	Use reaches 85% of capacity of three consecutive days and/or state drought declaration affecting service area	10% reduction in demand	• Continue all *Voluntary* measures • Stop system flushing except for essential needs • Reduce municipal irrigation and aesthetic uses and post information explaining reduction • Restrict landscape watering to evening hours • Restrict pavement washing to needs related to health • Prohibit un-valved vehicle washing • Prohibit building cleaning **Prioritized Notification Methods:** Posters/sandwich boards/Web page/Media
Tier 2 Moderate	Use reaches 90% of capacity for two consecutive days	15% reduction in demand	• Continue all *Tier 1* measures • Prohibit landscape watering between 7 am – 11pm • Restrict landscape watering to every 5th day on an alternating schedule • Cease municipal water uses such as street cleaning, flushing (unless health related), park and landscape irrigation • Prohibit vehicle washing outside of commercial facilities • Prohibit non-irrigation outdoor water use except when required for public health • Request businesses reduce demand by 10% **Prioritized Notification Methods:** Media/Door hangers/Posters/Sandwich boards/Web
Tier 3 Critical	Use reaches 95% of capacity for one day	20% reduction in demand	• Continue *Tier 2* measures • Prohibit landscape watering except for hand watering of new trees and shrubs • Prohibit vehicle washing with City supplied water **Prioritized Notification Methods:** Media/Door hangers/Posters/Sandwich boards/Web

Section 6: Other Water Management and Conservation Planning Issues

6.1 Introduction

The City will be requesting a transfer of water rights under G-8615, G-15295, and G-15491 as described in Section 3.8. s. It is the City's understanding that the intent to fully exercise the full extent of the water rights either at the current point-of-withdraw or transfer of the point-of-withdraw, regardless of the lack of availability of water constitutes an extension or initial diversion of water under the existing permit. The City understands as such that there are certain conservation and water management issues that must be a addressed as outlined under OAR 690-086-0170(5). These issues are address by this section. Table 6.1 summarizes the contents of this section.

Table 6-1: Contents of Section 6

6.2 Quantification of Maximum Rate and Monthly Volume

It is the City's understanding that the intent to fully exercise the full extent of the water rights either at the current point-of-withdraw or transfer of the point-of-withdraw constitutes an extension or initial diversion of water under the existing permit. To meet requirements that City has calculated and estimate of the water that would be diverted within the next 20 years for each permit based on maximum rate and maximum monthly volume. These estimates are summarized in Table 6.2. To meet these rates it is assumed that the point-of-diversion from other water rights would be transferred.

Table 6-2: Estimate of Diverted Water under the City's Existing Permits by 2032

Permit	Maximum Rate (gpm)	Maximum Monthly Volume (MG)
G-8615	695	1.0
G-15295	695	1.0
G15491	695	1.0

6.3 Supply Mitigation Actions under Federal and State Law

At the time of the WMCP submittalit is unknown at if mitigation issues will arise from transfer of the water right point of diversion since the eventual point-of-diversion is unknown. It is anticipated that since new points-of-diversion will be within the same basin but downstream of where current mitigation measures restrict accessibility that mitigation actions can be avoided. This issue will be addressed when application of transfer of the water rights is made. The City will make every effort to transfer the water rights without triggering mitigation actions.

6.4 Consideration of Alternative Measures to Reduce Need for Additional Water Supply

Two alternatives the City has, or will be, addressing in order to extend the time frame for extension of current water rights are inter-connection with other communities, increasing supply through the reduction of water loss, and conservation measures. At the current time the inter-connection with a neighboring system is not a financially feasible alternative. The closest system is the City of St. Helens. Connection with the City of St. Helens would require a 6-8 mile pipeline and possible expansion of existing treatment facilities. It is unknown if the City of St. Helens possess adequate water supply foe such a connection. Such a connection is planned for analysis under the City's next Water Master Plan. A discussion of this alternative is included under Section 3.8.

Another option for the City is that of creating supply through the reduction of water loss. This option while, a prudent water management measure, my slow the need for additional water, but it will not provide the the City's full projected need. This alternative has been discussed in Section 3.9.

The City is putting in place a conservation program required for a water system of its size. Supply-side conservation measures are limited to reduction of water loss as described in Section 3.8 and modification of backwash handling was discussed in Section 4.12. Supply-side conservation measures may slow, but will not eliminate, the need for expansion of water rights. Demand-side conservation measures, are a good long-term practice, but by their nature are not within the City's control. Reliance on such measures as a water management tool for a small system as an alternative to developing adequate sources-of-supply is not advised.

6.5 List of Affected Local Governments and Their Comments

The City of Scappoose's nearest neighboring community water systems are the Warren Water Association and the City of St. Helens, Oregon. There is currently no physical connection between the water systems and there are no shared sources of supply.

As there are no other communities impacted by the City's water resource management and conservation practices, at this time no review or comment by other local governments is required.

To meet the requirement for notifying local governments a Notice of Availability was sent to both the City of St. Helens and Columbia County. Copies of letters requesting review and comment are included as Appendix D.

6.6 Date for Submittal of Next Update

The City plans to move forward with Conservation Program elements as outlined in this WMCP. Based on this outlook, the City plans an update to this WMCP in 2020 unless the City's situation should change requiring a revision of the document sooner.

6.7 Request for Additional Time to Meet Previous Benchmarks

As this represents the City's initial WMCP, there are no existing benchmarks for implementation of plan elements. As such, the City is not requesting additional time for completion. The City anticipates full implementation of the elements of this WMCP prior to the 2020 update.

Figures

LAZY CREEK DAM
ELEV: 430FT
WR CAP (MGD): 0.97

S. FORK CREEK DAM
ELEV: 420FT
WR CAP (MGD): 1.6

GOURLEY CREEK DAM
ELEV: 420FT
WR CAP (MGD): 6.45

HIGH LEVEL TANK
OF ELEV: 432 FT
CAP (MG): 0.3

HIGH LEVEL TANK
OF ELEV: 432 FT
CAP (MG): 0.37

HIGH LEVEL BOOSTER PS
PAD ELEV: ***
CAP (MGD): 250 GPM (2)
+ 500 GPM (1)

PRV #1
ELEV: ***
SETTING: ***

PRV #3
ELEV: ***
SETTING: 80/60 PSI

KEY ROAD WTP
ELEV: ***FT
WTP CAP (MGD): 0.86

TANK
OF ELEV: 189.8 FT
CAP (MG): 0.3

TANK
OF ELEV: 189.8 FT
CAP (MG): 1.0

TANK
OF ELEV: 189.8 FT
CAP (MG): 2.0

PRV #2
ELEV: ***
SETTING: ***

GROUND WATER TREATMENT
ELEV: ***
WTP CAP (MGD): 0.76–1.15

GLEN VIEW BOOSTER PS
ELEV: ***
CAP (MGD): ***

DUTCH CANYON WELL PS
PAD ELEV: 76 FT
WR CAP (MGD): 1.3
PROD CAP (MGD): 0.5
[330 GPM]

MILLER RD WTP
ELEV: 50FT
WTP CAP (MGD): 1.44

MILLER ROAD WELLS
ELEV: 20FT
PROD CAP (MGD): 0.65
[450 GPM]

WELL #1 #2 #3

400
350
300
200
150
100
50
0
FEET

GLOSSARY:

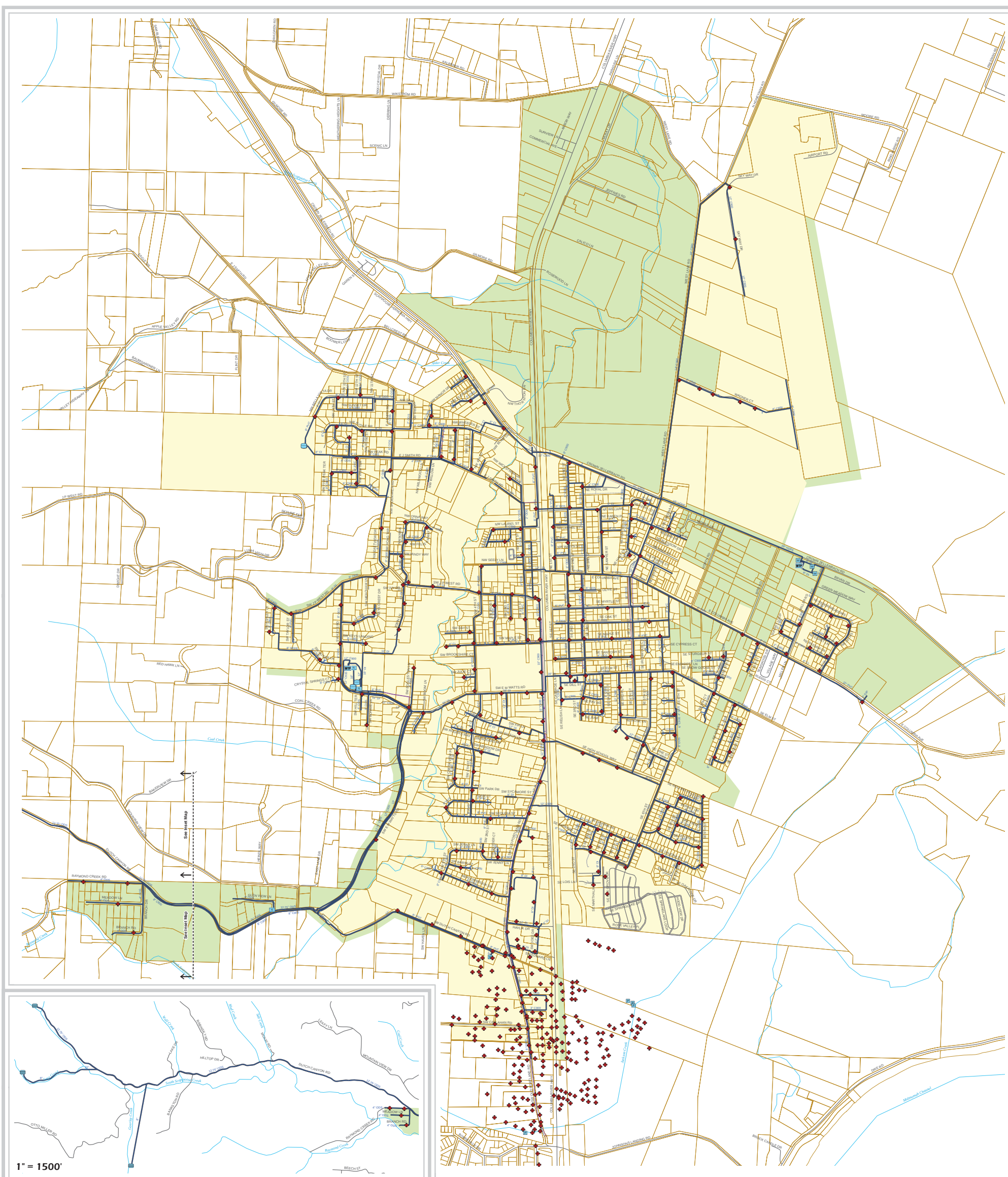
DIA : DIAMETER
ELEV : ELEVATION
WR CAP: WATER RIGHTS CAPACITY
PROD CAP: PRODUCTION CAPACITY
MG : MILLION GALLONS
MGD: MG PER DAY
OF ELEV : OVERFLOW ELEVATION
SETTING: PRESSURE SETTINGS
PRV : PREASSURE REDUCTION VALVE

Kennedy/Jenks Consultants

CITY OF SCAPPOOSE
SCAPPOSE, OREGON

WATER SYSTEM COMPONENTS

Figure 2-1



City of Scappoose - Figure 2.2

Water System

Scappoose GIS

LEGEND

- Water Plant
- Distribution Reservoir
- Supply Reservoir
- Supply Well
- Hydrant
- Pump Station
- Service
- Main
- Abandoned Lines
- Private Service
- Private Main
- Streets
- Rivers
- City Limits
- UGB

1" = 500'

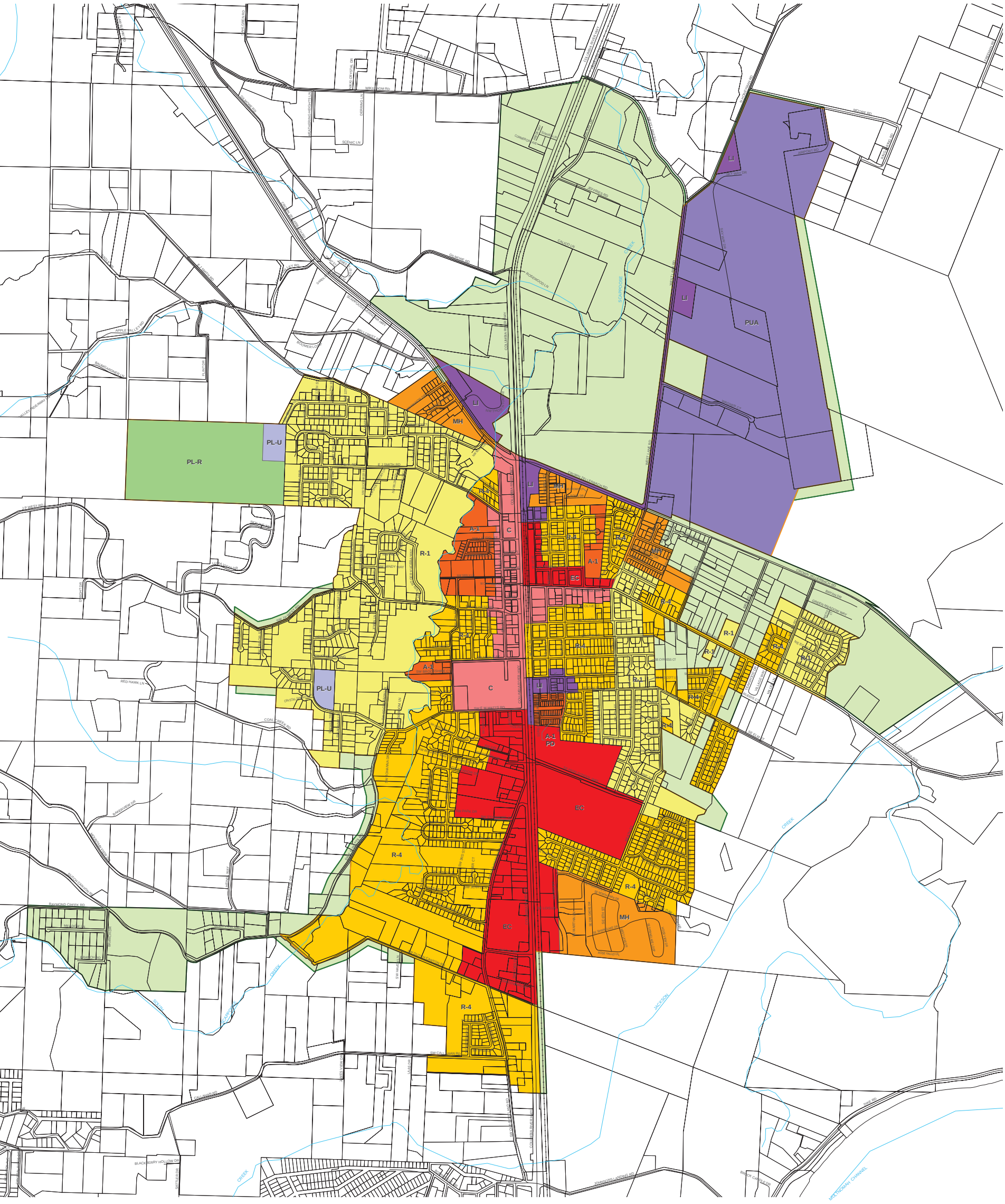
0 500 1,000 2,000 Feet

Map Developed by GeoSolve Inc.

Printed: December 8, 2008

City of Scappoose - Figure 2.4

Zoning Map



Scappoose GIS

Legend

- Streets
- Rivers
- Railroads
- Taxlots
- City Limits
- Urban Growth Boundary

Zoning

- R-1 - Low Density Residential
- R-4 - Moderate Density Residential
- MH - Manufactured Housing Residential
- A-1 - High Density Residential
- C - General Commercial
- EC - Expanded Commercial
- LI - Light Industrial
- PUA - Public Use Airport
- PL-R - Public Lands-Recreation
- PL-U - Public Lands-Utility

0 500 1,000 2,000 Feet

1" = 500'

Taxlot Revision: 1/26/2009

Compilation Date: 6/12/2009

Appendix A

2005-2009 Water Use Measurement Reports

Water Use Report

Choose an agency: CITY OF SCAPPOOSE

CITY OF SCAPPOOSE
JOSEPH J LEWIS
PO BOX 'P'; 33568 E COLUMBIA AVE
SCAPPOOSE, OR 97056

Records per Page: 5

	Report ID	Facility	Associated water rights & Description
Select	12137	GOURLEY	Cert:5573 OR * GOURLAY CREEK (3.00N-2.00W-12-NE SE)
Select	12138	S FK SCAPPOOSE CR	Cert:42700 OR * SOUTH SCAPPOOSE CREEK (3.00N-2.00W-7-NW SE) 1930 FT N & 1970 FT W FM NE COR, S18
Select	12139		Claim:GR 926 * A WELL (3.00N-2.00W-12-NE SE) 726.51 FEET SOUTH & 525.78 FEET WEST FROM E1/4 CORNER, SECTION 12
Select	12141	LAZY	Cert:42700 OR * LAZY CREEK (3.00N-2.00W-18-SE NW) 1470 FT S & 2680 FT W FM NE COR, S18
Select	30256	DUTCH CANYON WELL	Permit: G 15295 * A WELL (3.00N-2.00W-13-NE SW) 1544.48 FEET NORTH & 2000.48 FEET EAST FROM SW CORNER, SECTION 13 Permit: G 8615 * A WELL (3.00N-2.00W-13-NE SW) 1563.91 FEET NORTH & 1935.8 FEET EAST FROM SW CORNER, SECTION 13

1 2

Wur Report ID: 12137

Water Year	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2011	M	0.08	0.07	0.06	0.09	1.57	0.06	2.42	2.38	3.2	2.16	3.11	2.14
2008	M	0.0	0.0	0.0	2.66	2.9	0.0	6.69	13.36	0.42	10.27	7.65	11.74
2006	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87	0.63	2.13
2005	M	5.2	4.6	7.9	2.2	9.2	8.6	3.5	2.8	7.0	9.0	1.0	0.05
2004	M	11.3	4.8	3.1	6.0	10.8	13.4	12.6	13.8	11.4	12.4	11.3	11.3
2003	M	2.8	1.4	0.8	7.3	5.8	4.4	11.4	15.0	15.2	14.5	13.9	12.5
2002	G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	M	20.0	14.0	17.8	15.5	12.4	13.3	10.0	13.0	735.0	18.0	19.0	16.0
1999	G	11863800.0	1837100.0	4661900.0	4864000.0	3096000.0	6879000.0	16908000.0	12118000.0	22600000.0	21175600.0	13327400.0	13476000.0
1998	G	9705000.0	9540000.0	10924000.0	8320000.0	4687000.0	6932000.0	6444000.0	625000.0	15390000.0	24330000.0	23268000.0	19162000.0
1997	G	8950700.0	7465700.0	3013200.0	10630500.0	12247200.0	13849900.0	14849900.0	16633000.0	13308400.0	21524000.0	23106000.0	14466400.0
1996	G	8788000.0	5022000.0	7890000.0	8899000.0	4473000.0	10719000.0	8045000.0	10351000.0	15106000.0	17383000.0	17139000.0	15677000.0
1995	G	11266400.0	7972200.0	7540500.0	9913000.0	10715300.0	10856100.0	10942000.0	12744000.0	14179000.0	16125200.0	16326000.0	14124100.0

Water Use Report

Choose an agency: CITY OF SCAPPOOSE

CITY OF SCAPPOOSE
JOSEPH J LEWIS
PO BOX 'P'; 33568 E COLUMBIA AVE
SCAPPOOSE, OR 97056

Records per Page: 5

	Report ID	Facility	Associated water rights & Description
Select	12137	GOURLEY	Cert:5573 OR * GOURLAY CREEK (3.00N-2.00W-12-NE SE)
Select	**12138**	**S FK SCAPPOOSE CR**	**Cert:42700 OR * SOUTH SCAPPOOSE CREEK (3.00N-2.00W-7-NW SE) 1930 FT N & 1970 FT W FM NE COR, S18**
Select	12139		Claim:GR 926 * A WELL (3.00N-2.00W-12-NE SE) 726.51 FEET SOUTH & 525.78 FEET WEST FROM E1/4 CORNER, SECTION 12
Select	12141	LAZY	Cert:42700 OR * LAZY CREEK (3.00N-2.00W-18-SE NW) 1470 FT S & 2680 FT W FM NE COR, S18
Select	30256	DUTCH CANYON WELL	Permit: G 15295 * A WELL (3.00N-2.00W-13-NE SW) 1544.48 FEET NORTH & 2000.48 FEET EAST FROM SW CORNER, SECTION 13 Permit: G 8615 * A WELL (3.00N-2.00W-13-NE SW) 1563.91 FEET NORTH & 1935.8 FEET EAST FROM SW CORNER, SECTION 13

1 2

Wur Report ID: 12138

Water Year	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2011	M	0.2	0.17	0.15	0.22	4.07	0.15	6.29	6.19	8.32	5.62	8.09	5.57
2002	M	11.3	4.8	1.4	5.7	10.1	9.9	5.0	4.7	15.3	8.8	8.3	8.5
2001	M	13.0	191.0	3.1	10.5	14.5	16.8	16.0	15.7	19.5	16.6	15.8	12.8
1992	M	7.83	4.21	6.94	7.54	9.27	5.44	7.67	9.41	10.21	8.9	10.41	8.54
1991	M	9.25	6.11	6.26	7.07	13.25	12.74	6.76	5.67	6.4	8.85	6.59	8.19
1990	G	6.13	6.04	5.62	6.38	5.5	5.01	6.24	5.83	8.94	0.0	10.66	4.83
1989	G	4954140.0	5003160.0	4496440.0	4393020.0	5600880.0	4472580.0	4875180.0	5756580.0	5664900.0	7224480.0	6574500.0	5859840.0

Water Use Report

Choose an agency: CITY OF SCAPPOOSE

CITY OF SCAPPOOSE
JOSEPH J LEWIS
PO BOX 'P'; 33568 E COLUMBIA AVE
SCAPPOOSE, OR 97056

Records per Page: 5

	Report ID	Facility	Associated water rights & Description
Select	12137	GOURLEY	Cert:5573 OR * GOURLAY CREEK (3.00N-2.00W-12-NE SE)
Select	12138	S FK SCAPPOOSE CR	Cert:42700 OR * SOUTH SCAPPOOSE CREEK (3.00N-2.00W-7-NW SE) 1930 FT N & 1970 FT W FM NE COR, S18
Select	**12139**		**Claim:GR 926 * A WELL (3.00N-2.00W-12-NE SE) 726.51 FEET SOUTH & 525.78 FEET WEST FROM E1/4 CORNER, SECTION 12**
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Select	30256	DUTCH CANYON WELL	Permit: G 15295 * A WELL (3.00N-2.00W-13-NE SW) 1544.48 FEET NORTH & 2000.48 FEET EAST FROM SW CORNER, SECTION 13 Permit: G 8615 * A WELL (3.00N-2.00W-13-NE SW) 1563.91 FEET NORTH & 1935.8 FEET EAST FROM SW CORNER, SECTION 13

12

Wur Report ID: 12139

Water Year	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1989	G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Water Use Report

Choose an agency: CITY OF SCAPPOOSE

CITY OF SCAPPOOSE
JOSEPH J LEWIS
PO BOX 'P'; 33568 E COLUMBIA AVE
SCAPPOOSE, OR 97056

Records per Page: 5

	Report ID	Facility	Associated water rights & Description
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Select	12139		Claim:GR 926 * A WELL (3.00N-2.00W-12-NE SE) 726.51 FEET SOUTH & 525.78 FEET WEST FROM E1/4 CORNER, SECTION 12
Select	**12141**	**LAZY**	**Cert:42700 OR * LAZY CREEK (3.00N-2.00W-18-SE NW) 1470 FT S & 2680 FT W FM NE COR, S18**
Select	30256	DUTCH CANYON WELL	Permit: G 15295 * A WELL (3.00N-2.00W-13-NE SW) 1544.48 FEET NORTH & 2000.48 FEET EAST FROM SW CORNER, SECTION 13 Permit: G 8615 * A WELL (3.00N-2.00W-13-NE SW) 1563.91 FEET NORTH & 1935.8 FEET EAST FROM SW CORNER, SECTION 13

1 2

Wur Report ID: 12141

Water Year	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2011	M	0.03	0.03	0.02	0.03	0.63	0.02	0.96	0.95	1.28	0.87	1.24	0.86
2002	G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Water Use Report

Choose an agency: CITY OF SCAPPOOSE

CITY OF SCAPPOOSE
JOSEPH J LEWIS
PO BOX 'P'; 33568 E COLUMBIA AVE
SCAPPOOSE, OR 97056

Records per Page: 5

	Report ID	Facility	Associated water rights & Description
Select	12137	GOURLEY	Cert:5573 OR * GOURLAY CREEK (3.00N-2.00W-12-NE SE)
Select	12138	S FK SCAPPOOSE CR	Cert:42700 OR * SOUTH SCAPPOOSE CREEK (3.00N-2.00W-7-NW SE) 1930 FT N & 1970 FT W FM NE COR, S18
Select	12139		Claim:GR 926 * A WELL (3.00N-2.00W-12-NE SE) 726.51 FEET SOUTH & 525.78 FEET WEST FROM E1/4 CORNER, SECTION 12
Select	12141	LAZY	Cert:42700 OR * LAZY CREEK (3.00N-2.00W-18-SE NW) 1470 FT S & 2680 FT W FM NE COR, S18
Select	30256	DUTCH CANYON WELL	Permit: G 15295 * A WELL (3.00N-2.00W-13-NE SW) 1544.48 FEET NORTH & 2000.48 FEET EAST FROM SW CORNER, SECTION 13 Permit: G 8615 * A WELL (3.00N-2.00W-13-NE SW) 1563.91 FEET NORTH & 1935.8 FEET EAST FROM SW CORNER, SECTION 13

1 2

Wur Report ID: 30256

Water Year	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2011	M	3.5	3.78	4.55	5.91	5.18	6.5	6.12	2.58	3.88	5.49	9.28	12.3
2008	M	0.73	0.0	1.26	3.08	3.75	0.0	2.58	2.47	4.36	4.98	8.76	1.86
2006	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	2.75	2.78
2005	M	10.7	11.0	7.7	11.8	7.5	4.9	6.2	9.9	6.7	1.3	0.0	0.2
2004	M	6.0	10.6	13.3	10.9	5.5	3.9	4.4	1.6	7.8	8.7	11.1	5.0
2003	M	13.5	13.3	13.9	8.2	7.5	10.5	2.9	1.6	8.2	12.4	11.8	9.3
2002	M	10.6	10.8	15.4	10.7	2.8	4.7	9.2	11.0	4.6	14.6	15.5	9.9
2001	M	3.9	0.6	15.3	9.1	5.2	4.9	5.0	5.9	5.7	10.1	12.4	11.7
2000	M	4.0	7.0	4.0	7.0	7.0	6.0	8.0	7.0	17.0	12.0	13.0	7.0
1999	G	2736200.0	9162900.0	6551100.0	6110000.0	5269000.0	5100100.0	0.0	3202600.0	0.0	4062400.0	8138600.0	7113700.0
1998	G	5902800.0	4464000.0	1217500.0	6426000.0	8627300.0	12011300.0	10492600.0	20835200.0	3029800.0	0.0	1521500.0	1239000.0
1997	G	5099300.0	6559300.0	10469800.0	4425500.0	837800.0	1728400.0	102100.0	0.0	2817600.0	0.0	4268700.0	1873600.0
1996	G	3052400.0	5647600.0	3069900.0	3272500.0	7181600.0	2500200.0	3250000.0	2000000.0	135600.0	2748400.0	2651800.0	0.0
1995	G	1233600.0	3894800.0	4659500.0	2050000.0	943700.0	460900.0	118000.0	0.0	0.0	335800.0	0.0	415900.0
1994	G	366000.0	2477100.0	2862300.0	1714700.0	390800.0	5100.0	0.0	0.0	0.0	1239500.0	2421800.0	2863000.0

Water Use Report

Choose an agency: CITY OF SCAPPOOSE

CITY OF SCAPPOOSE
JOSEPH J LEWIS
PO BOX 'P'; 33568 E COLUMBIA AVE
SCAPPOOSE, OR 97056

Records per Page: 5

	Report ID	Facility	Associated water rights & Description
Select	61419		**Permit: G 15491 * WELL 1 (3.00N-1.00W-7-SE NW) 380 FEET NORTH & 3700 FEET WEST FROM E1/4 CORNER, SECTION 7**
Select	61420		Permit: G 15491 * WELL 2 (3.00N-1.00W-7-SE NW) 370 FEET NORTH & 3490 FEET WEST FROM E1/4 CORNER, SECTION 7

1 2

Wur Report ID: 61419

Water Year	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2011	M	0.0	0.0	0.0	0.0	0.0	0.0	0.94	3.68	2.6	7.94	7.56	5.44
2008	M	18.67	17.35	16.0	12.58	10.69	20.0	10.25	10.05	19.96	14.79	13.4	13.62
2006	G	14.96	16.05	14.89	15.72	14.66	15.63	16.08	18.32	21.08	24.04	26.23	14.11
2005	M	0.0	0.0	0.0	0.0	0.0	1.2	5.6	1.9	3.3	13.4	22.7	17.1

Water Use Report

Choose an agency: CITY OF SCAPPOOSE

CITY OF SCAPPOOSE
JOSEPH J LEWIS
PO BOX 'P'; 33568 E COLUMBIA AVE
SCAPPOOSE, OR 97056

Records per Page: 5

	Report ID	Facility	Associated water rights & Description
Select	61419		Permit: G 15491 * WELL 1 (3.00N-1.00W-7-SE NW) 380 FEET NORTH & 3700 FEET WEST FROM E1/4 CORNER, SECTION 7
Select	61420		**Permit: G 15491 * WELL 2 (3.00N-1.00W-7-SE NW) 370 FEET NORTH & 3490 FEET WEST FROM E1/4 CORNER, SECTION 7**

1 2

Wur Report ID: 61420

Water Year	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2011	M	8.6	7.99	7.55	7.49	4.24	7.38	1.47	2.26	1.56	5.18	4.79	3.47

City of Scappoose Individual Source Water Output by Year in MG

Month	2004			2005			2006			2007			2008			2009			2010			2011			2012			Month
	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	DC Well	Miller Wells	Keys Surface	
January	10.9	0.00	6.00	11.80	0.00	2.20	1.51	16.00	1.05	0.97	18.30	0.00	3.08	12.50	2.66	4.70	12.20	1.27		15.70		5.91	13.82	0.34	4.22	12.52	4.42	January
February	5.5	0.00	10.80	7.50	0.00	9.20	0.50	15.80	0.00	1.00	16.30	0.00	3.75	10.70	2.90	3.46	10.00	5.35	7.79	8.82	0.59	5.18	7.69	6.63	4.90	7.66	4.90	February
March	3.9	0.00	13.40	4.90	1.20	8.60	0.00	17.10	0.66	0.50	14.30	0.09	0.00	20.00	0.00	4.19	8.70	3.61	3.78	13.45	1.84	6.50	13.49	0.23				March
April	4.4	0.00	12.60	6.20	5.60	3.50	0.00	17.10	1.37	3.90	2.00	8.23	2.58	10.30	6.69	0.50	15.90	2.48	2.57	13.83	0.00	6.12	3.07	9.68				April
May	1.6	0.00	13.80	9.90	1.90	2.80	1.00	19.80	0.00	3.80	11.30	7.32	2.47	10.10	13.36	2.38	19.00	0.06	8.00	10.10	0.00	2.58	5.93	9.52				May
June	7.8	0.00	11.40	6.70	3.30	7.00	1.36	22.40	0.30	0.00	24.30	0.00	4.36	20.00	0.42	1.33	14.30	0.00	9.30	4.54	6.33	3.88	4.17	12.80				June
July	8.7	0.00	12.40	1.30	14.00	9.00	0.23	24.90	1.07	1.68	27.40	2.05	4.98	14.80	10.27	5.99	10.38	12.11	6.83	11.31	13.60	5.49	13.12	8.65				July
August	11.1	0.00	11.30	0.00	24.40	1.00	1.50	28.20	0.00	0.66	24.90	0.41	8.76	13.40	7.65	11.91	3.64	13.07	9.70	8.56	14.42	9.28	12.35	12.44				August
September	5	0.00	11.30	0.20	18.50	0.05	2.62	16.30	1.38	2.66	20.70	1.91	1.86	13.60	11.74	10.29	1.53	10.58	2.96	10.32	9.58	12.30	8.87	8.56				September
October	10.7	0.00	5.20	0.00	15.90	0.00	2.78	11.20	2.13	0.73	18.70	0.00	1.65	12.60	3.84	3.64	12.30	2.81	3.22	14.33	0.60	9.29	5.52	7.41				October
November	11	0.00	4.60	0.00	17.30	0.00	1.37	14.90	0.00	0.00	17.30	0.00	3.45	12.30	1.09	2.48	13.55	0.35	3.78	13.31	0.27	9.86	10.35	0.67				November
December	7.7	0.00	7.90	0.00	15.60	0.00	1.18	15.80	0.00	1.26	16.00	0.00	3.57	13.30	0.09	3.81	8.09	5.58	4.55	12.58	0.22	8.42	9.66	4.56				December

Yearly Total	2004			2005			2006			2007			2008			2009			2010			2011			2012			Yearly Total
Individual	88.3	0.0	120.7	48.5	117.7	43.4	14.1	219.5	8.0	17.2	211.5	20.0	40.5	163.6	60.7	54.7	129.6	57.3	62.5	136.8	47.4	84.8	108.0	81.5	9.1	20.2	9.3	Individual
Combined	209.0			209.6			241.5			248.7			264.8			241.5			246.7			274.3			38.6			Combined

Appendix B

City of Scappoose 2005 Water Conservation Measures During Water Crises (SMC 13.08)

City of Scappoose

Council Action & Status Report

Date Submitted:	3/30/05
Agenda Date Requested:	4/4/05
To:	Scappoose City Council
Through:	**Jon Hanken, City Manager**
From:	Eugene Smith, City Engineer
Subject:	Water Conservation

Type of Action Requested:

[ ]	**Resolution**		**[ ]**	**Ordinance**
[ ]	**Formal Action**		**[x]**	**Report Only**

Issue: Council has requested a report on the current status of water development, potential water conservation measures, and expectations for the coming summer.

Analysis:

Attached is a report describing the current water conservation plan which could be implemented by council should the need arise. At this time, Staff is not asking Council to implement any measures. Implementation would be in accordance with Scappoose Municipal Code, Chapter 13.08.

Recommendation:

Review the attached water conservation plan and Code Chapter.

Suggested Motion:

None

Water Conservation
City of Scappoose

I. Introduction

A. Present situation:

The City of Scappoose has five primary sources of water: The Dutch Canyon Well, the three wells at Miller road, and surface water from South Scappoose Creek, Gourlay Creek, and Lacey Creek. Combined surface water sources provide approximately 500 GPM[1], the Miller Road wells provide approximately 1300 GPM, and the Dutch Canyon Well provides approximately 500 GPM. Maximum production available to the city water treatment plant should be approximately 2,300 GPM. During summer months, especially in the hottest months of August and September, use has been over 1,000 GPM. However, since additional housing has been constructed in the City of Scappoose and the State of Oregon has experienced an exceptionally dry winter, it is reasonable to expect surface water sources may not be able to provide the needed 500 GPM during the critical hottest months of the summer and still be able to provide adequate flow to maintain native fish populations. In addition, the Dutch Canyon Well has not been able to produce 500 GPM without danger of well failure and the Miller Road wells and Treatment Plant have not been in production long enough to state definitively how they will perform through a dry summer season.

B. Importance of water conservation:

The City of Scappoose does have adequate storage for treated water for a three-day supply[2]. This means that if surface water availability is curtailed during the hottest months and the Dutch Canyon and Miller Wells are not able to keep up, the City of Scappoose has some time to implement water conservation measures.

C. Summary of conservation measures:

The City of Scappoose has instituted a three-tiered system of conservation measures: Voluntary Measures, Tier 1 – Mandatory Measures, and Tier 2 – Mandatory Measures. Voluntary and Tier 1 – Mandatory Measures involve such things as lawn watering in the cooler evening and early morning hours, reducing or eliminating washing of sidewalks, streets, buildings, cars, and boats. Tier 2 – Mandatory Measures include such things as prohibiting watering lawns, washing streets, sidewalks, buildings, and cars.

D. Summary of enforcement measures:

While the City of Scappoose has no desire to implement mandatory conservation measures or to enforce such measures, circumstances could force such actions. Voluntary measures have no enforcement measures associated with them. Tier 1 – Mandatory Measures are enforced with a notice of violation.

[1] Gallons per Minute
[2] 3.9 Million Gallons total

Tier 2 – Mandatory Measures are enforced with discontinuance of service, fines, or jail.

II. Conservation Measures

A. Voluntary Measures:

1. Restrict landscape watering to the hours between 6 PM and 10 AM except new lawn, grass or turf that has been seeded within the 90 days prior to declaration of water shortage.

2. Alternate landscape-watering depending on address. That is, even numbered address' water on even numbered days, odd numbered address' water on odd numbered days.

3. Don't hose or wash sidewalks, driveways, streets, parking lots, etc. except where necessary for public health or safety.

4. Don't wash cars, boats, trailers, or other vehicles without using a shut-off nozzle (don't let the water just run).

5. Wash vehicles at commercial or fleet facilities using water-recycling equipment.

6. Provide drinking/serving water at restaurants, motels, cafeterias, or other public places where food is sold or served only when expressly requested.

7. Restrict cleaning buildings (walls or roofs) to preparation for painting only.

8. Use bottled water stored in the refrigerator instead of running the tap to obtain cold water.

9. Consider installing more efficient appliances such as low water consumption stools and taking showers instead of tub baths.

B. Mandatory Measures:

1. Tier 1 -- Serious – flow reductions are beginning to take place in City of Scappoose watersheds or the aquifer tapped by the Dutch Canyon Well.

   a. Prohibit lawn watering between the hours of 7 AM and 11 PM.

   b. Require compliance with alternate day system for landscape watering.

   c. Restrict hydrant permit use to those already in effect.

2. Tier 2 – Critical – a declared water crisis emergency in accordance with Chapter 13.08 of the City of Scappoose Municipal Code.

   a. Prohibit watering, sprinkling, or irrigating lawns, grass, or turf unless it is a new lawn, grass, or turf that has been seeded after March 1 of the

calendar year in which any restrictions are implemented. In such cases, it may be watered until established.

b. Prohibit washing down, wetting down, or sweeping with water sidewalks, driveways, parking lots, open ground, or other hard surfaced areas unless:

1) In the opinion of the City Manager or delegate, there is a demonstrable need to meet public health or safety requirements including but not limited to alleviation of fire, sanitation hazards, or dust control to meet air quality requirements mandated by the Oregon Department of Environmental Quality; or

2) Power washing of building, roofs, and homes prior to painting, is for repair, remodeling or reconstruction and not solely for aesthetic purposes.

c. Prohibit washing cars, trucks, trailers, tractors, or other land vehicles or boats, or other water craft except by commercial establishments or fleet washing facilities which recycle or reuse the water in their washing processes, or by bucket and hose with a shut-off mechanism unless the City Manager or delegate finds that the public health, safety, and welfare is contingent upon frequent vehicle cleaning of solid waste transfer vehicles, vehicles that transport food and other perishables or otherwise required by law.

III. Enforcement

A. Tier 1 – Mandatory Measures

The Scappoose City Council, through the Public Works Department, shall enforce any violation of the restrictions or prohibitions stated in the Tier 1 – Mandatory Measures as follows:

1. Scappoose Public Works Department shall deliver a notice of violation to occupant at the premises. If occupant is not present, notice may be posted on the premises advising occupant of violation and notifying occupant that the violation shall cease.

2. City of Scappoose shall also mail notice of violation by regular mail to occupant at the address of the premises where violation has occurred.

B. Tier 2 - Mandatory Measures

Scappoose City Council, through the Scappoose Police Department, shall enforce any violation of restrictions or prohibitions stated in the Tier 2 - Mandatory measures as follows:

1. Scappoose Police Department shall personally deliver a notice of violation to occupant at the premises. If occupant is not present, the Officer may post the notice on the premises advising occupant of the

violation and warning that service may be discontinued if violations continue.

2. City of Scappoose shall also mail notice of violation by regular mail to occupant at the address of the premises where violation has occurred. If water service is discontinued, a fee may be charged to restore service as stated in Resolution No. 538 and amendments.

3. If discontinuance of service will cause a health or safety situation to develop at the location where violation has occurred, a citation may be issued in accordance with Section 13.08.030 A of the Scappoose Municipal Code.

IV. Implementation

A. Council action

After a Scappoose City Council declaration of a Water Crisis State of Emergency in accordance with City of Scappoose Municipal Code Section 13.08, implementation of public notification will begin.

B. Coordination with Newspapers

City Manager will prepare press releases for local and regional papers detailing the reasons for the declaration of a Water Crisis State of Emergency and describing the measures to be undertaken. For the duration of the crisis, the City Manager will periodically, as seems appropriate, provide press releases detailing the actions being undertaken to end the crisis and to avoid exceeding the available water supply.

C. Coordination with Schools

City Manager or his delegate will coordinate with Public Schools in the city of Scappoose to encourage school contests of appropriate kinds to highlight the need for and methods for conserving water. City may provide prizes or participate in award ceremonies for such contests.

D. Public Works Action

Upon declaration of a Water Crisis State of Emergency, Public Works crews will make notification of all residences and businesses where water service is provided. The notification will be by a flyer posted on the door or handed to the resident, if present. Notification will include a statement of the crisis, the need for the declaration, and the measures being implemented.

In addition, the Public Works Department may, as deemed appropriate, arrange for signs to be posted in prominent locations notifying city residents of the emergency and of measures, which are being implemented.

Appendix C

Summary of Water Rights, Water Rights Permit and Certificate Documents

Gourley Creek															
Application No.	**Permit No.**	**Permitted Usage**	**Use**	**Date Permitted**	**Certified Usage**	**Date Certified**	**Type**	**Height of Dam**	**Top Length**	**Construction Material**	**Headgate**	**Name**	**Pipe**	**Construction Completed On**	**Water Applied to Proposed Usage**
8815	5813	10.0 cfs	Municipal	4/12/1923	10.0 cfs	11/30/1925	Dam	5 ft	80 ft	Timber and Concrete	Sand Filter box with wood pipe, valve and valve chamber.	Gourley Creek	N/A	3/8/1925	3/8/1953
Condtions:															
None															

Lazy Creek and South Fork Scappoose Creek															
Application No.	**Permit No.**	**Permitted Usage**	**Use**	**Date Permitted**	**Certified Usage**	**Date Certified**	**Type**	**Height of Dam**	**Top Length**	**Construction Material**	**Headgate**	**Name**	**Pipe**	**Construction Completed On**	**Water Applied to Proposed Usage**
27859	25918	4.0 cfs: 1.5 cfs Lazy Creek; 2.5 cfs So. Fk. Scappoose Creek.	Municipal	3/16/1959	4.0 cfs:1.5 cfs from Lazy Creek; 2.5 cfs from South Fork Scappoose Creek	12/5/1975	Dam	5 ft	30 ft	Concrete	Coarse bar racks and fine screening facilities; sluice gates 18" sq.; No pumping.	Lazy Creek And South Fork Scappoose Creek	Length of Pipe: 30000 ft; size and intake of pipe: 8" Lazy Creek, 12" So. Fk; difference in elevation: 370 - City, 220 - Reservoir; the pressure line is below the hydraulic gradient at all points.	October 1953. So. Fk. Intake in initial construction; Lazy Creek in the future.	So Fk. Scappoose Creek October 1953; Lazy Creek 1958.
Conditions															
None															

Dutch Canyon Well Original Permit

Application No.	Permit No.	Permitted Usage	Use	Date Permitted	Certified Usage	Date Certified	Type	Diameter	Depth	Name	Casing		Depth of Water Table	Well drilled by	Pump	Motor	Construction Completed On	Water Applied to Proposed Usage
G-9218	G-8615	.89 cfs	Municipal	8/31/1979	N/A	N/A	Well	12"	227'	Dutch Canyon	227 ft	Steel	61.0 ft	S & M Drilling & Supply, Inc. Canby, OR	Worthington Oil Lubricated-Lineshaft, Vertical Turbine, 10M41 Bowls, 11 stage, 185' in length, airline, gauge and flowmeter.	U.S. Motors 364T-21, Type RU, 60 HP, 1770 RPM.	6/30/1979	6/30/1979

Conditions:

None

Dutch Canyon Well Revised Permit

Application No.	Permit No.	Permitted Usage	Use	Date Permitted	Certified Usage	Date Certified	Type	Diameter	Depth	Name	Casing		Depth of Water Table	Well drilled by	Pump	Motor	Construction Completed On	Water Applied to Proposed Usage
G-14103	G-12955	2.0 cfs	Municipal	6/21/1995	N/A	N/A	Well			Dutch Canyon								

Conditions:

A. Annual Report: Install water meter. Annual reports of monthly water usage submitted to Department.
B. Pump Test: Results of pump test must be sent to Department prior to receiving certification. Water level or pump test results maybe required every ten years thereafter.
C. Water Management and Conservation Plan: By October 29, 1997 a water management and conservation plan consistent with OAR Chapter 690, Division 86 must be submitted.
D. Extension Application: Water must be completely applied to intended usage by October 1, 1999.

Note: Permit G-12955 was cancelled by the Department of Water Resources on September 27, 2007 and is no longer an authorized source of water.

Miller Well #1																	
Application No.	**Permit No.**	**Permitted Usage**	**Use**	**Date Permitted**	**Certified Usage**	**Date Certified**	**Type**	**Diameter**	**Depth**	**Name**	**Casing**		**Depth of Water Table**	**Well drilled by**	**Pump**	**Motor**	**Construction Completed On**	**Water Applied to Proposed Usage**
G-15135	G-15295; Originally Authorized by Permit G-8615	0.557 cfs	Municipal	12/20/2002	N/A	N/A	Well			Miller Well #1								10/1/2007

Conditions:

A. Annual Report: Install water meter. Annual reports of monthly water usage submitted to Department.
B. Pump Test: Results of pump test must be sent to Department prior to receiving certification. Water level or pump test results maybe required every ten years thereafter.
C. Water Management and Conservation Plan: By 12/20/2005 a water management and conservation plan consistent with OAR Chapter 690, Division 86 must be submitted.
D. Extension Application: Water must be completely applied to intended usage by October 1, 2007.
E. Claim of Beneficial Use: Within one year after complete application of water to proposed use the permitee shall submit a claim of beneficial use, including a map and report, prepared by a Certified Water Rights Examiner.

Miller Wells #2 and #3																	
Application No.	Permit No.	Permitted Usage	Use	Date Permitted	Certified Usage	Date Certified	Type	Diameter	Depth	Name	Casing		Depth of Water Table	Well drilled by	Pump	Motor	Construction Completed On	Water Applied to Proposed Usage
G-15792	G-15491	2.9 cfs: 2.23 cfs from well 1; 0.67 cfs from well 2:	Municipal	37879	N/A	N/A	well			Miller Wells #2 and #3								39356
Conditions:																		
A. Annual Report: Install water meter. Annual reports of monthly water usage submitted to Department.																		
B. Pump Test: Results of pump test must be sent to Department prior to receiving certification. Water level or pump test results maybe required every ten years thereafter.																		
C. Water Management and Conservation Plan: By 9/15/2005 a water management and conservation plan consistent with OAR Chapter 690, Division 86 must be submitted.																		
D. Extension Application: Water must be completely applied to intended usage by October 1, 2007.																		

Oak Street Well (No Longer In Use)																		
Application No.	**Permit No.**	**Permitted Usage**	**Use**	**Date Permitted**	**Certified Usage**	**Date Certified**	**Type**	**Diameter**	**Depth**	**Name**	**Casing**	**Depth of Water Table**	**Well drilled by**	**Capacity**	**Pump**	**Motor**	**Construction Completed On**	**Water Applied to Proposed Usage**
GR-926	GR-899	**No copy of permit submitted**	Municipal	**No copy of permit submitted**	N/A	N/A	Well	8"	116 ft	Oak Street Well	32 ft mean ground seawater down 116 ft. At 82 ft level well is gravel filled. From 50 ft to 60 ft level pipe is perforated.	50 ft	Steinman Bros. Drilling Co. 8332 SE 16TH ST, Portland, OR	200 gpm with 25 ft drawdown. 300 gpm with 35 ft drawdown.	Serial # OL 16651 Model # 5K326XA10A	G.E. Motor # 5709201; H.P. 30 @ 1760 RPM	N/A	N/A
Conditions:																		
None.																		

Application No. G-9218 Permit No. G 8615

STATE OF OREGON WATER RESOURCES DEPARTMENT

Application for a Permit to Appropriate Ground Water

RECEIVED
APR 30 1979
WATER RESOURCES DEP
SALEM, OREGON

I, City of Scappoose
(Name of Applicant)

of P.O. Drawer "P", Scappoose
(Mailing Address) (City)

State of Oregon, 97056 (Zip Code) Phone No. 503-543-7146 do hereby make application for a permit to appropriate the following described ground waters of the State of Oregon:

1. The development will consist of One Well
(Give number of wells, tile lines, infiltration galleries, etc.)
having a diameter of 12" and an estimated depth of 227 feet.

2. The well or other source is to be located 1563.91 ft. North (N. or S.) and 1935.80 ft. East (E. or W.) from the S.W. corner of Sec. 13, TWP 3N, R2 WWM
(Public Land Survey Corner)
(If there is more than one well, each must be described)
being within the N.E. ¼ of the S.W. ¼ of Sec. 13 Tp. 3N R 2W, W.M., in the county of Columbia.

3. Location of area to be irrigated, or place of use if use other than irrigation.

Township	Range	Section	List ¼ ¼ of Section	List use and/or number of acres to be irrigated
City of	Scappoose	Water	System - see	Municipal
Attachment One		for Description of the		
Property	on which	water is	to be used.	

4. It is estimated that 227 feet of the well will require Steel (Kind) casing.

5. Depth to water table is estimated 61.0' (Feet) Well drilled by S. & M. Drilling & Supply, Inc. Canby, Oregon

6. The amount of water which the applicant intends to apply to beneficial use is ..... cubic feet per second or 400 gallons per minute.

7. The use to which the water is to be applied is Municipal

8. If the flow to be utilized is artesian, the works to be used for the control and conservation of the supply when not in use must be described.

-

9. If the location of the well, or other development work is less than one-fourth mile from a natural stream channel, give the distance to the channel and the difference in elevation between the stream bed and the ground surface at the source of development.

-

10. DESCRIPTION OF WORKS

Include 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.

Pump: Worthington Oil Lubricated-Lineshaft, Vertical Turbine, 10M41 Bowls, 11 stage, 185' in length, airline, gauge and flowmeter.

Motor: U.S. Motors 364T-21, Type RU, 60 HP, 1770 RPM.

Distribution Pipeline:

Well water discharges through pump into 100 LF of 8" Diameter Ductile Iron Pipe, through 3300 LF of 12" Diameter Ductile Iron Pipe, ties into existing 12" I.D. Steel supply line, and flows 5700 LF to Water Treatment Plant. From there water is distributed throughout existing Municipal Water System.

11. Construction work will begin on or before September 7, 1978

12. Construction work will be completed on or before June 30, 1979

13. The water will be completely applied to the proposed use on or before June 30, 1979

14. If the ground water supply is supplemental to an existing supply, identify the supply and existing water right. 1. Gourley Creek, Permit No. 5813.

2. Lazy Creek and South Fork Scappoose Creek, Permit No. 25918.

Application No. G-9218 Permit No. G 8615

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RESUBMITTAL ATTACHMENT ONE

APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER
CITY OF SCAPPOOSE, OREGON
August 6, 1979

Permit No. G-9218 Item No. 3 "See Resubmittal Map"

Note: The quarter/quarter sections listed include any land either encroached upon by the City of Scappoose corporate city limit lines, and existing distribution lines or existing users of water derived from any existing lines owned and operated by the City of Scappoose, Oregon.

Quarter/Quarter Description	Section	Township	Range
N.W. 1/4 of S.W. 1/4	7	3 N.	1 W.W.M.
N.E. 1/4 of S.W. 1/4	7	3 N.	1 W.W.M.
S.E. 1/4 of S.W. 1/4	7	3 N.	1 W.W.M.
S.E. 1/4 of S.W. 1/4	1	3 N.	2 W.W.M.
S.W. 1/4 of S.W. 1/4	1	3 N.	2 W.W.M.
S.E. 1/4 of S.E. 1/4	2	3 N.	2 W.W.M.
S.W. 1/4 of S.E. 1/4	2	3 N.	2 W.W.M.
N.E. 1/4 of N.W. 1/4	11	3 N.	2 W.W.M.
N.W. 1/4 of N.E. 1/4	11	3 N.	2 W.W.M.
N.E. 1/4 of N.E. 1/4	11	3 N.	2 W.W.M.
S.E. 1/4 of N.E. 1/4	11	3 N.	2 W.W.M.
N.W. 1/4 of S.E. 1/4	11	3 N.	2 W.W.M.
N.E. 1/4 of S.E. 1/4	11	3 N.	2 W.W.M.
S.E. 1/4 of S.E. 1/4	11	3 N.	2 W.W.M.
N.W. 1/4 of N.W. 1/4	12	3 N.	2 W.W.M.
N.E. 1/4 of N.W. 1/4	12	3 N.	2 W.W.M.
S.E. 1/4 of N.W. 1/4	12	3 N.	2 W.W.M.
S.W. 1/4 of N.W. 1/4	12	3 N.	2 W.W.M.
N.W. 1/4 of N.E. 1/4	12	3 N.	2 W.W.M.
N.E. 1/4 of N.E. 1/4	12	3 N.	2 W.W.M.
S.E. 1/4 of N.E. 1/4	12	3 N.	2 W.W.M.
S.W. 1/4 of N.E. 1/4	12	3 N.	2 W.W.M.
N.W. 1/4 of S.E. 1/4	12	3 N.	2 W.W.M.
N.E. 1/4 of S.E. 1/4	12	3 N.	2 W.W.M.
S.E. 1/4 of S.E. 1/4	12	3 N.	2 W.W.M.
S.W. 1/4 of S.E. 1/4	12	3 N.	2 W.W.M.
N.W. 1/4 of S.W. 1/4	12	3 N.	2 W.W.M.
N.E. 1/4 of S.W. 1/4	12	3 N.	2 W.W.M.
S.E. 1/4 of S.W. 1/4	12	3 N.	2 W.W.M.
S.W. 1/4 of S.W. 1/4	12	3 N.	2 W.W.M.

Application No. G-9218
Permit No. G 8615

Quarter/Quarter Description	Section	Township	Range
N.W. 1/4 of N.W. 1/4	13	3 N.	2 W.W.M.
N.E. 1/4 of N.W. 1/4	13	3 N.	2 W.W.M.
S.E. 1/4 of N.W. 1/4	13	3 N.	2 W.W.M.
S.W. 1/4 of N.W. 1/4	13	3 N.	2 W.W.M.
N.W. 1/4 of N.E. 1/4	13	3 N.	2 W.W.M.
N.E. 1/4 of N.E. 1/4	13	3 N.	2 W.W.M.
S.E. 1/4 of N.E. 1/4	13	3 N.	2 W.W.M.
S.W. 1/4 of N.E. 1/4	13	3 N.	2 W.W.M.
N.W. 1/4 of S.E. 1/4	13	3 N.	2 W.W.M.
S.W. 1/4 of S.E. 1/4	13	3 N.	2 W.W.M.
N.W. 1/4 of S.W. 1/4	13	3 N.	2 W.W.M.
N.E. 1/4 of S.W. 1/4	13	3 N.	2 W.W.M.
S.E. 1/4 of S.W. 1/4	13	3 N.	2 W.W.M.
S.W. 1/4 of S.W. 1/4	13	3 N.	2 W.W.M.
S.E. 1/4 of N.E. 1/4	14	3 N.	2 W.W.M.
N.W. 1/4 of S.E. 1/4	14	3 N.	2 W.W.M.
N.E. 1/4 of S.E. 1/4	14	3 N.	2 W.W.M.
N.W. 1/4 of S.W. 1/4	14	3 N.	2 W.W.M.
N.E. 1/4 of S.W. 1/4	14	3 N.	2 W.W.M.
N.W. 1/4 of N.E. 1/4	24	3 N.	2 W.W.M.

2,000 acres M/L

Application No. G-9218.
Permit No. G 8615

Remarks:.....

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.....Virginia R. Sheldon Recorder-Trea:
Signature of Applicant

City of Scappoose

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

In order to retain its priority, this application must be returned to the Water Resources Director with corrections on or before August 13, 19 79

RECEIVED
AUG 3 - 1979
WATER RESOURCES DEPT
SALEM, OREGON

WITNESS my hand this 12th *day of* June, 19 79

James E. Sexson *Water Resources Director*

By Robert G. Mucken
Robert G. Mucken

This instrument was first received in the office of the Water Resources Director at Salem, Oregon, on the 30th *day of* April, 19 79, *at* 8:00 *o'clock* A *M.*

Application No. G-9218 *Permit No.* G 8615

Application No. G-9218 Permit No. G 8615

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 MINIMUM 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 0.89 *cubic feet per second measured at the point of diversion from the well or source of appropriation, or its equivalent in case of rotation with other water users, from* a well.

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 further limited to a diversion of not to exceed ..... acre feet per acre for each acre irrigated during the irrigation season of each year;

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

The well shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon.

The works constructed shall include an air line and pressure gauge or an access port for measuring line, adequate to determine water level elevation in the well at all times.

The permittee shall install and maintain a weir, meter, or other suitable measuring device, and shall keep a complete record of the amount of ground water withdrawn.

The priority date of this permit is April 30, 1979

Actual construction work shall begin on or before August 31, 1980 *and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 19*80

Extended to Oct. 1985

*Complete application of the water to the proposed use shall be made on or before October 1, 19*81

Extended to Oct. 1985

WITNESS my hand this 31st *day of* August, *19*79

James E. Sexton
Water Resources Director

STATE OF OREGON

COUNTY OF COLUMBIA

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

CITY OF SCAPPOOSE
52432 SE FIRST
SCAPPOOSE, OREGON 97056

(503)543-7146

The specific limits for the use are listed below along with conditions of use.

APPLICATION FILE NUMBER: G-14103

SOURCE OF WATER: A WELL IN SCAPPOOSE CREEK BASIN

PURPOSE OR USE: MUNICIPAL

MAXIMUM RATE: 2.0 CUBIC FOOT PER SECOND

PERIOD OF USE: YEAR ROUND

DATE OF PRIORITY: JUNE 21, 1995

POINT OF DIVERSION LOCATION: NW 1/4 NE 1/4, SECTION 13, T 3N, R2W, W.M.; 870 FEET SOUTH & 1800 FEET WEST FROM NE CORNER, SECTION 13

THE PLACE OF USE IS LOCATED AS FOLLOWS:

WITHIN THE SERVICE AREA OF THE CITY

Measurement, recording and reporting conditions:

A. Before water use may begin under this permit, the permittee shall install a meter or other suitable measuring device as approved by the Director. The permittee shall maintain the meter or measuring device in good working order, shall keep a complete record of the amount of water used each month and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the permittee to report general water use information, including the place and nature of use of water under the permit.

B. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

Within ONE YEAR of permit issuance, the permittee shall submit a water management and conservation plan consistent with OAR Chapter 690, Division 86.

Ground water for use under this permit shall be produced only from the confined Troutdale Consolidated Gravel groundwater reservoir between approximately 100 feet and 200 feet below land surface.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this permit, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interferences.

STANDARD CONDITIONS

The wells shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge adequate to determine water level elevation in the well at all times.

The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test meeting the department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

The Director finds that the proposed use(s) of water described by this permit, as conditioned, will not impair or be detrimental to the public interest.

Actual construction of the well shall begin within one year from permit issuance, and shall be completed on or before October 1, 1998. Complete application of the water to the use shall be made on or before October 1, 1999.

Issued October 29, 1996

Martha O. Pagel, Director
Water Resources Department

STATE OF OREGON

COUNTY OF COLUMBIA

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

CITY OF SCAPPOOSE
JOHN HANKEN
PO BOX P (503) 543-7185
SCAPPOOSE, OREGON 97056

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: G-15135

SOURCE OF WATER: A WELL IN SCAPPOOSE CREEK BASIN (ORIGINALLY AUTHORIZED UNDER PERMIT G-8615)

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 0.557 CUBIC FOOT PER SECOND

PERIOD OF USE: YEAR ROUND

DATE OF PRIORITY: MARCH 10, 2000

WELL LOCATION: NE ¼ SW ¼, SECTION 13, T3N, R2W, W.M.; 1544.48 FEET NORTH & 2000.48 FEET EAST FROM SW CORNER, SECTION 13

THE PLACE OF USE IS LOCATED AS FOLLOWS:

WITHIN THE SERVICE BOUNDARY OF THE CITY

Measurement, recording and reporting conditions:

A. Before water use may begin under this permit, the permittee shall install a meter or other suitable measuring device as approved by the Director. The permittee shall maintain the meter or measuring device in good working order, shall keep a complete record of the amount of water used each month and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the permittee to report general water use information, including the place and nature of use of water under the permit.

B. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

Within 3 years of permit issuance, the permittee shall submit a Water Management and Conservation Plan consistent with OAR Chapter 690, Division 86. The Director may approve an extension of this timeline to complete the required Water Management and Conservation Plan.

The use may be restricted if the quality of the source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards due to reduced flows.

STANDARD CONDITIONS

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this permit, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interferences.

The wells shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge adequate to determine water level elevation in the well at all times.

The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test meeting the department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

The Director finds that the proposed use(s) of water described by this permit, as conditioned, will not impair or be detrimental to the public interest.

Complete application of the water to the use shall be made on or before October 1, 2007. If the water is not completely applied before this date, and the permittee wishes to continue development under the permit, the permittee must submit an application for extension of time, which may be approved based upon the merit of the application.

Within one year after complete application of water to the proposed use, the permittee shall submit a claim of beneficial use, which includes a map and report, prepared by a Certified Water Rights Examiner (CWRE).

Issued December 20, 2002

Paul R. Cleary, Director
Water Resources Department

REAL ESTATE TRANSACTIONS: Pursuant to ORS 537.330, in any transaction for the conveyance of real estate that includes any portion of the lands described in this permit, the seller of the real estate shall, upon accepting an offer to purchase that real estate, also inform the purchaser in writing whether any permit, transfer approval order, or certificate evidencing the water right is available and that the seller will deliver any permit, transfer approval order or certificate to the purchaser at closing, if the permit, transfer approval order or certificate is available.

CULTURAL RESOURCES PROTECTION LAWS: Permittees involved in ground-disturbing activities should be aware of federal and state cultural resources protection laws. ORS 358.920 prohibits the excavation, injury, destruction or alteration of an archeological site or object, or removal of archeological objects from public and private lands without an archeological permit issued by the State Historic Preservation Office. 16 USC 470, Section 106, National Historic Preservation Act of 1966 requires a federal agency, prior to any undertaking to take into account the effect of the undertaking that is included on or eligible for inclusion in the National Register. For further information, contact the State Historic Preservation Office at 503-378-4168, extension 232.

This document was prepared by Russell W. Klassen. If you have any questions about any of the statements contained in this document I am the most likely the best person to answer your questions. You can reach me at 1-503-378-8455 extension 266.

If you have questions about how to file a protest or if you have previously filed a protest and want to know the status, please contact Renee Moulun. Her extension number is 239.

If you have other questions about the Department or any of its programs please contact our Water Rights Information Group at extension 201. Address all other correspondence to: Water Rights Section, Oregon Water Resources Department, 158 12th ST. NE Salem, OR 97301-4172, Fax: (503)378-2496

STATE OF OREGON

COUNTY OF COLUMBIA

CERTIFICATE OF WATER RIGHT

This is to Certify, *That* City of Scappoose

of Scappoose, *State of* Oregon, *has made proof to the satisfaction of the STATE ENGINEER of Oregon, of a right to the use of the waters of* Gourley Creek, a tributary of Scappoose Creek and *a tributary of* Columbia River *for the purpose of* Municipal *under Permit No.* 5813 *of the State Engineer, and that said right to the use of said waters has been perfected in accordance with the laws of Oregon; that the priority of the right hereby confirmed dates from* January 24, 1923;

that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed

10.0 cubic feet per second;

The use hereunder for irrigation shall conform to such reasonable rotation system as may be ordered by the proper state officer.

The amount of water used for irrigation, together with the amount secured under any other right existing for the same lands, shall be limited to one-eightieth of one cubic foot per second per acre, or its equivalent in case of rotation.

A description of the lands irrigated under the right hereby confirmed, and to which such right is appurtenant (or, if for other purposes, the place where the water is put to beneficial use), is as follows: Northeast Quarter of the Southeast Quarter (NE¼SE¼) of Section Twelve (12), Township Three North, Range Two West of the Willamette Meridian, in the City of Scappoose, Columbia County, Oregon.

The right to the use of the water for irrigation purposes is restricted to the lands or place of use herein described.

Rights to the use of water for power purposes are limited to a period of forty years from the date of priority of the right, as herein set forth, subject to a preference right of renewal under the laws existing at the date of the expiration of the right for power purposes, as hereby confirmed and limited.

WITNESS the signature of the State Engineer, affixed this 30th *day of* November, *19*23.

Khan Lyver.
State Engineer.

Recorded in State Record of Water Right Certificates, Volume 6, *page* 5575.

*Permit No. 5813 CERTIFICATE NO. 5573

APPLICATION FOR A PERMIT

To Appropriate the Public Waters of the State of Oregon

I, City of Scappoose
(Name of Applicant)

of Scappoose (Postoffice), County of Columbia,

State of Ore., do hereby make application for a permit to appropriate the following described public waters of the State of Oregon subject to existing rights:

If the applicant is a corporation, give date and place of incorporation .....

1. *The source of the proposed appropriation is* Courley Creek (Scappoose Creek)
(Name of stream)

tributary of Scappoose Creek & Columbia River

2. *The amount of water which the applicant intends to apply to beneficial use is* .....

10 *cubic feet per second.*

3. *The use to which the water is to be applied is* .....
(Irrigation, power, mining, manufacturing, domestic supplies, etc.)

Municipal

4. *The point of diversion is located* .....
(Give distance and bearing to section corner)

being within the NW SE (Give smallest legal subdivision) *of Sec.* 17, *Tp.* 3 N (No. N. or S.)
R. 2 West (No. E. or W.), *W. M., in the county of* Columbia

5. *The* pipeline (Main ditch, canal or pipe line) *to be* - *miles in length, terminating in the* NE SE (Smallest legal subdivision) *of Sec.* 12, *Tp.* 3 N (No. N. or S.)
R. 2 W (No. E. or W.), *W. M., the proposed location being shown throughout on the accompanying map.*

6. *The name of the ditch, canal or other works is* .....

DESCRIPTION OF WORKS

DIVERSION WORKS—

7. (a) *Height of dam* 5 *feet, length on top* 80 *feet, length at bottom* 70 *feet; material to be used and character of construction* .....
(Loose rock, concrete, masonry, rock and brush, timber crib, etc., wasteway over or around dam)

Timber & Concrete.

(b) *Description of headgate* Sand filter box with wood pipe, valve and valve chamber.
(Timber, concrete, etc., number and size of openings)

* A different form of application is provided where storage works are contemplated. These forms can be secured without charge, together with instructions, by addressing the State Engineer, Salem, Oregon.

CANAL SYSTEM—

8. (a) *Give dimensions at each point of canal where materially changed in size, stating miles from headgate. At headgate: Width on top (at water line)* ..... *feet; width on bottom* ..... *feet; depth of water* ..... *feet; grade* ..... *feet fall per one thousand feet.*

(b) *At* ..... *miles from headgate. Width on top (at water line)* ..... *feet; width on bottom* ..... *feet; depth of water* ..... *feet; grade* ..... *feet fall per one thousand feet.*

.....

.....

.....

FILL IN THE FOLLOWING INFORMATION WHERE THE WATER IS USED FOR:

IRRIGATION—

9. *The land to be irrigated has a total area of* ..... *acres, located in each smallest legal subdivision, as follows:* .....
(Give area of land in each smallest legal subdivision which you intend to irrigate)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....
(If more space required, attach separate sheet)

POWER, MINING, MANUFACTURING, OR TRANSPORTATION PURPOSES—

10. (a) *Total amount of power to be developed* ..... *theoretical horsepower.*

(b) *Total fall to be utilized* ..... *feet.*
(Head)

(c) *The nature of the works by means of which the power is to be developed* .....

.....

(d) *Such works to be located in* ..... *of Sec.*.....,
(Legal subdivision)

Tp......, *R.*....., *W. M.*
(No. N. or S.) (No. E. or W.)

(e) *Is water to be returned to any stream?* .....
(Yes or No)

(f) *If so, name stream and locate point of return* .....

....., *Sec.*....., *Tp.*....., *R.*....., *W. M.*
(No. N. or S.) (No. E. or W.)

(g) *The use to which power is to be applied is* .....

.....

(h) *The nature of the mines to be served* .....

.....

MUNICIPAL SUPPLY—

11. *To supply the city of* Scappoose

Columbia (Name of) *County, having a present population of* 500,

and an estimated population of ..... *in 19*.....

(Answer questions 12, 13, 14 and 15 in all cases)

12. *Estimated cost of proposed works, $* 25,000.00

13. *Construction work will begin on or before* One yr. from date of application.

14. *Construction work will be completed on or before* Two years from date of application.

15. *The water will be completely applied to the proposed use on or before* Thirty years from the date of application.

Duplicate maps of the proposed ditch or other works, prepared in accordance with the rules of the State Water Board, accompany this application.

City of Scappoose
(Name of applicant)
By J. C. Watts, Mayor.
Attest: C. F. Cathcart, Recorder.

Signed in the presence of us as witnesses:

(1) J. E. Miller (Name), ... (Address of Witness)

(2) D. W. Price (Name), ... (Address of Witness)

Remarks: .....

STATE OF OREGON, }
County of Marion, } ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows:

Answers to Questions Nos. 4 & 5 and maps

In order to retain its priority, this application must be returned to the State Engineer, with corrections, on or before April 7, 1923.

WITNESS my hand this 6 *day of* March, 1923.

Percy A. Cupper,
State Engineer.

L.A.

5013(c)

3

Application No. 8815

Permit No. 5013

PERMIT

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF OREGON

District No.

This instrument was first received in the office of the State Engineer at Salem, Oregon, *on the* 24 *day of* January, *192*3, *at* 11:30 *o'clock* A *M.*

Returned to applicant for correction March 8, 1923

Corrected application received March 30, 1923

Approved: April 12, 1923

Recorded in Book No. 20 *of Permits, on Page* 5013

Percy A. Cupper
State Engineer.

1 map FR

$8.00

STATE OF OREGON, }
County of Marion, } *ss.*

This is to certify that I have examined the foregoing application and do hereby grant the same, subject to the following limitations and conditions: If for irrigation, this appropriation shall be limited to one-eightieth 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 right herein granted is limited to the appropriation of water from Courtney Creek for municipal supply.

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and not to exceed 10.0 *cubic feet per second, or its equivalent in case of rotation. The priority date of this permit is* January 24, 1923.

Actual construction work shall begin on or before April 12, 1927 *and shall thereafter be prosecuted with reasonable diligence and be completed on or before* June 1, 1927

Complete application of the water to the proposed use shall be made on or before October 1, 1929

WITNESS my hand this 12th *day of* April, 1923.

Percy A. Cupper.
State Engineer.

Permits for power development are subject to the limitation of franchise as provided in Section 5728, Oregon Laws, and the payment of annual fees as provided in Section 5883, Oregon Laws.

This form approved by the State Water Board, March 11, 1909.

STATE OF OREGON

COUNTY OF COLUMBIA

CERTIFICATE OF WATER RIGHT

This Is to Certify, *That* CITY OF SCAPPOOSE

of Scappoose 97056, *State of* Oregon, *has made proof to the satisfaction of the STATE ENGINEER of Oregon, of a right to the use of the waters of* Lazy Creek and South Fork Scappoose Creek

a tributary of Columbia River *for the purpose of* municipal

under Permit No. 25918 *of the State Engineer, and that said right to the use of said waters has been perfected in accordance with the laws of Oregon; that the priority of the right hereby confirmed dates from* November 24, 1958

that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed 4.0 cubic feet per second, being 1.5 c.f.s. from Lazy Creek and 2.5 c.f.s. from South Fork Scappoose Creek

or its equivalent in case of rotation, measured at the point of diversion from the stream.

The point of diversion is located in the S. Fk. Scappoose Cr.-NW¼ SE¼, Section 7, Lazy Cr.-SE¼ NW¼, Section 18, T. 3 N., R. 2 W., W. M., 1930 ft. North & 1970 ft. West, 1470 ft. South & 2680 ft. West, both from NE Corner, Section 18.

The amount of water used for irrigation, together with the amount secured under any other right existing for the same lands, shall be limited to ---------- *of one cubic foot per second per acre,*

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

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

NW¼ NW¼
Section 18
T. 3 N., R. 1 W., W. M.

S½ SW¼
NE¼ SE¼
S½ SE¼
Section 1

SE¼ SE¼
Section 2

E½ NE¼
N½ SE¼
SE¼ SE¼
Section 11
T. 3 N., R. 2 W., W. M.

All
Section 12

N½ NE¼
SW¼ NE¼
NW¼
N½ SW¼
SE¼ SW¼
W½ SE¼
Section 13

E½ NE¼
N½ SW¼
SE¼ SW¼
N½ SE¼
Section 14
T. 3 N., R. 2 W., W. M.

W½ NE¼
N½ NW¼
NE¼ SE¼
Section 15

W½ NW¼
Section 16

S½ NE¼
N½ NW¼
Section 17

NE¼ NE¼
Section 18

W½ NE¼
NE¼ NW¼
Section 24
T. 3 N., R. 2 W., W. M.

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 State Engineer, affixed this date. December 5, 1975

James E. Sexson
Water Resources Director XXXXXXXXXXXXX

Recorded in State Record of Water Right Certificates, Volume 34 *, page* 42700

42700

Permit No. 25918

*APPLICATION FOR PERMIT

To Appropriate the Public Waters of the State of Oregon

I, CITY OF SCAPPOOSE (Name of applicant)

of Scappoose, Oregon (Mailing address)

State of Oregon, do hereby make application for a permit to appropriate the following described public waters of the State of Oregon, SUBJECT TO EXISTING RIGHTS:

If the applicant is a corporation, give date and place of incorporation

1. The source of the proposed appropriation is Lazy Creek, a tributary of South Scappoose (Name of stream) Creek, and South Scappoose Creek, a tributary of the Columbia River

2. The amount of water which the applicant intends to apply to beneficial use is 8.0 cubic feet per second** as follows: Lazy Creek 3.0 c.f.s.; South Fork Scappoose Creek 5.0 c.f.s. (If water is to be used from more than one source, give quantity from each)

**3. The use to which the water is to be applied is Municipal water system (Irrigation, power, mining, manufacturing, domestic supplies, etc.)

4. The proposed points of diversion are to be located approximately as follows:

1957.6 2448
The point of diversion is located ..... ft. (N or S) and ..... ft. (E or W) from the corner of Lazy Creek - 1900 ft. S. and 800 Ft. W. of the N.E. Corner of Sect. 18, (Section or subdivision) T. 3 N., R. 2 W., W. M.; Columbia County

So. Fk. Scappoose Creek - 1,721 ft. N. and 196 ft. W. of S.E. Corner of Sect. 7, T. 3 N., R. 2 W., W. M.; Columbia County (If preferable, give distance and bearing to section corner)

(If there is more than one point of diversion, each must be described. Use separate sheet if necessary)

being within the ..... of Sec. ..... Tp. ..... (Give smallest legal subdivision) (N or S.)

R. ....., W. M., in the county of ..... (E. or W.)

5. The pipe line to be 30,000 feet (Main ditch, canal or pipe line) (Miles or feet)

in length, terminating in the approx. 680 ft. N. & 510 ft. W. Sec. the SE Corner of Sect 11 (Smallest legal subdivision) Tp. 3N (N or S.)

R. 2W (E. or W.), W. M., the proposed location being shown throughout on the accompanying map.

DESCRIPTION OF WORKS

Diversion Works—

6. (a) Height of dam 5 feet, length on top 30 feet, length at bottom 20 feet; material to be used and character of construction Concrete (Loose rock, concrete, masonry, rock and brush, timber crib, etc., wasteway over or around dam)

(b) Description of headgate Coarse bar racks and fine screening facilities; (Timber, concrete, etc., number and size of openings) sluice gates 18" sq. or 18" x 24"

(c) If water is to be pumped give general description No pumping; gravity diversions (Size and type of pump)

(Size and type of engine or motor to be used, total head water is to be lifted, etc.)

*A different form of application is provided where storage works are contemplated.

**Application for permits to appropriate water for the generation of electricity, with the exception of municipalities, must be made to the Hydroelectric Commission. Either of the above forms may be secured, without cost, together with instructions by addressing the State Engineer, Salem, Oregon.

3-39—Gil

25918

Canal System or Pipe Line—

7. (a) Give dimensions at each point of canal where materially changed in size, stating miles from headgate. At headgate: width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

(b) At ..... miles from headgate; width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

(c) Length of pipe ± 30,000 ft.; size at intake, Lazy Creek 8" So. Fk. 12" in.; size at ..... ft. from intake 12" ..... in.; size at place of use 12" ..... in.; difference in elevation between intake and place of use, 370 - City 220 - Reservoir. Is grade uniform? Pressure line below hydraulic gradient at all points Estimated capacity. 3.98 sec. ft.

8. Location of area to be irrigated, or place of use City of Scappoose, farm houses along route of pipe line, and area contiguous to Scappoose

Township North or South	Range E. or W. of Willamette Meridian	Section	Forty-acre Tract	Number Acres To Be Irrigated
T3N	R2W	18	NW¼ of NE¼	
T3N	2W	18	NE¼ of NE¼	
T3N	See Attached Map 2W	17	SW¼ of NE¼	
T3N	2W	17	SE¼ of NE¼	
T3N	2W	16	NW¼ of NW¼ SW¼ of NW¼	
T3N	2W	15	NW¼ of NW¼ NE¼ of NW¼	
T3N	2W	15	NW¼ of NE¼ SW¼ of NE¼	
T3N	2W	14	NW¼ of SW¼ SE¼ of SW¼	
T3N	2W	14	NW¼ of SE¼ NE¼ of SE¼	
T3N	2W	14	SE¼ of NE¼ NE¼ of NE¼	
T3N	2W	11	SE¼ of SE¼	—
T3N	2W	12	NW¼ of SW¼ SW¼ of SW¼	

(If more space required, attach separate sheet)

(a) Character of soil .....

(b) Kind of crops raised .....

Power or Mining Purposes—

9. (a) Total amount of power to be developed ..... theoretical horsepower.

(b) Quantity of water to be used for power ..... sec. ft.

(c) Total fall to be utilized ..... (Head) feet.

(d) The nature of the works by means of which the power is to be developed .....

.....

(e) Such works to be located in ..... (Legal subdivision) of Sec. ....., Tp. ..... (No. N. or S.), R. ..... (No. E. or W.), W. M.

(f) Is water to be returned to any stream? ..... (Yes or No)

(g) If so, name stream and locate point of return .....

....., Sec. ....., Tp. ..... (No. N. or S.), R. ..... (No. E. or W.), W. M.

(h) The use to which power is to be applied is .....

(i) The nature of the mines to be served .....

2918

CITY OF SCAPPOOSE
WATER DISTRIBUTION

TWP N or S	RGE E or W	SECTION	FORTY Ac. Th.
T3N	2W	12	NE¼ of NW¼
T3N	2W	12	SE¼ of NW¼
T3N	2W	12	NW¼ of NE¼
		12	SW¼ of NE¼
		12	NE¼ of NE¼
		12	SE¼ of NE¼
		12	NW¼ of SE¼
		12	SW¼ of SE¼
		12	NE¼ of SE¼
		12	SE¼ of SE¼
		12	NE¼ of SW¼
T3N	2W	12	SE¼ of SW¼
T3N	2W	1	SE¼ of SW¼
T3N	2W	1	SW¼ of SE¼
T3N	2W	1	NE¼ of SE¼
T3N	2W	1	SE¼ of SE¼
T3N	1W	18	NW¼ of NW¼
T3N	2W	13	NW¼ of NW¼
		13	SW¼ of NW¼
		13	NE¼ of NW¼
		13	SE¼ of NW¼
		13	NW¼ of NE¼
		13	SW¼ of NE¼
		13	NE¼ of NE¼
		13	NW¼ of SE¼
		13	SW¼ of SE¼
		13	NW¼ of SW¼
		13	NE¼ of SW¼
T3N	2W	13	SE¼ of SW¼
T3N	2W	24	NE¼ of NW¼

Municipal or Domestic Supply—

25918

10. (a) To supply the city of SCAPPOOSE

Columbia (Name of) County, having a present population of 960 in City & serving 400

and an estimated population of 3,000 in 19 60

(b) If for domestic use state number of families to be supplied

(Answer questions 11, 12, 13, and 14 in all cases)

11. Estimated cost of proposed works, $ 100,000

12. Construction work will begin on or before Contemplated spring 1953

13. Construction work will be completed on or before October 1953
So. Fk. intake in initial construction; Lazy Creek in future

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

So. Fk. Scappoose Creek, October 1953; Lazy Creek 5 years

CITY OF SCAPPOOSE
(Signature of applicant)

By City Recorder Stanifred Elder

Remarks: The proposed diversions herein outlined and the pipe lines, dams and appurtenances necessary to convey water to the City of Scappoose are predicated upon authorization and sale of bonds for the construction. The existing 5" wood stave pipe to Gourley Creek, a tributary of the South Fork of Scappoose Creek, is in poor repair and inadequate in capacity and must be replaced. The flow of the existing pipe line plus approximately 200 G.P.M. from a drilled well are together insufficient for the City's needs.

The hydraulic gradient of the proposed pipe line will be determined by elevation of existing distribution storage at 200 and proposed diversion at elevation 420. Should it be decided to direct connect the supply line to the distribution grid & "float" the reservoir on the line, at times of heavy draft the gradient will be steepened if and when the distribution reservoir empties.

STATE OF OREGON,
County of Marion, } ss.

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

In order to retain its priority, this application must be returned to the State Engineer with corrections on or before November 8, 1957 February 16, 1959 December 15th, 1958

WITNESS my hand this 9th day of May 1957

LEWIS A. STANLEY
STATE ENGINEER

By Chris L. Wheeler, Assistant James W. Carver, Jr.

eh eh

PERMIT

STATE OF OREGON, } ss.
County of Marion, }

This is to certify that I have examined the foregoing application and do hereby grant the same, SUBJECT TO EXISTING RIGHTS 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 4.0 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 Lazy Creek and South Fork Soappoose Creek, being 1.5 cfs from Lazy Creek and 2.5 cfs from South Fork Scappoose Creek

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 November 21, 1958

Actual construction work shall begin on or before March 16, 1960 and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1960

Complete application of the water to the proposed use shall be made on or before October 1, 1961

WITNESS my hand this 16th day of March, 1959

STATE ENGINEER

Application No. 29252

Permit No. 25918

PERMIT
TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF OREGON

This instrument was first received in the office of the State Engineer at Salem, Oregon, on the 26th day of November, 1952, at 8:00 o'clock A. M.

Returned to applicant:
December 15, 1958
May 2, 1927

Approved:
March 16, 1959

Recorded in book No. 70 of Permits on page 25918

LEWIS A. STANLEY
STATE ENGINEER

3
State Printing 8M50

STATE OF OREGON

COUNTY OF COLUMBIA

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

CITY OF SCAPPOOSE
PO BOX P (503) 543-7185
SCAPPOOSE, OREGON 97056

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: G-15792

SOURCE OF WATER: TWO WELLS IN JACKSON CREEK BASIN

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 2.90 CUBIC FEET PER SECOND, BEING 2.23 CFS FROM WELL 1 AND 0.67 CFS FROM WELL 2

PERIOD OF USE: YEAR ROUND

DATE OF PRIORITY: JULY 5, 2002

WELL LOCATION:

WELL 1: SE ¼ NW ¼, SECTION 7, T3N, R1W, W.M.; 380 FEET NORTH & 3700 FEET WEST FROM E1/4 CORNER, SECTION 7

WELL 2: SE ¼ NW ¼, SECTION 7, T3N, R1W, W.M.; 370 FEET NORTH & 3490 FEET WEST FROM E1/4 CORNER, SECTION 7

THE PLACE OF USE IS LOCATED AS FOLLOWS:

WITHIN THE SERVICE BOUNDARIES OF THE CITY OF SCAPPOOSE

Measurement, recording and reporting conditions:

A. Before water use may begin under this permit, the permittee shall install a meter or other suitable measuring device as approved by the Director. The permittee shall maintain the meter or measuring device in good working order, shall keep a complete record of the amount of water used each month and shall submit a report which includes the recorded water use

measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the permittee to report general water use information, including the place and nature of use of water under the permit.

B. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

The well(s) shall produce groundwater from the Troutdale gravel groundwater reservoir between approximately 160 and 195 below land surface.

The use may be restricted if the quality of the source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards due to reduced flows.

Within 2 years of permit issuance, the permittee shall submit a Water Management and Conservation Plan consistent with OAR Chapter 690, Division 86. The Director may approve an extension of this time line to complete the required Water Management and Conservation Plan. The time line for submittal of a plan under this permit does not alter the time lines for submittal of a plan under any other order of the Department.

STANDARD CONDITIONS

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this permit, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interferences.

The wells shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge adequate to determine water level elevation in the well at all times.

The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test meeting the department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

The Director finds that the proposed use(s) of water described by this permit, as conditioned, will not impair or be detrimental to the public interest.

Complete application of the water to the use shall be made on or before October 1, 2007. If the water is not completely applied before this date, and the permittee wishes to continue development under the permit, the permittee must submit an application for extension of time, which may be approved based upon the merit of the application.

Within one year after complete application of water to the proposed use, the permittee shall submit a claim of beneficial use, which includes a map and report, prepared by a Certified Water Rights Examiner (CWRE).

Issued September 15, 2003

Paul R. Cleary, Director
Water Resources Department

REAL ESTATE TRANSACTIONS: Pursuant to ORS 537.330, in any transaction for the conveyance of real estate that includes any portion of the lands described in this permit, the seller of the real estate shall, upon accepting an offer to purchase that real estate, also inform the purchaser in writing whether any permit, transfer approval order, or certificate evidencing the water right is available and that the seller will deliver any permit, transfer approval order or certificate to the purchaser at closing, if the permit, transfer approval order or certificate is available.

CULTURAL RESOURCES PROTECTION LAWS: Permittees involved in ground-disturbing activities should be aware of federal and state cultural resources protection laws. ORS 358.920 prohibits the excavation, injury, destruction or alteration of an archeological site or object, or removal of archeological objects from public and private lands without an archeological permit issued by the State Historic Preservation Office. 16 USC 470, Section 106, National Historic Preservation Act of 1966 requires a federal agency, prior to any undertaking to take into account the effect of the undertaking that is included on or eligible for inclusion in the National Register. For further information, contact the State Historic Preservation Office at 503-378-4168, extension 232.

Registration No. GR- 826

Certificate No. GR- 2419

Registration Statement

OF CLAIMANT OF RIGHT TO APPROPRIATE GROUND WATER

TO THE STATE ENGINEER OF OREGON:

I, City of Scappoose

of Scappoose (Mailing address) County of Columbia

State of Oregon, do hereby make application for a certificate of registration as evidence of a right to appropriate ground water.

1. **Source from which water is withdrawn is** Pump Well (Driving well, pump well, infiltration trench, or tunnel)

2. **Location is:** in Scappoose (Approximate distance and direction from nearest city or town)

and is more particularly described as follows:

(a) South - 725.51 Feet & West 529.78 feet from East ¼ corner of Sec. 12, T. 3N. R. 2W. (Give distance and bearing to center of section or other legal subdivision)

being within N.E. ¼ of S.E. ¼ (Smallest legal subdivision) of Sec. 12, Twp. 3N. (N. or S.), Rge. 2W. (E. or W.)

or (b) within limits of recorded platted property, town or city: 20 Feet West of East City Limits and 20 feet South of Oak St. Not subdivided

in Lot ____, Block ____ of ____ (Name of plat or addition)

____ (If within city or town, give name) County of Columbia

3. **Construction Work** was begun on 1950 (Date); was completed on June 1st (Date)

and the ground water claimed was first used for the purposes set out below on 1950 (Date)

since which time the water has been used intermittantly (Continuously or intermittently)

from 1950 (Date) to date (Date)

4. **Quantity of water claimed and used is** 50 gallons per minute; 81 ± acre feet per year.

5. **Purpose or Purposes for which water is used** Municipal Supply (Domestic, irrigation, municipal, manufacturing, industrial, etc.)

6. **Description of Well:** Depth 116 feet; Type Drilled (Dug or drilled)

diameter 8 inches. Elevation of ground at well site 32 (As near as known) feet, mean sea level.

Depth to water table 50 feet.

7. **Capacity of Well:** 200 g.p.m. with 25 feet drawdown.

300 g.p.m. with 35 feet drawdown.

Date of test June 1950

If Flowing Well: Measured discharge ____ g.p.m. on ____ (Date)

Shut-in pressure at ground surface ____ lbs. per sq. in. on ____ (Date)

Water is controlled by ____ (Cap, valve, etc.)

425—4-57

8. **Casing:** (Give diameter, commercial specifications and depth below ground surface of each casing size.)

8 inch diameter ..... from 32 to 116 feet

..... inch diameter ..... from ..... to ..... feet

..... inch diameter ..... from ..... to ..... feet

..... inch diameter ..... from ..... to ..... feet

Describe and show depth of shoe, plug, adapter, liner or other details: Gravel filled to 82 foot level

Perforated from 50 foot to 60 foot level

9. **Perforated Casings or Screens:**

Fine perforated from 50 foot to 60 foot levels ..... from ..... to .....
(Number per foot and size of perforations, or describe screen)

..... from ..... to .....

..... from ..... to .....

..... from ..... to .....

10. **Log of Well:** (Describe each stratum or formation clearly, indicate if water bearing, and give thickness and depth as indicated.)

MATERIAL	Thickness (Feet)	Depth to Bottom (Feet)

GR - 899 A

If log of well is not available, give name and address of driller. Steinman Bros. Drilling Co.

8332 S. E. 16th St., Portland, Oregon

11. **Infiltration Trench:** Covered or open .....

Dimensions: Length ..... ft. Minimum depth ..... ft. Maximum depth ..... ft.

Bottom width ..... ft. Discharge ..... g.p.m. Date of test .....

12. **Tunnel:** Type of lining .....

Dimensions: ..... (Length, course, and cross sectional size)

Position of water bearing stratum with reference to portal of tunnel .....

Log of tunnel: (Preceding table for log of well may be used, if desired. Give footage from portal and character of materials, as pertinent.)

13. **Pumping Equipment:**

(a) Pump Serial # OL 16651 5K326XA10A Model G.E. Motor# 5709201 (Make, type and size) Capacity ..... g.p.m.

(b) Motor H.P. 30 AT 1760 R.P.M. (Type and horsepower)

14. Location of area irrigated or to be irrigated, or place of use if for purposes other than irrigation.

Township North or South	Range E. or W. of Willamette Meridian	Section	Forty-acre Tract	Number Acres To Be Irrigated	Date of Reclamation
T3N	R2W	12	NE¼ of SE¼	Municipal	19

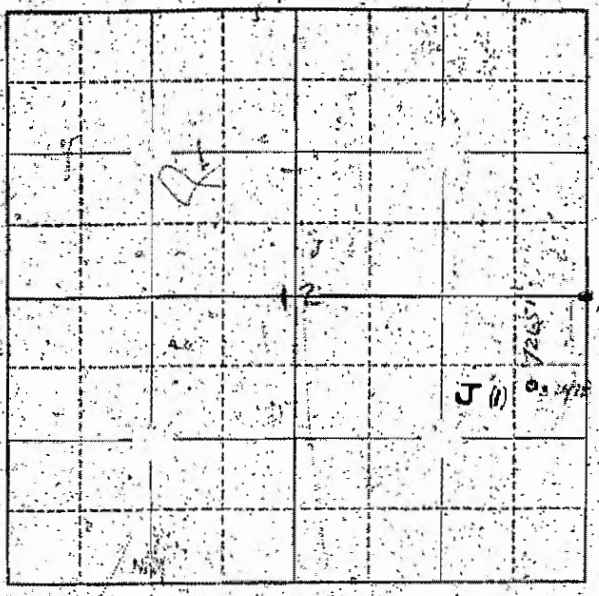
15. If the ground water supply is supplemental to an existing water supply, identification of any application for a permit, permit, certificate or adjudicated right to appropriate water made or held by the registrant.

Application for Water Rights on Scappoose Creek & Lacey Creek pending.

GR- 899 B

Township 3 N, Range 2 W, W.M.

North



Locate well and acreage of irrigated land on plat.

Scale: 2" = 1 Mile

STATE OF OREGON }
County of ..... } ss.

I, Virginia R. Sheldon, being first duly sworn, do hereby certify that I have read the foregoing Registration Statement and that all of the items therein contained are true to the best of my knowledge and belief.

Virginia R. Sheldon
(Signature of Registrant)

Subscribed and sworn to before me this 13 day of ..... 19 ..

My commission expires COMMISSION EXPIRES FEB. 29, 1960 Winifred Eckes
(Notary Public)

(SEAL)

CERTIFICATE OF REGISTRATION

STATE OF OREGON }
County of Marion } ss.

This is to certify that the foregoing Registration Statement was received in the office of the State Engineer on the 21st day of January 19 58, at 8:00 o'clock A.M. and has been duly recorded in said office in Book No. 5 of Registration Statements on page 899

Witness my hand this 27 day of May 19 58

Leslie M. Gilbert
(State Engineer)

By .....
(Deputy)

GR - 800 C

Instream Water Right

STATE OF OREGON

COUNTY OF COLUMBIA

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

STATE OF OREGON
WATER RESOURCES DEPARTMENT
SALEM, OREGON 97310

confirms the right to use the waters of GOURLAY CREEK, a tributary of SOUTH SCAPPOOSE CREEK, in the WILLAMETTE BASIN to maintain an instream flow for the purpose of SUPPORTING AQUATIC LIFE.

The right is for flows to be maintained IN GOURLAY CREEK AND ITS TRIBUTARIES ABOVE ITS MOUTH, (NE 1/4, SECTION 17, T 3 N, R 2 W, W.M.), MEASURED AT OR NEAR THE MOUTH.

The right is established under Oregon Revised Statutes 537.346.

The date of priority is MAY 25, 1966.

The right is limited to not more than the amounts during the time periods listed below:

Period	Flows (cubic feet per second)
OCT 1 - OCT 31	0.5
NOV 1 - MAY 31	10.0
JUN 1 - JUL 15	2.0
JUL 16- SEP 30	0.5

This instream water right shall not have priority over domestic or livestock uses or waters to be legally stored or legally released from storage.

Witness the signature of the Water Resources Director affixed this 1st day of February, 1989.

William H. Young
Water Resources Director

Recorded in State Record of Water Right Certificates number 59519.

MF104

Instream Water Right

STATE OF OREGON

COUNTY OF COLUMBIA

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

STATE OF OREGON
WATER RESOURCES DEPARTMENT
SALEM, OREGON 97310

confirms the right to use the waters of SOUTH SCAPPOOSE CREEK, a tributary of SCAPPOOSE CREEK, in the WILLAMETTE RIVER BASIN to maintain an instream flow for the purpose of SUPPORTING AQUATIC LIFE.

The right is for flows to be maintained IN SOUTH SCAPPOOSE CREEK AND ITS TRIBUTARIES ABOVE THE CONFLUENCE OF RAYMOND CREEK, (SE 1/4 SECTION 15, T 3 N, R 2 W, W.M.), MEASURED AT OR NEAR THE CONFLUENCE OF SOUTH SCAPPOOSE AND RAYMOND CREEKS.

The right is established under Oregon Revised Statutes 537.346.

The date of priority is MAY 25, 1966.

The right is limited to not more than the amounts during the time periods listed below:

Period	Flows (cubic feet per second)
OCT 1 - OCT 31	5
NOV 1 - MAY 31	25
JUN 1 - JUN 30	12
JUL 1 - SEP 30	5

This instream water right shall not have priority over domestic or livestock uses or waters to be legally stored or legally released from storage.

Witness the signature of the Water Resources Director affixed this 1st day of February, 1989.

William H. Young
Water Resources Director

Recorded in State Record of Water Right Certificates number 59688.

MF161

Appendix D

City of St. Helens and Columbia County Letters of Invitation to Review

Kennedy/Jenks Consultants
Engineers & Scientists
200 S.W. Market Street, Suite 500
Portland, Oregon 97201
503-295-4911
FAX: 503-295-4901

18 March 2011

Dale Goodman, Director of Public Works
City of St. Helens
P.O. Box 278
St Helens, Oregon 97051

Subject: Water Management and Conservation Plan for Scappoose, Oregon
K/J 0791018*00

Dear Dale:

As part of the water rights permit process, this Water Management and Conservation Plan has been prepared to document the water supply needs and proposed management practices for the City of Scappoose, Oregon.

The City of Scappoose wishes to provide this information to you and solicits your input regarding the contents of this plan. Please provide written comments by 21 April 2011. You may submit written comments to Gordon Munro, City Engineer at the following address:

Kennedy/Jenks Consultants
200 SW Market Street, Suite 500
Portland, OR 97201

You may also contact Gordon Munro by telephone or email if you have any questions at 503-295-4911, gordonmunro@kennedyjenks.com .

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Gordon Munro
City Engineer

Enclosure

cc: Sue Nelson-Mullit, Engineering Supervisor
Neal Shepard, Public Works Supervisor

Kennedy/Jenks Consultants
Engineers & Scientists
200 S.W. Market Street, Suite 500
Portland, Oregon 97201
503-295-4911
FAX: 503-295-4901

9 March 2011

Mr. Glenn Higgins
Land Development Services
Court House Room 105
Columbia County
230 Strand Street
St Helens, Oregon 97051

Subject: Water Management and Conservation Plan for Scappoose, Oregon
K/J 0791018*00

Dear Mr.Higgins:

As part of the water rights permit process, this Water Management and Conservation Plan has been prepared to document the water supply needs and proposed management practices for the City of Scappoose, Oregon.

The City of Scappoose wishes to provide this information to you and solicits your input regarding the contents of this plan. Please provide written comments by 9 April 2011. You may submit written comments to Gordon Munro, City Engineer at the following address:

Kennedy/Jenks Consultants
200 SW Market Street, Suite 500
Portland, OR 97201

You may also contact Gordon Munro by telephone or email if you have any questions at 503-295-4911, gordonmunro@kennedyjenks.com.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Gordon Munro
City Engineer

Enclosure

cc: file