

Name CRYSTAL SPRINGS WATER DISTRICT  
By P. O. Box 35 186  
Address Hood River, Oregon 97031

Date filed March 3, 1969  
Priority March 3, 1969  
Action suspended until C58

Returned to applicant  
Date of approval August 25, 1969

#### CONSTRUCTION

Date for beginning August 25, 1970  
Date for completion October 1, 1971  
Extended to 10-1-78, 10-1-83, 10-1-88  
10-1-93, 10-1-98, 10-1-58  
Date for application of water October 1, 1972  
Extended to 10-1-78, 10-1-83, 10-1-88  
10-1-93, 10-1-98, 10-1-58

#### PROSECUTION OF WORK

Form "A" filed Nov. 12, 1969  
Form "B" filed October 24, 1972  
Form "C" filed

#### FINAL PROOF

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Date certificate issued MAY 31 2017  
2-23-2023

Application No. 45826

Permit No. 34196

Certificate No. 93120 partial 97597

Stream Index, Page No. 4-24

Map in C-24-13

SEE ALSO: S-13490  
S-39422

Date

To Whom

#### ASSIGNMENTS

Address

Volume

Page

#### REMARKS

3.5 cfs from Crystal Springs for municipal use

OCT 6 1972 CARD FOR C

CARD FOR BC OCT 12 1983

CARD FOR BC OCT 26 1988

Spou 104 pg 984 Partial Perfection of W.R. Permit S-34196 5/31/2017

#### FEES PAID

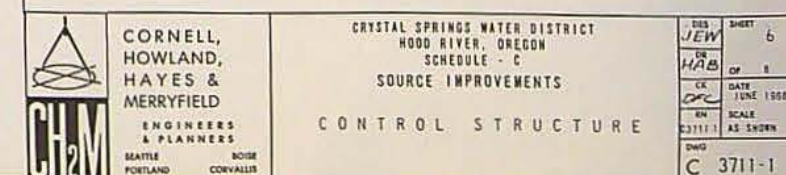
Date	Amount	Receipt No.
3-3-69	30.00	13414
3-7-69	1.00	13462
2-10-93	100.00	107969
EXT 3-1-99	106.00	28040
	\$1 Cert. r'ee	

#### FEES REFUNDED

Date	Amount	Check No.
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COBU MAP # 1060 (Folder H)  
# 1060A (Folder H)  
(7-1-2022)

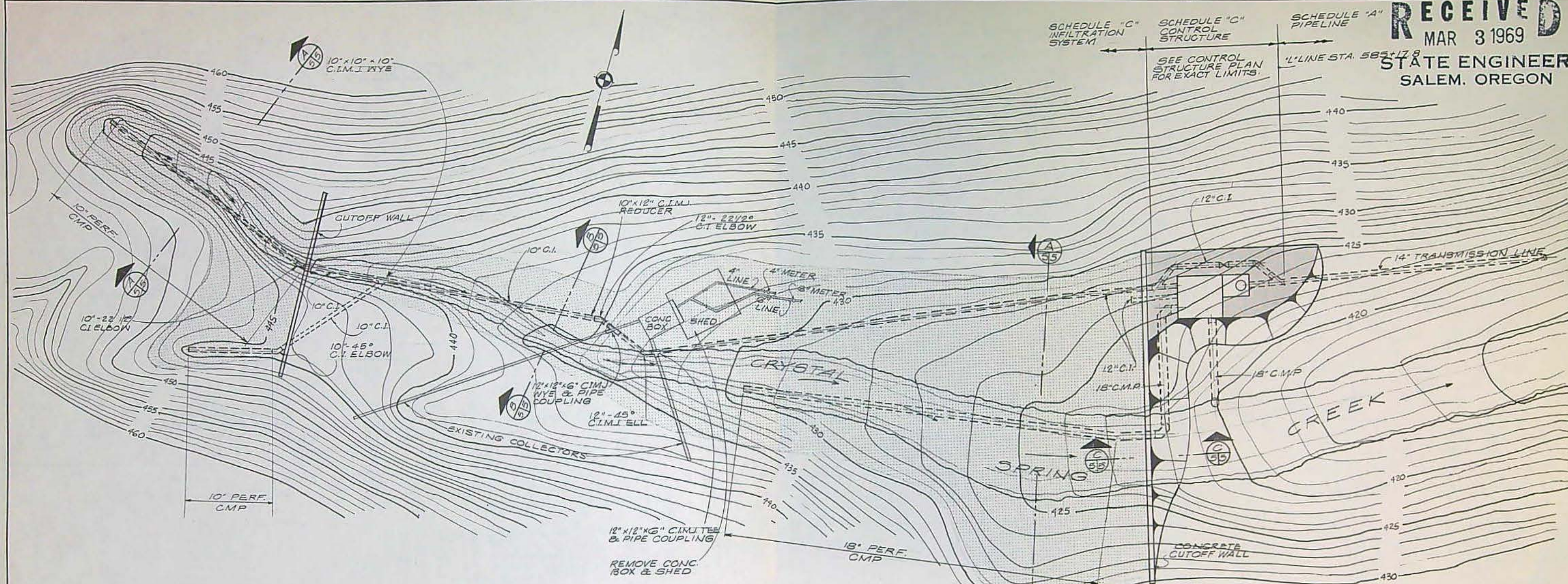






RECEIVED  
MAR 3 1969

STATE ENGINEER  
SALEM, OREGON



Application No. 45826  
Permit No. 34196

1" MIN. DEPTH OF IMPORTED IMPERVIOUS MATERIAL AS DIRECTED BY ENGINEER

2' DEPTH OF EXCAVATED  
MATERIAL AND AVAILABLE  
LOCAL GRAVEL AS  
DIRECTED BY ENGINEER

ORIGINAL GROUND  
SURFACE AND  
CREEK BED.

1" MIN DEPTH OF WASHED FILTER  
GRAVEL ABOVE AND ALONG  
SIDES OF PERF. CMP

10" OR 18" PERFORATED  
GALV. CMP

TRENCH SLOPES AS REQ'D.

EXCAVATE CREEK BED TO  
ROCK OR IMPERVIOUS LAYER  
EXCAVATION AND PIPE  
INVERTS TO BE DETERMINE  
IN FIELD BY ENGINEER.

TYPICAL SECTION (A)

N.T.S.

1" MIN. DEPTH OF IMPORTED  
IMPERVIOUS MATERIAL  
AS DIRECTED BY ENGINEER

EXISTING GROUND  
SURFACE AND  
CREEK BED

APPROX. 2' DEPTH  
OF AVAILABLE LOCAL  
GRAVEL & ROCK  
AS DIRECTED  
BY ENGINEER


10" C.I.  
PIPE


TRENCH  
AS REQUIRED

TYPICAL SECTION (B)

N.T.S.

### LEGEND

 GRAVEL WALK AROUND  
CONTROL STRUCTURE

 APPROX. AREA OF IMPERVIOUS  
FILL MATERIAL

2' DEPTH OF AVAILABLE  
LOCAL GRAVEL AND  
EXCAVATED MATERIAL

1" MIN. DEPTH OF IMPORTED IMPERVIOUS MATERIAL.  
BOTTOM OF IMPERVIOUS MATERIAL TO BE MIN.  
(OF ONE FOOT ABOVE LIP OF OVERFLOW WEIR  
IN CONTROL STRUCTURE

MIN. 1' DEPTH  
OF WASHED  
FILTER  
GRAVEL

18" PERF.  
CMP

LOCATE PERF. CMP /  
AT ELEVATIONS AS  
DIRECTED BY ENGINEER  
CONC. CUTOFF WALL  
12" WIDE, W/ REINF. OF  
#5 @ 12" EW

12" WIDE, W/ REINF. OF  
#5 @ 12" E.W.

BACKFILL & RIPRAP DOWNSTREAM SIDE OF CUTOFF WALL W/ GRAVEL AND LARGE ROCKS FROM SITE. (TYP. ALL CUTOFF WALLS)

MATCH EXIST. CREEK BED GRADE

MINIMUM 1/2' COVER OVER 18" CMP TO CONTROL STRUCTURE.

CROSS-CHANNEL PROFILE  
- OF CUTOFF WALL TO BE  
DETERMINED BY ENGINEER  
IN FIELD

WATERTIGHT RUBBER BASKETED COUPLINGS FOR  
18" CMP FROM CUTOFF WALL TO CONTROL STRUCTURE

EXCAVATE FOR CUTOFF  
WALL AS DIRECTED BY  
ENGINEER

SECTION C

APPROX SCALE- 1" = 5'

THIS PRINT IS REDUCED TO ONE HALF  
OF THE ORIGINAL SCALE

IF THE SCALE READS:  
1" = 1'-0" USE  $\frac{1}{2}$ " = 1'-0" OR 1" = 10' USE 1" = 20'



**CORNELL,  
HOWLAND,  
HAYES &  
MERRYFIELD**

**ENGINEERS  
& PLANNERS**

SEATTLE BOISE  
PORTLAND COVALLIE

CRYSTAL SPRINGS WATER DISTRICT  
HOOD RIVER, OREGON  
SCHEDULE - C  
SOURCE IMPROVEMENTS  
INFILTRATION SYSTEM  
PLAN AND SECTIONS

DIES <b>JEW</b>	SHEET 5
OR <b>HAB</b>	OF 8
CK <b>OFF</b>	DATE JUNE 1980
EN 3711-1	SCALE AS SHOWN
DWG C 3711-1	



Application No. 45826

# CRYSTAL SPRINGS WATER DISTRICT

## WATER SYSTEM ANALYSIS

MARCH 1991

**RECEIVED**

FEB 27 2001

WATER RESOURCES DEPT.  
SALEM, OREGON

LEE ENGINEERING, INC.  
1300 John Adams Street  
Oregon City, Oregon 97045  
(503) 655-1342

#4



# CRYSTAL SPRINGS WATER DISTRICT

## WATER SYSTEM ANALYSIS

MARCH 1991



LEE ENGINEERING, INC.  
1300 John Adams Street  
Oregon City, Oregon 97045  
(503) 655-1342



# CRYSTAL SPRINGS WATER DISTRICT

## WATER SYSTEM ANALYSIS

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## CHAPTER 1

### INTRODUCTION

#### 1.1 - BACKGROUND

The Crystal Springs Water District is an Oregon municipal corporation operating under Oregon Revised Statutes to provide domestic water to its customers. The District is responsible to take all reasonable precautions to assure that the water delivered to its users does not exceed maximum contaminant levels, to assure that the facilities are free of health hazards, and to assure the water system's operation and maintenance is performed in accordance with applicable rules and regulations and standard practices.

The Crystal Springs Water District was formed in 1963 when the privately owned Crystal Springs Water Company was dissolved. The Water Company was originally formed in 1930 when certificates of stock were issued to the customers of the Water Company. Each customer purchased five shares of stock at \$50 par value per share. Two thousand shares were initially issued, the first certificate being issued to J. J. Annala on October 13, 1930. When reorganization took place, certificates of stock were recalled. Any outstanding certificates are considered to have no value. The reorganization that took place was primarily to improve the financial base of the water system.

Under the new organization, the Crystal Springs Water District, through Hood River County, inquired into the possibility for obtaining assistance for a study under the County Planning Program. Federal Urban Planning Assistance grants were subsequently obtained for the purpose of preparing an overall water supply plan that provided for the future water needs of homes and non-farm development throughout the District's service area. The plan was completed in 1963. Many recommendations for improving the water supply were made and those improvements have, for the most part, been completed. The improvements included a new intake at Crystal Springs, two new water storage reservoirs, pressure regulating facilities, and transmission mains. Due to limitations of funds, however, not all transmission mains have been constructed, particularly in the northern portion of the District.

In 1989, the governing board of the Water District, consisting of five elected individuals, recognized a need to upgrade the planning for future water system improvements. Numerous changes have occurred since 1963, including additional demands of the system from new connections, and new regulations requiring a



more comprehensive review of the water source and transmission of a safe, potable water supply.

Based on the need for a new study, the District solicited engineering proposals from a variety of firms to provide engineering services in preparing a new report for future needs. During the spring of 1990, the District retained Lee Engineering, Inc. to provide that assistance.

### 1.2 - PURPOSE

The stated goals of the District are to:

1. Meet the needs of the consumer.
2. Comply with federal, state and local regulations.
3. Work within a reasonable but realistic budget.

The purpose of this report is to assist the District in meeting these goals.

### 1.3 - SCOPE

The various elements of the District's water system which need to be addressed, in order that the above goals can be met, include:

1. Spring Recharge Area
2. Water supply, including spring and spring site.
3. System water demands.
4. Storage.
5. Distribution.
6. Regulatory requirements.
7. Administrative tools, including computer modeling.
8. Financial considerations.
9. Record keeping.



The scope of this report will include an analysis of each of the above items except Items 8 and 9. The analysis will include research and reconnaissance of data for each of the items, and analysis of the existing situation, projection for future situations, and an analysis of the financial impacts for each of the issues. Items 8 and 9 will be discussed in separate reports.

#### 1.4 - AUTHORIZATION

Authorization to proceed with work on this project was given by the Crystal Springs Water District at its regular board meeting on February 22, 1990. Because of budget constraints, some work was authorized during fiscal year 1989-1990, with the remaining work to follow in fiscal year 1990-1991. Clarification as to the various tasks to be performed in each fiscal year was given during a special meeting of March 12, 1990.

The authorizations for work are generally outlined in a Statement of Qualifications and Proposal for Water System Analysis and General Engineering Services for the Crystal Springs Water District, dated January 24, 1990, submitted by Lee Engineering, Inc. Additional understandings with regard to the scope of work are covered in a letter to the Board of Commissioners dated March 29, 1990.

#### 1.5 - ACKNOWLEDGMENTS

Lee Engineering, Inc. wishes to acknowledge its appreciation to the Board and Staff of the Crystal Springs Water District. Individuals who have had direct involvement in the preparation, review, and implementation of this report include:

##### A. Commissioners

Mike McCarthy, President  
Gale Scobee, Vice President  
Tim Burton, M.D., Secretary  
Lyle McAlexander, Treasurer  
Gary Willis, Commissioner and Past President

##### B. District Staff

Tom Hachtel, Manager  
Shirley Cree, Office  
Mike Muma, Foreman



C. Lee Engineering, Inc.

F. Duane Lee, President  
Walt Mintkeski, Associate  
Jim Shaver, E.I.T.  
Nancy Jelinek, Secretary

In addition, special acknowledgment goes to Carl Goebel of Economic Resource Associates, who prepared a separate report dealing with the financial aspects of this engineering report.



## CHAPTER 2

### EXISTING AND FUTURE CONDITIONS IN THE PLANNING AREA

#### 2.1 - PLANNING AREA

##### 2.1.1 - EXISTING SERVICE AREA

The existing service area is bounded on the north by U.S. Highway 30 near the Columbia River and extends southerly along Oregon Highway 35 for a distance of approximately 20 miles. The service boundary extends east and west of Highway 35 one to four miles in each direction. The rural communities served include Pine Grove, Odell, Mt. Hood, Parkdale, and the upper Hood River Valley. The current Crystal Springs Water District boundary is shown in Figure 2.1.

##### 2.1.2 - FUTURE SERVICE AREA

Because of existing capacity and ability to serve, it is possible for the Water District to extend its service boundaries. Proposed changes in the existing boundaries are noted also on Figure 2.1. The proposed future service areas are not large in extent and are proposed primarily to assist the existing rural residential neighborhoods to improve their existing domestic water supply. In many of these areas, wells have proved to be unsatisfactory for normal household use.

An approximately 1/2 square mile area directly east of Booth Hill is recommended to be removed from the District boundaries. It is too high in elevation to be adequately served and there are no residents in this area in current need of water service. The area is zoned primary forest and it is unlikely that any future service for this area will be required.

##### 2.1.3 - OTHER WATER SERVICE AGENCIES

There are two other water companies which serve domestic water and three irrigation companies which serve irrigation water within the boundaries of the Crystal Springs Water District. However, in the legal description for the Water District, the Parkdale Water Company has been excluded from the boundaries and therefore is not formally a part of the District, even though the boundaries totally encompass Parkdale. Therefore, if Parkdale is to be served by Crystal Springs at some future date, it will need to be annexed to the District.



Currently, the Odell Water Company serves the community of Odell. However, no formal boundaries between Crystal Springs and the Odell Water Company exist. Most of the boundaries have been agreed to informally and are based primarily on the locations of waterlines owned by the Odell Water Company at the time of the formation of the Crystal Springs Water District. Recently, the Odell Water Company provided water service to two lots within a new business park north and west of Odell. The Water District is providing water service to the remainder of the Weber Business Park. Division of service was agreed to orally between the owners of the Odell Water Company and the Crystal Springs Water District.

The Middle Fork Irrigation Company, East Fork Irrigation Company, and the Mt. Hood Irrigation District provide irrigation water for farming and residential use, including gardens and lawn sprinkling, within the District. In the vicinity of Parkdale, the irrigation company also provides some fire protection through connection of fire hydrants to the high pressure irrigation line. Because of the ready availability of irrigation waters, Crystal Springs Water District does not experience the high summer time peak demands one might normally expect of a domestic water system.

At some future date, stimulated primarily by increasing federal and state regulations concerning water quality, the communities of Odell and Parkdale may find it advantageous to receive water from the Crystal Springs Water District. If that should occur, the District can expect an immediate increase in demand upon its existing system. Based on projections for the next 20 years, the Crystal Springs water system has the capacity to serve these two areas in addition to its existing customers and projected future growth.

## 2.2 - POPULATION PROJECTIONS

In 1963, when the District was first formed, the population connected to the water system was estimated to be approximately 2,500 people. In 1990, the Crystal Springs Water District is estimated to be serving approximately 4,500 people. Increase in population is occurring at the rate of about 40 to 50 new connections per year. Each connection is assumed to have approximately 2.3 to 2.4 people per household.

The overall population statistics for Hood River County and selected census tracts are shown on Table 2.1. For Hood River County overall, the population for 1970 was estimated at 13,187 people. In 1990, the population had increased to 16,903. Population growth overall for the County has been slightly greater than 1% per year.



TABLE 2.1

CRYSTAL SPRINGS WATER DISTRICT  
WATER SYSTEM ANALYSIS  
HOOD RIVER COUNTY ZONING

<u>Item</u>	<u>Classification</u>	<u>Symbol</u>	<u>Housing Density</u>
1.	Rural Residential	RR	1/2 ac. to 5 ac. per lot
2.	Medium Density Residential	R1-7500	7,500 S.F. per lot
3.	Industrial	M1	None Set
4.	Light Industrial	M2	None Set
5.	Commercial	C1	None Set
6.	Exclusive Farm Use	EFU	20 ac.
7.	Forest	F1	40 ac.
8.	Primary Forest	F2	40 ac. and 80 ac.
9.	Natural Area	--	None



Analysis of the anticipated growth for the Crystal Springs Water District indicates a more rapid growth rate of approximately 3% per year. The reason the water district has a faster growth rate than the County is the fact that many of the households within the District are still on their own individual well water supplies. As those well water supplies age, considerable expense is necessary to maintain them or drill new wells. When this occurs, those individuals normally connect to the District's water supply system.

It is also likely that future service will be extended to the Odell Water Company and the Parkdale Water Company. Therefore, it is anticipated that the overall growth within the District will exceed the anticipated population growth within Hood River County.

In conclusion, it is anticipated that the total population served by the Crystal Springs Water District will be approximately 5,900 people by the year 2010.

### 2.3 - EMPLOYMENT TRENDS

The primary employment base within the water district centers around fruit farming and timber. The employment base has been relatively stable. Although there have been some increases in farming activities, the increase in productivity through automation has tended to offset the need for additional farm labor. For purposes of this study, there is no anticipation for major changes in the employment situation within the Crystal Springs Water District boundaries.

### 2.4 - PRESENT AND FUTURE LAND USE

The present and future land use in the study area is shown graphically in Figure 2.1. Overall land use is controlled by Hood River County through the adoption of the "Comprehensive Land Use Plan - 1984 - Hood River County." The plan is the basic instrument used for County land use planning. It has the effect of law. It is utilized to control and direct land use and development activities on private lands within the County.

The Comprehensive Plan land use designations as shown on the County's Comprehensive Plan are also shown in the legend on Figure 2.1. A review of the current and future land use designations shows that the majority of the service area is and will continue to be farm land.

Other common land uses include primary forest, forest land, and rural residential. There are also some minor land uses, including medium density residential, industrial, commercial and environmental protection.



The primary density of land use varies with the zoning designation (see Table 2.1). For example, rural residential densities vary from 0.5 to 5 acres per house. Farm densities are projected to be 20 to 40 acres per farm. Only one residential house is allowed per farm, except for migrant housing. Densities for forest lots vary from 20 to 40 acres. Each of these densities will play an important role on the amount of water anticipated to be served for domestic purposes. Ultimate densities as outlined in the Comprehensive Plan will be considered when analyzing the capacity of the existing pipe network for the water district.

A summary of the land use designations and their densities is shown in Table 2.2.

TABLE 2.2

CRYSTAL SPRINGS WATER DISTRICT  
WATER SYSTEM ANALYSIS

POPULATION DATA

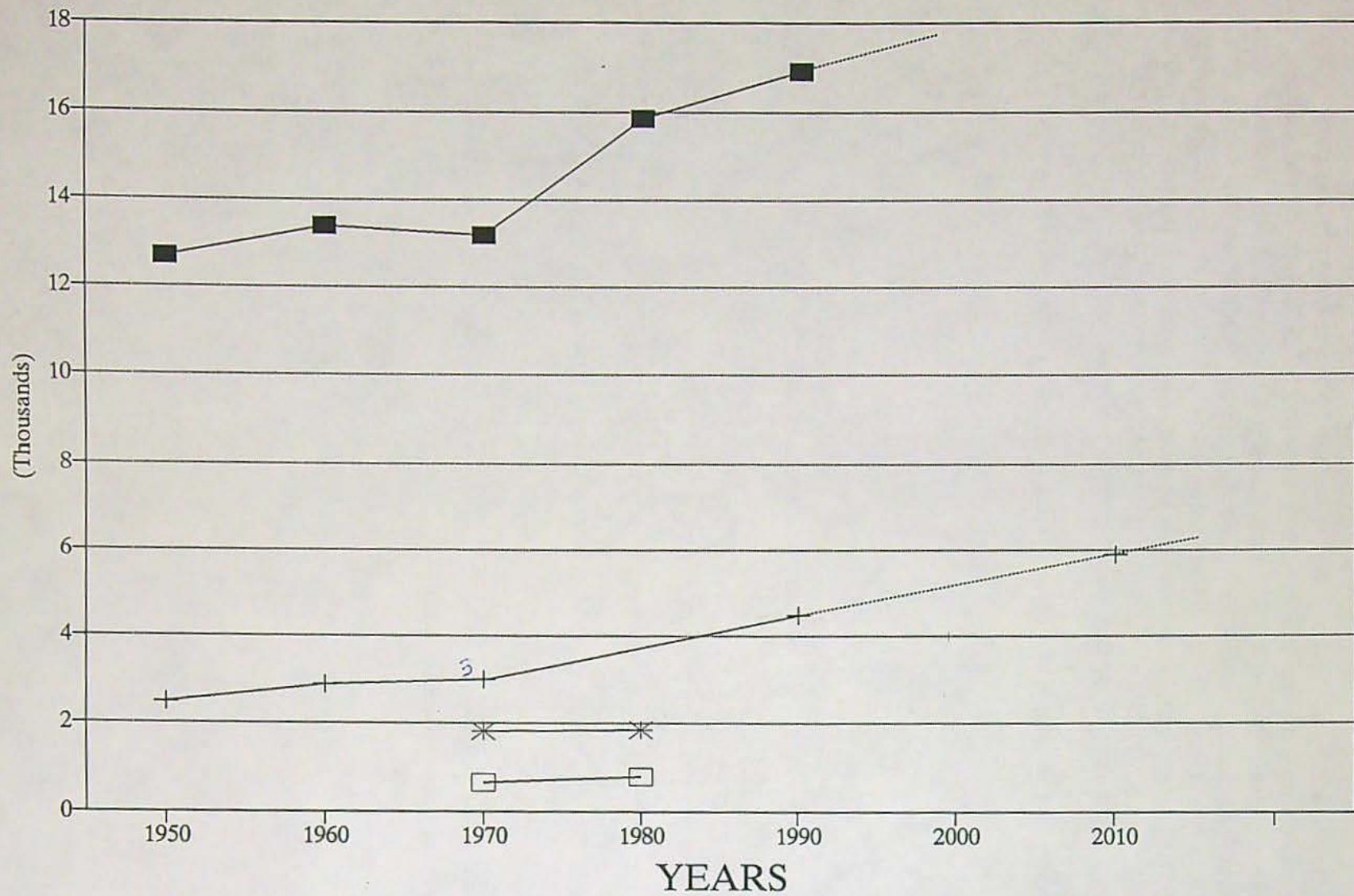
CENSUS DISTRICT	POPULATION					HOUSING UNITS			PERSONS PER HOUSE		
	1950	1960	1970	1980	1990	1970	1980	1990	1970	1980	1990
HOOD RIVER CO.	12700	13400	13187	15835	16903	3091	3653	N.A.	--	--	--
HOOD RIVER - CITY			3991	4329	--	1607	1953	N.A.	2.48	2.22	--
ODELL			2963	3846	--	1825	1865	N.A.	1.62	2.06	--
PARKDALE			1140	1575	--	663	809	N.A.	1.41	2.38	--

\*Does not appear to include housing units inside city limits.



# CRYSTAL SPRINGS WATER DISTRICT

## FIG. 2.1 - POPULATION PROJECTIONS



■ H.R.CTY.    + C.S.W.D.    \* ODELL    □ PARKDALE



TABLE 2.3

1144DENS.WQ1

07-Mar-90

# CRYSTAL SPRINGS WATER DISTRICT ULTIMATE POPULATION PROJECTION

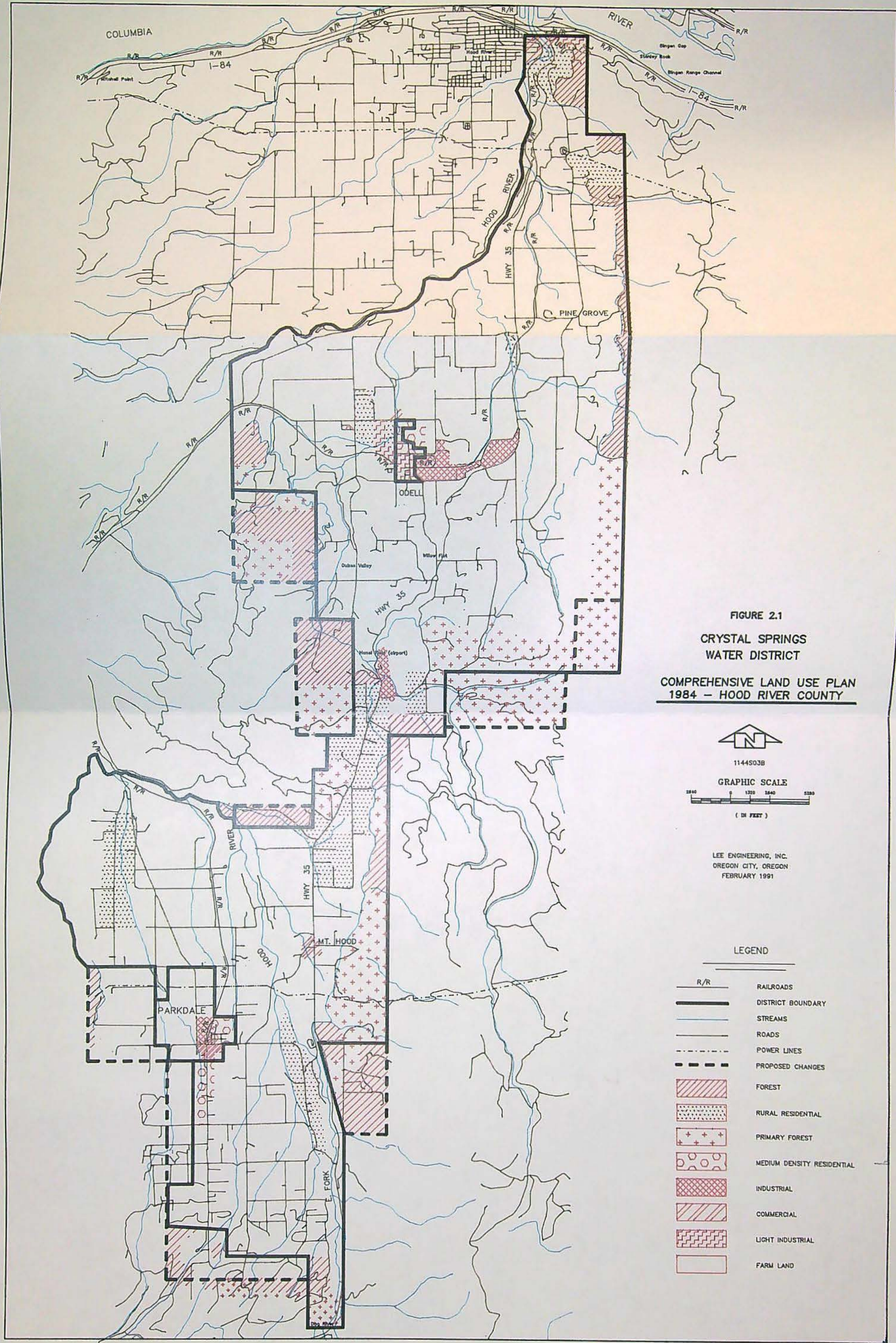
LAND USE DESIGNATION	LOT SIZE (ACRES)	AREA (ACRES)				EST'D. DWELLINGS(5)	TOTAL AREA	PEOPLE CSWD(6)
		CSWD(1)	NEW BRDR.(2)	ODELL(3)	PARK.(4)			
FOREST	40	1016	1335			58.8	2351	147
RURAL RES.	2.5	1650				660.0	1650	1650
PRIM. FOREST	80	2200	840			38.0	3040	95
MED. DEN. RES	0.15	125		45	50	1466.7	220	3667
INDUSTRIAL		245			35		280	
COMMERCIAL		70			32		102	
LT. INDUST.		74		45			119	
FARM LAND	20	16645	1425	0	368	921.9	18438	2305
<b><u>TOTAL</u></b>		22025	3600	90	485	3145	26200	7863

BASIS - "COMPREHENSIVE LAND USE PLAN -1984- HOOD RIVER COUNTY"

## NOTES

- 1 EXISTING DISTRICT.
- 2 AREA INCLUDED BY PROPOSED BORDER CHANGES.
- 3 AREA IN ODELL.
- 4 AREA IN PARKDALE.
- 5 NUMBER OF DWELLINGS BASED ON LOT SIZE AND AREA DESIGNATION.
- 6 PROJECTED POPULATION IN FUTURE CSWD SERVICE AREA BY LAND USE DESIGNATION.







## CHAPTER 3

### WATER REQUIREMENTS

#### 3.1 - INTRODUCTION

In order to determine the adequacy of the present supply source, distribution, transmission, and storage facilities of the Crystal Springs Water District, the trends in water supply, water consumption, and water loss must be analyzed. To determine what improvements will be required to meet future needs, present and future land use, population trends and projections must be examined in conjunction with water supply and consumption data so that the water needs and demands of the District can be projected through the year 2010. The staff of the Crystal Springs Water District has been keeping good records of the water flows and water use throughout the District. Currently, the information is collected at the spring, Booth Hill Reservoir, and Pine Grove Reservoir by reading master meters at these locations. The information is read approximately once a week. The office staff then transfers this information from a notebook and enters it into the computer. The information is filed on the computer and is readily available.

Water consumption is monitored through reading of household and commercial meters once every other month. By comparing the consumption records through the house meter with records from the spring and reservoirs, it is relatively easy to assess the production, consumption and loss trends of the District.

#### 3.2 - ANALYSIS OF WATER SERVICES BY TYPE AND CONSUMPTION

##### 3.2.1 - TYPES OF SERVICE

Water service for the Crystal Springs Water District has been categorized into five different classes of users. They include single family, multi-family, commercial, farms, and schools. The classes of users are served by meters of various sizes, varying from 5/8" by 3/4" meters to 10" meters. There were approximately 1,531 5/8" x 3/4" meters in the system as of 1989. The meters serve primarily rural residential customers.

The total number of water meters in the District as of 1989 was 1,570. These meters served a total of approximately 1,800 connections. There are several housing units which are connected to a single meter. That is, one meter can serve two or more houses in certain instances. There are 238 such cases that are known.



The policy of allowing more than one house to be connected to an individual service should be discouraged. Each single family residence and/or business should be connected to a separate meter. The Board of Directors have recently addressed this issue and have revised their policy statement to read that "It is the policy of the Crystal Springs Water District to require a separate meter for each property." Therefore, it is anticipated that all new construction will require a single meter for each individual property. Where a single meter serves two or more houses, or if in the opinion of the District an existing meter size has not been properly serving the customer, those situations will be corrected.

The larger meter sizes, including 4" and 10", serve primarily commercial customers. The 1-1/2" and 2" meter sizes typically serve commercial enterprises and mobile home parks.

### 3.2.2 - WATER CONSUMPTION BY USER CLASS

Before 1989, 51% of the water used within the District was consumed by single family residences. The next largest user class was commercial, using 31% of the water. Minor water was consumed by multiple-family units, farms and schools.

Table 3.2 lists the water consumption by meter size and class of users. Tabulations have been made for a 12-month period from December 1988 through December 1989 and for a 6-month period from December 1989 through May of 1990. Total water used during 1989 was approximately 174,592,000 gallons. For the six months of December 1989 through May 1990, approximately 86,073,000 gallons was used. About 81% of the water used passes through a typical 5/8" by 3/4" meter.

The peak to average flow demand is important in sizing various components of the water system and in analyzing the adequacy of the supply. For the 1989 period, the peak to average water use ratio was about 1.39 to 1. Most of the classes of users peak their water use during the period of April and May. However, this information may be slightly distorted because during 1989 snow prevented reading of meters during the months of December in many cases. Therefore, this peaking ratio may be somewhat higher than the reality. Also, the peaking in 1989 appears to be almost double the peaking ratio of the early part of 1990. Therefore, a more realistic peaking ratio is probably in the range of 1.2 to 1 to 1.3 to 1. This peaking ratio is relatively low for domestic water systems. A more typical peaking ratio can be expected in the ranges of 2.4 to 1 to 3 to 1. The primary reason for the low peaking ratio for Crystal Springs is the fact that the District does not



allow irrigation use during the summertime from the domestic water supply. The region has independent irrigation districts which serve water for irrigation purposes. Therefore, the peaking ratio of approximately 1.2 to 1 to 1.3 to 1 is realistic.

An explanation for peaking during the months of April and May might be the fact that the irrigation water from the East Fork Irrigation District is turned on sometime in March and local farmers may be using water for spraying and local residents may be using more water than normal for spring cleanup, gardening and other minor uses that would not occur when irrigation water is available.

### 3.3 - ANALYSIS OF PRODUCTION, CONSUMPTION, AND LOSS

The water supply for Crystal Springs is a spring which was improved in 1966. The improvements provide for a diversion of a certain amount of the spring water to the District's pipeline network. The remainder of the flow in the spring is diverted to Crystal Springs Creek, a tributary to the East Fork Hood River. The spring is located approximately 1/4 mile west of State Highway 35 in Section 29, Township 1 South, Range 10 East, Willamette Meridian. The District owns the property between the highway and the spring, consisting of approximately 35 acres.

A summary of the water flow throughout the District is shown in Table 3.3. Waters are diverted at the spring into the District's system where it flows by pipeline to customers and to reservoir storage at Booth Hill and Pine Grove. In 1988 and 1989 the total flow at the spring was estimated to be 1,937 gpm and 1,993 gpm respectively, on an average annual basis. Maximum flow of the spring is approximately 2,700 gpm. This occurs in the summer months. Minimum flow is approximately 1,500 gpm during the colder portion of each winter.

Overflow at the spring is estimated to be 676 gpm and 637 gpm for 1988 and 1989, respectively. This leaves a net flow of water to the District of 1,261 gpm and 1,356 gpm for 1988 and 1989.

The overflow at Booth Hill and Pine Grove totaled approximately 849 gpm on an average annual basis in 1988. In 1989, the average overflow rate for the two reservoirs was 902 gpm. The net flow to the District, therefore, is 412 gpm and 454 gpm, respectively, for 1988 and 1989.

The total water sales for the two-year period investigated was 310 gpm and 322 gpm. As stated earlier, total water sales for 1989 was a little more than 174 mg. Comparing the water sales with the net flow to the District indicates an



unaccounted-for water loss of approximately 102 gpm in 1988 and 132 gpm in 1989. This represents a 33% and 41% net water loss as compared to gross water sales. As a percent of total flow to the District, approximately 10% of the water is lost.

The water loss ratios are somewhat high as compared to water sales. An analysis of the total footage of pipe in the District indicates that one might expect under ideal circumstances a water loss of approximately 10 gpm. This ideal situation is that which is referred to in the American Water Works Association and the Ductile Iron Research Association's Recommendations for Water Loss in Newly Constructed Pipe. Obviously, the water pipe network in the District is not new and much of the pipe is old and leaking. Normal water loss is considered adequate when the rate is between 10% and 20%. For rural water districts, it is not unusual to see higher than normal water loss rates. However, the District is aware of a considerable amount of pipe in the system which has reached its service life. Most of this pipe is due to be replaced within the next five to ten years according to the recommended capital improvements plan outlined in Chapters 6 and 7. It is also recommended that the District pursue correction to known leaks to minimize water losses. If treatment is required in the near future, sizes of facilities and costs of operation can be minimized by reducing water losses to a more realistic level.

### 3.4 - PROJECTION FOR FUTURE WATER DEMANDS

Future water demand will depend upon the growth within the District and the ability of the District to reduce unaccounted-for water to a reasonable level. Based on current population projections, average water consumption is anticipated to increase from approximately 320 gpm in 1989 to 440 gpm by the year 2010. If water loss continues at a rate of about 100 to 130 gpm, then total water use by the year 2010 will be in the range of 550 to 580 gpm on an average annual basis. Taking into account the peaking factor, the maximum day demand may be in the range of 20% to 30% higher than these estimates.

Currently, water is allowed to overflow at the Booth Hill and Pine Grove Reservoirs at an instantaneous rate of 350 to 900 gpm. By reducing or eliminating these overflows, more than adequate water remains within the system to serve anticipated needs beyond the year 2010.

It is anticipated that the rate of water use will continue at approximately the same per capita water use as now exists. The average per capita water use in 1989 is estimated at slightly over 100 gallons per capita per day. A major increase in commercial use could increase per capita water use, but is not expected. For example, the current water use for commercial establishments involves restaurants,



stores, and packing houses. If a cannery were to be added to the system, that commercial use could significantly increase the total water demand on the system.

#### 3.4.1 - CRYSTAL SPRINGS WATER DISTRICT ULTIMATE WATER DEMAND

Current water sales amount to approximately 1/6 or 16% of the total available water at the springs. Accounting for water loss, the total water use amounts to approximately 25% of the available water. Therefore, it is anticipated that the available spring water supply is of sufficient quantity to meet all of the expected needs of the water district, including the ultimate population density anticipated under the County's Comprehensive Plan.

Although wintertime flows are less than summertime flows at the intake, being in the range of 1,500 gpm, there is still adequate supply at the spring to meet all foreseeable future needs of the District.

#### 3.4.2 - OTHER WATER DEMANDS

Other water demands placed on the spring and surface waters in the Hood River Valley include waters for irrigation, minimum perennial spring flow, instream water rights, including preservation of stream flows for supporting aquatic life, minimizing pollution, and maintaining recreational values.

State law, ORS 536.340, gives the Water Resource Commission the authority to classify waters for beneficial use. A classification prescribes the uses for which new water permits may be issued. A classification may be tailored to designate the time or season of use, the amount of use, and even the specific user or user group.

Minimum stream flows are established by the Commission under the provisions of ORS 536.325. As administrative actions, they are subject to change by the Commission, but otherwise function as a water right in the system of appropriation. By law, only the Departments of Fish and Wildlife, the Department of Environmental Quality, and Parks and Recreation, may apply to the Commission for minimum stream flows. The Commission may adopt minimum stream flows on its own initiative as well.

Instream water rights are a new water management tool created in 1987. They serve a similar function as minimum stream flows, but have the more secure status of a water right. Once established, they are not subject to modification.



Instream water rights may also be established by transferring an existing water right to instream use through purchase, lease, or gift. Instream water rights created in this manner retain the original right to priority. A water right lease for instream purposes may be used again for its original purpose at the end of the lease without loss of priority. A third way to establish instream water rights is through water conservation projects that leave a portion of the conserved water within the stream.

As these issues affect the Crystal Springs Water District, the District needs to be aware that these issues, as well as prior rights for irrigation and other uses, may impact the ability of Crystal Springs to maintain its current water rights. As existing water rights are exercised to beneficial use, less water will remain in the streams. It is likely that, although the District currently maintains permits to appropriate more water than they are currently using, these permits may be voided if these waters are not eventually documented for future beneficial use. Therefore, the Board and staff must be ever diligent in monitoring the actions of the Water Resource Department as it applies to their rights and the perceived rights of other potential users.

### 3.5 - FIRE PROTECTION REQUIREMENTS

There are three fire protection districts within the boundaries of the Crystal Springs Water District. They are the Pine Grove Rural Fire Protection District, Odell Rural Fire Protection District, and Parkdale Volunteer Fire Department. Each of the fire departments has enacted an ordinance or resolution adopting a fire protection code. Each of these ordinances also adopts the Uniform Fire Code by reference. The various requirements of the ordinances are similar to those for Odell. A copy of their ordinance is included in the Appendix.

Fire flow requirements, duration of flow and fire hydrant spacing are tabulated in the ordinance. Generally, recommended fire flows vary from approximately 500 gpm for residential units to as high as 6,000 gpm for industrial locations. The highest fire demand appears to be required in the Pine Grove Rural Fire Protection District at Van Horn Drive and Mason Road. The Insurance Service Office of Oregon estimates a required fire flow of 6,000 gpm at this location with 20 psi residual in the mains at that flow rate.

It is the general policy of the Crystal Springs Water District to provide fire flow sufficient to meet code requirements where practical. In general, fire hydrants are to have a minimum of 500 gpm at 20 psi residual at the critical portion of the pressure zone with fire hydrants spaced within 1,000 feet of all protected property.



It is not possible to provide these fire flows and/or spacing between hydrants in all locations. Wherever economically practical, the future water system has been designed to meet these requirements.



27-Jun-91

**TABLE 3.1**  
**CRYSTAL SPRINGS WATER DISTRICT**  
**CUSTOMER SUMMARY BY METER SIZE**

SIZE OF METER	1989			1991*			TOTAL METERS	
	SINGLE	MULTI-USE	OFF	SINGLE	MULTI-USE	OFF	1989	1991
5/8"x3/4"		218		1382	175	108	1531	1665
1"		8		13	5	1	17	19
1.5"		1		4	1	1	5	6
2"		11		10	4	1	15	15
4"				1			1	1
10"FIRE				1			1	1
8"FIRE				2				2
4"FIRE				2				2
TOTALS		238		1415	185	111	1570	1711

NOTES

1. SINGLE METERS SERVE ONE DWELLING.
2. SINGLE METERS SERVE MULTIPLE DWELLINGS.
3. OFF MEANS METER IS INSTALLED BUT NOT METERING  
AT THIS TIME.

\* 1991 TOTALS AS OF MARCH 1991.



TABLE 3.2

## CRYSTAL SPRINGS WATER DISTRICT

WATER CONSUMPTION BY METER SIZE  
AND CLASS OF USERS  
(in 1,000 gallons)

Dec. 1988 through Dec. 1989 (12 months)

User Class	Meter Size						Total Use	Two Mo. Average	Peak Two Month		Peak to Ave. Ratio
	5/8"x3/4"	1"	1.5"	2"	4"	10"			Month	Usage	
Single Family	98,962	1,445					100,407	16,735	Apr	27,190	1.62
Multi-Family	572	--		6,519			7,091	1,182	Feb	1,462	1.24
Commercial	31,125	1,594	1,283	13,634	5,473	335	53,444	8,907	Dec	11,818	1.33
Farms	11,532	888	36				12,456	2,076	Apr	2,932	1.41
Schools		297		897			1,194	265	Aug	371	1.4
TOTALS:	142,191	4,224	1,319	21,050	5,473	335	174,592	29,165		40,617	1.39

Dec. 1989 through May 1990 (6 months)

Single Family	45,109	1,027	--	--	--	--	46,136	15,379	Apr	20,438	1.33
Multi-Family	227	--	--	3,192	--	--	3,419	1,140	Feb	1,156	1.01
Commercial	15,385	1,031	890	6,978	4,124	257	28,665	9,555	Dec	11,811	1.24
Farms	6,841	332	102	--	--	--	7,275	2,425	Apr	2,991	1.23
Schools	--	187	--	391	--	--	578	193	Apr	229	1.19
TOTALS:	67,562	2,577	992	10,561	4,124		86,073	28,692		33,742	1.18



**TABLE 3.3**  
**CRYSTAL SPRINGS WATER DISTRICT**  
**1988 AND 1989**  
**SUMMARY OF WATER FLOWS**

Item	Description	Average Annual flows in GPM		Min. flows in GPM		Max. flows in GPM	
		1988	1989	1988	1989	1988	1989
1	Total Flow at Spring	1937	1993	--	--	--	--
2	Overflow at Spring	<u>676</u>	<u>637</u>	--	--	--	--
3	Flow to District at Spring	1261	1356	397	1306	1580	1692
4	Overflow						
	A. Booth Hill	439	453	--	--	--	--
	B. Pine Grove	<u>410</u>	<u>449</u>	--	--	--	--
	Total Overflow	849	902	--	--	--	--
5	Net Flow to District	412	454	--	--	--	--
6	Water Sales	<u>310</u>	<u>322</u>	--	--	--	--
7	Unaccounted For Water (Loss)	102	132	--	--	--	--
	% of Sales	33%	41%	--	--	--	--

Note: See table titled CRYSTAL SPRINGS (File:SPRGFLOW)  
for weekly data.



TABLE 3.4

26-Jun-91

CRYSTAL SPRINGS WATER DISTRICT  
CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

SPRING RECORD INFORMATION  
(Flow, Temperatures, Weather,  
pH and Turbidity)

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
18-Jan-88	254220	--	--	--	36	18	42	1" NEW SN.	--	--	1.25	174	174
25-Jan-88	268266	14046	1391	--	42	22	42	17" OLD SN.	--	--	1.50	229	1620
01-Feb-88	282383	14117	1398	--	36	10	42	21" SNOW	--	0.10	1.75	288	1687
08-Feb-88	296473	14090	1400	--	38	24	42	8" OLD SN.	--	0.13	1.50	229	1629
16-Feb-88	296473	--	--	--	44	22	42	1"/12" OLD	--	0.21	2.00	352	--
22-Feb-88	308544	12071	1396	--	44	28	--	12" SNOW	--	0.16	2.00	352	1748
07-Mar-88	336611	28067	1391	--	42	26	44		--	0.26	2.00	352	1743
14-Mar-88	350559	13948	1384	--	44	24	42	5" OLD SN.	--	0.16	2.50	491	1875
21-Mar-88	364511	13952	1380	--	58	26	43	LIGHT RAIN	--	0.23	3.00	643	2023
28-Mar-88	378325	13814	1377	--	42	26	42	2" NEW SN.	--	0.18	2.75	565	1942
04-Apr-88	392582	14257	1381	--	58	28	42		--	0.18	3.50	809	2190
11-Apr-88	406412	13830	1385	42	79	30	42		--	0.16	4.25	1078	2463
25-Apr-88	435003	28591	1427	--	56	30	42		--	0.16	4.50	1173	2600
02-May-88	449766	14763	1466	--	60	30	42		--	0.14	4.50	1173	2639
09-May-88	464938	15172	1468	--	62	34	42		--	0.18	4.75	1271	2739
16-May-88	479841	14903	1526	--	54	54	42		--	0.16	4.25	1078	2604
23-May-88	494239	14398	1426	76	76	32	42		--	--	4.50	1173	2600
06-Jun-88	524122	29883	986	--	44	32	42		--	0.16	4.50	1173	2159
20-Jun-88	554076	29954	1484	--	78	35	42		--	--	4.00	986	2469
05-Jul-88	571990	17914	830	--	72	38	42		--	0.17	4.25	1078	1908
11-Jul-88	571900	--	--	--	78	40	42		--	0.16	4.00	986	--
01-Aug-88	617200	45300	1491	--	81	49	42		--	0.12	4.00	986	2477



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
08-Aug-88	632933	15733	1580	--	82	38	42		--	--	4.00	986	2565
15-Aug-88	647673	14740	1412	--	--	--	44		--	--	4.25	1078	2490
22-Aug-88	662453	14780	1528	56	78	42	44		--	0.18	3.50	809	2336
29-Aug-88	677226	14773	1461	--	84	48	42		--	0.16	3.25	725	2185
05-Sep-88	692518	15292	1487	100	86	40	42		--	0.18	3.50	809	2296
12-Sep-88	707197	14679	1485	--	84	34	42		--	0.10	3.75	896	2381
19-Sep-88	722012	14815	1479	--	74	32	42	.25" RAIN	--	0.14	3.50	809	2287
27-Sep-88	739166	17154	1476	--	82	46	42	LIGHT RAIN	--	0.16	3.00	643	2119
03-Oct-88	739166	--	--	--	82	46	42		--	--	3.00	643	--
10-Oct-88	766475	27309	1473	--	68	44	42		--	0.12	2.75	565	2038
17-Oct-88	781466	14991	1474	--	64	40	42	TR. RAIN	--	0.12	2.25	419	1893
24-Oct-88	796882	15416	397	--	60	36	42		--	0.13	2.25	419	816
01-Nov-88	813666	16784	1429	--	60	30	42	RAIN	--	0.16	2.50	491	1920
14-Nov-88	826016	12350	668	--	42	30	42	1.75" SNOW	--	0.16	2.00	352	1020
28-Nov-88	840641	14625	717	--	--	--	--	6" SNOW	--	0.14	1.75	288	1006
05-Dec-88	855237	14596	1473	--	34	34	42	LIGHT RAIN	--	0.14	1.25	174	1647
19-Dec-88	884861	29624	1476	--	36	20	42		--	--	1.75	288	1765
27-Dec-88	885000	--	--	--	34	10	42	12.25" SNOW	--	0.19	1.50	229	--
03-Jan-89	900032	15032	1487	--	39	16	42	7" SNOW	--	0.19	1.50	229	1716
09-Jan-89	912900	12868	1487	--	36	16	42	10" SNOW	--	0.58	1.25	174	1661
16-Jan-89	927911	15011	1485	--	34	26	42	14" SNOW	--	0.22	2.25	419	1904
23-Jan-89	942998	15087	1486	--	40	16	42	12" SNOW	7.4	0.13	2.50	491	1976



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
30-Jan-89	957970	14972	1490	--	44	18	42	12" SNOW	7.4	0.12	2.50	491	1980
06-Feb-89	973224	15254	1519	--	44	-8	--	16" SNOW	7.4	0.12	2.50	491	2010
13-Feb-89	988540	15316	1529	--	36	-2	42	14"	7.4	0.11	2.50	491	2019
21-Feb-89	1660	13120	1132	--	36	-9	--	19" SNOW	7.4	0.16	2.50	491	2000
27-Feb-89	6114	--	--	--	36	16	42	14" SNOW	7.5	0.19	2.50	491	--
06-Mar-89	6114	--	--	--	40	10	42	27" SNOW	7.5	0.21	2.25	419	--
13-Mar-89	6114	--	--	--	44	30	42	20.5" SNOW	7.5	0.11	2.50	491	--
20-Mar-89	19574	13460	1306	--	44	25	42		--	--	2.75	565	1871
27-Mar-89	32822	13248	1346	--	42	28	42	13" SNOW	7.7	0.18	3.25	725	2071
03-Apr-89	49876	17054	1692	--	39	30	42	9.5" SNOW	7.7	0.18	3.75	896	2588
10-Apr-89	64540	14664	1446	--	60	30	42		7.4	0.16	4.00	986	2432
17-Apr-89	79465	14925	1490	--	68	32	42		7.7	0.12	4.00	986	2475
24-Apr-89	94714	15249	1517	--	64	30	42		7.6	--	3.50	809	2325
08-May-89	124798	30084	1476	--	70	36	42		7.9	0.11	4.00	986	2462
22-May-89	154430	29632	1485	--	65	31	42		8.0	0.18	4.00	986	2471
29-May-89	169567	15137	1479	--	60	30	42		7.8	0.11	4.25	1078	2557
05-Jun-89	184387	14820	1495	--	78	36	42		7.8	0.12	4.25	1078	2574
12-Jun-89	199443	15056	1492	--	78	36	42		7.9	0.11	4.25	1078	2570
19-Jun-89	214510	15067	1490	--	74	36	42		7.8	0.11	4.25	1078	2568
26-Jun-89	229497	14987	1490	--	78	36	42		8.0	0.12	4.25	1078	2568
03-Jul-89	244425	14928	1484	--	64	42	42		7.8	0.16	4.25	1078	2562
10-Jul-89	260007	15582	1492	--	76	38	42		7.9	0.14	4.25	1078	2570



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
24-Jul-89	289577	29570	1493	--	70	40	42		8.1	--	3.50	809	2302
31-Jul-89	304745	15168	1498	--	74	40	42		8.3	0.14	3.50	809	2307
07-Aug-89	319643	14898	1485	--	82	38	42		8.2	0.16	3.00	643	2128
15-Aug-89	336773	17130	1488	--	82	40	42		8.1	0.15	3.78	906	2394
21-Aug-89	349918	13145	1492	--	72	38	42		--	--	3.50	809	2301
28-Aug-89	364694	14776	1487	--	68	42	42		8.1	0.20	3.00	643	2131
04-Sep-89	379703	15009	1490	--	70	36	42		--	--	3.50	809	2299
11-Sep-89	394967	15264	1500	--	72	38	42		8.2	0.17	3.50	809	2309
18-Sep-89	410318	15351	1519	--	74	32	42		8.2	0.18	3.50	809	2328
25-Sep-89	424856	14538	1463	--	74	32	--		8.4	0.12	3.25	725	2187
09-Oct-89	454672	29816	1479	--	64	30	42		8.4	0.18	2.00	352	1831
16-Oct-89	469633	14961	1478	--	56	28	--		8.3	0.18	2.00	352	1830
23-Oct-89	484415	14782	1469	--	66	28	42		8.3	0.15	2.00	352	1821
30-Oct-89	499447	15032	1488	--	48	25	42		8.6	0.14	2.00	352	1840
06-Nov-89	514301	14854	1475	--	56	28	--		8.5	0.18	1.00	125	1600
13-Nov-89	529094	14793	1476	--	56	30	42		8.6	0.12	1.50	229	1705
20-Nov-89	544055	14961	1479	--	48	30	42		8.6	0.14	1.50	229	1708
27-Nov-89	559319	15264	1484	--	42	28	42	4.5" SNOW	--	--	1.50	229	1713
04-Dec-89	573957	14638	1482	--	40	26	42		8.6	0.20	1.00	125	1607
11-Dec-89	588859	14902	1475	--	38	22	42		8.6	0.14	1.00	125	1600
18-Dec-89	603857	14998	1483	--	32	16	42		8.5	0.15	0.75	81	1565
25-Dec-89	618572	14715	1486	--	34	20	42	TRACE SNOW	8.4	0.22	0.50	44	1531

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26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
01-Jan-90	623009	--	--	38	34	20	42	TR/SNOW	8.5	0.16	--	--	1500
08-Jan-90	623999	--	--	39	42	28	42	HEAVY RAIN	8.5	0.24	0.25	16	1500
15-Jan-90	638909	14910	1468	--	36	30	42	RAIN	8.6	0.12	0.50	44	1512
22-Jan-90	653929	15020	1492	34	36	22	42		8.6	0.18	0.50	44	1536
29-Jan-90	668697	14768	1469	30	32	26	42	6" SNOW	--	--	0.50	44	1514
05-Feb-90	684079	15382	1524	32	36	26	42	14" SNOW	8.7	0.10	0.50	44	1569
12-Feb-90	699529	15450	1500	--	42	26	42	17" SNOW	--	--	1.25	174	1674
19-Feb-90	714123	14594	1471	20	30	12	42	21" SNOW	8.7	0.16	1.75	288	1760
21-Feb-90	718611	4488	1609	34	36	18	42	17" SNOW	8.6	0.22	1.75	288	1897
23-Feb-90	722897	4286	1504	34	40	30	42	16.5" SNOW	--	--	1.75	288	1792
26-Feb-90	729620	6723	1546	32	44	28	42	15" SNOW	--	--	1.25	174	1720
28-Feb-90	733980	4360	1509	40	42	28	42	14.5" SNOW	8.5	0.18	1.75	288	1797
02-Mar-90	738374	4394	1505	33	48	26	42	14" SNOW	8.6	0.12	2.00	352	1857
05-Mar-90	744837	6463	1507	36	48	26	42	14" SNOW	8.6	0.15	2.25	419	1926
07-Mar-90	749660	4823	1502	38	38	30	42	12" SNOW	8.6	0.16	2.25	419	1922
09-Mar-90	754021	4361	1509	36	40	28	42	11" SNOW	8.6	0.13	2.25	419	1928
12-Mar-90	760541	6520	1504	--	34	25	42	13" SNOW	8.6	0.10	2.00	352	1856
14-Mar-90	764802	4261	1495	40	40	20	42		8.6	0.13	2.25	419	1914
16-Mar-90	768968	4166	1493	46	48	28	42	12" SNOW	8.6	0.14	2.50	491	1984
19-Mar-90	775588	6620	1505	48	54	34	42	8" SNOW	8.7	0.34	2.50	491	1995
23-Mar-90	784182	8594	1486	34	48	32	42	2" SNOW	8.6	0.19	2.75	565	2051
26-Mar-90	790654	6472	1495	38	42	28	42		8.6	0.18	2.75	565	2060



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
28-Mar-90	794976	4322	1496	50	56	30	42		8.6	0.18	2.75	565	2061
30-Mar-90	799281	4305	1500	56	60	30	42		8.6	0.20	--	--	1500
02-Apr-90	805640	6359	1475	60	60	34	42		8.7	0.24	2.75	565	2041
04-Apr-90	810048	4408	1525	60	60	30	42		8.6	0.24	2.75	565	2091
09-Apr-90	820939	10891	1521	56	64	28	42		--	--	2.75	565	2086
17-Apr-90	838552	17613	1526	56	68	32	42		7.9	0.28	2.75	565	2092
18-Apr-90	840699	2147	1496	58	58	33	42		0.0	0.15	2.75	565	2061
20-Apr-90	844994	4295	1499	56	58	36	42		8.5	0.15	2.75	565	2064
23-Apr-90	851555	6561	1495	40	58	34	42		8.6	0.16	2.75	565	2060
25-Apr-90	855801	4246	1495	44	48	34	42		8.6	0.28	2.75	565	2060
27-Apr-90	857093	1292	449	42	48	34	42		8.6	--	3.00	643	1092
30-Apr-90	866172	9079	2131	52	54	30	42		--	--	3.00	643	2775
02-May-90	870840	4668	1593	58	62	36	42		8.6	0.21	3.00	643	2237
04-May-90	875176	4336	1495	74	74	38	42		8.6	--	3.00	643	2139
07-May-90	881600	6424	1496	44	73	33	42		--	--	3.24	721	2217
09-May-90	885927	4327	1495	60	60	28	42		--	--	3.50	809	2303
11-May-90	890203	4276	1492	40	62	32	42		--	--	3.50	809	2301
14-May-90	896698	6495	1493	48	52	32	42		--	--	--	--	1493
16-May-90	900918	4220	1494	58	60	30	42		8.6	0.24	3.50	809	2303
18-May-90	905282	4364	1496	52	60	34	42		8.7	0.22	3.75	896	2391
21-May-90	911706	6424	1498	54	56	30	42		8.6	0.18	3.75	896	2394
23-May-90	916051	4345	1491	43	56	43	42		8.5	0.24	3.75	896	2386



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
25-May-90	920385	4334	1500	56	56	30	42		8.6	0.20	3.50	809	2308
28-May-90	926232	5847	1495	44	58	40	42		8.6	0.22	3.50	809	2304
30-May-90	931147	4915	1501	48	60	40	42		8.5	0.19	3.50	809	2310
01-Jun-90	935467	4320	1122	--	54	34	42		--	0.20	3.75	896	2018
06-Jun-90	946274	10807	1123	--	58	42	42		--	0.26	3.75	896	2019
08-Jun-90	950587	4313	1120	--	58	44	42		8.6	0.23	3.75	896	2016
11-Jun-90	957023	6436	1114	--	60	40	42		8.6	0.22	3.50	809	1923
13-Jun-90	961372	4349	1130	--	58	38	42		8.6	0.24	3.50	809	1938
15-Jun-90	965694	4322	1123	--	68	42	42		8.6	0.24	3.50	809	1931
18-Jun-90	972172	6478	1122	--	68	42	42		8.6	0.26	3.50	809	1930
20-Jun-90	979512	7340	1906	--	72	48	42		8.7	0.25	3.50	809	2715
22-Jun-90	980929	1417	368	--	78	82	42		8.6	0.26	3.75	896	1264
25-Jun-90	987444	6515	1128	--	80	46	42		8.6	0.29	3.50	809	1937
29-Jun-90	996209	8765	1138	--	74	44	42		--	M	M	--	1138
02-Jul-90	1002895	6686	1158	--	64	48	42		8.6	0.28	3.50	809	1966
16-Jul-90	33111	--	1121	--	86	38	42		8.6	0.16	3.50	809	1930
18-Jul-90	37534	4423	1149	--	80	48	42		8.6	0.24	3.50	809	1958
20-Jul-90	41865	4331	1125	--	82	48	42		8.6	0.20	3.50	809	1934
24-Jul-90	50564	8699	1130	--	86	50	43		8.6	0.18	3.50	809	1938
25-Jul-90	52618	2054	1067	--	62	48	43		8.7	0.22	3.50	809	1876
27-Jul-90	57165	4547	1181	--	74	46	43		8.6	0.16	3.50	809	1990
30-Jul-90	63775	6610	1145	--	84	46	43		8.7	0.20	3.50	809	1953



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
01-Aug-90	68137	4362	1133	--	74	52	43		8.6	0.16	3.50	809	1942
03-Aug-90	72488	4351	1130	--	84	48	43		8.6	0.14	3.50	809	1939
06-Aug-90	79105	6617	1146	--	86	50	43		8.7	0.12	3.75	896	2042
08-Aug-90	BAD RDG	--	--	--	82	50	44		8.7	0.18	3.50	809	809
10-Aug-90	87824	--	--	--	86	56	44		8.6	0.12	3.50	809	809
13-Aug-90	94594	6770	1172	--	88	58	44		8.7	0.10	3.50	809	1981
15-Aug-90	98958	4364	1133	--	75	48	44		8.6	0.08	3.50	809	1942
20-Aug-90	109884	10926	1135	--	68	44	44		8.7	0.14	3.75	896	2031
22-Aug-90	114297	4413	1146	--	68	50	44		8.6	0.18	3.50	809	1955
27-Aug-90	125286	10989	1142	--	68	68	44		--	M	3.50	809	1950
29-Aug-90	129530	4244	1102	--	72	48	45		--	M	3.50	809	1911
31-Aug-90	133988	4458	1158	--	64	42	44		--	M	3.00	643	1801
05-Sep-90	144789	10801	1122	--	76	44	M		--	0.14	3.00	643	1765
07-Sep-90	149189	4400	1143	--	78	46	44		--	0.12	3.00	643	1786
12-Sep-90	160211	11022	1145	--	74	42	44		--	0.16	3.00	643	1788
14-Sep-90	164539	4328	1124	--	70	38	42		--	0.15	3.00	643	1767
17-Sep-90	171177	6638	1149	--	70	40	42		--	0.16	3.00	643	1793
21-Sep-90	179887	8710	1131	--	72	38	42		--	0.18	3.00	643	1774
24-Sep-90	186159	6272	1086	--	78	46	42		--	0.16	2.50	491	1577
26-Sep-90	190935	4776	1240	--	72	46	42		--	0.12	2.50	491	1731
28-Sep-90	195345	4410	1145	--	72	44	42		--	0.16	2.50	491	1636
01-Oct-90	201940	6595	1142	--	72	36	M		--	0.14	2.50	491	1633



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
03-Oct-90	206330	4390	1140	--	60	42	M		--	0.16	2.50	491	1631
05-Oct-90	210682	4352	1130	--	66	42	42		--	0.16	2.50	491	1621
08-Oct-90	217143	6461	1119	--	48	28	M		--	0.16	2.50	491	1609
11-Oct-90	223822	6679	1156	--	56	36	M		--	0.16	2.50	491	1647
15-Oct-90	232400	8578	1114	--	51	39	M		--	0.18	2.50	491	1605
17-Oct-90	236758	4358	1132	--	53	30	M		--	0.14	2.50	491	1622
19-Oct-90	241052	4294	1115	--	44	34	M		--	0.12	M	--	1115
22-Oct-90	247628	6576	1139	--	52	30	M		--	M	2.00	352	1491
26-Oct-90	256333	8705	1130	--	55	32	M		--	0.16	2.00	352	1482
29-Oct-90	262930	6597	1142	--	48	33	M		--	0.16	2.00	352	1494
31-Oct-90	267278	4348	1129	--	44	36	M		--	0.12	2.00	352	1481
02-Nov-90	271710	4432	1151	--	42	26	M		--	0.16	2.00	352	1503
05-Nov-90	278258	6548	1134	--	50	30	M		--	0.14	1.75	288	1422
07-Nov-90	282663	4405	1144	--	48	28	M		--	0.18	1.75	288	1432
09-Nov-90	286913	4250	1104	--	50	40	M		--	0.12	1.75	288	1392
12-Nov-90	293187	6274	1086	--	52	33	M		--	0.12	1.75	288	1375
14-Nov-90	297717	4530	1177	--	39	31	M		--	0.12	1.50	229	1406
16-Nov-90	302102	4385	1139	--	42	28	M		--	0.12	1.50	229	1368
19-Nov-90	308709	6607	1144	--	43	28	M		--	0.14	1.25	174	1318
26-Nov-90	324058	15349	1139	--	54	30	M		--	0.14	0.75	81	1220
28-Nov-90	328349	4291	1114	--	36	22	M		--	0.10	0.75	81	1196
30-Nov-90	332737	4388	1140	--	44	28	M	1" SNOW	--	0.12	0.75	81	1221



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
03-Dec-90	339156	6419	1111	--	32	28	M	6" SNOW	--	0.14	0.75	81	1193
05-Dec-90	343585	4429	1150	--	40	30	M	5" SNOW	--	0.12	0.75	81	1232
07-Dec-90	347000	3415	887	--	36	24	M	4" SNOW	--	0.14	0.75	81	968
10-Dec-90	354457	7457	1291	--	39	30	M	2" SNOW	--	0.14	M	--	1291
12-Dec-90	358853	4396	1142	--	40	24	M	2" SNOW	--	0.14	0.75	81	1223
17-Dec-90	369862	11009	1144	--	40	22	M	2" SNOW	--	0.14	0.75	81	1225
19-Dec-90	374264	4402	1143	--	38	10	M	12" SNOW	--	0.12	0.75	81	1225
21-Dec-90	378318	4054	1053	--	12	-6	M	10" SNOW	--	0.16	0.50	44	1097
24-Dec-90	384861	6543	1133	--	4	-10	M	8" SNOW	--	0.16	--	--	1133
26-Dec-90	389466	4605	1196	--	32	2	M		--	0.12	--	--	1196
28-Dec-90	394458	4992	1297	--	36	18	M	16" SNOW	--	0.14	0.50	44	1341
31-Dec-90	400465	6007	1040	--	36	-9	M	15" SNOW	--	0.14	M	--	1040
02-Jan-91	404808	4343	1128	--	34	-20	M	14" SNOW	--	0.12	0.50	44	1172
04-Jan-91	408988	4180	1086	--	28	17	M	13" SNOW	--	0.14	0.50	44	1130
07-Jan-91	415365	6377	1104	--	20	15	M	18" SNOW	--	0.14	0.50	44	1148
09-Jan-91	419413	4048	1051	--	34	20	M	12" SNOW	--	0.14	0.50	44	1096
11-Jan-91	424049	4636	1204	--	32	22	M	10" SNOW	--	0.12	0.50	44	1248
14-Jan-91	430314	6265	1085	--	38	32	M	10" SNOW	--	0.12	1.00	125	1210
19-Jan-91	440576	10262	1066	--	38	32	M	6" SNOW	--	M	1.00	125	1191
21-Jan-91	444771	4195	1090	--	30	18	M		--	0.12	1.25	174	1264
23-Jan-91	449429	4658	1210	--	33	25	M		--	0.08	2.00	352	1562
25-Jan-91	453170	3741	972	--	34	24	M		--	0.10	2.00	352	1324



26-Jun-91

# CRYSTAL SPRINGS WATER DISTRICT CRYSTAL SPRINGS

FILE: SPRGFLOW.WK1

LEE ENGINEERING, INC

TOTAL  
SPRING

DATE	RDG	INTAKE	GPM	TEMP	HI	LO	WTR	PRECIP	pH	TURB	O/F(°)	O/F(GPM)	FLOW
28-Jan-91	459725	6555	1135	--	40	16	M		--	0.12	2.25	419	1554
30-Jan-91	463986	4261	1107	--	34	14	M		--	0.14	2.25	419	1526
01-Feb-91	467761	3775	980	--	36	30	M		--	0.12	2.25	419	1400
04-Feb-91	474292	6531	1131	--	42	22	M		--	M	2.00	352	1483
06-Feb-91	478239	3947	1025	--	38	28	M		--	M	2.00	352	1377
08-Feb-91	482245	4006	1040	--	36	28	M		--	M	2.00	352	1392
11-Feb-91	489097	6852	1186	--	42	30	M		--	0.12	2.25	419	1606
13-Feb-91	493180	4083	1060	--	44	34	M		--	0.10	2.25	419	1480
15-Feb-91	497476	4296	1116	--	46	34	M		--	0.11	2.50	491	1606
18-Feb-91	BAD RDG.	--	--	--	46	30	M		--	0.12	2.50	491	491
20-Feb-91	507893	--	--	--	52	38	M		--	M	2.75	565	565
22-Feb-91	512218	4325	1123	--	48	22	M		--	0.08	2.25	419	1543
25-Feb-91	517980	5762	998	--	48	28	M		--	M	M	--	998
27-Feb-91	522533	4553	1183	--	52	28	M		--	M	2.75	565	1748



FIGURE 3.1

CRYSTAL SPRINGS WATER DISTRICT  
SPRING OVERFLOW - 1988

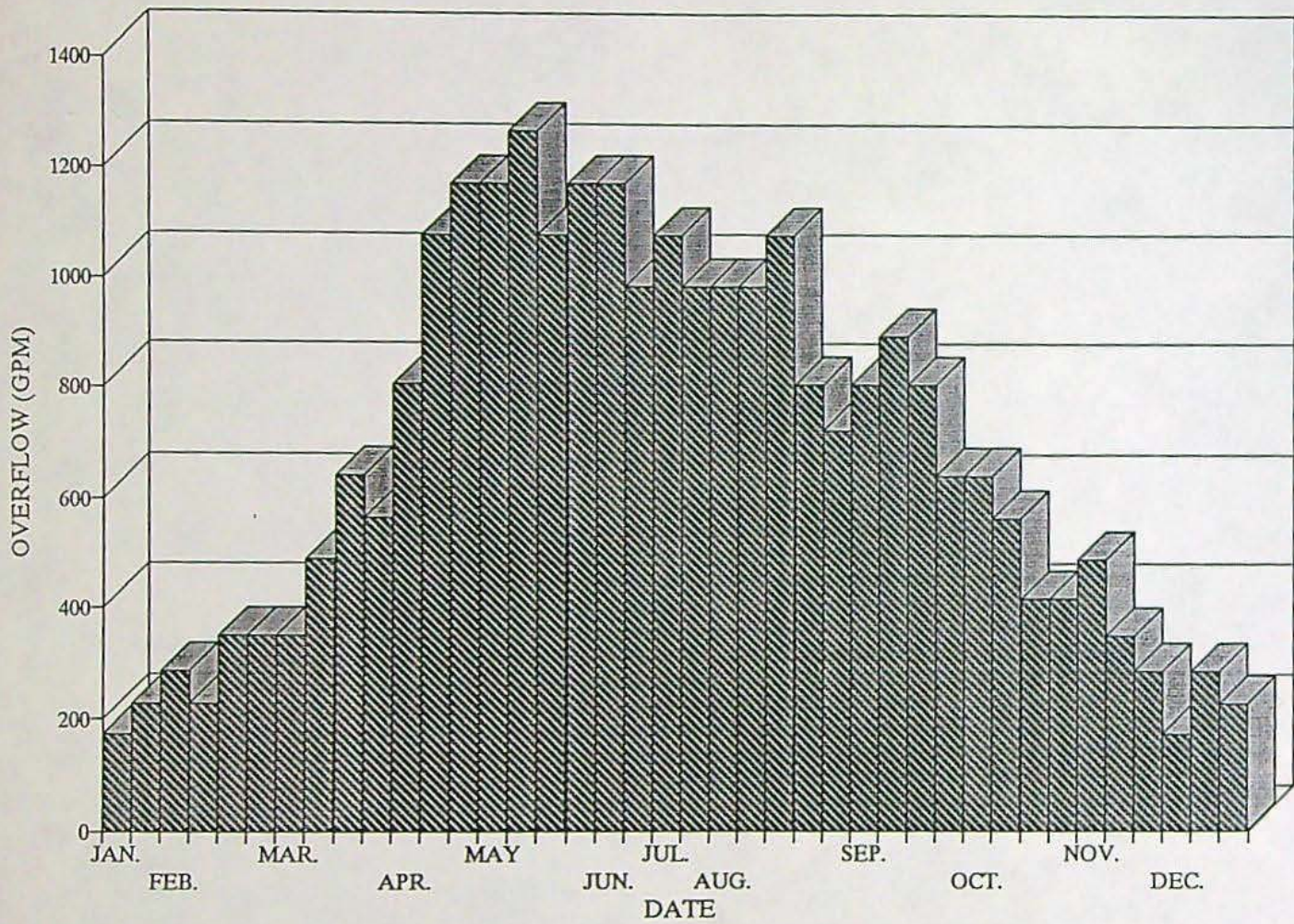




FIGURE 3.2

CRYSTAL SPRINGS WATER DISTRICT  
SPRING OVERFLOW - 1989

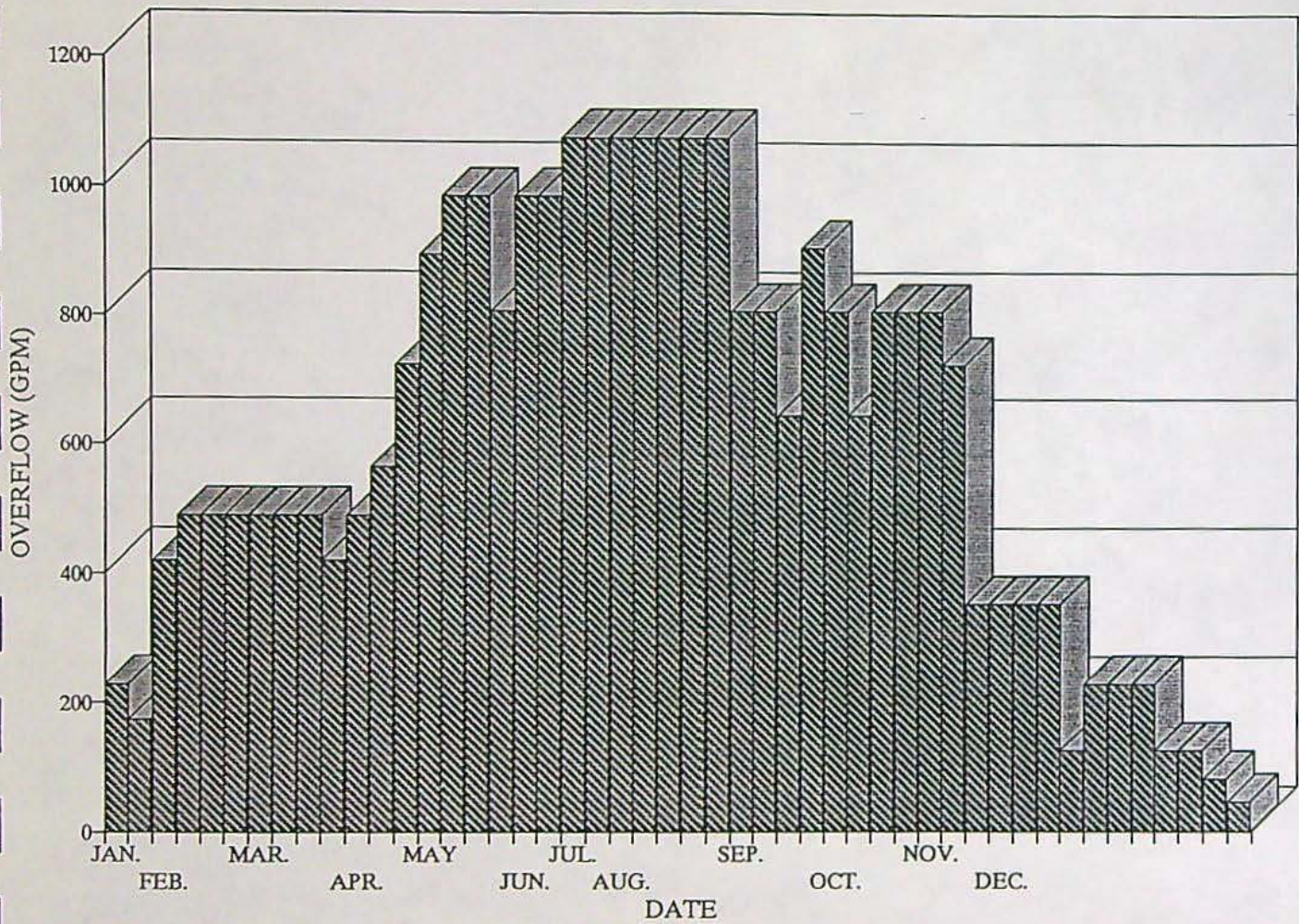




FIGURE 3.3

CRYSTAL SPRINGS WATER DISTRICT  
SPRING OVERFLOW - 1990

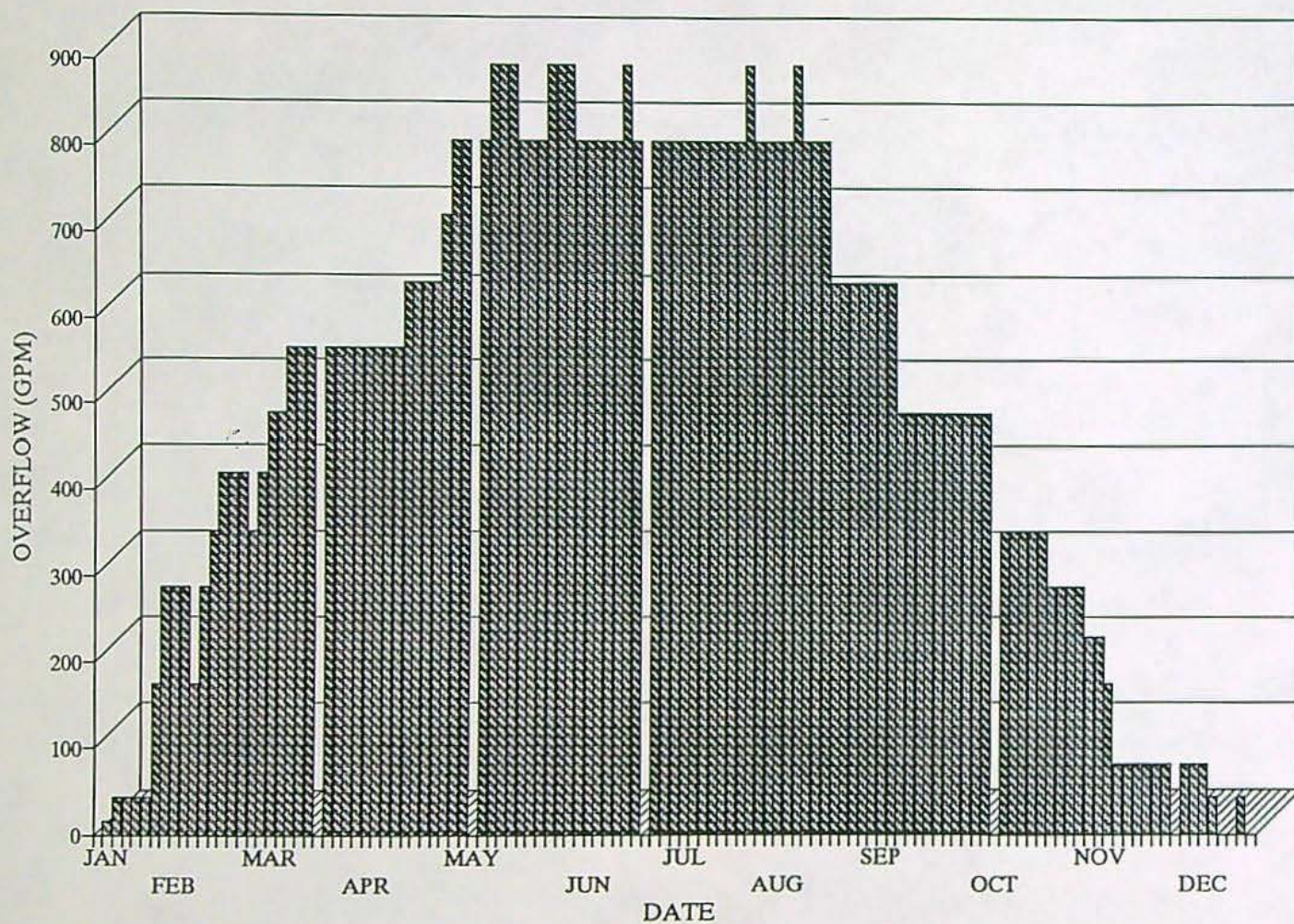




FIGURE 3.4

CRYSTAL SPRINGS WATER DISTRICT  
TURBIDITY - 1988

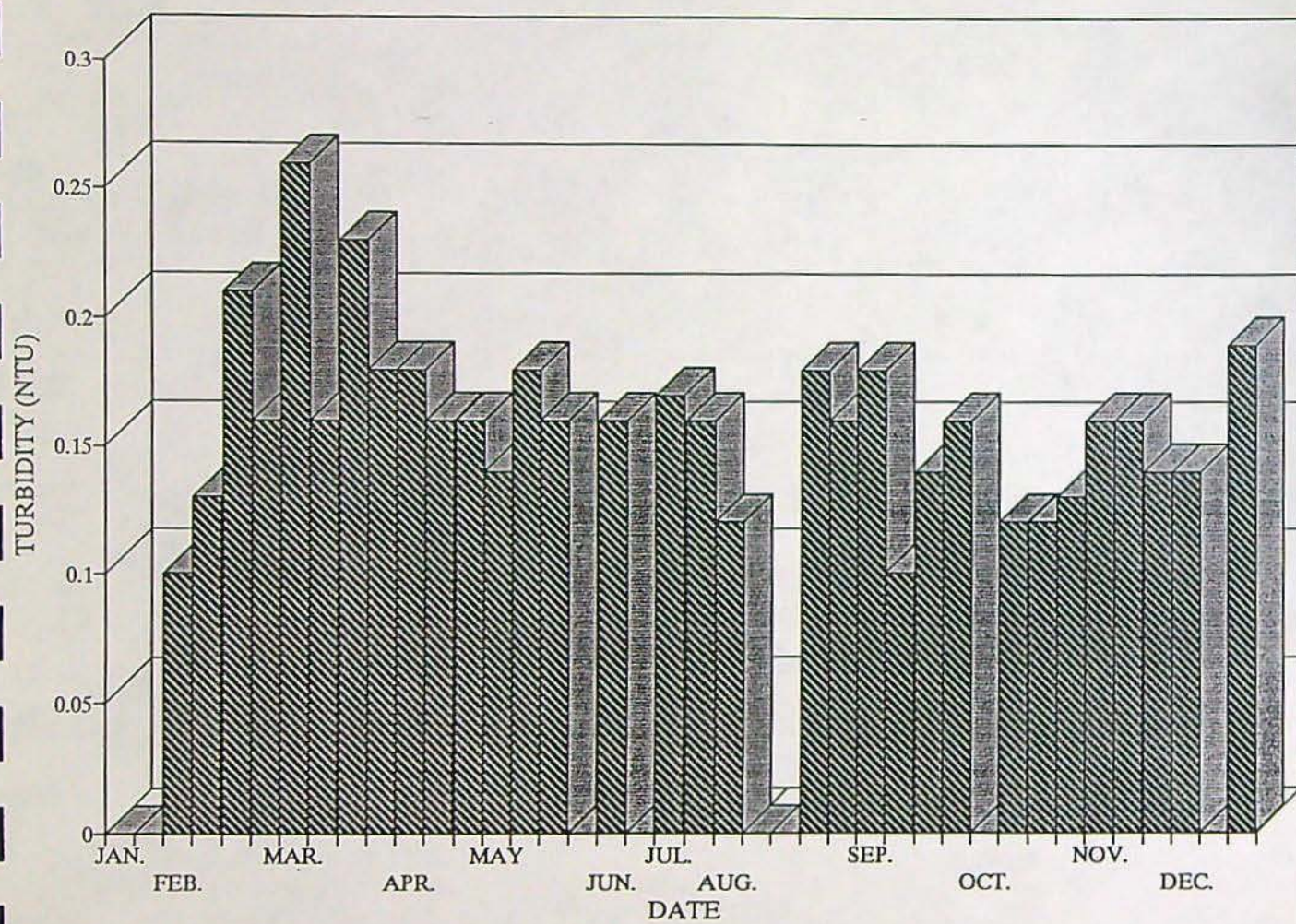




FIGURE 3.5

CRYSTAL SPRINGS WATER DISTRICT  
TURBIDITY - 1989

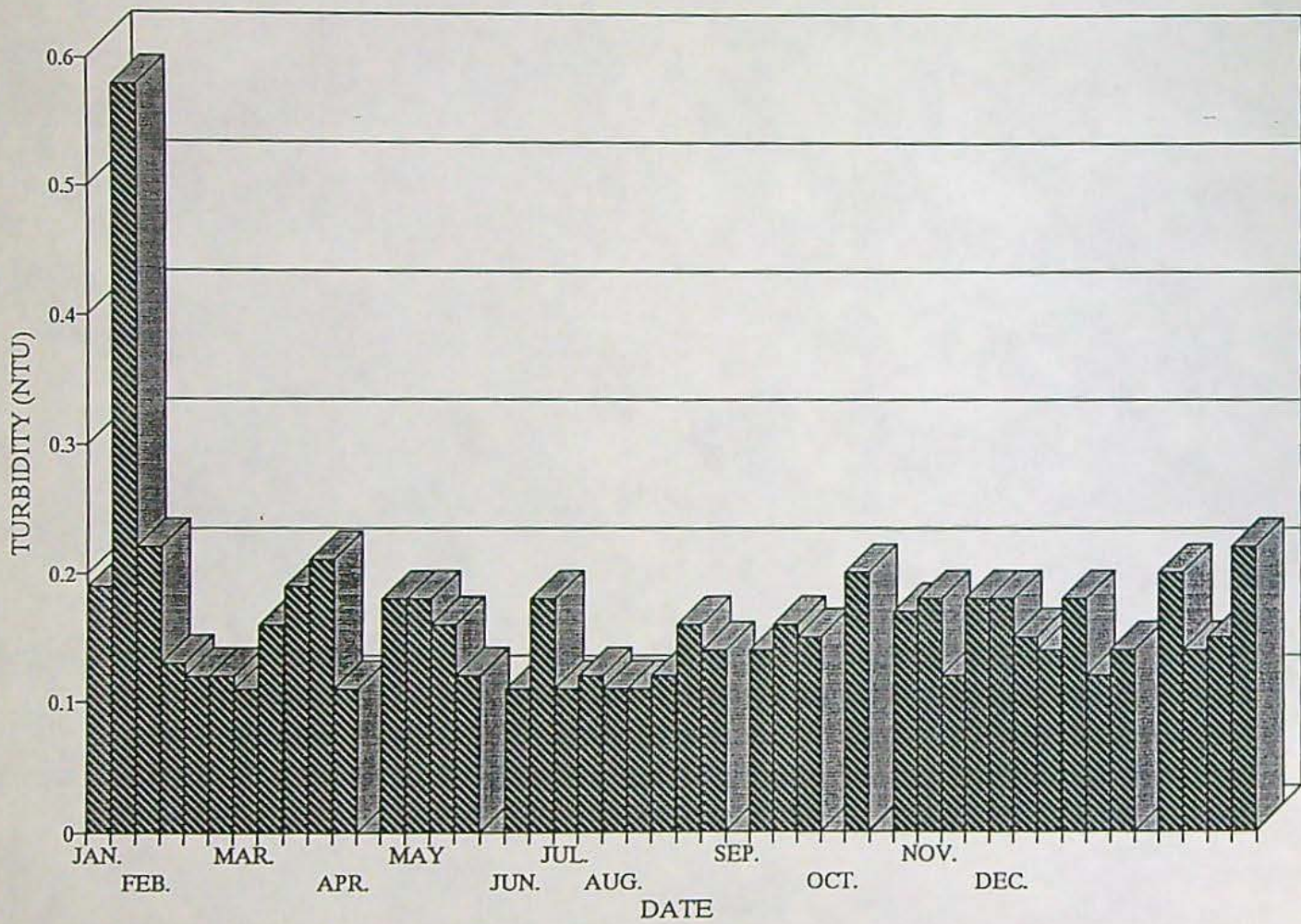
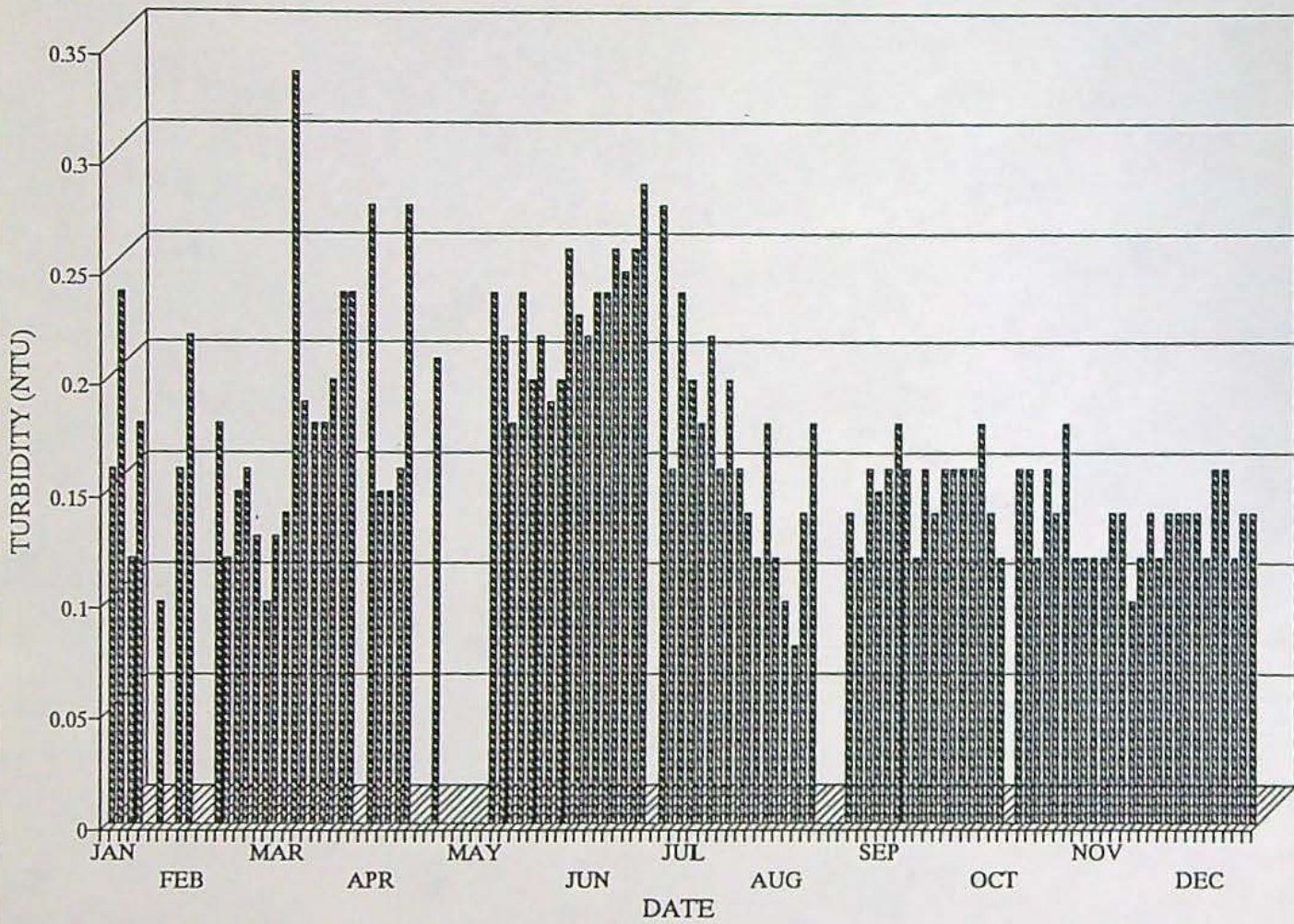




FIGURE 3.6

CRYSTAL SPRINGS WATER DISTRICT  
TURBIDITY - 1990





## CHAPTER 4

### SUPPLY SYSTEM

#### 4.1 - HISTORY AND DESCRIPTION OF EXISTING SUPPLY SYSTEM

##### 4.1.1 - RECHARGE AREA DESCRIPTION

The recharge area for Crystal Springs includes an area on the northern slopes of Mt. Hood referred to on the U.S.G.S. maps as Weygandt Canyon. The canyon extends from the East Fork of the Hood River southwest to a point approximately one mile north by northeast from Cloud Cap Inn and Cloud Cap Saddle Campground. (See Figure 4.1.)

Soil and other features of the recharge area are outlined in a report entitled "Soil Resource Inventory" prepared for the Mt. Hood National Forest in 1979. The two predominant mapping units within the recharge area consist of soils 333 and 335 as outlined in the Resource Inventory. Geological deposits for these mapping units have been formed in unconsolidated medium-textured glacial till. Materials are a mixed geologic origin with bedrock consisting primarily of hard andesites and basalts.

In order to inventory the recharge area, a tour was made on May 9, 1990. The entire length of Weygandt Canyon was walked starting near Cloud Cap and ending at the spring. A separate report is available of the inspection.

Topography varies from gently sloping to very steep. Side slopes are estimated to vary from about 5% to as steep as 90%. Elevation relief through Weygandt Canyon varies from about 2,400 ft. mean sea level at the intake to 4,800 ft. at the southwest extreme of the drainage basin.

Vegetation varies from new growth, trees, grasses and shrubs in recently logged areas to dense overstory of evergreens containing Mountain Hemlock, Western Red Cedar, Spruce, Noble Fir, Western Larch, Western Hemlock, and Douglas Fir. The understory consists primarily of blue huckleberry, princess pine, service berry, and rhododendron. Ground cover consists primarily of pyrola, trailing twin flower, bunchberry, bear grass, bed grass, and other grasses planted following clear-cut operations and used mostly for erosion control.

Precipitation is estimated to vary from 70" to 130" per year. The mean annual soil temperature is estimated at about 42° F, which corresponds



exactly with the constant water temperature measured for the spring water each month over the past several years.

There is no discernible river channel within Weygandt Canyon upstream of the spring except in minor eroded areas of clear-cut operations. Organic litter throughout the canyon consists primarily of decomposing needles and twigs from Mountain Hemlock, larch, and fir. The litter varies in thickness from 4" to 12" and provides an excellent filter for surface water which drains through the canyon.

#### 4.1.2 - WATER QUALITY AND QUANTITY

The District staff has measured the water quality and quantity at the springs for several years. There are no continuous flow monitoring or quality monitoring device at the spring except for a master meter which records the total flow entering the District's pipe line on a continuous basis. The other information that exists has been collected weekly and recorded in notebook form. The information in the notebook has also been transferred to the District's computers for use in recording, plotting and analyzing the information.

Flow at the spring varies from approximately 1,500 gpm in the colder periods of the winter to approximately 2,700 gpm during August. It is anticipated that the increased water flows in the summer result from snow and glacial melt on Mt. Hood. It is also likely that the source of the water may not be totally within Weygandt Canyon. Some water may filter through various subsurface basalt and andesite formations and outcrop at Crystal Springs.

Water temperature of the spring has been constant at 42° F summer and winter. This gives strong indication that the source of water is primarily groundwater.

During October, 1990, two independent samples were obtained to analyze for water borne particulates. Samples were collected by District staff and sent to CH Diagnostic and Consulting Services in Fort Collins, Colorado, for laboratory analysis. The result of that work is included in the Appendix. Following analysis, the laboratory commented that "there is no evidence of surface water influence on this system."

Turbidity has also been measured continuously by the staff in their monitoring of the spring supply. Turbidity is a measure of the cloudiness of the water caused by suspended particles. The measure of turbidity is



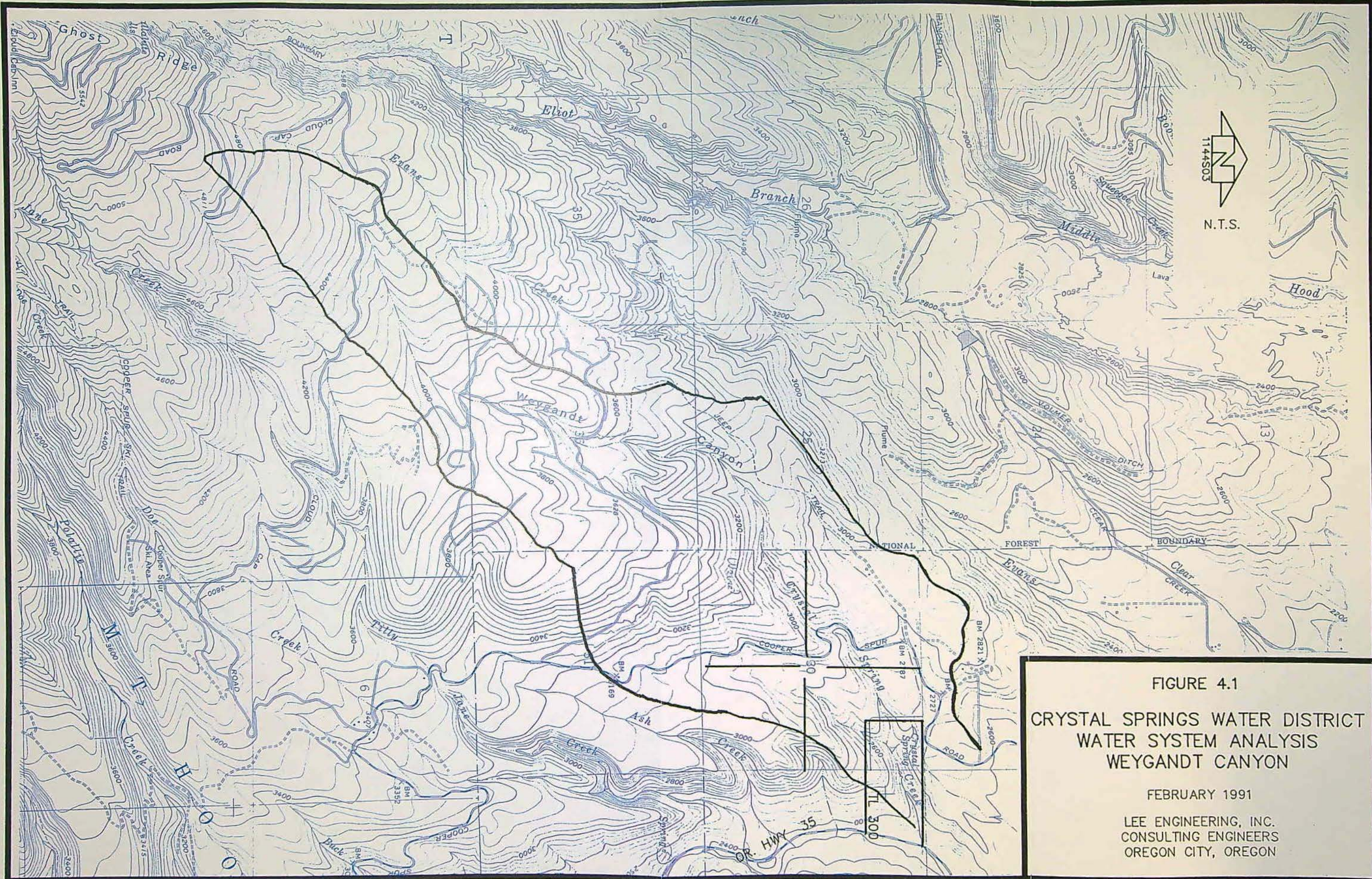


FIGURE 4.1  
CRYSTAL SPRINGS WATER DISTRICT  
WATER SYSTEM ANALYSIS  
WEYGANDT CANYON  
FEBRUARY 1991  
LEE ENGINEERING, INC.  
CONSULTING ENGINEERS  
OREGON CITY, OREGON



generally made in units of nephelometric turbidity units (NTU). The District has measured turbidity with a portable turbidity meter. Over the past three years, the maximum turbidity level was about 0.68 NTUs measured on April 27, 1990. (This higher reading may have resulted from faulty equipment such as low battery charge or improper set point.) In general, the turbidity levels vary from 0.1 to 0.2 NTUs. This also indicates that the water supply is groundwater. One other turbidity reading of note occurred on January 9, 1989 and monitored 0.58 on the turbidity monitor. Again, equipment error may have been the cause of the higher reading.

Water quality is further reviewed on a regular basis by the District to check for physical, chemical, organic and bacteriological constituents. Water samples have been collected on a regular basis by the District staff and sent to certified laboratories for testing. Results of those tests are included in the Appendix.

A review of the laboratory results indicates that the water meets or exceeds the requirements of state and federal regulations for domestic water supplies, except for periodic samples which contain minute quantities of total coliform.

#### 4.1.2.1. - MICROBIOLOGICAL ANALYSIS

Throughout 1988 and 1989 the District staff collected routine samples for analysis of coliform bacteria as required by Oregon Administrative Rules, Chapter 333, Public Water Systems. The rules required that one sample be collected each month for each 800 population connected to the water system. Since there were between 4,000 and 4,800 people being served, the District collected six samples per month and sent them to certified laboratories for testing. The test procedures were in accordance with Section 1441.21 of the U.S. Environmental Protection Agency Interim Primary Water Regulations, amended August 27, 1980. The water system has been in compliance with the regulations throughout the period of 1988 through 1990.

Microbiological testing is normally done to check for the presence of indicator organisms such as coliform which demonstrate the potential for pollution, rather than testing for the pollution itself. Coliform, by and of themselves, are a necessary part of the environment and are necessary for digestion within the intestinal tracts of warm blooded animals. In and of themselves, they do not cause disease. However, their presence indicates that there may be a direct link between the water supply and potential pollution. Because coliform bacteria exists



in enormous quantities as compared to other bacteria, these organisms are the ones which the laboratories attempt to find.

The methods used for testing for these organisms are defined in "Standard Methods for the Examination of Water and Wastewater," published by the Public Health Association, the American Water Works Association, and the Water Pollution Control Federation. An early pioneer in bacteriology, Escherich, in 1885, recovered certain bacteria from human feces which he found in such numbers and consistency as to lead him to determine that these organisms were "the characteristic organism of human feces." Later work has substantiated much of Escherich's original concepts, but has shown that what was first regarded as a single bacteria species is in fact a heterogenous complex of bacterial species and species variants. It has been found that the coliform bacteria not only exists in human feces, but also in other warm blooded animals, surface fresh waters of all categories, and even vegetation. Therefore, the group has been subdivided into various categories, the primary groups being labeled total coliform and fecal coliform. Fecal coliform are those bacteria which are found primarily in the feces of warm blooded animals. Total coliform, including possible fecal coliform, include also the strains of bacteria which grow primarily in soils and plants.

An evaluation of coliform as a pollution indicator can be summarized as follows:

1. The absence of coliform bacteria is evidence of bacteriologically safe water.
2. The density of coliform is roughly proportional to the amount of excretal pollution present.
3. If pathogenic bacteria of intestinal origin are present, coliform bacteria are present in much greater numbers.
4. Coliform are generally harmless to humans and can be determined quantitatively by routine laboratory procedures.
5. Some of the constituents of the coliform group have a wide environmental distribution in addition to their occurrence in the intestines of warm blooded animals.



6. Tests of coliform are subject to interferences due to other kinds of bacteria. False negative results sometimes occur when certain species are present. False positive results sometimes occur when two or more kinds of noncoliforms produce gas from lactose, when neither can do so alone.
7. There is no established correlation between ratios of total coliform/fecal coliform in establishing sanitary quality of water.

A review of the District's tests for microbiological analysis indicates that through the period of September 16, 1988 through December, 1990, there was no indication of pollution from coliform bacteria. There were occasional positive tubes reported in samples taken on November 7, 1989, January 2, 1990 and December 11, 1990. Although one or more of the tubes collected for sampling on these dates showed the presence of total coliform, no fecal coliform was found and there is no reason to believe that these positive samples were indication of bacteriological pollution. Rather, the positive samples may have resulted from testing procedures, sampling procedures, or other factors.

The provisions of the Surface Water Treatment Rules promulgated by the EPA require that filtration must be included in the treatment of surface waters or groundwater under surface water influence, unless certain criteria are met. These criteria include limitations on turbidity levels and on coliform concentrations. If the supply does not meet the surface water quality criteria, changes in operation to meet site-specific criteria may improve the water quality so that the source criteria will be met. However, if the primary agency, in this case the Oregon State Health Division, believes that the source water quality criteria and/or site specific criteria cannot be met, or that filtration is appropriate regardless, the primary agency may require the installation of filtration without a complete evaluation to determine whether the system meets all the criteria required to avoid filtration.

The Surface Water Treatment Rules state that to avoid filtration, the system must demonstrate that the raw water quality is within certain parameters regarding coliform concentrations and turbidity.

The coliform criteria requires that the concentration be less than 20 per 100 ml of fecal coliform, or that the total coliform concentration is less than 100 per 100 ml in the water prior to the point of disinfection application in 90% of the samples taken during the six



previous months. Therefore, the District has undertaken additional monitoring of biological contamination in order to show whether or not the Crystal Springs supply meets these parameters. To date, these parameters have been met.

Also to avoid filtration, the turbidity of the water prior to disinfection cannot exceed 5 NTUs on an ongoing basis, based on grab samples collected every four hours or more frequently while the system is in operation. The system may substitute continuous turbidity monitoring for grab sample monitoring if it validates such measurements for accuracy with grab sample measurements on a regular basis as specified by the primary agency. However, since the turbidity levels at Crystal Springs have never exceeded one NTU, there has been no attempt to meet the monitoring frequency required by the Act. Rather, grab samples have continued to be collected and none of those have ever exceeded 0.68 NTUs. The Oregon State Health Division has provisions under the Act to determine whether or not this testing frequency is adequate to meet the intent of the Act. Because of the remote location of the spring and a lack of power supply in the immediate vicinity, there has been no aggressive attempt to meet the total requirements of the Act for sampling of turbidity on a continuous basis.

In order to meet requirements of the coliform concentration rule, additional sampling is required. For populations serving 3,300 to 10,000, at least three coliform samples are to be collected each week.

In order to avoid filtration, the system must also demonstrate that it maintains disinfection conditions which inactivate 99.9% of giardia cysts and 99.99% of viruses every day of operation, except any one day each month. A number of disinfection mediums and methods are available to meet the inactivation requirements of giardia and other pathogenic organisms. Those agents or methods include free chlorine, chloramines, chlorine dioxide, and ozone. Other disinfectants such as bromine and iodine may be acceptable upon approval by the Health Division.

In January and February, 1991, test results have shown the presence of additional concentrations of total coliform count which is of concern. Again, tests were performed for the presence of fecal coliform and none was found.



The incidence of coliform contamination may be due to the more frequent testing being performed by the District as required by proposed Oregon State Health Division rules and regulations. Particularly, the fecal coliform concentration shall not exceed 20 per 100 ml, or the total coliform concentration must be equal to or less than 100 per 100 ml and representative samples of the source water immediately prior to the first point of disinfection application. Since the District does not disinfect its water supply, the total and fecal coliform counts should be zero. In order to continue to classify the District's source of water as groundwater, it was necessary to test more frequently to verify that there is not an influence from surface waters on the groundwater supply. However, recent bacteriological tests indicate that there may be a surface water influence on the groundwater.

Future work needs to be undertaken to verify the source and/or the extent of the total coliform bacteria. That work is to include a field examination by Oregon State Health Department personnel scheduled for March 8, 1991, further testing for total coliform bacteria, location of potential sources of contamination through the use of tracer chemicals, further control on the management of the watershed, in particular logging practices, and other activities. If the source of total coliform bacteria cannot be found and eliminated, it may be necessary for the District to disinfect its water supply.

#### 4.1.3 - MANAGEMENT AND PROTECTION OF THE RECHARGE AREA

A recharge area is defined as that area which water flows or percolates through in order to replenish an aquifer. One difficulty with defining Crystal Springs' recharge area is that there is no defined drainage within the Weygandt Canyon in terms of surface water. Therefore there is some question as to the full extent of the "recharge area."

In terms of recharge area control, there are a number of agencies and jurisdictions that have concern about Crystal Springs' recharge area. Those jurisdictions include the Environmental Protection Agency, the Oregon State Health Division, the U.S. Forest Service, the State of Oregon Department of Forestry, and Hood River County.

Federal legislation has enacted the Safe Drinking Water Act which establishes maximum contaminant levels for public water supplies. The Act recognizes that communities will be required in many instances to treat water to meet the standards set by the Act. The State of Oregon has



assumed primary enforcement responsibilities for the Act. In addition, federal legislation has set limits for insecticides, fungicides, rodenticides and other chemicals.

A number of state laws also address concerns about water supplies. The Water Resource Department administers Oregon's water laws that provide for a coordinated and integrated state water resource management policy to promote and secure beneficial use of waters within the state. The purposes and policies of the laws of the state in formulating water resource policy is to include notions that the waters in the state are public, that they achieve maximum economic development, that they provide adequate supplies for human consumption while providing for other use, and that they favor multiple use.

The Oregon Forest Practices Act is administered by the Oregon Department of Forestry and includes provisions for maintaining water quality at a treatable level. There are no provisions in the Forest Practices Act to maintain water quality at existing pristine levels.

To date, very little action has been taken to preserve the pristine nature of Crystal Springs' watershed. The County's Comprehensive Plan shows the area in the immediate vicinity of the spring as being zoned "Natural Area." However, the majority of the area is located downstream of the diversion point at the springs and has little or no impact in protecting the recharge area per se. The area immediately upstream of the springs is zoned Primary Forest (F-2) and Forest (F-1). The County has indicated an intent to log the area immediately upstream of the spring, but has deferred those logging operations in anticipation that the Crystal Springs Water District has valid concerns about the logging operations that are proposed.

Currently, the Crystal Springs Water Board is in the process of negotiations with the Forestry Department at Hood River County and is attempting to control logging operations through negotiations and/or outright purchase of the County properties within Weygandt Canyon. It is recommended that the District take whatever action is necessary in order to preserve the pristine nature of the topography within Weygandt Canyon and to preserve the "litter" characteristics in the bottom of the canyon. It is believed that the nature of the litter preserves and protects the groundwater source against potential contamination from surface waters.

Other properties directly upstream of the intake include private forest ownerships and ownerships by the U.S. Government (U.S. Forest Service, Department of Agriculture). Many areas within the recharge area have been



clear cut. There is little question that these clear-cut operations have an impact on the surface waters which percolate through the litter and upper soil mantle before entering the groundwater zone. Any activity which accelerates the rate of runoff and encourages erosion of the surface soils is bound to have an impact on the spring source.

In late 1990, Mt. Hood National Forest published the "Land and Resource Management Plan" for lands under their jurisdiction. The plan fails to locate or acknowledge Crystal Springs as a source of domestic water supply. In this regard, the U.S. Forest Service should be contacted and requested to modify the plan to acknowledge the existence of this very important domestic water supply. In addition, the Forest Service should be contacted and encouraged to participate with Crystal Springs Water District in the management of the recharge area to minimize impact on domestic waters. In company with the U.S. Forest Service, Hood River County, and private land owners within the watershed, an overall recharge area management program should be developed which thoroughly identifies accepted practices

within Crystal Springs' watershed. Hopefully, the plan will address water resource concerns which are not at this time adequately addressed in the federal, state or local legislative statutes. Hood River County and local land owners have shown their intent to cooperate with the water district. The intent of the Forest Service is uncertain.

Management issues and concerns which should be addressed in communications with the above agencies include:

#### SUMMARY OF RECHARGE AREA MANAGEMENT ISSUES AND CONCERNS

- I. Recharge Area Management Concerns and Issues
  - A. Access
  - B. Recreation Level
    - 1. Developed/primitive
    - 2. Prohibited/restricted/permitted
  - C. Forest Practices
    - 1. Forest yield
    - 2. Logging methods
    - 3. Road construction
    - 4. Prescribed forest fire controls
    - 5. Special/conditional use permits
  - D. Fire Protection Plan
    - 1. Retardants/fertilizers



- 2. Priority for control
    - 3. Rehabilitation of burned areas
    - 4. Fuel storage
  - E. Agricultural Practices
    - 1. Crops
    - 2. Farming Methods
  - F. Range Management
    - 1. Riparian protection
    - 2. Livestock grazing
  - G. Wildlife
  - H. Minerals and Mining
  - I. Energy Development
  - J. Water Resources
    - 1. Other users
    - 2. Minimum stream flows (downstream)
  - K. Human and Community Development
    - 1. Domestic Sewage
    - 2. Storm drainage
  - L. Soils - Erosion and Stabilization
  - M. Pest and Vegetation Control
  - N. Pesticide/Herbicide Applications
    - 1. Chemical
    - 2. Biological
  - O. Transportation
    - 1. Road construction
    - 2. Transportation of hazardous material
    - 3. Toxic road materials
  - P. Zoning and Land Use
  - Q. Environmental groups, media, political realities and issues
- II. Establishing Recharge Area Management Direction and Directives
- A. Agreement with Owners
    - 1. Forest plans
    - 2. Individual agreements
    - 3. Special agreements/powerline right-of-way, etc.
    - 4. Special uses
  - B. Direct Ownership
  - C. Special Legislative Action/Agreements
  - D. Laws and Ordinance
    - 1. Federal
    - 2. State/local
    - 3. Land use planning
    - 4. Security/enforcement



- 5. Use of recharge area management committee
- E. Informal Agreements
- F. Administrative Management
- G. Institutional Relationships/Public Involvement
- I. Preparation and Planning of Both Long and Short Term Management Plans
- J. Alternate Sources and Sites Selection for Emergency When Recharge Area Becomes Unusable

#### 4.2 - EVALUATION OF WATER SUPPLY

##### 4.2.1 - DEFINITION

According to Oregon Administrative Rules, Chapter 333-61-020(54): "Spring" means a natural occurring discharge of flowing water at the ground surface or into surface water. Springs can be derived from groundwater or they can be surface water influenced. As indicated above, the spring appears to be classified as groundwater in all respects except in regard to occasional presence of total coliform. Temperatures remain constant, turbidities are always less than one NTU. Water flow remains relatively constant except during the very cold portions of the winter.

Maximum contaminant levels for turbidity are applicable to all public water systems using surface water sources in whole or in part. Prior to January 1, 1992, the maximum contaminant levels for turbidity measured in drinking water at the representative entry points to the distribution system is one NTU as determined by monthly average criteria, except that five or fewer turbidity units may be allowed by the Division if the water supplier can demonstrate that the higher turbidity levels do not:

- a. Interfere with disinfection;
- b. Prevent maintenance of effective disinfection; or
- c. Interfere with microbiological determinations.

Beginning January 1, 1992, the maximum contaminant level for turbidity for systems which do not provide filtration treatment shall not exceed 5 NTUs in representative samples of the source water immediately prior to the first or only point of disinfectant application.

OAR 333-61-030(4) provides for maximum microbiological contamination levels of all domestic water systems. Requirements are that:



- a. The MCL is based on the presence or absence of total coliform, rather than density. Total coliform shall not be present in more than one sample each month.
- b. When using the fermentation tube method and 10 ml standard portions are used, coliform bacteria shall not be present in:
  1. More than 10% of the tubes in any month;
  2. Three or more tubes in more than one sample when less than 20 samples are examined per month; or
  3. Three or more tubes in more than 5% of the samples when 20 or more samples are examined per month.

Since more than one sample in the months of January and February, 1991 contained total coliform counts, the Crystal Springs Water District did not comply with the maximum microbiological contaminant levels according OAR 333.

#### 4.2.2 - SOURCE VOLUME AND WATER RIGHTS

As indicated above, the source volume is sufficient to meet all future needs anticipated for the Water District, including the population needs through saturation population in accordance with the existing Comprehensive Plan. In addition, the District maintains adequate water rights to the spring source. The District is in possession of one certificate of water right and two water rights permits, Certificate No. 9831, and Permit Numbers 29377 and 34196. The certificate is for 1.0 cfs, or 448 gpm. The first permit is for 2.65 cfs, or 1,187 gpm. The second permit is for 3.5 cfs, or 1,568 gpm. Total water rights amount to approximately 3,203 gpm, or slightly higher than the maximum flow of Crystal Springs.

Even though the Water District maintains adequate certificates and permits for the appropriation of waters from Crystal Springs, those rights may be in jeopardy. Therefore an understanding of appropriation doctrine and water rights issues is important in order that the District and its staff can maintain the rights for future appropriation outlined under its permits.

There are two basic systems for controlling the use of surface drainages in the United States. The riparian doctrine prevails in the eastern part of the United States, and the appropriation doctrine prevails in the west.



Concerning groundwater, allocation procedures vary from state to state and can include a rule of absolute ownership, rule of reasonable use, the rule of correlative rights, or the permit system. In Oregon, the permit system is used for both surface waters and groundwaters.

The appropriation doctrine is generally referred to as "first in time, first in right," and was subsequently confirmed in law by express recognition through court decisions, constitutional provisions, and state statutes. The nature of a water right acquired by appropriation is a right of use, to take water and apply it to beneficial use for a certain property and a right of preference over the rights of subsequent appropriators during times of water shortage. Although appropriative water rights arise by application of water to beneficial use, state administrative and judicial systems are in place for determining the nature and extent of these water rights and their relative priorities, and for administration of such rights to assure that such waters are made available to appropriators in accordance with their determined rights.

Municipal water suppliers must often compete with other water users for a water resource. The water utility manager and municipal governing board will on occasion be required to make policy decisions to insure an adequate supply of water. The more knowledgeable they are on the consequences of their decisions, the better those decisions will be.

The appropriation doctrine rests on two basic principles: priority and beneficial use. When the flow of a stream is insufficient to meet demand, its use is regulated by priority and time. The most recent uses are curtailed in order to provide water for the earlier uses. The effect of the rule is clear: water shortages fall entirely on those who last began using water. This is in contrast to the riparian doctrine, under which shortages are shared by all.

Under Oregon law, municipalities can reserve for future appropriation water rights which may or may not be perfected. That is, the municipalities may not show that they have actually used the water, but may be able to show some future need for the water, and thus, reserve those waters for future appropriation. It is the normal procedure for cities to request and be granted permits for future water appropriation. When the water is used, the District should file for perfection of its water rights and receive a water rights certificate. The remaining portions of their unused permits should be held in abeyance by repeated extensions of time for these municipalities to fully develop or perfect their water permits.



Municipal water rights in Oregon, long held in reserve, are now being developed to serve a growing population. Water districts and municipalities have the legal ability to interconnect systems and serve other entities, even out-of-basin. Municipal water rights generally represent a senior claim to the waters of a lake or receiving stream and are a potential threat to the public in-stream values that depend on river flows. The Oregon Water Resource Department in the future will be analyzing all streams of Oregon for minimum stream flows to enhance fish and wildlife benefits. Where stream flows are not sufficient to maintain riparian benefits, the Water Resource Department may attempt to divert existing water rights or permits, currently unused, to what is perceived to be a greater beneficial use. Therefore, it is extremely important that the District remain active in preserving its water rights to and including the ultimate development of the Hood River Valley in accordance with the adopted Comprehensive Plan. In so doing, the District should file for a water rights certificate to perfect the waters it has currently used. As required by state statute, the District should also renew its permits to maintain their validity into the foreseeable future.

#### 4.2.3 - TREATMENT REQUIREMENTS AND ALTERNATIVES

Since water quality of Crystal Springs meets or exceeds state statutes, except for bacteriological indicators, no treatment of the spring source is required or recommended in the foreseeable future, except for the possibility of disinfection.

#### 4.2.4 - DISINFECTION ALTERNATIVES

##### 4.2.4.1 - GENERAL

Water obtained from surface sources, unconfined wells, and infiltration galleries shall, as a minimum, be provided with continuous disinfection before such water is used in the water system. Water from springs can be utilized without disinfection if analysis indicate that the water is consistently below maximum biological contaminant levels. Springs may be considered by the health division to be groundwater sources when they derive waters from beneath an extensive and impervious formation. In the past, the Health Division has given verbal acknowledgement that they classify Crystal Springs as a groundwater source. However, recent bacteriological examination indicates a potential source of contamination. Therefore, it is anticipated that unless this contamination threat can be found and eliminated, the spring water may need to be disinfected.



#### 4.2.4.2 - CHLORINATION

The use of chlorine has been the primary drinking water disinfectant in the United States for more than 70 years. A 1987 study, "AWWARF Trihalomethane Survey," found that about 85% of the U.S. Water systems using surface waters and about 80% of those using ground waters rely on chlorine.

From a health standpoint, the omnipotence of chlorine has come into question as by-products of chlorination are identified. Although judicious use of alternative disinfectants to replace or augment chlorine can provide the equivalent microbiological control, questions about other disinfectants and/or the health effects of their by-products also exist.

Chlorine can be used as a disinfectant in a variety of forms, including chlorine gas, chlorine combined with water to form hydrochloric acid, chlorine dioxide, chloride, and chlorite. Chlorine reacts in water with residual organic material to produce trihalomethanes and a variety of other chlorinated and oxidized substances. Similar substances are generated in the intestinal track by reaction between chlorine and gastric contents. Chlorine and chlorine by-products in elevated dosages have been found to be cancer-causing in some laboratory experiments. However, the overall benefit of chlorine in reducing pathogenic organisms within the water supplies is believed to outweigh the negative side effects of chlorine use. Therefore, the water industry still relies on chlorine as a reasonable and appropriate means of disinfection.

If chlorination is used, it will be necessary to provide a 99.9% removal or inactivation of giardia cyst and a minimum of 99.99% removal or inactivation of virus if the source is influenced by surface water. These parameters can be met by providing for certain levels of chlorine concentration and contact time between the chlorine and the pathogens in a holding or detention tank or within an existing pipeline such that a free chlorine residual of 0.2 mg/l after 30 minutes contact time before first water use is achieved. At a temperature of approximately 5° Centigrade or 40° Fahrenheit, and a pH level of 7.5, required CT is approximately 179. That is, the product of detention time times chlorine concentration must be in the range of 179.



This criteria can be met within the existing 14" pipeline between the spring and the end of Dog River, provided that the overflows at the existing reservoirs are reduced or eliminated. At the existing flow rates, a contact basin would have to be constructed at the springs. However, it is assumed that the overflows can be eliminated and therefore, a new detention basin may not be required.

#### 4.2.4.3 - ULTRAVIOLET RADIATION

Ultraviolet light is invisible radiation with a range of solar spectrum, that is equivalent to sunlight. Ultraviolet light is similar to that produced by visible light but the wave lengths of the light waves are shorter. Ultraviolet radiation is measured in billionths of a millimeter, or Angstrom units. An angstrom unit wave length equals one hundred millionth of a centimeter.

Protein and nucleic acid of micro-organisms absorb ultraviolet radiation energy. After absorption, the ultraviolet energy destroys or inactivates the nucleic acid, thus preventing the microorganisms from reproducing. Sterilization of drinking water implies that all life is destroyed, including life of bacteria, molds, virus, algae, and protozoa. However, this method is not approved for inactivation of Giardia cysts. At this time ultraviolet radiation has not proved effective and is not approved on sources influenced by surface water.

In order for ultraviolet radiation to be effective, the water supply must meet certain criteria. The turbidity must be less than 10 NTUs, color less than 15 TCUs, and iron less than 0.2 parts per million. The Crystal Springs Water supply meets this criteria.

Ultraviolet treatment does not provide residual bactericidal action. Therefore, the need for care in the operation and maintenance of the water distribution system must be recognized. Water disinfection is required for protection of the supply. Therefore, standby equipment may be required. It is suggested that if ultraviolet radiation is used, at least two units be installed in order to provide reliable disinfection. In addition, consideration should be given to using chlorine or another approved disinfectant in limited amounts to provide for residual disinfection in the distribution system and as a backup to the ultraviolet radiation.

Two benefits may result from use of ultraviolet. There is no THM residual. Also, no detention time is required. However, the Oregon



Health Division does not recognize ultraviolet treatment as a reliable process. Therefore, this concept is not recommended.

#### 4.2.4.4 - OZONE

Ozone is a very powerful oxidant. It is moderately soluble in water and is typically used at a concentration of a few milligrams per liter for drinking water disinfection. Over 1,000 systems in Europe use ozone and its use in the United States is increasing. Because it decomposes rapidly in water, it cannot be used to maintain a residual in the distribution system.

Ozone is a molecule of oxygen containing three atoms, rather than the normal two atoms of oxygen typically found in the atmosphere. Therefore, the ozone must be generated on-site using electric energy and filtered air. The ozone that is generated is then defused into the water supply. The CT time required for ozone is considerably less than for chlorine. A three-log reduction of pathogens at 5°C is shown to require a CT of 1.9 as shown in Table E-10 of EPA's Guidance Manual for filtration and disinfection requirements of public water systems. Therefore, the location of the ozone system could be placed anywhere along the transmission line between the spring and the first customer.

#### 4.2.4.5 - IODINE

Iodine has been used to disinfect both drinking water and swimming pools. An iodine residual of about 1 mg/l is required for effective disinfection. Iodine is an essential trace element required for the synthesis of the thyroid hormone. The estimated adult requirement is 80 to 150 mg per day. Deficiency results in goiter, a compensatory hyperplasia of the thyroid. Most intake of iodine is from food, especially seafood, and in the United States, table salt is supplemented with potassium iodide. The threshold for sensory perception of iodide is considerably higher than for chlorine. Chlorine has a effectual limit of approximately 1.0 to 1.5 mg/l. Iodine has a threshold limit in the range of 8 to 9 mg/l.

In very high doses, iodine can be fatal, particularly in the range of 2 to 3 grams. However, this level is 2,000 to 3,000 times that necessary for disinfection. Therefore, no negative results are anticipated nor negative health anticipated with iodine at residuals for one milligram per liter or less.



Iodine can be fed into the system relative simply using iodine crystals and pot type chemical feeders.

#### 4.2.6 - TRIHALOMETHANE REGULATIONS

In addition to complying with disinfection requirements, systems must meet the requirements of total trihalomethane regulations. Currently, this regulation includes a MCL or maximum contaminate level for TTHM of 0.1 mg/l for systems that serve greater than 10,000 people. EPA expects to issue new regulations with lower MCL's in the near future. These regulations may also pertain to systems serving the less than 10,000 people. Therefore, the selection of an appropriate disinfection strategy must include consideration of current and future regulations. For Crystal Springs, the population is less than 10,000 and therefore the regulations do not apply. However, future regulations may change this situation.

#### 4.2.7 - CONCLUSIONS

Conclusions that can be drawn from the above include:

1. Crystal Springs Water supply meets water quality criteria and applicable regulations except for possible bacteriological contaminations.
2. The water quality, even with bacteriological contamination, does not appear to require filtration of the water source.
3. Unless the source of the bacteriological contamination can be found and eliminated, it is likely that some form of disinfection will be required.
4. Several possibilities exist for adequate disinfection including chlorination, ultraviolet radiation, and ozone. Based on primary analysis, chlorine may be the best choice.
5. Before a final choice of disinfection is selected, a sanitary survey should be undertaken by the State Health Division, and they should respond to the options outlined above for disinfection.



## 4.3 - ALTERNATIVES FOR MEETING FUTURE WATER SUPPLY

### 4.3.1 - GENERAL CONSIDERATIONS

Future water needs to serve the estimated ultimate population of the District, including the communities of Odell and Parkdale, are a little less than 1 mgd. This estimate is based on an ultimate population density of approximately 7,860. Allowance must also be made for unaccounted-for water. Assuming an average daily demand of approximately 100 gallons per capita, then approximately 786,000 gallons per day of water will be sold through individual meters. Approximately 250,000 gallons should be allowed for reasonable water loss for unaccounted-for water. Based on these figures, the spring supply has more than adequate waters to serve the District into the foreseeable future.

There are other water supplies available, including groundwater and/or filtered surface water. Each of these options are briefly discussed below.

### 4.3.2 - GROUNDWATER SUPPLY

Many of the homes within the District boundaries are currently not connected to the District's water supply. These homes obtain their water from individual wells which are common throughout the Hood River Valley and deliver water of sufficient volume to meet the needs of an individual home. However, many of the well waters do not taste palatable. They contain various constituents, including iron, manganese, and hydrogen sulfide, which are offensive to the senses. Most of the wells are relatively shallow and less than 100 ft. deep.

A review of two references concerning groundwater indicates that additional larger volumes of water may be available. The two references are: "Groundwater Resources in the Hood Basin, Oregon," by Stephen J. Grady, published by the U.S. Geological Survey in 1983. The other reference is "A Study of Water Sources, Supply and Quality," prepared for Hood River County by the Oregon State Water Resources Board in 1965.

Relatively little groundwater is being pumped from the wells in the Hood River Valley because of the abundance of springs and surface water supplies. The main water bearing unit underlying the Hood Basin is the Columbia River basalt group. Total thickness of this unit is probably 2,000 ft. or more throughout much of the basin. Much of it is saturated. The most productive water-bearing zones are in porous, fractured basalts or rubbly basalt formations that commonly occur near the top of the individual



lava flows. Anticipated yields from the basalts vary widely, from a few gallons per minute, to several thousand gallons per minute.

The development of groundwater in the Hood River Basin of a sufficient quality and quantity to meet domestic demands would take considerable investigation. Additional wells would have to be drilled for exploratory purposes. It is likely that the most promising water-bearing formations are in the lower portions of the Hood River Valley, requiring the water to be pumped significant distances and in high elevations to meet the needs of the southern end of the valley. The reports do not recommend that wells be drilled through the volcanic overburden or through the Troutdale formations that might exist. Rather, attempts should be made to drill directly into the Columbia River basalts. Wells may end up being 1,000 ft. to 2,000 ft. deep.

It is anticipated that the cost of each well of sufficient capacity for domestic purposes would run between \$300,000 and \$500,000. Wells may yield 500 to 2,000 gpm. In addition, considerable expense would be required for the purchase of power to lift the water to the higher elevated areas of the District. Pipeline modifications would probably be necessary and booster pumps between the various pressure zones would have to be constructed. In summary, the expense of developing groundwater appears to be prohibitive in comparison to continued use of Crystal Springs.

#### 4.3.3 - FILTERED SURFACE SUPPLY

Alternative surface supplies are available throughout the Hood River Valley. There are numerous streams which flow water 12 months of the year. However, the water quality in the streams is often high in turbidity and color and may also be subject to surface contamination from accidental spills of fuels and/or toxic substances. Also, the District does not at this time maintain any water rights on surface streams except the rights to Crystal Springs.

The cost to provide full treatment of surface waters is estimated to be in the range of about \$1.3 million per million gallons per day of capacity. This cost includes package treatment plants, clearwells, buildings, sludge disposal, site work, standby power, land, and engineering and contingencies. The annual cost of operation and maintenance is approximately \$223,000 per year per million gallons per day of produced water. Although the Crystal Springs water supply has a demand of somewhere between 350 and 500 gpm, or between 0.5 and 0.7 mgd, the treatment plant would probably have to be constructed of a one million



gallon capacity. Ultimate peak day demand may approach 2 mgd. Package treatment plants do not come in incremental sizes, except for certain standard sizes. The standard capacities are 350, 520, 700 and 1,400 gpm. Therefore, initially a 700 gpm system is very likely the one that would be required. Ultimately, capacity to 1,400 gpm might be necessary.

The final result is that the cost, including capital and operation and maintenance, per 1,000 gallons is about \$.85. This cost would be in addition to the present cost the District is experiencing and would be in addition to the costs anticipated for capital improvements projects necessary to improve the system. Needless to say, this cost is exorbitant, and therefore future analysis of surface water treatment is not recommended. Also, slow sand filters are not anticipated to be adequate because of the nature of the surface waters throughout the Hood River Valley. Slow sand filters, except as it may apply to the spring source, would be difficult to operate and maintain.

#### 4.3.4 SPRING DEVELOPMENT

It is anticipated that continued use of the spring will require the following:

- A. Further development of the spring to eliminate total coliform.
- B. Improved monitoring of the various flows and turbidity at the intake site.
- C. Monitoring instruments will require some electrical power to continuously record data to be collected at the intake. Data collection should include turbidity, temperature, conductivity, instantaneous flow rates of water diverted to the distribution system, and overflow of water at the weir which flows to Crystal Springs Creek.
- D. If chlorination is used, the chlorination equipment should be installed within a building that is provided with heat. Heat can either be provided with electrical power or propane gas. Chlorine residuals may also have to be monitored.

The electrical power necessary to run the equipment can either be obtained from the local power company, or it can be generated on site. In order to produce this power on site, a water-powered turbine generator operated by the continuous flow of water entering the distribution system can be constructed. The electrical system should be equipped with a DC-AC converter. Power generated should be



stored in battery packs so that power would be available in the event flows would be minimal to the distribution system during late evening hours or during emergency shutdowns.

The chlorination equipment can be run automatically, also using the power within the water flowing in the pipe. Chlorination equipment should be provided with proportional feed control so that chlorine dosages are maintained at preset levels. Chlorination equipment should also be provided with automatic overrides in the event there should be a failure in the electrical system. The automatic override would provide for continuous chlorine feed at a constant rate. Without these controls, high dosages of chlorine may be sensed by users if emergency situations should occur.

In order to adequately generate the power, the site of the proposed generator facilities, chlorinator, and monitoring equipment should be located near Highway 35. Approximately 20 ft. of head will be needed to run the chlorination equipment and/or power equipment. The effect of this will be to reduce pressures in the upper Hood River Valley by approximately 5 to 10 psi. However, because of the relatively high pressures, this is not considered to be a problem.

#### 4.3.5 - EVALUATION OF ALTERNATIVES AND RECOMMENDATIONS FOR IMPLEMENTATION

The least expensive and most viable option for future water supply is to continue the utilization of the spring source.

In order to protect and enhance the existing spring supply, the following should be undertaken:

1. The pristine nature of the forest immediately upstream of the springs should be protected. This may occur as a result of negotiations with land owners, including Hood River County, private individuals, and the U.S. Forest Service. It may also include the outright purchase or land exchange of property immediately upstream of the spring from Hood River County.
2. Investigation should be undertaken to attempt to find the source of bacteriological contamination. If the source can be found and future testing can document the nonexistence of a bacteriological contamination following corrective action, then attempts should be made to continue to use the spring without disinfection.



3. In the event sources of bacteriological contamination cannot be conclusively eliminated, then disinfection should be implemented.
4. If disinfection is needed, additional investigation should be made into the effects of chlorination.
5. Monitoring of the flows and turbidity at the spring should be undertaken immediately. Permanent equipment should be installed, including electrical generation capacity utilizing the flows in the existing pipelines. A new building should be constructed just upstream of where Crystal Springs Creek crosses Highway 35 to house monitoring equipment and power generation.

Although sources of water are possible through groundwater and surface water treatment, these options are not recommended because of their high cost relative to the continued use and improvement of the springs.



## CHAPTER 5

### TRANSMISSION AND DISTRIBUTION SYSTEM

#### 5.1 - DESCRIPTION AND EVALUATION OF EXISTING SYSTEM

The existing transmission and distribution system consists of pipelines varying in size from 14" at the spring to 1" and 3/4" pipe sizes extending service along agricultural roads, driveways, and through private easements to serve individual homes. Elevations vary from 2,430 ft. at the intake to about 150 ft. at a service to a restaurant near Hood River. The existing transmission and distribution system is shown in Figure 5.1.

In addition to the pipelines, the distribution system also includes pressure regulating valves and reservoirs. Pressure regulating valves are installed to reduce pressure as water flows through the District. Without pressure regulating valves, the pressure near the City of Hood River could be as high as 987 psi. The normal operating pressures for distribution systems is in the range of 40 to 100 psi. Because of the extreme elevation relief within the Crystal Springs system, the pressure zones vary from 40 to 240 psi under normal flow conditions. During maximum flows, such as for fire fighting purposes, pressures can be significantly lower than normal.

The District is divided into four pressure zones. The zones are generally referred to as the Upper Hood River Valley, the Booth Hill pressure zone, the Pine Grove pressure zone, and the lower pressure zone serving areas generally north of Panorama View County Park. There are also some other limited pressure zones northwest of Parkdale and northwest of Odell. These pressure regulating valves serve local pipelines. There are also regulating valves on most, if not all, of the individual services. In these situations, although the pressures in the main are relatively high, the water delivered to the customers is kept at lower pressures through individual pressure regulating valves.

The reservoirs on the system include one at Booth Hill of a capacity of 0.7 mg. The other located at Pine Grove has a capacity of 0.4 mg. Each is constructed of concrete.

Because of the relatively high pressures within the distribution system, the District has a policy of constructing pipelines using ductile iron or copper. Other pipeline materials such as steel, plastic, and asbestos cement are not allowed because those piping materials do not readily withstand high pressures. It is recommended that the District continue with this policy of allowing only ductile



iron and/or copper as acceptable pipe materials. Pressure rating of the pipe needs to be equal to or greater than the maximum pressures in the pipe.

## 5.2 - POINT OF USE EVALUATION

There are two concerns with regard to point of use evaluation. The first concerns pressures at the end of small diameter service lines. The District has experienced situations where customers have complained about low pressures during certain situations. These low pressures are undoubtedly caused by high demands on small diameter pipe systems and excessive elevation relief throughout the District. In some cases additional pumping is required. For houses located along hillsides, it is frequently uneconomical for the District to serve these areas with a gravity water feed. The District's policy is that where low pressures exist along or on top of hillsides, individual property owners are required to provide their own pumping system to maintain pressures above the minimum 20 psi residual pressure required at all connections at all times.

Low pressures can also result from increased hydraulic demand on the water system. This increased demand normally results from fire hydrant use and/or from broken or leaking pipes.

One of the requirements of a water purveyor is to maintain pressures in the system to a level of at least 20 psi. This issue is addressed more thoroughly in Section 5.4 below.

Another concern with regard to point of use has to do with proposed EPA regulations initially published in the Federal Register on October 18, 1988. The new requirements are to minimize lead and copper in drinking water. The regulations will impact all community water systems, regardless of size. To date, the regulations have not been adopted in final form. However, when they are adopted, the District will need to address the levels of lead and copper in drinking water at the point of use. The requirements are that lead and copper be kept to a level of 0.05 and 1.3 mg/l respectively. This can normally be accomplished if the water is maintained at a pH level of at least 7.5 to 8.5 and carbon dioxide levels and other features of the water system which can cause corrosion of the pipe are kept under control.

For the purposes of Crystal Springs Water District, the pH of the water supply has generally been measured above 7.5. The water does not contain high levels of carbon dioxide and therefore it is anticipated that the impact of the rules will be a requirement of the District to conduct additional testing of water supplies at the point of use, that is, inside homes. Other than the additional testing which may be required at some future date, no other expense is anticipated with regard to



this regulation. However, if the assumptions listed do not prove conclusive, and the water is determined to be corrosive in nature, then chemical addition at the source may be required.

### 5.3 - HYDRAULIC ANALYSIS OF DISTRIBUTION SYSTEM - COMPUTER MODEL

In order to analyze the capacity of the existing system as well as project future needs of the system, a computer model was developed.

The hydraulic analysis was performed on the computer using two different software programs. One was the Kentucky Pipe program, called KYPIPEF, developed by Donald J. Wood, Department of Civil Engineering, University of Kentucky at Lexington. The program runs on IBM-compatible computers. Input data was organized on a separate LOTUS 1-2-3 spreadsheet which was converted to an input file readable by Kentucky Pipe using 1-2-3-4 TRAN written by Ridgetop Software of Beaverton, Oregon.

The other software package used was Waterworks, developed by Synex Systems Corporation of Vancouver, British Columbia. The software by Waterworks is a LOTUS add-in used for the design and analysis of water pipe networks. This program is also compatible with IBM-compatible desktop computers and has additional capabilities in terms of input data and graphic viewing of results that are not included in Kentucky Pipe.

The primary advantage of using the two different systems is to verify that the models work properly and represent a reasonable estimate of the capacity of the existing and proposed systems.

The basic computer modeling system used in the programs is that a water system consists of nodes connected to pipe sections. Pipe sections are constant diameter pipes which can contain fittings such as bends, valves, pumps, fire hydrants, and other systems. The end points of the pipe sections are called nodes, which act as places in the network where flow may either enter or leave the distribution system. There are two types of nodes modeled in the program.

A junction node is a point where two or more pipes meet. Most commonly, it serves as a location where customers take water at a given flow rate. The computer program calculates the resulting pressure based on the specified elevation and demand at the node. A fixed grade node is a point in the system where both pressure and elevation are specified and the computer program calculates the resulting flow in or out of the system. Examples of fixed grade nodes are reservoirs and/or master meters connected to large pipelines. A fixed



grade node can also be used at a point where the available fire flow is to be calculated at a standard residual pressure of 20 psi.

All nodes and pipe sections are linked together by a set of equations which obey the following physical rules.

1. The sum of all flows into and out of a junction node is zero.
2. The sum of all pressure drops around any closed loop in the network must be zero. Pipe sections are modeled using the Hazen-Williams equation which relates flow to pressure drop through a length of pipe. The diameter, length, and friction factor for each pipe section must be input in the model. For a pressure reducing valve, the computer program compares the upstream pressure, the downstream pressure and the valve pressure setting. If the upstream pressure is greater than the valve pressure setting, the pressure out of the valve is reduced to the setpoint. If the downstream pressure is greater than the valve setpoint, there is no flow through the valve. If the upstream pressure is greater than the downstream pressure but less than the set point, the valve opens all the way and acts like a pipe.

The output from each KYPIPEF computer run is a listing of flow, velocity and pressure loss through each pipe section and the elevation, pressure and flow into or out of each node. Sample input data and output results are shown in the Appendix.

KYPIPEF also generates a Results File which is converted by another University of Kentucky program called PIPEPLOT into a pipe network CAD (Computer Aided Design) file. When plotted, the file graphically displays the flows and pressures at selected points in the piping system. The PIPEPLOT program was used to generate CAD results files which were printed out on an AUTOCAD computer drafting system. PIPEPLOT was also used to create a network schematic of the water system pipes modeled in this hydraulic analysis. (See Figure 5.2).

When constructing a hydraulic model of a water system, much information is required. One must know the configuration of the system; the size, length and hydraulic condition (or smoothness) of each pipe modeled; the elevation of each node; the characteristics of the water sources; and the demand patterns of the customers. The following narrative discusses the sources of information and the assumptions made in using it to construct the computer model.

The distribution system configuration was available from the District's master map updated as of June 1989 and various conversations with District's personnel. The major problem in modeling the system was selecting the most important pipes so



that the computer program was reasonably uncomplicated, yet was sufficiently accurate in predicting system performance. Pipes smaller than 4 inches were assumed to make no meaningful contribution toward moving water through the system and to function only as local distribution laterals. Therefore, 3 inch and smaller mains were eliminated unless they completed an important loop or otherwise were significant due to their location.

The resulting model of 142 junction nodes, 6 fixed grade nodes and 162 lines is shown schematically in Figure 5.2. Solid lines represent existing pipes within the District boundaries. Heavy lines are those modeled to improve flow conditions within the District. Elevations shown for the junction and fixed grade nodes were taken from U.S. Geological Survey quadrangle maps.

In addition to system configuration, the model requires input data for each line consisting of length, diameter and friction factor. The individual line lengths were scaled from the District's master map. This map also shows line size. All pipes are either cast iron, ductile iron or steel. Most have been installed within the last 20 years, but some pipe from the 1930's and 40's remains. The roughness coefficient or Hazen-Williams "C" factor for each pipe was set to 150. Modeling the "C" factor using standard varying factors did not work for this model.

Water demand for the services in the District was estimated from the District's computerized meter consumption records. Using data from the meter books District personnel computed the total annual water consumption by meter size. The results are listed in Chapter 3.

The peak day demand was assumed to be 543 gpm, which is 1.62 times the average day demand of 335 gpm. Fire flow demands were obtained from various fire bureau's consisting of Parkdale, Odell and Pine Grove as follows:

<u>Building</u>	<u>Fire Flow</u>	<u>Duration(Hours)</u>
Single-family residences	500 gpm	2
Apartments, residential developments	1,500 gpm	2
Industrial/complexes/schools		
5,000 - 10,000 S.F.	2,500 gpm	2
Industrial/complexes/schools up to		
35,000 S.F.	5,000 gpm	2

\*Note - Sprinkle systems reduce requirements by 50%.

According to accepted engineering practice and Oregon State Health Division requirements, a distribution system must be able to supply peak day demand plus fire flow while maintaining a minimum 20 psi pressure throughout the system.



Thus, for purposes of this study, the supply sources and transmission system must be able to provide fire flows at 20 psi during peak day demands.

After all network elements and node demands were defined and input into the computer, the model was verified against actual field tests. This verified model is then used for modeling any capital improvement projects or changes in conditions.

In addition to pipe and junction node information, data was collected for pressure reducing valves (PRV's). Due to the nature of the District there are PRV's throughout the District to keep pressures at a manageable level. The PRV's incorporated in the model are listed in the following table along with the verified in/out pressure readings.

#### PRV INFORMATION

<u>No.</u>	<u>Location</u>	<u>Size</u>	<u>Grd. Elv.</u>	<u>Pressure (PSI)</u>	
				<u>In</u>	<u>Out</u>
5A	Jordon Road	8"	1905	240	55
15A	Culbertson Road	4"	1980	230	55
45A	Takasumi	8"	1180	200	65
65A	Massey Grade	8"	1120	230	70
100A	East Side Road	4"	600	210	125
30A	Trout Creek @Berry Dr.	4"	1475	185	85
70A	Central Vale Drive	4"	1110	240	150

One of the drawbacks of the KYPIPEF program is its inability to handle multiple PRV's. The model "disconnects" causing continuity problems and giving erroneous results. For this reason the District had to be broken down into pressure zones. This resulted in three models to work with instead of one. This does not pose problems when working with a skeletal system consisting of the major pipes but when you move to the borders (between models) and start adding more pipes it makes interpreting the results more difficult.

For this reason copies of the data from the KYPIPEF models were combined into one data file and inserted into a hydraulic analysis program called WATERWORKS. This program also uses the Hazen-Williams equation and requires the same information as the KYPIPEF program. It is a much "friendlier" program to use and is self contained, thus eliminating the need for "extra" editing and plot creation files. It will create a drawing file similar to PIPEPLOT which can then be exported to a CAD program or plotted using LOTUS 1-2-3 plotgraph capabilities. WATERWORKS also handles PRV's, and it was therefore possible to model the



entire system in one model rather than 3 separate models. This makes modeling changes and different operating conditions much simpler and quicker.

As was stated previously the model was verified against data collected by Lee Engineering, Inc. and District personnel. Pipe sizes and actual connections were also discussed with District staff and it is believed the model now represents closely actual field conditions.

### 5.3.2 - HYDRAULIC GRADE LINE ANALYSIS AND REVIEW

The hydraulic grade line of a water distribution system is the level to which water would rise vertically. For example, if a pipeline was extended along the edges of the hillside adjoining the water system, the water level could only rise to a certain level depending on the pressure within the system that the pipe was connected to. The water level will not rise indefinitely. It will rise only to a given level which can be envisioned to be that level which is the surface of a river equal to the capacity of the pipeline. The hydraulic grade line of a river is in fact the water surface of the river itself. The hydraulic grade line of a lake is the lake level.

As water flows through a pipeline, it loses energy. That energy results in a lower level to which the water will rise in elevation.

An analysis of the District's existing system indicates that there are a number of areas in which low pressures can result from various circumstances. Figure 5.3 shows those areas of concern. The areas are dashed and cross-hatched to show areas above the hydraulic grade line, that is, elevations to which water will not rise, and a dotted shaded area indicating the potential areas where pressures may be less than 20 psi. Water service should not be extended to those areas which are in the shaded or dashed zones, unless it is pumped.

There are also areas shown on Figure 5.3 which represent areas of concern during major fire events. For the most part, these areas will be eliminated once all of the capital improvements outlined below are completed. In the interim, however, the District and the Fire Department should be aware that fighting fires may create some zones where people will have less than 20 psi pressures. When and if these events occur, the neighborhood should be notified, the District should flush these areas of the system, and special bacteriological samples should be taken so as to minimize the effects of potential contamination of the distribution system resulting from low pressures. If pressures are reduced below 20 psi or below 0, water can be syphoned from the ground into the joints in the buried pipes, through leaks,



or even through plumbing fixtures in housing units to cause potential contamination. If possible, these circumstances should be avoided. However, when they occur, they need immediate attention. As stated above, the ultimate intent is to solve these problems by the addition of larger pipelines, new reservoirs, or readjusting existing pressure regulating valves.

There is one area which can be corrected by modifying the pressure regulating valves and isolating valves within the existing system. This area is along the hillside due east of the community of Odell. This area, shown in Pressure Zone 3 on Figure 5.3, should be corrected in the near future by adjusting the valves and regulating features so that this area is fed directly from Booth Hill Reservoir, rather than from the Pine Grove pressure zone.

### 5.3.3 - SURGES

Surges are phenomena within hydraulic systems which tend to increase pressures when the velocities of pipeline are changed rapidly. For example, if a fire hydrant is opened and flows 1,000 gallons per minute and the Fire Department shuts the hydrant down quickly, surges may be added to the system which have an effect of raising the pressures significantly. The surges can be of such an extent that they break pipes.

Because the pressures in the Crystal Springs system are quite high in certain areas, surges should be kept to a minimum. The primary means of keeping surges under control is to slowly open and close valves or fire hydrants, and to size water pipes and services so that high velocities do not occur. It is the rapid change in velocity which causes the surge. The best solution to surge problems is to eliminate them at their source.

In order to minimize the problems with surges, the District has installed relief valves which discharge the high pressures to local drainage ways when and if they occur. These relief valves need to be maintained on a regular basis to be sure that they work. In addition, the Fire Departments should be contacted on a regular basis and meetings held with the professional and volunteer staffs of the Fire Departments to emphasize the hazards of creating surges and the methods to minimize them.

Other sources of surges are improperly operating regulating valves or relief valves and/or pumps. Since there are few or no pumps in the system which operate to change velocities rapidly, the main sources of surges will be the opening and closing of fire hydrants, the opening and closing of isolating valves, and improperly operated and maintained pressure regulating valves.



Regulating valves and relief valves should be maintained on a semi-annual basis. Major components of these valves should be replaced at a minimum of every five years. During routine maintenance, pilot controls should be made to operate over their full range. Strainers should be cleaned. Any noticeable leakage should be repaired. During the inspections of the system to verify the hydraulic models, the copper tubing on some of the relief valves were corroded and leaking. These were brought to the attention of the foreman.

#### 5.3.4 - DESIGN STANDARDS

In the design of hydraulic networks, it is important to provide a reasonable estimate of the demand at each individual service. A normal single-family dwelling unit can place a demand on the system as high as 10 to 20 gpm through a normal 3/4" service. However, not every house is expected to turn on their water system at a maximum rate, nor is it expected that all systems will demand water at the same time. Therefore, some estimate needs to be made concerning the average demand throughout the system.

Oregon Administrative Rules requires that the system be designed so as to maintain a 20 psi residual pressure under all flow conditions, including fire demand. However, no guideline is given for the average demand placed on each service. Other guidelines, such as those published by the Farmers Home Administration for rural water systems, and those published by the Department of Social and Health Services, as well as those published by the Ten State Standards and several Midwest states, have a variety of methods for arriving at acceptable hydraulic demands in pipeline systems. The Farmers Home Administration guideline suggests an average instantaneous demand of 2 gpm per service, plus 5 gpm for each dead end pipeline. Other guidelines suggest 2 gpm for the first 25 to 30 customers and then 1 gpm for each customer thereafter, and 5 gpm at the termination of each subbranch pipeline. For communities up to 30 customers, 2 gpm should be provided. Beyond 30 customers, flow demands equal to 10 times the square root of the number of customers is suggested.

The Iowa State Standards recommends 2 gpm per family unit, plus 5 gpm at dead ends. They also recommend that where fire protection is provided, that fire hydrants be provided with at least 500 gpm capacity with 20 psi residual pressure.

Based on the above and a review of the demands of the Crystal Springs customers, it was decided to design the system for 1 gpm per customer plus 10 gpm at dead end pipes. Fire protection is superimposed on top of



these demands and peaking factors applied to analyze for peak day demand.

#### 5.4 - IMMEDIATE NEEDS

Based on the results of the hydraulic computer model, inspection of the system, and discussions with the manager and foreman, a number of capital improvement projects have been addressed. In addition, there is a need to extend service into areas where service does not now exist. The majority of the capital improvement programs that have been identified are shown on Figure 5.4 and are included in a separate document entitled "Crystal Springs Water District -Proposed Capital Improvements." In that document, each project is listed separately and shown on a separate sheet. The sheet shows the location of the project, labels the project as to number and geographic location, describes the nature of the project, develops approximate cost estimates, and provides for means of financing. A summary of the proposed capital improvement projects, whether they represent a replacement or system extension, and their cost estimate is shown in the enclosed tabulation. The numbers associated with each individual project are also identified in Figure 5.4.

#### 5.5 - RECOMMENDED IMPROVEMENTS AND COST ESTIMATES

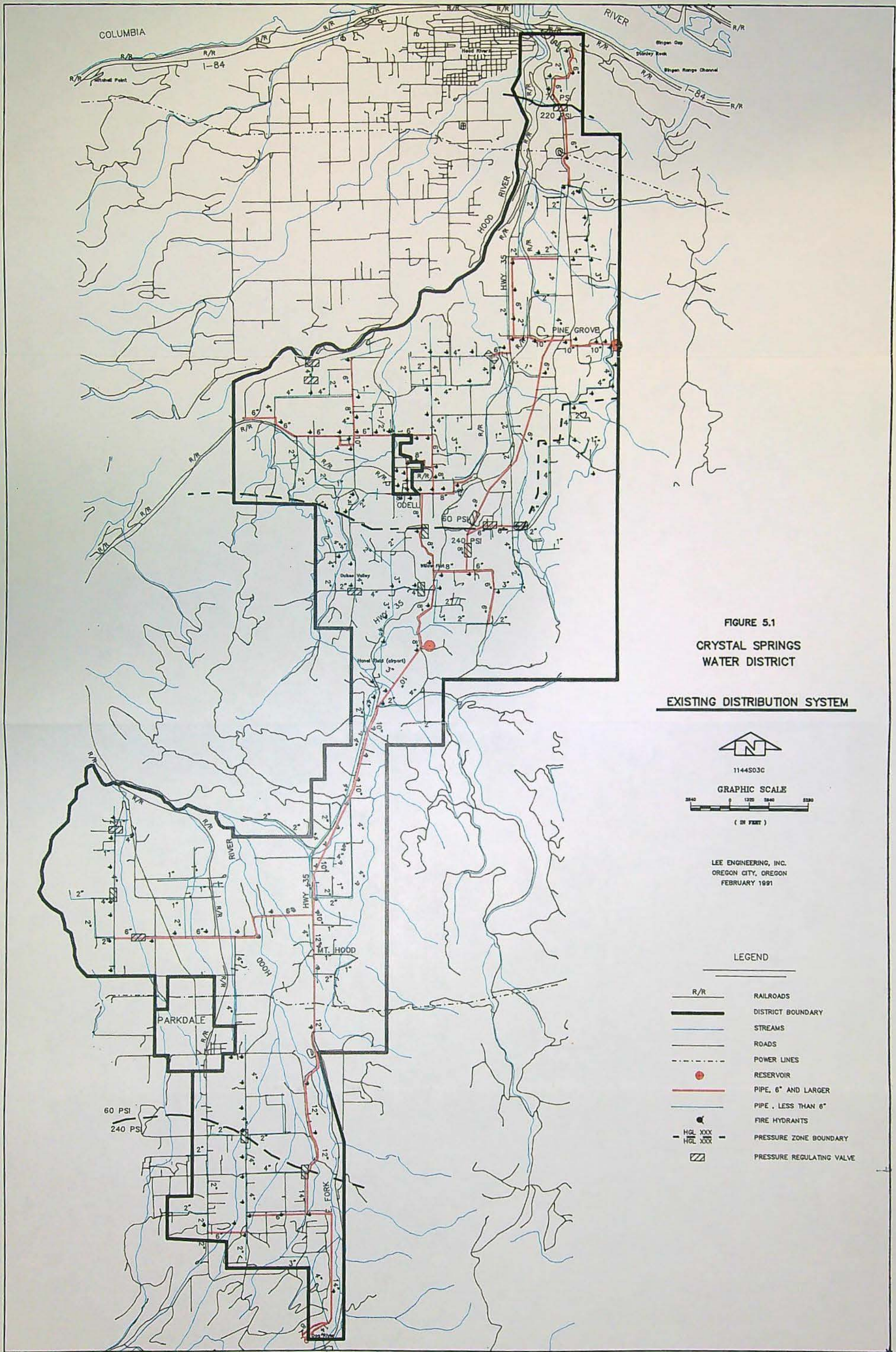
As mentioned earlier, a separate document listing all of the proposed capital improvements projects has been provided. The listing of projects is provided in loose leaf form so that the projects can be prioritized and adjusted to meet the needs of the District as time and circumstances dictate. Cost estimates provided herein are of a very preliminary nature. No attempt was made to develop projects to a level of preliminary engineering. Rather, standard cost guidelines were used when they were appropriate. In other cases, information was taken from similar projects in the Pacific Northwest and costs were adjusted to take into account the location at Crystal Springs.

Since the Engineer has no control over the costs of labor, materials, equipment or services furnished by others; the Contractor's methods of determining prices; and competitive bidding or market conditions; the Engineer's opinion of probable costs provided are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as an experienced and qualified professional engineer familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual project costs or construction costs will not vary from the opinions of probable costs prepared.



In some cases, it was assumed that District personnel would construct the pipelines. These projects relate primarily to small diameter pipes. In those cases, costs of labor and equipment of the District were used.







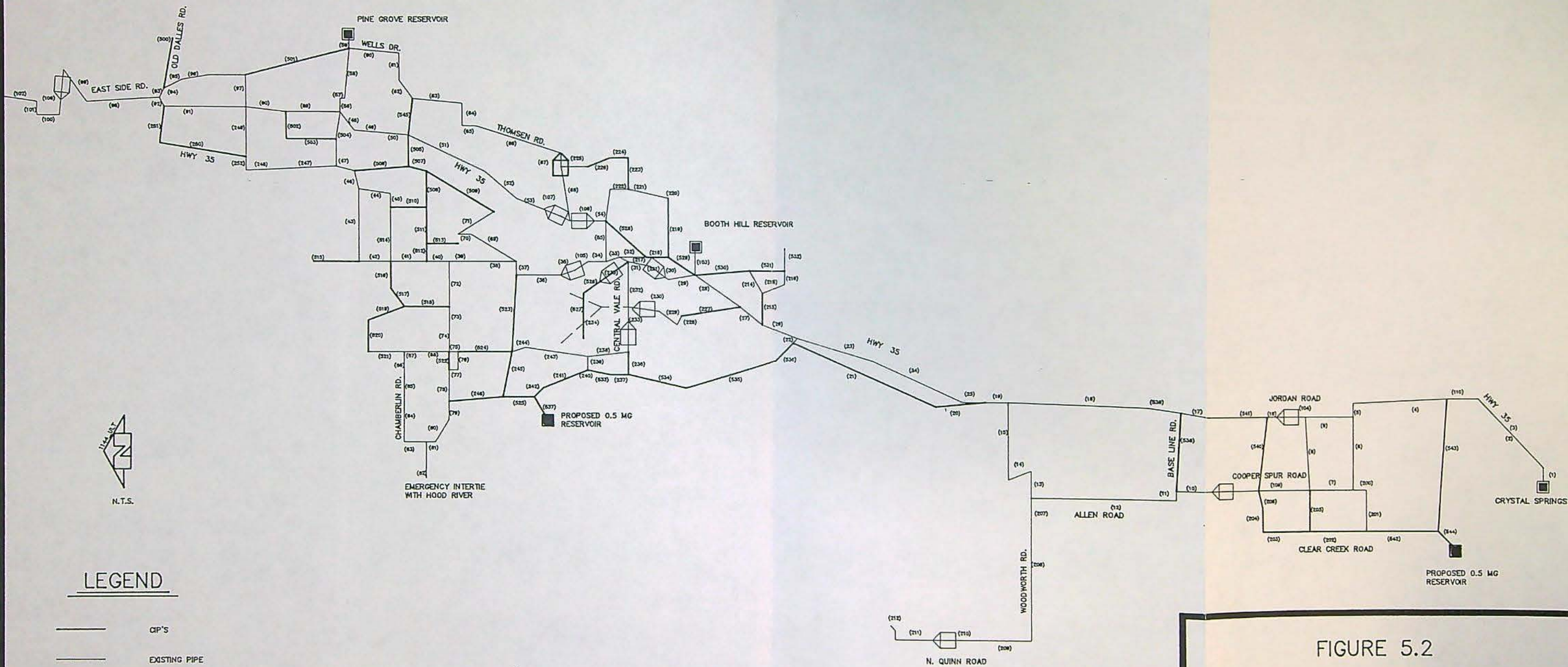


FIGURE 5.2  
CRYSTAL SPRINGS WATER DISTRICT  
HYDRAULIC MODEL

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CONSULTING ENGINEERS  
OREGON CITY, OREGON



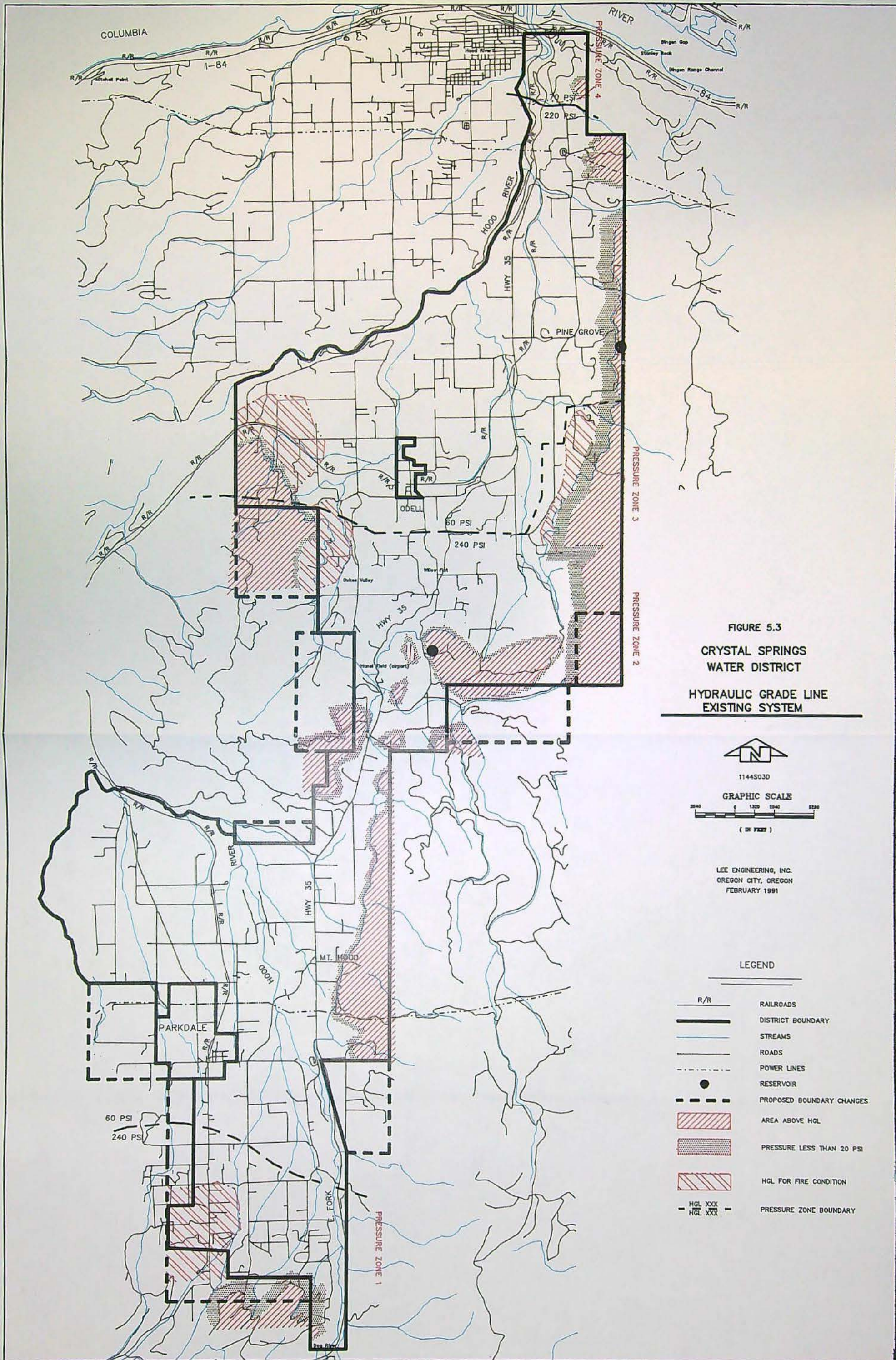
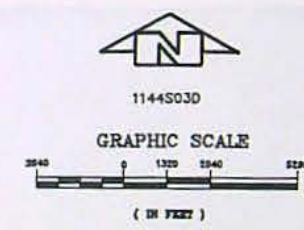


FIGURE 5.3  
CRYSTAL SPRINGS  
WATER DISTRICT  
HYDRAULIC GRADE LINE  
EXISTING SYSTEM



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OREGON CITY, OREGON  
FEBRUARY 1991

LEGEND

- R/R RAILROADS
- DISTRICT BOUNDARY
- STREAMS
- ROADS
- - - POWER LINES
- RESERVOIR
- - - PROPOSED BOUNDARY CHANGES
- ▨ AREA ABOVE HGL
- ▩ PRESSURE LESS THAN 20 PSI
- ▨ HGL FOR FIRE CONDITION
- HGL XXX  
- HGL XXX - PRESSURE ZONE BOUNDARY



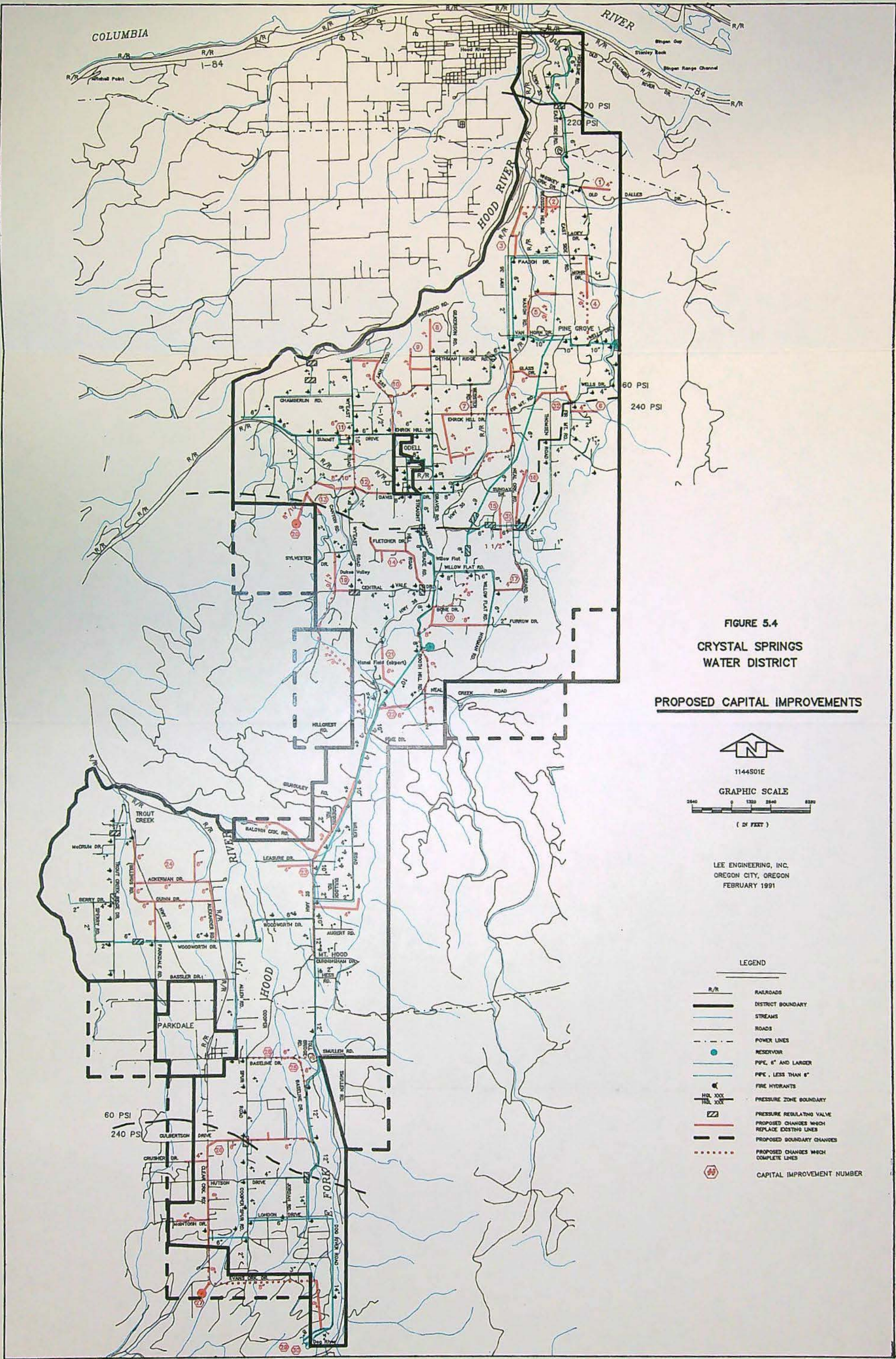
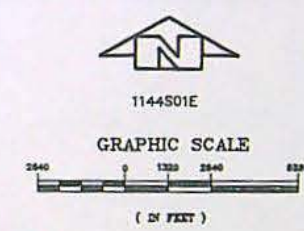


FIGURE 5.4  
CRYSTAL SPRINGS  
WATER DISTRICT

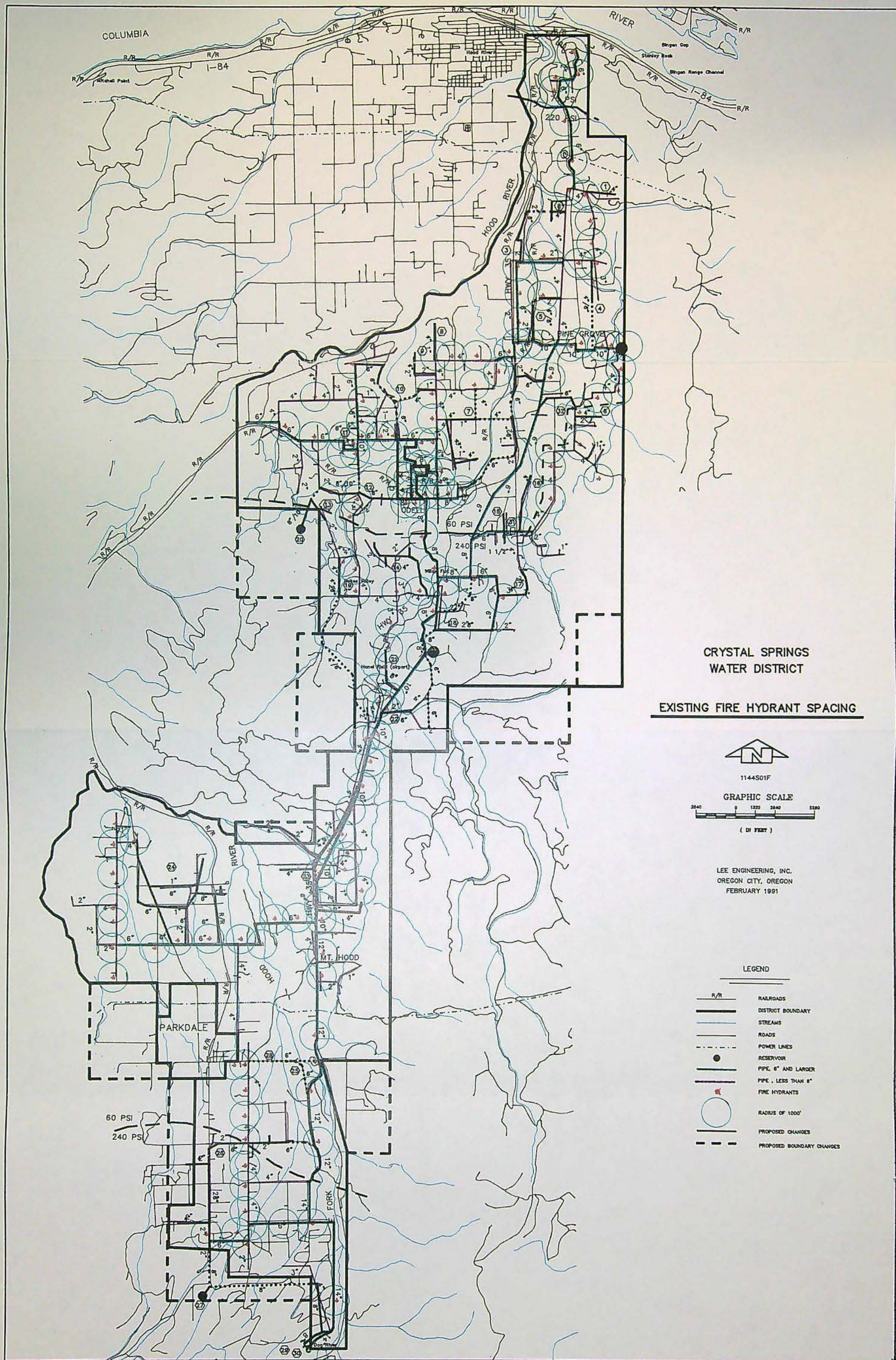
PROPOSED CAPITAL IMPROVEMENTS



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OREGON CITY, OREGON  
FEBRUARY 1991

- LEGEND
- R/R RAILROADS
  - DISTRICT BOUNDARY
  - STREAMS
  - ROADS
  - POWER LINES
  - RESERVOIR
  - PIPE, 6" AND LARGER
  - PIPE, LESS THAN 6"
  - FIRE HYDRANTS
  - HOL. XXX PRESSURE ZONE BOUNDARY
  - PRESSURE REGULATING VALVE
  - PROPOSED CHANGES WHICH REPLACE EXISTING LINES
  - PROPOSED BOUNDARY CHANGES
  - PROPOSED CHANGES WHICH COMPLETE LINES
  - CAPITAL IMPROVEMENT NUMBER







## CHAPTER 6

### WATER STORAGE

#### 6.1 - PRESENT AND FUTURE STORAGE REQUIREMENTS

As indicated earlier, existing water storage is provided at Booth Hill in a 700,000 gallon concrete reservoir and at Pine Grove in a 400,000 gallon concrete reservoir. The total storage capacity is therefore 1.1 mg. The average daily demand on the system, as indicated in Chapter 3, is approximately 335 gpm, or 0.48 mgd. This assumes a reasonable allowance for water loss. A typical standard in the engineering practice is to provide for three times the average daily flow as the required storage. In addition to this should be added fire flow reserve. Therefore, the required storage for present average day demand is 1.4 mg plus a fire reserve of 500 gpm for two hours. The fire reserve is estimated at 60,000 gallons, giving a total required storage need of 1.51 mg. This is approximately 400,000 gallons more than the system has in place.

Future reservoir storage is needed not only for adequate service during times of emergency, but is also needed to correct some of the pressure problems in the Hood River Valley area south of Parkdale and in the Dukes Valley area and areas west of Odell. Therefore, two new reservoirs are recommended and are shown on the capital improvements list, Figure 5.4, as C.I.P. Projects Nos. 20 and 27. It is recommended that each of these reservoirs be constructed with a capacity of 0.5 mg. With these two new reservoirs, present and future storage needs should be satisfied through the year 2010. Total reservoir capacity needed through the year 2010 is estimated to be approximately 2 mg.

#### 6.2 - RESERVOIR COST ESTIMATES

Future reservoirs can be constructed of either concrete or steel. There is an ongoing debate within the professional trade as to which has more advantage. Generally, concrete tanks are anticipated to last longer and have less maintenance. Steel tanks are expected to require more maintenance, but their initial cost is less. However, experience generally shows that tanks in the capacities recommended of 0.5 mgd show no particular advantage one way or the other. Therefore, it is recommended that plans and specifications be developed that allow for either steel or concrete tanks to be constructed. Specifications should be developed in such a way that the additional maintenance costs of the steel tank are taken into account in the bidding and award of the projects. That is, additional costs should be added to the bid price for steel constructed tanks



to take into account the life cycle costs of additional maintenance of the steel tank.

In general, a rough estimate of the anticipated costs, be the tanks steel or concrete, are in Table 6.1.

TABLE 6.1  
RESERVOIR COST ESTIMATE - 0.5 MG

<u>Item</u>	<u>Description</u>	<u>Cost Estimate</u>
1.	Tank	\$225,000
2.	Piping & Site Work	15,000
3.	Telemetry	10,000
4.	Miscellaneous	<u>25,000</u>
	SUBTOTAL:	\$275,000
	Engineer & Contingency:	\$ 65,000
	Land - 1 Acre:	4,000
	Legal & Administrative:	<u>16,000</u>
	TOTAL:	\$360,000

The total anticipated project cost, including allowances for land, are approximately \$360,000 per tank.

### 6.3 - OVERFLOW ISSUES

As indicated earlier, the overflow at the existing reservoirs accounts for more than 50% of the existing water flowing into and out of Crystal Springs distribution system. This practice should be discontinued within the next few years, especially when and if disinfection of the system is required.

The overflow issues can be addressed by installing altitude valves on each of the existing reservoirs. There is concern that with altitude valves the reservoirs may



not drain regularly and that water may become stale in the tanks. This is a valid concern, but it can be eliminated by providing either manual or automatic flow through the tanks on a regular basis.

It may be necessary to modify the piping at the Booth Hill Reservoir to cause flow through the Reservoir, rather than having the reservoir float on the system. This is not considered to be a difficult task at Booth Hill. However, the reservoir at Pine Grove does not lend itself well to this solution. Therefore, it is anticipated that flow through the tank can be activated manually by forcing water out of the tanks. This can be done by throttling the pressure regulating valve into the Pine Grove system on a regular basis and can be accomplished manually or automatically. Another option is to allow for discharge from the Pine Grove tank on a programmed basis. That is, some overflow may be allowed, but not on a continuous basis. The overflow would only be for provision of minimizing any stale water which might accumulate in the reservoir. It is recommended that the altitude valves be installed and that a trial be made to see how serious the stale water issue may be. It is difficult, if not impossible, to predict ahead of time the amount of detention necessary to cause concern regarding stale water.

It is estimated that the cost of eliminating the overflow at the reservoirs is in the range of \$10,000 per tank. A more detailed analysis needs to be made at the time that the projects are implemented.



## CHAPTER 7

### CAPITAL IMPROVEMENTS PROGRAM

#### 7.1 - SYSTEM IMPROVEMENTS

System improvements include projects to replace pipelines and appurtenances and projects to improve or extend service within the existing and future boundaries of the Crystal Springs Water District. Many of the pipelines within the system were installed in the 1930's and '40's. Most of the material used at that time was steel pipe. The average life of steel pipe is approximately 40 to 50 years. Much of the old steel pipe is leaking excessively and maintenances costs are increasing rapidly. Steel pipes corrode with age and therefore the rate of the leaks will increase with time.

Previous analysis in Chapter 5 indicates that some of the pipelines do not have sufficient capacity to meet peak day demands plus fire flows. Those pipes which are too small will need to be increased in size by replacing the pipes or paralleling the existing pipes with additional pipes.

In addition to the needs for increasing capacity, additional pipes will also be needed to extend fire flow and service throughout the District.

It is anticipated that the District's responsibility will extend to pipelines which are needed to serve two or more residential, commercial, or industrial users. Where pipelines are of relatively small size and required to serve a single residential customer, that pipeline is anticipated to be extended at the expense of the benefitting property.

Analysis of the system also indicates that pipelines which are 4" and smaller are needed primarily to distribute water to individual customers. Four-inch pipelines are normally not sufficient to provide adequate fire protection, and it is not recommended that fire hydrants be installed on 4" pipelines unless the 4" pipelines are of short length and are looped with other larger pipelines.

Pipes 6" and larger are anticipated to be needed primarily for transmission of water to the distribution network and to provide adequate fire flow to hydrants for fire protection purposes. Therefore, these larger pipelines and hydrants are of general benefit to the District and are not likely to serve individual customers.

A summary of the recommended capital improvement programs is shown in Table 7.1. Some projects serve primarily existing customers. Other projects serve



existing customers and future customers. Finally, a few of the projects serve primarily future customers. It has been the policy of the Crystal Springs Water District to fund repair, maintenance and replacement of existing pipelines through water rates. It is also the policy of the board to fund improvements to serve future customers through system development charges. These various funding mechanisms are outlined in greater detail in a separate report prepared by Economic Resources. The reader is referred to those documents for further discussions.

Some improvements are recommended for projects other than pipelines. Those include reservoir improvements, increased reservoir capacity, and source improvements at the spring supply.

Cost estimates for each of the improvements are included in Table 7.1. These cost estimates have been derived by estimating the construction costs and adding sufficient allowances for cost of engineering, project administration, easements, legal costs, and contingencies. The overall factor applied to the estimated construction costs for these other costs is approximately 30%.

In some cases, projects will be constructed with District staff. However, it is not anticipated that District staff will be capable of constructing all of the improvements, due to the lack of time and staff available. Also, to have on staff sufficient capacity to do major construction work is not considered practical for Crystal Springs Water District. Therefore, many of the major projects will be constructed with outside contractors as provided for under competitive bidding provisions of Oregon statutes.

Since the desire of the Board of the Crystal Springs Water District is to pay for projects on a pay-as-you-go basis, no attempt has been made to fund the projects through the issuance of revenue or general obligation bonds. Rather, projects will be built based on their priority and available resources. Most of the replacement projects are anticipated to be constructed within the next 10 to 15 years. Capital improvement projects will be funded through resources collected as system development charges, and will be constructed as funds and needs dictate. Generally, many of the capital improvement projects may not be constructed in the immediate future, but are more likely to be constructed in a period from 10 to 40 years, or between a period of approximately now and the Year 2030.

The cost estimates listed in the Capital Improvements list are based on 1991 dollars. These dollars cost estimates should be adjusted during the year of construction by either performing additional engineering estimates or by updating these costs using appropriate cost indexes, such as the Engineering News Record Cost Index, published by McGraw Hill, in their weekly periodicals. For example,



a project estimated to cost \$100,000 in 1991 may cost about \$104,000 to \$105,000 in 1992, depending on the inflationary impacts on the construction and materials industries.



**FIGURE 7.1**  
**CRYSTAL SPRINGS WATER DISTRICT**  
**CAPITAL IMPROVEMENTS**

1144CIP.WQ1

27-Mar-90

CIP #	DESCRIPTION	PROJECT	EST. COST	PRIORITY	LENGTH	TO CMPLT.
1	OLD DALLES DRIVE	REPLACEMENT	\$43,500	20		
2	BLOSSOM HILL DRIVE	REPLACEMENT	53,250	19		
3	HWY 35 @ WHISKEY CRK. DR.	REPLACE/COMPLETE	143,500	10	5800	1600
4	EAST SIDE ROAD	REPLACE/COMPLETE	153,500	8	6200	3600
5	MASON ROAD	REPLACE/COMPLETE	138,500	9	5600	1500
6	OFF FIR MOUNTAIN ROAD	REPLACEMENT	40,300	31		
7	HWY 35/EHRCK HILL VICINITY	REPLACE/COMPLETE	536,750	12	42090	6000
8	REDWOOD ROAD	REPLACEMENT	53,500	32		
9	DETHMAN RIDGE DRIVE	REPLACEMENT	54,300	33		
10	TUCKER RIDGE	REPLACE/COMPLETE	217,500	18	8800	4000
11	SUMMIT DR. @ WYEAST ROAD	COMPLETE	32,500	22	1300	1300
12	DAVIS DRIVE AND WYEAST ROAD	REPLACE/COMPLETE	230,500	23	8200	2600
13	NEAR CANYON ROAD	REPLACE/COMPLETE	73,500	26	2600	500
14	FLETCHER ROAD	REPLACE/COMPLETE	197,500	13	8000	0
15	BY SCOTT ROAD	REPLACEMENT	20,000	24		
16	NEAL CRK. NEAR SUNDAY DRIVE	REPLACEMENT	90,000	11		
17	SHERRARD ROAD	REPLACEMENT	85,000	15		
18	BOOTH HILL RD. / FURROWS DR.	REPLACE/COMPLETE	448,500	14	16500	12000
19	CENTRAL VALE DR. / HILLCREST	REPLACE/COMPLETE	346,000	27	14000	8000
20	NEAR DUKES VALLEY	NEW RESERVOIR	360,000	28		
21	HANEL AIRSTRIP	REPLACEMENT	79,500	17		
22	NEAL CR. RD. / BOOTH HILL RD.	REPLACEMENT	41,000	25		
23	HWY 35 NORTH OF MT. HOOD	REPLACE/RELOCATE	321,000	4	13000	2000
24	TROUT CREEK / HWY 281	REPLACEMENT	714,000	16		
25	BASE LINE DRIVE	COMPLETE	69,000	29	2800	2800
26	CULBERTSON RD/CLEAR CRK AREA	REPLACE/COMPLETE	204,500	6	33900	16000
27	COOPER SPUR RD. / EVANS CRK.	NEW RESERVOIR	360,000	7		
28	PARKDALE TO HWY 35	COMPLETE	116,000	21	4700	4700
29	CRYSTAL SPRING	SOURCE IMPROVEMENTS	30,000	1		
30	DOG RIVER ROAD	DISINFECTION SYSTEM	141,000	5		
31	THOMSEN ROAD	PRV IMPROVEMENTS	5,000	34		
32	FIR MOUNTAIN ROAD	COMPLETE	67,000	30	2700	2700
33	PINE GROVE & BOOTH HILL RES'S	IMPROVEMENT	20,000	3		
34	WATERSHED PURCH. OR EXCH.		800,000	2		
35	MISCELLANEOUS PROJECTS	IMPROVEMENT	500,000	*		

TOTAL \$6,786,100

TOTAL (1"-4") \$1,357,850

TOTAL (6"+) \$5,428,250

NOTES:

\* IN PRIORITY COLUMN INDICATES NO CURRENT PRIORITY.

LENGTH INDICATES TOTAL PROJECT LENGTH.

TO CMPLT. INDICATES LENGTH REQUIRED TO COMPLETE A LOOP.



## APPENDIX





CITY OF

## PORTLAND, OREGON

BUREAU OF WATER WORKS

Mike Lindberg, Commissioner  
Edward Tenny, Administrator  
1120 S.W. 5th Avenue  
Portland, OR 97204-1926  
Information (503) 796-7404

November 16, 1990

WQ

Mr. Duane Lee  
Lee Engineering  
1300 John Adams Street  
Oregon City, OR 97045

NOV 28 1990

Dear Mr. Lee:

Enclosed is a summary sheet I compiled of the characteristics of the two dominant soil types in the Crystal Springs watershed. As you can see by the characteristics marked with an asterisk, the canyon sides generally present a moderate to high risk for potential impacts that could be detrimental to watershed values.

After discussing the situation with Jack Parcell, Chief Soil Scientist for the Mt. Hood National Forest, I recommend that the water district retain both a soil scientist and a logging systems engineer if the district is intent upon conducting harvesting operations on the canyon sides or bottom. I point out that the regeneration potential on the canyon sides is listed as "low", so there may be the possibility that insufficient regeneration would occur to make up for loss of root strength from decaying stumps some years after harvest. While under the "normal" conditions, the potential for saturation of the soil mantle in that country is low, it may be possible that in, say, a 20-year storm event, maintenance of root strength could be crucial to maintaining the integrity of the soil mantle on the canyon walls during a flood. The point is that the determination to inflict human-related impacts to the watershed must be evaluated not just directly and in the short-term, but also indirectly and in the mid- to long-term in combination with the effects of naturally occurring near-catastrophic events. Neither (human-related or natural) event may be separately catastrophic - but in combination they may become so. The district should also consider regeneration potential from the standpoint of long-term productivity and ecologic stability of its land and, obviously, its long-term income producing potential. Logging of the ridges does not seem nearly so crucial and could probably be adequately conducted with a minimum of additional planning.

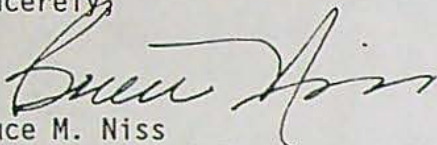
It may be possible for the Forest Service to provide the water district with the advice necessary to plan timber harvest in the canyon. Please contact Jack at 666-0700 to see if through its state and private cooperative forestry program the Mt. Hood could arrange to obtain advice from both a soil scientist and a logging systems engineer. It may also be possible to obtain advice of a soil scientist from the USDA Soil Conservation Service. Mr. Roy Carlson in the Dalles office at 296-6178 may be able to assist the district in this effort.



Mr. Duane Lee  
November 16, 1990  
Page 2

Please accept my apology for being unable to provide the district with more direct assistance, but as I said, my field skills have somewhat wasted away and, at any rate, I am not very familiar with Eastside conditions. I hope the forgoing is of some assistance. I am returning to you the material originally given to me by Carl Goebel.

Sincerely,



Bruce M. Niss  
Water Quality & Environmental Policy - Deputy Director

Enclosure

BMN:dmh      WQZ:9011W138

cc: Carl Goebel



# CRYSTAL SPRINGS WATERSHED SOIL CHARACTERISTICS

	Soil Type* 333 (Ridges)	Soil Type* 335 (Canyon Sides)
Surface Soil Erosion Potential	slight	moderate
* Subsoil Erosion Potential	moderate	moderate-high
* Natural Soil Mantle Stability	very stable	mod. stable-unstable
Compaction Hazard	low-moderate	low
* Susceptibility to Soil Displacement	low	moderate-high
Impacts from Tractor Harvesting	low	low
* Impacts from Cable Harvesting	low	moderate-high
* Sediment Yield Potential	low	moderate-high
Sediment Size	surface subsoil ground-sand ground-silt	ground-sand ground-silt
* Mass Movement Change Potential	unchanged	increased
Water Yield Class	moderate	moderate
Bedrock Hydrologic Characteristics	high storage low transmission	
Hydrologic Soil Groups	moderate water transmission	
* Cutbank/Ditch Erosion Potential	moderate	moderate-high
Cutback Sloughing & Raveling Susceptibility	low	moderate
* Cutbank Failure Potential	moderate	moderate
* Regeneration Potential	moderate	low
Alder Susceptibility	low	low
Pinegrass Susceptibility	low	low
Brush Susceptibility	moderate	high
* Road Fill Failure Potential	moderate	high

BMN:dmh WQZ:9011W138

\* Reference: "Soil Resource Inventory"  
Forest Service - USDA  
Pacific Northwest Region  
Mt. Hood National Forest  
Report by Steve Howes, Soil Scientist  
January 1979



## STATE OF OREGON

COUNTY OF \_\_\_\_\_ HOOD RIVER \_\_\_\_\_

## CERTIFICATE OF WATER RIGHT

This Is to Certify, That \_\_\_\_\_ CRYSTAL SPRINGS WATER CO. \_\_\_\_\_

of \_\_\_\_\_ Hood River \_\_\_\_\_, 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 \_\_\_\_\_ Crystal Springs \_\_\_\_\_ a tributary of \_\_\_\_\_ East Fork of Hood River \_\_\_\_\_ for the purpose of Domestic \_\_\_\_\_

under Permit No. 9831 \_\_\_\_\_ 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 June 7, 1930;

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 1.0 cubic foot per second.

The point of diversion is located in the NW<sup>1</sup>/<sub>4</sub> of Section 29, Township 1 S Range 10 E, W. M. 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 (if for irrigation, or any other purpose), is as follows: \_\_\_\_\_

## PLACE OF USE:

From the source in Section 29, Township 1 South, Range 10 East, W. M. to the end of the system in Section 31, Township 3 North, Range 11 East, W. M., supplying 365 users.

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

After the expiration of fifty years from the date of this certificate or on the expiration of any federal power license issued in connection with this right, and after not less than two years notice in writing to the holder hereof, the State of Oregon, or any municipality thereof, shall have the right to take over the dams, plants and other structures and all appurtenances thereto which have been constructed for the purpose of devoting to beneficial use the water rights specified herein, upon condition that before taking possession the State or municipality shall pay not to exceed the fair value of the property so taken, plus such reasonable damages, if any, to valuable, serviceable and dependable property of the holder of this certificate, not taken over, as may be caused by the severance therefrom of the property taken in accordance with the provisions of section 47-508, Oregon Code 1930.

WITNESS the signature of the State Engineer,

affixed this \_\_\_\_\_ 28th \_\_\_\_\_ day

of \_\_\_\_\_ July \_\_\_\_\_ 1933 \_\_\_\_\_

*Chas. E. Stickler*  
State Engineer



AM-  
JAN 2 1964

Permit No. 29377

\*APPLICATION FOR PERMIT

# To Appropriate the Public Waters of the State of Oregon

I, Crystal Springs Water District  
(Name of applicant)  
of 106 Third Street, Hood River  
(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. Municipal Corporation,  
October 2, 1963, Hood River County, Oregon

1. The source of the proposed appropriation is Crystal Springs  
(Name of stream)

a tributary of East Fork of Hood River

2. The amount of water which the applicant intends to apply to beneficial use is 2.65  
cubic feet per second. (See Remarks) Hood River  
(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 Public water supply for domestic use.  
(Irrigation, power, mining, manufacturing, domestic supplies, etc.)

4. The point of diversion is located 608 ft. S and 221 ft. E from the NW  
(N. or S.) (E. or W.)  
corner of Section 29, T1S, R10E, WM,  
(Section or subdivision)

(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 NW 1/4 of the NW 1/4 of Sec. 29, Tp. 1 S  
(Give smallest legal subdivision) (N. or S.)

R. 10E, W. M., in the county of Hood River  
(E. or W.)

5. The pipe lines to be \_\_\_\_\_ (Miles or feet)  
(Main ditch, canal or pipe line)  
in length, terminating in the NE 1/4 of the NW 1/4 of Sec. 31, Tp. 3N  
(Smallest legal subdivision) (N. or S.)

R. 11E, W. M., the proposed location being shown throughout on the accompanying map.  
(E. or W.)

## DESCRIPTION OF WORKS

Diversion Works—

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

(b) Description of headgate Collection System - Two 12-inch diameter perforated  
(Timber, concrete, etc., number and size of openings)  
collector pipes and concrete control box with 14-inch effluent pipe and overflow  
and drain.

(c) If water is to be pumped give general description \_\_\_\_\_  
(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.



PERMIT

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 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 2.65 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 Crystal Springs

The use to which this water is to be applied is group domestic

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 JANUARY 22, 1964

Actual construction work shall begin on or before May 1, 1965 and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1966

Complete application of the water to the proposed use shall be made on or before October 1, 1967

WITNESS my hand this 1st day of May, 1964

Chris L. Miesler

STATE ENGINEER A

Application No. 39422

Permit No. 29377

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 22nd day of January,  
1964 at 8:20 o'clock A. M.

Returned to applicant:

Approved:

May 1, 1964

Recorded in book No. 82 of

Permits on page 29377

CHRIS L. MIESELER

STATE ENGINEER

Drainage Basin No. 4 page 23

Fees \$11.00

State Printing Unit



10. (a) To supply the city of Crystal Springs Water District of Hood River  
 County, having a present population of 3050  
 (Name of) and an estimated population of 5160 in 1982.

(b) If for domestic use state number of families to be supplied 1360

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

11. Estimated cost of proposed works, \$12,000 (Source Only), \$480,000 initial improvements to the system  
 12. Construction work will begin on or before April 1965  
 13. Construction work will be completed on or before Phase I - December, 1965  
 14. The water will be completely applied to the proposed use on or before Initial improvements at the source in use by August 1965. Domestic demands will require all of the applied-for appropriation by 1982.

Gowlan Wells Vickers  
 (Signature of applicant)

Remarks: The Crystal Springs Water District presently utilizes as its sole source of supply water from Crystal Springs, use of which is granted under Permit No. 9831 to appropriate an amount not exceeding 1.0 cfs from the springs. Certificate was issued dated July 28, 1933, to the Crystal Springs Water Company for 365 domestic users. Present users number 830<sup>+</sup> with a maximum day demand of 1.55 cfs. Appropriation of more than 1.0 cfs at this time is limited by the present right, and capacity of the collection system and pipelines.

Granting of the requested appropriation will permit the Crystal Springs Water District to enlarge the collection system at the source and to construct the transmission lines to supply the District's users over the next 15 years.

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 \_\_\_\_\_

In order to retain its priority, this application must be returned to the State Engineer, with corrections on or before \_\_\_\_\_, 19\_\_\_\_.

WITNESS my hand this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

STATE ENGINEER

By \_\_\_\_\_ ASSISTANT



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, to res. 65,700; size at intake, 14 in.; size at 10,800 ft. from intake 10 in.; size at place of use varies %; difference in elevation between Booth Hill Reservoir intake and place of use, 1280 ft. Is grade uniform? No Estimated capacity, 3.65 sec. ft. \*Assumes replacement of present system)

8. Location of area to be irrigated, or place of use See accompanying map

Township North or South	Range E. or W. of Williamsburg Meridian	Section	Forty-acre Tract	Number Acres To Be Irrigated
1S	R10E	4	W1/2 of SW1/4	
"		5	All	
"		6	All except N 1/2 of NW 1/4 and NW 1/4 of NE 1/4	
"		7	All except W 1/2 of NW 1/4 and NW 1/4 of SW 1/4	
"		8	All	
"		9	W 1/2 of NW 1/4 and W 1/2 of SW 1/4	
"		16	W 1/2 of NW 1/4 and W 1/2 of SW 1/4	
"		17	All except S 1/2 of SW 1/4 and SW 1/4 of SE 1/4	
"		18	N 1/2 of NW 1/4, N 1/2 of NE 1/4, SE 1/4 of NE 1/4 and NE 1/4 of SE 1/4	
"		20	E 1/2 of NE 1/4	
"		21	W 1/2 of NW 1/4	
"		(Also see attached sheets) (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 ..... feet.  
(Head)

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

(e) Such works to be located in ..... of Sec. ....  
(Legal subdivision)

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

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

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

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

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

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



•APPLICATION FOR PERMIT

To Appropriate the Public Waters of the State of Oregon

I, Crystal Springs Water District  
(Name of applicant)  
of P.O. Box 35, Hood River 97031  
(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  
2 October 1963, Hood River

1. The source of the proposed appropriation is Crystal Springs  
(Name of stream)  
a tributary of East Fork of Hood River

2. The amount of water which the applicant intends to apply to beneficial use is 3.50  
cubic feet per second.  
(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 domestic-municipal use  
(Irrigation, power, mining, manufacturing, domestic supplies, etc.)

4. The point of diversion is located 608 ft. S. and 221 ft. E. from the N.W.  
(N. or S.) (E. or W.)  
corner of Section 29, T1S, R10E, WM  
(Section or subdivision)

(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 NW1/4 of the NW1/4 of Sec. 29, Tp. 1S  
(Give smallest legal subdivision) (N. or S.)  
R. 10E, W. M., in the county of Hood River  
(E. or W.)

5. The pipelines to be variable  
(Main ditch, canal or pipe line) (Miles or feet)  
in length, terminating in the NW1/4 of NW1/4 of Sec. 31, Tp. 3N  
(Smallest legal subdivision) (N. or S.)  
R. 11E, W. M., the proposed location being shown throughout on the accompanying map.  
(E. or W.)

See map accompanying Application 39422 - Permit 29377.

DESCRIPTION OF WORKS

Diversion Works—

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

(b) Description of headgate See attached Drawing C 3711-1 sheets 5 & 6.  
(Timber, concrete, etc., number and size of openings)

(c) If water is to be pumped give general description \_\_\_\_\_  
(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.



### 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, 250.000 ft.; size at intake, 14 in.; size at 55.000 ft. from intake 10 in.; size at place of use variable in.; difference in elevation between intake and place of use, up to 2300 ft. Is grade uniform? no Estimated capacity, 7.15 sec. ft.

8. Location of area to be irrigated, or place of use see map accompanying Application  
39422 - Permit 29377

[illegible]

(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 ..... feet.

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

(e) Such works to be located in ..... of Sec. ....  
(Legal subdivision)

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

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

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

....., Sec. ...., Tp. ...., R. ...., W. M. ....  
(S. N. or E.) (S. E. or W.)

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

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



10. (a) To supply the city of Crystal Springs Water District  
Hood River County, having a present population of 3950  
(Name of)  
 and an estimated population of 8000 in 19 2000.

(b) If for domestic use state number of families to be supplied 2290

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

11. Estimated cost of proposed works, \$1,500,000  
 12. Construction work will begin on or before January 1968  
 13. Construction work will be completed on or before January 1970  
 14. The water will be completely applied to the proposed use on or before year 2000

Gowlan Wells  
(Signature of applicant)

by Gowlan Wells, Chairman, Board of Commiss.

Remarks: Headworks, second storage reservoir, and first 60,000 feet of new  
pipelines already constructed (1967-1968). Next 125,000 feet of new pipelines  
and third storage reservoir under contract now and due to be completed by  
September 1969.

Domestic and industrial growth will require full use of all of existing water  
rights plus this application prior to year 2000.

Existing rights and permits are as follows:

Application 13490 - Permit 9831 for 1.0 cfs

Application 39422 - Permit 29377 for 2.65 cfs

Spring yield during water system high demand period is about 7.1 cfs.

Granting of this application will give the District rights to 7.15 cfs at the spring.

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 .....

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

WITNESS my hand this ..... day of ....., 19.....

STATE ENGINEER

By ..... ASSISTANT



PERMIT

STATE OF OREGON, }  
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 3.5 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 Crystal Springs

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 March 3, 1969

Actual construction work shall begin on or before August 25, 1970 and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1971

Complete application of the water to the proposed use shall be made on or before October 1, 1972

WITNESS my hand this 25th day of August, 1969

*Chris L. Meester*  
STATE ENGINEER

Application No. 45826  
Permit No. 34196

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 3rd day of March,  
1969, at 2:00 o'clock A. M.

Returned to applicant:

Approved:

August 25, 1969  
Recorded in book No. \_\_\_\_\_ of \_\_\_\_\_  
Permits on page 34196

CHRIS L. MEESTER  
STATE ENGINEER

Drainage Basin No. 4 page 24  
Fees \$31.00

State Engineer, MEET



**TABLE**  
**CRYSTAL SPRINGS WATER DISTRICT**  
**WATER SYSTEM ANALYSIS**  
**SUMMARY OF CONTROL VALVES**

VALVE NUMBER	VALVE SIZE & LOCATION	INLET PRESSURE	OUTLET PRESSURE SETTING	VALVE TYPE
5A	8" 92G-01B Jordan Rd., Hudson Dr.	260#	60#	Reducing
10A	6" 50G-01 Jordan Rd., Irrigation Ditch	60#	65#	Relief
15A	4" 90G-01 Cooper Spur, Culbertson Dr.	230#	60#	Reducing
20A	4" 50G-01 Cooper Spur Rd., Evans Creek		70#	Relief
25A	4" 50G-01 Woodworth Dr. & Trout Creek			Relief
30A	4" 90G-01AB Trout Creek Ridge Rd. & Berry Drive			Reducing
30B	1-1/4" 90G-01 Trout Creek Ridge Rd. & Berry Drive			Reducing
35A	4" 50G-01 Trout Creek Ridge Rd.	140#	150#	Relief
40A	4" 50G-01B Miller Rd, at Baldwin Creek	200#	210#	Relief
45A	8" 92G-01B Taksumi Main Line	230#	60#	Reducing
50A	6" 92G-01B Taksumi Reservoir	10-20#	2.5#	
50B	4" 92G-01 Taksumi Reservoir	10-20#	3.5#	
55A	6" 50G-01 Taksumi Reservoir	20#	30#	Relief



**TABLE**  
**CRYSTAL SPRINGS WATER DISTRICT**  
**WATER SYSTEM ANALYSIS**  
**SUMMARY OF CONTROL VALVES**

VALVE NUMBER	VALVE SIZE & LOCATION	INLET PRESSURE	OUTLET PRESSURE SETTING	VALVE TYPE
60A	6" 50G-01 Neil Creek & Thomson Rd.		210#	Relief
65A	8" 90G-01 Massey Grade	250#	60#	Reducing
70A	4" 90G-01 Central Vale Drive	250#	140#	Reducing
70B	1-1/4" 90G-01 Central Vale Dr.	250#	150#	Reducing
75A	4" 50G-01 Central Vale Dr. at WyEast Road	240#	150#	Relief
80A		230#	120#	
80B		120#	150#	
85A	10" 90G-01 Chevron Road at Diamond Central	230#	100#	
85B	3" 90G-01 Chevron Road at Diamond Central	120#	50#	
85C	3" 90G-01 Chevron Road at Diamond Central	230#	100#	
85D	3" 50G-01 Chevron Road at Diamond Central		60#	
85E	4" 50G-01 Chevron Road at Diamond Central	120#	130#	



**TABLE**  
**CRYSTAL SPRINGS WATER DISTRICT**  
**WATER SYSTEM ANALYSIS**  
**SUMMARY OF CONTROL VALVES**

VALVE NUMBER	VALVE SIZE & LOCATION	INLET PRESSURE	OUTLET PRESSURE SETTING	VALVE TYPE
90A	6" 50G-01 Hwy 282 & Ehrck Hill		260#	Relief
95A	4" 50G-01 Dethman Ridge & Neal Creek		210#	Relief
100A	4" 92G-01 Highline at Eastside Rd.	220#	60#	Reducing
100B	2" 90G-01AS Highline at Eastside Rd.	220#	70#	Reducing
100C	3" 50G-01 Highline at Eastside Rd.	70#	77#	Relief



ANALYSIS FOR WATERBORNE PARTICULATES  
CH Diagnostic and Consulting Service, Inc.  
2012 Derby Court, Fort Collins, Colorado 80526  
Charles P. Hibler PhD, President Telephone (303) 223-9549

Invoice 90347

10/25/90

Customer 90276

Crystal Springs Water District  
PO Box 186  
Medell, Oregon 97044

Laboratory Information

UPS; 10/25/90; 0920 Hrs.;  
Polypropylene; Excellent;  
Sample read by *Charles P. Hibler*

Sample Identification: #1 (42°F; 0.12 NTU)

Date/Start 10/24/90; 0800 Date/Stop 10/24/90; 1245 Sampler: Tom Hachtel

Gallons: 950 Filter Color: White Sediment: None

Fine Amorphous Debris: Rare silica (1-5  $\mu$  diameter)

Large Amorphous Debris: 0

Algae: 0

Diatoms: 0

Plant Debris: 0

Giardia: 0

Cryptosporidium: Not checked

Free-Living Nematodes: 0

Pollen: 0

Free-Living Amoeba: 0

Free-Living Ciliates: 0

Free-Living Flagellates: Very rare (1 species)

Crustaceans: 0

Arthropods: 0

Other: 0

Comments: There is no evidence of surface water influence on this system.



**ANALYSIS FOR WATERBORNE PARTICULATES**

**CH Diagnostic and Consulting Service, Inc.**

**2012 Derby Court, Fort Collins, Colorado 80526**

**Charles P. Hibler PhD, President**

**Telephone (303) 223-9549**

**Invoice 90347**

**10/25/90**

**Customer 90276**

Crystal Springs Water District

PO Box 186

Odell, Oregon 97044

**Laboratory Information**

UPS; 10/25/90; 0920 Hrs.;

Polypropylene; Excellent;

Sample read by *Ch. P. Hibler*

**Sample Identification: #2 (42°F; 0.12 NTU)**

**Date/Start** 10/24/90; 1300 **Date/Stop** 10/24/90; 1500 **Sampler:** Tom Hachtel

**Gallons:** 500

**Filter Color:** White

**Sediment:** None

**Fine Amorphous Debris:** Rare silica (1-5  $\mu$  diameter)

**Large Amorphous Debris:** 0

**Algae:** 0

**Diatoms:** 0

**Plant Debris:** 0

**Giardia:** 0

**Cryptosporidium:** Not checked

**Free-Living Nematodes:** 0

**Pollen:** 0

**Free-Living Amoeba:** 0

**Free-Living Ciliates:** 0

**Free-Living Flagellates:** 0

**Crustaceans:** 0

**Arthropods:** 0

**Other:** 0

**Comments:** There is no evidence of surface water influence on this system.





Problem Solvers

# Water, Food & Research Lab, Inc.

Laboratory: 13035 S.W. Pacific Hwy., Tigard, Oregon 97223

Mailing Address: P.O. Box 19700, Portland, Oregon 97219

Telephone (503) 639-9311

CHRISTAL SPRINGS WATER DIST.  
P.O. BOX 186  
ODELL, OR 97044

SAMPLE NO # 7378

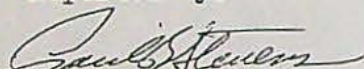
## CHEMICAL LABORATORY REPORT \*\*\*\*\* 04-07-89 \*\*\*\*\*

Sample:	Water sample collected for VOC Volatile Organic Chemicals
Collected:	02-14-89
Received:	02-14-89
Tested:	by Century Testing Lab, inc.

VOC results

-All tests within limits (see attached report)

Reported by:

  
PAUL B. STEVENS  
Vice President





# UMPQUA RESEARCH COMPANY

P.O. BOX 791 - 626 N.E. DIVISION  
MYRTLE CREEK, OREGON 97457  
(503) 863-5201



Date Rec'd: 10-10-89  
Time Rec'd: 0900  
Date Reported: 10-17-89

OREGON STATE CERTIFIED LABORATORY #015

Sample # 5 Collected: 1000 (Time)  
10-3-89 (Date)

Mailing Address:

Name: Water, Food & Research

Street: P.O. Box 19700

City: Portland State: OR Zip: 97219

Chlorinated: (no)

Sample Point: \_\_\_\_\_

Collector: \_\_\_\_\_ URC Sample No.: 91010-9

Sample Location:

Pine Grove School

Crystal Springs

#8461

VOLATILE ORGANIC CHEMICALS - EPA 502.1 & 503.1

Analyst: JH Analysis Dates: 10/10 & 10/11

TEST LIMITS, mg/L TEST RESULTS, mg/L

REGULATED

Benzene	0.005	ND@0.001
Carbon Tetrachloride	0.005	ND@0.0001
1,2-Dichloroethane	0.005	ND@0.0001
1,1-Dichloroethylene	0.007	ND@0.0001
Para-dichlorobenzene	0.075	ND@0.001
1,1,1-Trichloroethane	0.2	ND@0.005
Trichloroethylene	0.005	ND@0.0001
Vinyl Chloride	0.001	ND@0.0005

UNREGULATED

Chloroform*	0.1 THM**	ND@0.0001
Bromodichloromethane*	0.1 THM**	ND@0.0002
Chlorodibromomethane*	0.1 THM**	ND@0.0002
Bromoform*	0.1 THM**	ND@0.0003

Bromobenzene	ND@0.0002
Bromomethane	ND@0.0002
Chlorobenzene	ND@0.0004
Chloroethane	ND@0.0002
Chloromethane	ND@0.0002
o-Chlorotoluene	ND@0.0003
p-Chlorotoluene	ND@0.0003
Dibromomethane	ND@0.0003
m-Dichlorobenzene	ND@0.0002
o-Dichlorobenzene	ND@0.0002
trans-1,2-Dichloroethylene	ND@0.0001
cis-1,2-Dichloroethylene	ND@0.0002



# UMPQUA RESEARCH COMPANY

P.O. BOX 791 - 626 N.E. DIVISION  
MYRTLE CREEK, OREGON 97457  
(503) 863-5201

OR #015

Customer: Water, Food & Research URC Sample No.: 91010-9

## VOLATILE ORGANIC CHEMICALS - EPA 502.1 & 503.1

TEST	LIMITS, mg/L	TEST RESULTS, mg/L
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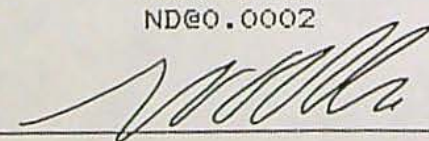
### UNREGULATED (Continued)

Dichloromethane	ND@0.0002
1,1-Dichloroethane	ND@0.0002
1,1-Dichloropropene	ND@0.0002
1,2-Dichloropropane	ND@0.0001
1,3-Dichloropropane	ND@0.0001
1,3-Dichloropropene	ND@0.0001
2,2-Dichloropropane	ND@0.0001
Ethylbenzene	ND@0.0002
Styrene	ND@0.0001
1,1,2-Trichloroethane	ND@0.0001
1,1,1,2-Tetrachloroethane	ND@0.0001
1,1,2,2-Tetrachloroethane	ND@0.0001
Tetrachloroethylene	ND@0.0002
1,2,3-Trichloropropane	ND@0.0002
Toluene	ND@0.0001
p-Xylene	ND@0.0002
o-Xylene	ND@0.0002
m-Xylene	ND@0.0002

Ethylene dibromide (EDB)	ND@0.0004
Dibromochloropropane (DBCP)	ND@0.0002

Bromochloromethane	ND@0.0002
n-Butylbenzene	ND@0.0003
Dichlorodifluoromethane	ND@0.0002
Fluorotrichloromethane	ND@0.0001
Hexachlorobutadiene	ND@0.0003
Isopropylbenzene	ND@0.0003
p-Isopropyltoluene	ND@0.0002
Naphthalene	ND@0.0003
n-Propylbenzene	ND@0.0003
sec-Butylbenzene	ND@0.0003
tert-Butylbenzene	ND@0.0003
1,2,3-Trichlorobenzene	ND@0.0002
1,2,4-Trichlorobenzene	ND@0.0002
1,2,4-Trimethylbenzene	ND@0.0003
1,3,5-Trimethylbenzene	ND@0.0002

ND=None Detected at Level Indicated

Approved By: 

\* These results may be used to satisfy THM testing requirements.  
 \*\* These limits apply as THMS, however limits as unregulated  
 VOC's have not been established.





Problem Solvers

# Water, Food & Research Lab, Inc.

Laboratory: 13035 S.W. Pacific Hwy., Tigard, Oregon 97223

Mailing Address: P.O. Box 19700, Portland, Oregon 97219

Telephone (503) 639-9311

CRYSTAL SPRINGS  
P.O. BOX 186  
Odell, OR 97044

SAMPLE NO # 8938

## CHEMICAL LABORATORY REPORT

\*\*\*\*\* 01-19-90 \*\*\*\*\*

Sample:  
Collected:  
Received:

Water sample for EPA inorganic pkg tests  
01-02-90 by RDS at Post office sink  
01-03-90 by PBS

ANALYSIS *****	METHOD *****	LIMIT *****	RESULTS *****
Arsenic	206.2	0.050 ppm	0.008 ppm
Barium	208.1	1.0	< 0.050
Cadmium	213.1	0.010	< 0.002
Chromium	218.1	0.050	< 0.005
Lead	239.2	0.050	0.010
Mercury	245.1	0.0020	< 0.0002
Selenium	270.2	0.010	0.008
Silver	272.1	0.050	< 0.002
Sodium	273.1	-	5.03 pH
Nitrate	353.3	10.0	1.50
Fluoride	340.1	2.4	< 0.50

Certified by:

*Paul B. Stevens*  
PAUL B. STEVENS  
Microbiologist/Biochemist  
LAB DIRECTOR (EPA/OSHD #31)

All test results are within EPA limits

< less than or none detected  
ppm parts per million

CERTIFIED



# UMPQUA RESEARCH COMPANY

P.O. BOX 791 - 626 N.E. DIVISION  
MYRTLE CREEK, OREGON 97457  
(503) 863-5201

Date Rec'd: 2-15-90

Time Rec'd:

Date Reported: February 23, 1990



## OREGON STATE CERTIFIED LABORATORY #015

Sample # 8

Collected: (Time)  
(Date) 2-6-90

PWS ID#: 41

Source ID:

### Mailing Address:

Name: Water, Food & Research

Street: P.O. Box 19700

City: Portland State: OR Zip: 97219

Chlorinated: (no) Sample Point: Wy East School

Collector: RDS

URC Sample No.: 00215-1

### Sample Location:

Crystal Springs

#9128

### VOLATILE ORGANIC CHEMICALS - EPA 502.1 & 503.1

Analyst: JH

Analysis Dates: 2/15 & 2/19/90

TEST	LIMITS,mg/L	TEST RESULTS,mg/L
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#### REGULATED

Benzene	0.005	ND@0.001
Carbon Tetrachloride	0.005	ND@0.0001
1,2-Dichloroethane	0.005	ND@0.0001
1,1-Dichloroethylene	0.007	ND@0.0001
Para-dichlorobenzene	0.075	ND@0.001
1,1,1-Trichloroethane	0.2	ND@0.005
Trichloroethylene	0.005	ND@0.0001
Vinyl Chloride	0.001	ND@0.0005

#### UNREGULATED

Chloroform*	0.1 THM**	ND@0.0001
Bromodichloromethane*	0.1 THM**	ND@0.0002
Chlorodibromomethane*	0.1 THM**	ND@0.0002
Bromoform*	0.1 THM**	ND@0.0003

Bromobenzene	ND@0.0002
Bromomethane	ND@0.0002
Chlorobenzene	ND@0.0004
Chloroethane	ND@0.0002
Chloromethane	ND@0.0002
o-Chlorotoluene	ND@0.0003
p-Chlorotoluene	ND@0.0003
Dibromomethane	ND@0.0003
m-Dichlorobenzene	ND@0.0002
o-Dichlorobenzene	ND@0.0002



# UMPQUA RESEARCH COMPANY

P.O. BOX 791 - 626 N.E. DIVISION  
MYRTLE CREEK, OREGON 97457  
(503) 863-5201

OR #015

Customer: Water, Food & Research URC Sample No.: 00215-1

## VOLATILE ORGANIC CHEMICALS - EPA 502.1 & 503.1

TEST	LIMITS, mg/L	TEST RESULTS, mg/L
------	--------------	--------------------

### UNREGULATED (Continued)

trans-1,2-Dichloroethylene	ND@0.0001
cis-1,2-Dichloroethylene	ND@0.0002
Dichloromethane	ND@0.0002
1,1-Dichloroethane	ND@0.0002
1,1-Dichloropropene	ND@0.0002
1,2-Dichloropropene	ND@0.0001
1,3-Dichloropropene	ND@0.0001
1,3-Dichloropropene	ND@0.0001
2,2-Dichloropropene	ND@0.0001
Ethylbenzene	ND@0.0002
Styrene	ND@0.0001
1,1,2-Trichloroethane	ND@0.0001
1,1,1,2-Tetrachloroethane	ND@0.0001
1,1,2,2-Tetrachloroethane	ND@0.0001
Tetrachloroethylene	ND@0.0002
1,2,3-Trichloropropene	ND@0.0002
Toluene	ND@0.0001
p-Xylene	ND@0.0002
o-Xylene	ND@0.0002
m-Xylene	ND@0.0002
Ethylene dibromide (EDB)	ND@0.0004
Dibromochloropropane (DBCP)	ND@0.0002
Bromochloromethane	ND@0.0002
n-Butylbenzene	ND@0.0003
Dichlorodifluoromethane	ND@0.0002
Fluorotrichloromethane	ND@0.0001
Hexachlorobutadiene	ND@0.0003
Isopropylbenzene	ND@0.0003
p-Isopropyltoluene	ND@0.0002
Naphthalene	ND@0.0003
n-Propylbenzene	ND@0.0003
sec-Butylbenzene	ND@0.0003
tert-Butylbenzene	ND@0.0003
1,2,3-Trichlorobenzene	ND@0.0002
1,2,4-Trichlorobenzene	ND@0.0002
1,2,4-Trimethylbenzene	ND@0.0003
1,3,5-Trimethylbenzene	ND@0.0002

ND=None Detected at Level Indicated

Approved By: \_\_\_\_\_

\* These results may be used to satisfy THM testing requirements.  
 \*\* These limits apply as THMS, however limits as unregulated  
 VOC's have not been established.



## Activity

ACTIVITY REPORT  
Oregon Health Division  
DRINKING WATER SECTION

## Routing

Field visit  
Phone call

State (yellow)  
County (pink)  
Crystal Springs

Reason Codes (check one)

- 2A TRAINING  
2E EMERGENCY ASSISTANCE (SPILLS, DISEASE, ...)  
2G PLAN REVIEW  
2I INVESTIGATION (MCL OR M/R VIOLATIONS)  
2M INFORMAL INSPECTION  
2S SAMPLE COLLECTION  
☒ 2T TECHNICAL ASSISTANCE  
2V COMPLIANCE RELATED, FORMAL ENFORCEMENT  
2O OTHER

I.D. Number

41 00386Date & time 16 OCT 90 :Who Responded FitchStaff C (C)ounty, (A)g, (S)tateCounty Hood River

## WATER SYSTEM

Crystal SpringsContact with / title: Jane LewisLocation / Phone #: 5955 Miller Rd 352-7391

Summary of call/visit: From treating with  
concentrated sulfuric acid &  
looking at remnants under  
microscope - Material appears to  
be plastic. Check hot & cold  
water trips to clothes washer.  
It only on hot could be from  
plastic inside hot water tank.  
drain sludge - sediment from  
bottom of tank. - Work  
from Experiment station

Action or follow-up needed: None.



ATTACH ID LABEL HERE ON YELLOW COPY  
Public Water System ID #

4 1 00386

Name of Water System

CITY OF SPRING

Address P.O. Box 186

City Odell County HIR

Collection Date and Time: 10/18/90 2:30 AM PM

MONTH DAY YEAR HOUR MIN AM PM

Type of Sample: Routine ☐ Check ☐ Special ☒

Collected By: FITCH

Sample Point: KITCHEN TAP

Chlorinated? Yes ☒ No ☐ Free Chlorine mg/l

Return address for report:

Name HOOD RIVER COUNTY HEALTH DEPARTMENT  
Address 1109 June Street  
City, State, Zip Hood River, Oregon 97031 386-1115

Send results to: Oregon State Health Division P.O. Box 200 Portland, OR 97207 Phone (503) 229-6307



**MICROBIOLOGICAL ANALYSIS**  
PUBLIC WATER SUPPLIES  
DRINKING WATER PROGRAM

Coliforms Present ☐ Coliforms Absent ☒  
\* See back of pink copy for interpretation

**LABORATORY RESULTS**

Test Method Results  
1) MTF Total Coliform 0 /5 Tubes Positive  
MTF Fecal Coliform 0 /5 Tubes Positive  
Heavy non-coliform growth ☐  
2) MF Total Coliform Colonies/100ml  
MF Fecal Coliform Colonies/100ml  
TNTC with sheen ☐ TNTC without sheen ☐

Comments:  
Sample not tested: Too old ☐ Leaked ☐

**COPY DISTRIBUTION**

White Lab  
Yellow Health Division  
Pink Water System

LABORATORY NAME

ORE. PHL 23

OCT 12 1990

Lab Cert # Sample #

Bottle #

Date & Time Received: 10/18/90 8:00

Date & Time Analyzed:

MTF	10 ML	1 ML	.1 ML
PR24			
PR48			
CF24			
CF48			
CP			
FC			
MF	Raw Count	Verified #	MLS
TC			
FC			
SPC			

REPORT

By: A DATE 10/19

(Rev. 2/88)



ACTIVITY REPORT  
Oregon Health Division  
DRINKING WATER SECTION

Activity

Routing

☐ Field visit  
☐ Phone call

State (yellow)  
County (pink)

Reason Codes (check one)

- ☐ 2A TRAINING  
☐ 2E EMERGENCY ASSISTANCE (SPILLS, DISEASE, ...)  
☐ 2G PLAN REVIEW  
☐ 2I INVESTIGATION (MCL OR M/R VIOLATIONS)  
☐ 2M INFORMAL INSPECTION  
☒ 2S SAMPLE COLLECTION  
☐ 2T TECHNICAL ASSISTANCE  
☐ 2V COMPLIANCE RELATED, FORMAL ENFORCEMENT  
☐ 2O OTHER



Number

41 00386

Date & Time

8 OCT 90

Who Responded

FITCH

Staff C (C)ounty, (A)g, (S)tate

County Hood River

WATER SYSTEM

Crystal Springs

Contact with / title: Mrs. Jimmie Lewis

Location / Phone #: 5955 Miller Rd 352-7391  
Parkdale

Summary of call/visit: Concerned with

white deposits in sink  
near toilet. Bacteriological  
sample collected - no coliforms  
present. Call to John  
Stroughton - If system complies  
with standards it meets  
criteria.

Action or follow-up needed: to check with

lab at experiment station  
Hot Water Heater?



ODELL RURAL FIRE PROTECTION DISTRICT  
HOOD RIVER COUNTY, OREGON

ORDINANCE NO. 1-81

AN ORDINANCE ADOPTING A FIRE PREVENTION CODE; PRESCRIBING REGULATIONS GOVERNING CONDITIONS HAZARDOUS TO LIFE AND PROPERTY FROM FIRE OR EXPLOSIONS; ESTABLISHING A BUREAU OF FIRE PREVENTION; PROVIDING OFFICERS THEREFOR; DEFINING THEIR POWERS AND DUTIES; PROVIDING FOR APPEALS; PROVIDING FOR PENALTIES; AND REPEALING ORDINANCE NO. 1-75.

SECTION 1.

THE BOARD OF DIRECTORS OF ODELL RURAL FIRE PROTECTION DISTRICT, HOOD RIVER COUNTY, OREGON, RECOGNIZING THAT THE ADOPTION OF A FIRE CODE IS NECESSARY FOR THE PRESERVATION OF THE PUBLIC HEALTH AND SAFETY, BY PROVIDING REASONABLE REGULATIONS RELATING TO:

1. Prevention of fires.
2. Storage and use of combustibles and explosives.
3. Construction, maintenance and regulation of fire escapes.
4. Means and adequacy of exit in case of fires in factories, asylums, hospitals, churches, schools, hall, theaters, amphitheaters, all buildings, except private residences, which are occupied for sleeping purposes, and all other places where large numbers of persons work, live or congregate from time to time for any purpose.
5. Requiring the issuance of permits by the Fire Chief, or his authorized representative, before burning trash or any other combustible materials.
6. Providing for the inspection of premises by officers designated by the Board of Directors, and requiring the removal of fire hazards found on premises at such inspections.
7. Providing for Fire Apparatus Access.
8. Providing for minimum fire flow water requirements.

DOES HEREBY DETERMINE IT NECESSARY TO ADOPT THE FOLLOWING FIRE CODE, AS IS HEREINAFTER MORE PARTICULARLY DESCRIBED. THE ODELL R.F.P.D. ORDAINS:

SECTION 2. ADOPTION OF THE UNIFORM FIRE CODE

That certain document, one copy of which is on file in the office of the ODELL Rural Fire Protection District being marked and designated as the Uniform Fire Code, 1979 edition, including its appendices A,B,C,D,E,F,G,H, and I, recommended by the International Conference of Building Officials and the Western Fire Chiefs Association shall be and the same is hereby adopted as the Uniform Fire Code of the ODELL Rural Fire Protection District, prescribing regulations, governing conditions hazardous to life and property from fire and explosions, establishing a Bureau of Fire Prevention and providing officers therefore and defining their powers and duties; and each and all of the regulations, provisions, penalties and conditions and terms of said Uniform Fire Code, 1979 edition, with its above noted appendices recommended by the International Conference of Building Officials and Western Fire Chiefs Association on file in the office of the ODELL Rural Fire Protection District, save as are hereafter in this ordinance amended are hereby referred to, adopted and made a part hereof as if fully set out in this ordinance.

SECTION 3. ESTABLISHMENT AND DUTIES OF BUREAU OF FIRE PREVENTION

(a) The Uniform Fire Code shall be enforced by the Bureau of Fire Prevention of the ODELL Rural Fire Protection District which is hereby established and which shall be operated under the supervision of the Chief of the Fire Department.



(b) The Fire Marshal in charge of the Bureau of Fire Prevention shall be appointed by the Board of Directors of the ODELL Fire Protection District.

(c) The Chief of the Fire Dept. may detail such members of the fire dept. as inspectors as shall from time to time be necessary.

#### SECTION 4. DEFINITIONS

(1) Whenever the word "Jurisdiction" is used in the Uniform Fire Code it shall be held to mean the ODELL Rural Fire Protection District.

(2) Whenever the word "Corporate Counsel" is used in the Uniform Fire Code it shall be held to mean the attorney for the ODELL Rural Fire Protection District.

(3) Whenever the words "Chief of the Bureau of Fire Prevention" are used in the Uniform Fire Code, they shall be held to mean the Fire Marshal of the ODELL Rural Fire Protection District. And the words "Fire Marshal" herein refers to the Fire Marshal of the ODELL Rural Fire Protection District.

#### SECTION 5. ESTABLISHMENT OF LIMITS OF DISTRICTS IN WHICH STORAGE OF FLAMMABLE LIQUIDS IN OUTSIDE ABOVEGROUND TANKS IS PROHIBITED.

(1) The limits referred to in Section 79.201 of the Uniform Fire Code in which storage of flammable or combustible liquids in outside aboveground tanks is prohibited, are hereby established as follows: ANY RESIDENTIAL ZONE OF LESS THAN 2.5 ACRES, ANY RESIDENTIAL PARCEL OF LESS THAN 2.5 ACRES IN ANY ZONE, AND ANY COMMERCIAL ZONE, within the boundaries of the ODELL Fire Protection District, as established by Hood River County Comprehensive Plan and Zoning Ordinance now or hereafter put into effect.

(2) The limits referred to in Section 79.601 of the Uniform Fire Code, in which new bulk plants for flammable or combustible liquids are prohibited, are hereby established as follows; the areas described and set forth as zoned for EXCLUSIVE FARM USE, RESIDENTIAL, AND COMMERCIAL, within the boundaries of the ODELL Fire Protection District, as established by Hood River County Comprehensive Plan and Zoning Ordinance now or hereafter put into effect.

#### SECTION 6. ESTABLISHMENTS OF LIMITS IN WHICH BULK STORAGE OF LIQUIFIED PETROLEUM GASES IS TO BE RESTRICTED.

(1) The limits referred to in Section 82.105 (a) of the Uniform Fire Code, in which commercial storage of liquidified petroleum gas is restricted, are hereby established as follows: the areas described and set forth as zoned for EXCLUSIVE FARM USE, RESIDENTIAL, AND COMMERCIAL, within the boundaries of the ODELL Fire Protection District, as established by Hood River County Comprehensive Plan and Zoning Ordinance now or hereafter put into effect.

#### SECTION 7. ESTABLISHMENTS OF LIMITS OF DISTRICTS IN WHICH STORAGE OF EXPLOSIVES AND BLASTING AGENTS IS TO BE PROHIBITED.

(1) The limits referred to in Section 77.106 (b) of the Uniform Fire Code, in which commercial storage of explosives and blasting agents is prohibited, are hereby established as follows; the areas described and set forth as zoned for EXCLUSIVE FARM USE, RESIDENTIAL, AND COMMERCIAL, within the boundaries of the ODELL Fire Protection District, as established by Hood River County Comprehensive Plan and Zoning Ordinance now or hereafter put into effect.



## SECTION 8. AMENDMENTS

WHEREAS, certain conditions and hazards exist within the boundaries of the ODELL Fire Protection District, which are not specifically defined in the Uniform Fire Code, it is necessary to amend the Uniform Fire Code as follows;

- (1) Delete Section 10.207 (a)  
Add Section 10.207 (a) to read:

Every building, structure or portion thereof constructed, altered, moved or relocated after the effective date of this ordinance shall be provided with Fire Apparatus Access. Every change of use or occupancy that would place a building or portion of a building in a different division of the same occupancy group or a different occupancy group, as defined in the Uniform Building Code, shall be subject to review and approval of the Fire Apparatus Access by the Fire Chief.

EXCEPTIONS: (1) Single family dwellings, less than 150 feet from an approved County, State or approved private access road.

(2) Group M occupancies, as defined in the Building Code, (Private Garages, Sheds, Agricultural Buildings less than 1000 sq. feet. ground floor).

When required, every building hereafter constructed shall be accessible to fire department apparatus by way of access roadways with all-weather driving surface of not less than 15 feet of unobstructed width, with adequate roadway turning radius capable of supporting the imposed loads of fire apparatus and having a minimum of 13 feet, 6 inches of vehicle clearance. Private access roads shall be maintained by the property owner.

The turn around area of a cul-de-sac in an approved subdivision shall be as near level as proper drainage will allow. If the length of the cul-de-sac exceeds 150 feet a turning radius of 45 feet is required. The radius shall be measured from the center point to the curb line (not property line).

The maximum grade for a access road shall be no more than 12%. Possible variances to the above grade, in particular situations where it might be feasible, a maximum grade of 15% may be acceptable when sharp turns are avoided and for a running distance not to exceed 200 feet.

The gross vehicle load requirements for Fire Apparatus access to structures located more than 150 feet but less than 250 feet from an approved road shall not be less than 38,000 lbs. Fire Apparatus access to structures beyond 250 feet from an approved road shall have gross vehicle load requirements not less than 60,000 lbs. Bridges, with a span of 10 feet or less, shall be designed to support two-thirds of the gross vehicle load requirements.

Access roads that are more than 400 feet in length and are dead end roads, provisions shall be made by the property owner for the turn around of Fire Apparatus as may be required by the Fire Chief.

- (2) Delete Section 10.301 (c)  
Add Section 10.301 (c) to read:

All premises where buildings, other than single family dwellings not in an approved subdivision, are hereafter constructed there shall be provided, as may be required by the Fire Chief, street fire hydrants and water mains or approved on site storage, capable of supplying the fire flow required by the Fire Chief. In setting forth such requirements, the Fire Chief shall be guided by, but may adjust, the standards set forth and published by the Insurance Services Office, "Guide For Determination of Required Fire Flow" and more specifically set forth in the following table No. 10.301



TABLE NO. 10.301

DISTRICT CLASSIFICATION	FIRE FLOW REQUIREMENTS (GPM)	DURATION REQUIREMENTS (HOURS)	FIRE HYDRANT SPACING (IN FEET)
<b>I Limited Multiple Residence 1 &amp; 2 Stories, Apartments, Tenements, Dormitories. Building size in square feet on first floor (Notes 1,2,3, 6 &amp; 7)</b>			
Less than 5000 square ft.	1,500	6	1,000
5,000 or more square ft.	2,000	8	1,000
10,000 or more square ft.	2,500	10	500
15,000 or more square ft.	3,000	10	500
20,000 or more square ft.	3,500	10	500
<b>II Unlimited Residence Three Story and Higher, Hotels, High-Rise Etc. Building Size in Square Feet On First Floor (Notes 1,2,4,6,&amp;7)</b>			
Less than 10,000 Square ft.	2,000	8	500
10,000 or more square ft.	2,500	10	500
15,000 or more square ft.	3,000	10	500
20,000 or more square ft.	3,500	10	500
25,000 or more square ft.	4,000	10	500
30,000 or more square ft.	4,500	10	500
35,000 or more square ft.	5,000	10	500
<b>III Commercial or Industrial Building Size in Square Feet on First Floor (Notes 1,2,4,5,6, &amp; 7)</b>			
Less than 10,000 square ft.	2,000	8	500
10,000 or more square ft.	2,500	10	500
15,000 or more square ft.	3,000	10	500
20,000 or more square ft.	3,500	10	500
25,000 or more square ft.	4,000	10	500
30,000 or more square ft.	4,500	10	500
35,000 or more square ft.	5,000	10	500
<b>IV Schools</b>			
A. Elementary	2,000	8	500
B. Intermediate (Jr. High)	2,500	10	500
C. Senior High	3,000	10	500
D. University - College	5,000	10	500



NOTES TO TABLE 10.201

1. When development occurs in a mountainous area, at least two-thirds of the required duration should be provided from storage located at an elevation capable of delivering the fire flow by gravity.
2. Required fire flows should be based on the highest land use allowable and/or zoning within any proposed subdivision.
3. Five hundred gpm should be added for each additional floor level, in addition to the first floor, to a total requirement of fire flow not to exceed 3,500 gpm.
4. Five hundred gpm should be added for each additional floor level, in addition to the first floor, to a total requirement of fire flow not to exceed 5,000 gpm.
5. Five thousand gpm should be required for industrial and/or commercial subdivisions where land use or zoning allows the construction of buildings that justify such flows.
6. Where buildings are constructed of fire-resistive materials such as concrete, brick, etc., and/or are provided with automatic sprinkler systems, the required fire flows may be reduced. All such reductions should be predicated on recognized standards and recommendations of the public fire protection grading and rating agencies providing that service.
7. All required fire flows are to be available at 20 pounds per square inch residual pressure.



It is recognized that, in many cases, the standards set forth in Table No. 10.301 are not immediately possible of realization due to present land use patterns and water flow capacities. In such cases, the Fire Chief or Board of Directors may vary the standards set forth in the aforesaid table so that:

1. Immediate fire protection needs are met.
2. Meeting of the standards on site, set forth in Table 10.301 is not immediately possible due to some circumstances not under the direct control of the applicant, and
3. Granting the variance does not prejudice public health, safety and general welfare.

The Fire Chief or the Board of Directors may attach such conditions to the grant of a variance which will:

1. Provide for immediate on-site fire protection needs, based primarily on the aforesaid table;
2. Lessen the impact of the variance on surrounding properties and the public; and
3. Fulfill future public fire protection needs based upon the aforesaid table.
4. When on-site fire hydrants are to be provided as required by this code, the type and location of such hydrants shall be as designated by the Fire Chief. The elevation of a fire hydrant shall be not less than 18 inches nor more than 24 inches between the adjoining final grade and the centerline of the discharge ports. Paved or all-weather access to fire hydrants shall be provided and maintained to accommodate the firefighting apparatus.

(3) Delete Section 11.203 (b)

Add Section 11.203 (b) to read:

1. Storage Requirements. Storage in buildings shall be orderly, shall be more than 2 feet from the ceilings, and shall be so located as not to endanger exit from buildings. Refer to Article 81 for High Piled Stock.
2. Storage in the open of empty wood boxes, tote bins, wood pallets or any other readily combustible materials and supplies, in industrial zones, shall meet the requirements set forth as follows:
  - A. Each bloc of open combustible storage shall not exceed 3,556 sq. feet in area (2,000) bins and shall not have a dimension of length or width of more than 80 feet.
  - B. There shall be not less than 12 feet of open space on all sides of each bloc and there shall be not less than 6 feet on all sides kept free of dry grass and weeds.
  - C. The height of each bloc shall not exceed 20 feet on the outside perimeter and 23 feet on the interior. If the outside perimeter of each bloc is less than 20 feet in height than the interior shall not be more than 3 feet higher.
  - D. Combustible storage may be placed next to buildings with exterior walls constructed intirely of concrete or steel, under the following conditions: The combustible storage shall not be placed less than 15 feet, measured horizontally, from each side of any opening in the exterior walls and shall not be more than 16 feet in depth and at least 4 feet below the top of the non-combustible wall, but the height shall not exceed 15 feet.



- E. There shall be not less than 50 feet of open space between any bloc of combustible storage and any building with exterior walls constructed of wood, whether on the property of the storage owner or the property of another. (Exception, wood buildings of 100 sq. ft. or less.)
  - F. Combustible storage more than 16 feet in width and 15 feet high shall not be placed less than 35 feet, measured horizontally, from any primary main electrical transmission lines or main telephone trunk lines serving the general public. Combustible storage more than 16 feet wide and 15 feet high shall not be placed less than 10 feet, measured horizontally, from any individual property electric service lines.
3. Storage of empty wood boxes, tote bins and pallets, on farms, shall meet the requirements set forth as follows:
- A. Each bloc of combustible storage shall not exceed 1000 bins and shall not have a deminsion in length or width of more than 80 feet. There shall be not less than 12 feet of open space on all sides of each bloc and the ground around each bloc shall be kept free of dry grass and weeds for a distance of not less than 6 feet.
  - B. Each bloc of combustible storage shall not exceed 20 feet in height. If the outside perimeter of a bloc is less than 20 feet in height, than the interior shall not be more than 3 feet higher.
  - C. Each bloc of 500 bins, or more, shall not be placed less than 50 feet from any building with exterior walls constructed of wood, whether on the property of the storage owner or the property of another. (Exception, wood building 100 sq. feet or less.)
  - D. Combustible storage more than 16 feet in width and 15 feet high shall not be placed less than 35 feet, measured horizontally, from any primary main electric transmission lines or main telephone trunk lines serving the general public. Combustible storage more than 16 feet wide and 15 feet high shall not be placed less than 10 feet, measured horizontally, from any individual property electric service lines.

#### SECTION 9    REPEAL

Ordinance No. 1-75 adopted February 11, 1975, pertaining to the adoption of a prior fire code, is hereby repealed.

#### SECTION 10    APPEALS

- A. Whenever the Fire Chief or Fire Marshal shall disapprove an application or fail to approve or grant a permit applied for under this ordinance, or when it is claimed that the provisions of this ordinance do not apply or that the true intent and meaning of this ordinance have been mis- construed or wrongly interpreted, the applicant may appeal the decision of the Fire Chief or Fire Marshal to the Board of Directors within 30 days of the date of the decision.
- B. Appeal from the decision of the Board of Directors or from any decision made pursuant to this ordinance shall be by Writ of Review as provided for by ORS 34.010 through 34.100, provided, however, that any aggrieved person may have a remedy by Writ of Review.

#### SECTION 11    FEES

There shall be no fee for any permit required by this ordinance.



SECTION 12      DENIAL OR REVOCATION OF BUILDING PERMIT FOR FAILURE TO COMPLY

- A. Any person applying for a Building Permit who does not demonstrate and assure compliance with the terms and provisions of this ordinance shall be denied such building permit.
- B. Any person having been issued a building permit who fails to comply with the terms and provisions of this ordinance shall have such permit revoked in the manner specified in the Uniform Building Code, as adopted by Hood River County.

SECTION 13      ENFORCEMENT, PENALTIES

- A. Any person who shall violate any of the provisions of this code hereby adopted or fail to comply there with, or who shall violate or fail to comply with any order made thereunder, or who shall build in violation of any detailed statement of specifications or plans submitted and approved thereunder, or any certificate or permit issued thereunder, and from which no appeal has been taken, or who shall fail to comply with such an order as affirmed or modified by the Board of Directors or by a court of competent jurisdiction, within the time fixed herein, shall severally for each and every such violation and noncompliance respectively, be guilty of a misdemeanor, punishable by fine of not less than \$10.00 or more than \$500.00 or by imprisonment for not less than 10 days nor more than 180 days or by both fine and imprisonment. The imposition of one penalty for any violation shall not excuse the violation or permit it to continue, and all such persons shall be required to correct or remedy such violations or defects within a reasonable time, and when not otherwise specified, each ten days that prohibited conditions are maintained shall constitute a separate offense.
- B. The application of the above penalty shall not be held to prevent the enforced removal of prohibited conditions.

SECTION 14      VALIDITY

If any section, subsection, paragraph, sentence, word, clause or portion of this ordinance is for any reason held to be unconstitutional or invalid, by a court of competent jurisdiction, such decision shall not effect the validity of the remaining portions of this ordinance or any part thereof.

SECTION 15      CONFORMITY WITH LAW

This ordinance, and the Rules and Regulations adopted pursuant thereto, shall not be in any way a substitute for, nor eliminate in any way, the necessity for conformity with any and all laws of the State of Oregon, nor ordinances of Hood River County, nor any rules or regulations adopted pursuant to such statutes or regulations.

ENACTED this 13th day of October, 1981, being the date of the 3rd reading and the First public hearing before the Board of Directors of the ODELL Rural Fire Protection District of Hood River County.



APPROVED:

BOARD OF COUNTY COMMISSIONERS  
HOOD RIVER COUNTY, OREGON

Elmer W. Murray  
CHAIRMAN

J. Houston  
COUNTY RECORDER

10/20/81  
DATE

First reading August 11, 1981  
Second reading Sept. 8, 1981  
Third reading Oct. 13, 1981  
Public hearing Oct. 13, 1981

APPOINTED:

BOARD OF DIRECTORS  
ODELL RURAL FIRE  
PROTECTION DISTRICT,  
HOOD RIVER COUNTY, OREGON

Clarence O. Ruille  
CHAIRMAN

F. W. H. /  
SECRETARY

Oct. 13, 1981  
DATE



25-Mar-91  
1144CSWD

CRYSTAL SPRINGS WATER DISTRICT  
CAPITAL IMPROVEMENTS ASSESSMENT

WATER LINE INVENTORY

NO.	LINE	DIA	MATERIAL	LENGTH	DATE	INIT.VALUE	LIFE	ENR INDEX	1991 \$\$	REM.LIFE	NOTES
1	H19/H16	14	CI	13,530	66	115,682	100	1,031	399,812	75	
2	H19/H18	8	PVC	1,700	81	35,890	50	3,548	38,447	40	
3	H18/H17	4	STL	5,000	30	4,486	40	203	0	(21)	
4	H17W	3	STL	2,650	30	1,698	40	203	0	(21)	
5	H16.5W	6	CI	7,400	68	44,424	100	1,158	140,342	77	
6	H17S	3	STL	2,900	30	1,859	40	203	0	(21)	
7	G17/G16	2	STL	7,500	35	4,641	40	196	0	(16)	
8	G16/F16	2	STL	2,650	35	1,640	40	196	0	(16)	
9	G16W	2	STL	1,600	35	990	40	196	0	(16)	
10	G16E	2	STL	1,850	35	1,145	40	196	0	(16)	
11	H17/H14	4	CI	10,800	68	55,280	100	1,158	174,636	77	
12	H14E	6	DI	2,640	87	60,274	100	4,404	62,422	96	
13	H16E	4	CI	4,200	68	21,498	100	1,158	67,914	77	
14	H16/H15	2	STL	4,750	40	3,629	40	242	0	(11)	
15	H16/H13	12	CI	6,600	66	51,389	100	1,031	177,606	75	
16	H15/H13	4	DI	7,900	75	78,498	100	2,248	139,356	84	
17	J13/H13	6	CI	7,730	68	46,405	100	1,158	146,600	77	
18	F13/F11	4	CI	7,400	68	37,877	100	1,158	119,658	77	
19	F13	2	GALV	3,050	79	29,389	40	3,052	32,025	28	
20	F13S	2	CI	1,850	68	6,764	100	1,158	21,368	77	
21	F12	4	PVC	1,050	81	16,467	50	3,548	17,640	40	
22	E12	2	PVC	1,700	81	19,043	50	3,548	20,400	40	
23	F12W	1	GALV	1,300	40	993	40	242	0	(11)	
24	F12E	4	DI	1,300	88	26,042	100	4,532	26,431	97	
25	F11N	2	GALV	1,300	68	4,753	40	1,158	8,288	17	
26	F11E	1	GALV	800	60	2,081	40	824	2,700	9	
27	G12	2	STL	3,400	35	2,104	40	196	0	(16)	
28	G12E	1	STL	1,850	35	1,145	40	196	0	(16)	
29	G12N	1	STL	800	35	495	40	196	0	(16)	
30	G12W	1	STL	900	35	557	40	196	0	(16)	
31	G12	1	STL	4,750	35	2,939	40	196	0	(16)	
32	J13E	2	GALV	1,300	77	10,585	40	2,579	12,675	26	
33	J13	1	GALV	3,170	77	25,812	40	2,579	30,908	26	
34	H13/J13	1	GALV	1,980	70	8,839	40	1,414	14,108	19	
35	H13/J13	1	STL	2,100	40	1,605	40	242	0	(11)	
36	H13/J10	10	CI	10,560	66	73,331	100	1,031	253,440	75	
37	H12/J11	4	DI	7,125	76	76,025	100	2,414	127,161	85	
38	H12N	2	GALV	800	80	8,234	40	3,260	8,700	29	
39	H12S	4	DI	5,300	89	107,716	100	4,598	109,674	98	
40	H13/J10	4	STL	8,450	30	7,582	40	203	0	(21)	
41	H12W	2	STL	5,200	42	4,531	40	276	0	(9)	
42	H11/G11	2	STL	3,040	35	1,881	40	196	0	(16)	
43	H11N	2	STL	1,975	55	4,115	40	660	2,963	4	
44	J9N	4	DI	1,700	79	22,933	100	3,052	31,416	98	
45	J10	2	GALV	1,050	60	2,732	40	824	3,544	9	
46	H10/J10	2	GALV	5,500	55	11,461	40	660	8,250	4	
47	H10E	4	DI	1,580	78	19,701	100	2,821	28,867	57	
48	J10/J9	3	STL	3,950	35	2,444	40	196	0	(16)	
49	J9N	4	DI	1,300	79	17,537	100	3,052	24,024	88	
50	J9/J8	3	STL	1,700	35	1,052	40	196	0	(16)	



25-Mar-91  
1144CSWD

CRYSTAL SPRINGS WATER DISTRICT  
CAPITAL IMPROVEMENTS ASSESSMENT

WATER LINE INVENTORY

NO.	LINE	DIA	MATERIAL	LENGTH	DATE	INIT.VALUE	LIFE	ENR	INDEX	1991 \$\$	REM.LIFE	NOTES
51	K9/K7	8	CI	11,200	68	77,173	100	1,158	243,800		77	
52	K9/H9	4	CI	5,300	68	27,128	100	1,158	85,701		77	
53	H9/H7	4	CI	6,850	68	35,062	100	1,158	110,764		77	
54	H8W	4	DI	5,000	88	100,160	100	4,532	101,850		97	
55	J9S	1	GALV	800	55	1,667	40	660	1,200		4	
56	H9W	2	STL	2,350	47	3,064	40	413	0		(4)	
57	H8N	2	STL	1,050	50	1,691	40	510	0		(1)	
58	H7N	1	STL	1,050	50	1,691	40	510	0		(1)	
59	J8N	3	STL	5,200	35	3,218	40	196	0		(16)	
60	J8	2	STL	1,050	35	650	40	196	0		(16)	
61	J8	2	STL	3,425	35	2,119	40	196	0		(16)	
62	J7/H7	2	STL	2,600	47	3,390	40	413	0		(4)	
63	J7E	2	STL	1,850	47	2,412	40	413	0		(4)	
64	ODELL	8	DI	3,430	79	62,290	100	3,052	85,330		88	
65	ODELL	6	CI	7,400	68	44,424	100	1,158	140,342		77	
66	J7N	1	GALV	1,050	70	4,688	40	1,414	7,481		19	
67	J7N	4	DI	1,050	85	19,586	100	4,220	20,727		94	
68	WY'EAST	10	DI	650	77	11,291	100	2,579	17,888		86	
69	WY'EAST	2	GALV	1,300	53	2,453	40	600	975		2	
70	H6.5S	6	CI	1,300	71	10,904	100	1,618	25,615		80	
71	H6.5S/66	6	CI	4,500	71	37,746	100	1,618	88,668		80	
72	H6S	1	STL	2,375	62	6,576	40	877	9,797		11	
73	G6	2	GALV	3,170	76	24,160	40	2,414	29,719		25	
74	G6	2	GALV	1,300	79	12,527	40	3,052	13,650		28	
75	G6	1	STL	1,050	40	802	40	242	0		(11)	
76	G6	1	STL	650	62	1,800	40	877	2,681		11	
77	G6/J6	4	DI	6,600	86	126,377	100	4,332	131,670		95	
78	G6/G5	4	DI	2,375	89	48,269	100	4,598	48,878		98	
79	G6N	2	STL	1,850	42	1,612	40	276	0		(9)	
80	H7N	8	DI	2,600	77	39,899	100	2,579	63,212		86	
81	H6N	6	DI	2,600	77	34,762	100	2,579	55,073		86	
82	H5N	1	STL	3,050	42	2,658	40	276	0		(9)	
83	H6E	1	GALV	1,850	60	4,813	40	824	6,244		9	
84	H6	1	GALV	2,600	55	5,418	40	660	3,900		4	
85	K7/K5	4	CI	5,300	68	27,128	100	1,158	85,701		77	
86	K5/L5	4	CI	5,300	68	27,128	100	1,158	85,701		77	
87	K5	4	DI	5,800	89	116,186	100	4,532	118,146		97	
88	K5W	1	GALV	1,050	77	8,550	40	2,579	10,238		26	
89	K5W/N	2	GALV	2,100	64	6,266	40	945	10,238		13	
90	K5N	1	GALV	2,375	55	7,326	40	977	12,469		14	
91	K5	1	GALV	1,055	55	2,198	40	660	1,583		4	
92	K6E	4	DI	900	82	15,511	100	3,899	17,199		91	
93	K6E	1	STL	1,850	35	1,145	40	196	0		(16)	
94	K6S	3	STL	2,550	35	2,197	40	196	0		(16)	
95	K6E	1	STL	1,575	35	975	40	196	0		(16)	
96	K7E	6	DI	2,100	67	47,945	100	4,404	49,654		96	
97	K7E	1	GALV	800	68	11,447	40	4,532	11,100		37	
98	K8	8	CI	4,100	68	28,251	100	1,158	89,248		77	
99	K8E	6	CI	4,225	68	25,364	100	1,158	80,128		77	
100	K8/L5	6	CI	14,500	70	106,291	100	1,414	282,137		79	



25-Mar-91  
1144CSWD

CRYSTAL SPRINGS WATER DISTRICT  
CAPITAL IMPROVEMENTS ASSESSMENT

WATER LINE INVENTORY

NO.	LINE	DIA	MATERIAL	LENGTH	DATE	INIT. VALUE	LIFE	ENR INDEX	1991 \$	REN. LIFE	NOTES
101	K8S	6	DI	5,300	86	119,027	100	4,332	124,012	95	
102	K8S	3	STL	5,300	35	3,230	40	196	0	(16)	
103	K8E	2	STL	2,100	35	1,300	40	196	0	(16)	
104	K8E	2	STL	4,475	35	2,769	40	196	0	(16)	
105	K8E	2	STL	1,850	35	1,145	40	196	0	(16)	
106	K8N	1	STL	1,300	35	804	40	196	0	(16)	
107	K8N	2	STL	1,300	35	804	40	196	0	(16)	
108	K8N	4	DI	1,300	77	14,819	100	2,579	23,478	86	
109	L8E	2	GALV	1,500	77	12,214	40	2,579	14,625	26	
110	K8N	1	STL	500	46	546	40	346	0	(5)	
111	K8S	1	STL	600	46	655	40	346	0	(5)	
112	K8N	1	STL	1,300	46	1,420	40	346	0	(5)	
113	L8N	1	GALV	500	87	6,952	40	4,404	6,750	36	
114	L8/L7	2	STL	4,500	35	2,785	40	196	0	(16)	
115	L8/M5	4	CI	13,900	68	71,147	100	1,158	224,763	77	
116	L7E	4	DI	2,000	75	19,873	100	2,248	35,280	84	
117	L7N	1	GALV	1,150	75	8,162	40	2,248	10,350	24	
118	L7N	1	GALV	1,150	75	8,162	40	2,248	10,350	24	
119	L7E	1	GALV	800	75	5,678	40	2,248	7,200	24	
120	L7E	1	GALV	2,000	63	7,312	40	1,158	12,750	17	
121	L6N	1	GALV	1,050	63	3,839	40	1,158	6,694	17	
122	L7N	2	STL	2,900	35	1,795	40	196	0	(16)	
123	L7W	1	STL	800	35	495	40	196	0	(16)	
124	L6W	1	GALV	2,100	50	3,381	40	510	0	(1)	
125	L5S	2	GALV	2,600	73	15,605	40	1,901	21,450	22	
126	L5E	1	GALV	800	71	5,678	40	2,248	6,000	20	
127	L5E	1	GALV	800	71	5,678	40	2,248	6,000	20	
128	PINEGROVE	10	CI	7,400	63	57,717	100	1,158	182,336	77	
129	L5	6	CI	800	68	4,803	100	1,158	15,172	77	
130	L5/L4	6	DI	5,300	89	126,335	100	4,598	127,928	98	
131	PINEGROVE	2	GALV	1,200	74	7,729	40	2,040	10,350	23	
132	PINEGROVE	3	STL	1,850	30	1,186	40	203	0	(21)	
133	M5/M3	4	CI	10,550	70	65,938	100	1,414	175,025	79	
134	L5	2	STL	2,600	35	1,609	40	196	0	(16)	
135	L5	2	STL	1,600	35	990	40	196	0	(16)	
136	L4/L3	1	STL	5,000	35	3,094	40	196	0	(16)	
137	L4W	2	GALV	1,000	71	5,108	40	1,618	7,500	20	
138	M4E	4	DI	1,300	79	17,537	100	3,052	24,024	88	
139	M4S	3	STL	2,600	35	1,609	40	196	0	(16)	
140	M4/M3	4	DI	5,650	86	108,186	100	4,332	112,718	95	
141	M3E	1	GALV	5,000	65	15,423	40	977	26,250	14	
142	M4E	2	PVC	800	73	7,709	50	3,052	9,120	38	
143	M3/M1	6	DI	9,500	70	69,639	100	1,414	184,848	79	
144	M2	2	GALV	1,980	48	2,882	40	461	0	(3)	
145	M2	2	GALV	800	48	1,164	40	461	0	(3)	
146	M2	2	GALV	800	48	1,164	40	461	0	(3)	
147	H15/H16	14	DI	5,000	81	147,118	100	3,548	177,300	90	
148	H16/H18	8	DI	3,300	81	69,669	100	3,548	83,962	90	
149	H17W	2	PVC	1,700	90	25,500	50	4,751	24,990	49	
150	H14N	3	STL	1,300	30	833	40	203	0	(21)	



25-Mar-91  
1144CSWD

CRYSTAL SPRINGS WATER DISTRICT  
CAPITAL IMPROVEMENTS ASSESSMENT

WATER LINE INVENTORY

NO.	LINE	DIA	MATERIAL	LENGTH	DATE	INIT.VALUE	LIFE	ENR INDEX	1991 \$\$	REM.LIFE	NOTES
151	H16/H13	12	CI	10,560	66	82,222	100	1,031	284,170	75	
152	H15	12	DI	1,300	81	34,833	100	3,548	41,980	90	
153	H15	12	DI	1,300	81	34,833	100	3,548	41,980	90	
154	H13/H12	4	STL	2,250	30	2,019	40	203	0	(21)	
155	H16	2	GALV	1,050	70	4,688	40	1,414	7,481	19	
156	G13	6	DI	2,650	90	65,270	100	4,751	64,617	99	
157	G13/F13	6	CI	4,620	68	27,735	100	1,158	87,619	77	
158	E13	2	PVC	650	81	7,281	50	3,548	7,800	40	
159	E12	2	GALV	400	85	5,329	40	4,220	5,100	34	
160	F12	4	DI	1,150	89	23,372	100	4,598	23,667	98	
161	J10	10	DI	1,500	79	30,835	100	3,052	42,240	88	
162	J10/J9	10	CI	7,400	66	51,387	100	1,031	177,600	75	
163	H12/J12	2	GALV	2,650	50	4,267	40	510	0	(1)	
164	H12	1	CU	800	89	11,614	30	4,598	11,200	28	
165	H12	4	DI	1,200	91	25,200	100	4,751	25,200	100	
166	J11/J10	4	DI	2,600	79	35,075	100	3,052	48,048	88	
167	J10	4	STL	925	30	830	40	203	0	(21)	
168	H11W	1	GALV	1,850	62	5,122	40	877	7,631	11	
169	J10	6	DI	500	79	7,911	100	3,052	10,837	83	
170	J10	6	DI	500	79	7,911	100	3,052	10,837	88	
171	J7	6	DI	1,050	78	15,356	100	2,821	22,500	87	
172	J7	6	DI	530	69	3,525	100	1,283	10,182	78	
173	J7	10	DI	1,050	79	21,584	100	3,052	29,568	88	
174	J7	6	DI	530	79	8,386	100	3,052	11,487	88	
175	J7	4	DI	800	79	10,792	100	3,052	14,784	88	
176	J7	4	DI	250	83	4,539	100	4,108	4,830	92	
177	J7	4	CI	600	71	4,291	100	1,618	10,080	80	
178	J7	2	GALV	500	72	3,357	40	1,772	4,725	21	
179	J6	4	DI	1,300	87	25,306	100	4,404	26,208	96	
180	G6	6	DI	2,000	86	44,916	100	4,332	46,797	95	
181	G6	2	PVC	1,450	79	13,972	50	3,052	16,530	38	
182	J6	1	CU	1,050	88	15,024	30	4,532	14,175	27	
183	J6	1	GALV	1,300	83	16,861	40	4,108	15,600	32	
184	K5	1	GALV	300	87	4,171	40	4,404	4,050	36	
185	K5	1	GALV	200	87	2,781	40	4,404	2,700	36	
186	K5	1	CU	1,580	89	22,937	30	4,598	22,120	28	
187	K7	6	DI	800	75	9,323	100	2,246	16,551	84	
188	L8	2	STL	500	35	309	40	196	0	(16)	
189	L8	2	GALV	1,500	87	20,857	40	4,404	20,250	36	
190	L8	1	STL	1,000	35	619	40	196	0	(16)	
191	L5	6	DI	3,400	90	83,742	100	4,751	82,905	99	
192	M1	1	GALV	700	58	1,677	40	759	1,838	7	
193	M1	1	GALV	1,200	78	10,688	40	2,821	12,150	27	



# RA Mailing List for Certificate and Order – partial perfection (2<sup>nd</sup>)

Scheduled Mailing Date:

Application: S-45826

Permit: S-34196

Certificate: 97597

And Special Order Volume 129 Pages 658-659

Copies Mailed	
by:	<u>K M W F</u> (STAFF)
on:	<u>FEB 23 2024</u> (DATE)

Water Right Holder:

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 186  
ODELL OR 97044

Copies of Final Certificate to be sent to:

1. Watermaster District 3 (include copy of map)
2. Water Availability
3. Vault
4. File

Is the Permit Holder(s) of record currently identified as a landowner of any tax lots involved as confirmed by the County records?

**N/A – MUNICIPAL USE**

Other persons to receive copies: (include map):

1. William Pavlich, CWRE, PACE Engineers,  
4500 Kruse Way, Suite 250, Lake Oswego OR 97035
2. Farmers Irrigation District, 1985 Country Club Road, Hood River OR 97031
3. Middle Fork Irrigation District, PO Box 291, Parkdale OR 97041
4. East Fork Irrigation District, PO Box 162, Odell OR 97044
5. Tamera Smith, OWRD – WMCP and partial perfection



BEFORE THE WATER RESOURCES DIRECTOR OF OREGON

HOOD RIVER COUNTY

IN THE MATTER OF PARTIAL PERFECTION OF )  
WATER RIGHT PERMIT S-34196 IN THE NAME ) ORDER  
OF CRYSTAL SPRINGS WATER DISTRICT )

STATEMENT

On July 1, 2022, the Water Resources Department received a request from Crystal Springs Water District to partially perfect the use of 0.65 cubic foot per second (CFS) of water under water right Permit S-34196. This is a request for the second and final increment; Certificate 93120 was issued May 31, 2017 for 2.85 CFS for the first increment.

FINDINGS OF FACT

Permit S-34196 allows for the use of 3.5 CFS from Crystal Springs, a tributary of East Fork Hood River, for municipal use. The Department previously issued Certificate 93120 for 2.85 CFS, with 0.65 CFS remaining to be perfected under Permit S-34196.

Crystal Springs Water District has requested the final (second) increment of 0.65 CFS for partial perfection of Permit S-34196 and issuance of a water right certificate. The request was accompanied by the survey required under ORS 537.230(4). The survey shows, to the satisfaction of the Director, that the appropriation has been partially perfected in accordance with the provision of the Water Rights Act.

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

The Department finds that Crystal Springs Water District has perfected 0.65 CFS.

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

**NOTICE OF RIGHT TO PETITION FOR JUDICIAL REVIEW OR  
RECONSIDERATION**

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.482. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.482 and ORS 536.075. Pursuant to ORS 183.482, ORS 536.075 and OAR 137-003-0675, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.



The Department finds that Crystal Springs Water has perfected the final increment of 0.65 CFS. This quantity of water is less than 25 percent, but is the remaining unperfected quantity of water under Permit S-34196 following the earlier increment that was partially perfected and evidenced by Certificate 93120.

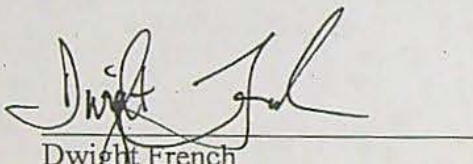
#### ULTIMATE FINDING OF FACT

Crystal Springs Water District is now entitled to a certificate in the amount of 0.65 CFS. The Director has determined the permittee has complied with the requirements to partially perfect Permit S-34196 pursuant to ORS 537.250 and 537.260.

#### ORDER

The Department finds that there is no remaining rate to be perfected under Permit S-34196 and that a certificate in the amount of 0.65 CFS shall be issued to Crystal Springs Water District. Certificate 97597 is issued for 0.65 CFS.

Dated FEB 23 2024



Dwight French  
Water Right Services Division Administrator, for  
Douglas E. Woodcock, Acting Director  
Oregon Water Resources Department



STATE OF OREGON  
COUNTY OF HOOD RIVER  
CERTIFICATE OF WATER RIGHT  
PARTIAL PERFECTION

THIS CERTIFICATE ISSUED TO

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 186  
ODELL OR 97044

confirms the right to the use of water perfected under the terms of Permit S-34196. The amount of water used to which this right is entitled is limited to the amount used beneficially, and shall not exceed the amount specified, or its equivalent in the case of rotation, measured at the point of diversion from the source. The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: S-45826

SOURCE OF WATER: CRYSTAL SPRINGS, A TRIBUTARY OF EAST FORK HOOD RIVER

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 0.65 CUBIC FOOT PER SECOND (CFS)

DATE OF PRIORITY: MARCH 3, 1969

The point of diversion is located as follows:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
1 S	10 E	WM	29	NW NW	500 FEET SOUTH AND 310 FEET EAST FROM NW CORNER, SECTION 29

A description of the place of use is as follows:

Twp	Rng	Mer	Sec	Q-Q
1 N	9 E	WM	24	NE NE
1 N	9 E	WM	24	SE NE
1 N	9 E	WM	24	NE SE
1 N	9 E	WM	24	NW SE
1 N	9 E	WM	24	SE SE
1 N	9 E	WM	25	NE NE
1 N	9 E	WM	25	SE NE
1 N	10 E	WM	1	NW NE
1 N	10 E	WM	1	SW NE

Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	1	NE NW
1 N	10 E	WM	1	NW NW
1 N	10 E	WM	1	SW NW
1 N	10 E	WM	1	SE NW
1 N	10 E	WM	1	NE SW
1 N	10 E	WM	1	NW SW
1 N	10 E	WM	1	NW SE
1 N	10 E	WM	2	NE NE
1 N	10 E	WM	2	NW NE

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

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



Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	2	SW NE
1 N	10 E	WM	2	SE NE
1 N	10 E	WM	2	NE NW
1 N	10 E	WM	2	NW NW
1 N	10 E	WM	2	SW NW
1 N	10 E	WM	2	SE NW
1 N	10 E	WM	2	NE SW
1 N	10 E	WM	2	NW SW
1 N	10 E	WM	2	SW SW
1 N	10 E	WM	2	SE SW
1 N	10 E	WM	2	NE SE
1 N	10 E	WM	2	NW SE
1 N	10 E	WM	2	SW SE
1 N	10 E	WM	3	NE NE
1 N	10 E	WM	3	NW NE
1 N	10 E	WM	3	SE NE
1 N	10 E	WM	3	NE NW
1 N	10 E	WM	3	NW NW
1 N	10 E	WM	3	NE SE
1 N	10 E	WM	3	NW SE
1 N	10 E	WM	3	SE SE
1 N	10 E	WM	10	NE NE
1 N	10 E	WM	10	SW NE
1 N	10 E	WM	10	SE NE
1 N	10 E	WM	10	NE SE
1 N	10 E	WM	10	NW SE
1 N	10 E	WM	10	SW SE
1 N	10 E	WM	10	SE SE
1 N	10 E	WM	11	NW NE
1 N	10 E	WM	11	SW NE
1 N	10 E	WM	11	NE NW
1 N	10 E	WM	11	NW NW
1 N	10 E	WM	11	SW NW
1 N	10 E	WM	11	SE NW
1 N	10 E	WM	11	NE SW
1 N	10 E	WM	11	NW SW
1 N	10 E	WM	11	SW SW
1 N	10 E	WM	11	SE SW
1 N	10 E	WM	11	NW SE
1 N	10 E	WM	11	SW SE
1 N	10 E	WM	15	NE NE
1 N	10 E	WM	15	NW NE
1 N	10 E	WM	15	SW NE
1 N	10 E	WM	15	SE NE
1 N	10 E	WM	15	NE NW
1 N	10 E	WM	15	SE NW
1 N	10 E	WM	15	NE SW
1 N	10 E	WM	15	SW SW
1 N	10 E	WM	15	SE SW
1 N	10 E	WM	15	NE SE
1 N	10 E	WM	15	NW SE
1 N	10 E	WM	15	SW SE

Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	15	SE SE
1 N	10 E	WM	18	SE NW
1 N	10 E	WM	18	NE SW
1 N	10 E	WM	18	SE SW
1 N	10 E	WM	18	NW SE
1 N	10 E	WM	18	SW SE
1 N	10 E	WM	19	NE NE
1 N	10 E	WM	19	NW NE
1 N	10 E	WM	19	SW NE
1 N	10 E	WM	19	SE NE
1 N	10 E	WM	19	NE NW
1 N	10 E	WM	19	NW NW
1 N	10 E	WM	19	SW NW
1 N	10 E	WM	19	SE NW
1 N	10 E	WM	19	NE SW
1 N	10 E	WM	19	NW SW
1 N	10 E	WM	19	SW SW
1 N	10 E	WM	19	SE SW
1 N	10 E	WM	19	NE SE
1 N	10 E	WM	19	NW SE
1 N	10 E	WM	19	SW SE
1 N	10 E	WM	19	SE SE
1 N	10 E	WM	20	SW NE
1 N	10 E	WM	20	SE NW
1 N	10 E	WM	20	NE SW
1 N	10 E	WM	20	NW SW
1 N	10 E	WM	20	SW SW
1 N	10 E	WM	20	SE SW
1 N	10 E	WM	20	NE SE
1 N	10 E	WM	20	NW SE
1 N	10 E	WM	20	SW SE
1 N	10 E	WM	20	SE SE
1 N	10 E	WM	21	SW NE
1 N	10 E	WM	21	SE NE
1 N	10 E	WM	21	SW NW
1 N	10 E	WM	21	SE NW
1 N	10 E	WM	21	NE SW
1 N	10 E	WM	21	NW SW
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1 N	10 E	WM	22	NE NE
1 N	10 E	WM	22	NW NE
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1 N	10 E	WM	22	NW NW
1 N	10 E	WM	22	SW NW
1 N	10 E	WM	22	SE NW
1 N	10 E	WM	22	NE SW
1 N	10 E	WM	22	NW SW
1 N	10 E	WM	22	SW SW



Twsp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	22	SE SW
1 N	10 E	WM	22	NE SE
1 N	10 E	WM	22	NW SE
1 N	10 E	WM	22	SW SE
1 N	10 E	WM	27	NW NE
1 N	10 E	WM	27	SW NE
1 N	10 E	WM	27	SE NE
1 N	10 E	WM	27	NE NW
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1 N	10 E	WM	27	SW NW
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1 N	10 E	WM	27	NE SW
1 N	10 E	WM	27	NW SW
1 N	10 E	WM	27	SW SW
1 N	10 E	WM	27	SE SW
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1 N	10 E	WM	28	NW NE
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1 N	10 E	WM	28	SE NE
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1 N	10 E	WM	28	NW NW
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1 N	10 E	WM	28	SE NW
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1 N	10 E	WM	28	NW SE
1 N	10 E	WM	28	SW SE
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1 N	10 E	WM	29	NW NE
1 N	10 E	WM	29	SW NE
1 N	10 E	WM	29	SE NE
1 N	10 E	WM	29	NE NW
1 N	10 E	WM	29	NW NW
1 N	10 E	WM	29	SW NW
1 N	10 E	WM	29	SE NW
1 N	10 E	WM	29	NE SW
1 N	10 E	WM	29	NW SW
1 N	10 E	WM	29	NE SE
1 N	10 E	WM	29	NW SE
1 N	10 E	WM	29	SE SE
1 N	10 E	WM	30	NE NE
1 N	10 E	WM	30	NW NE
1 N	10 E	WM	30	SW NE
1 N	10 E	WM	30	SE NE
1 N	10 E	WM	30	NE NW
1 N	10 E	WM	30	NW NW
1 N	10 E	WM	30	SW NW

Twsp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	30	SE NW
1 N	10 E	WM	30	NE SW
1 N	10 E	WM	30	SE SW
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1 N	10 E	WM	30	NW SE
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1 N	10 E	WM	33	SW NW
1 N	10 E	WM	33	NW SW
1 N	10 E	WM	33	SW SW
1 N	10 E	WM	33	SE SW
1 N	10 E	WM	33	NE SE
1 N	10 E	WM	33	SW SE
1 N	10 E	WM	33	SE SE
1 N	10 E	WM	34	NE NW
1 N	10 E	WM	34	NW NW
1 N	10 E	WM	34	SW NW
1 N	10 E	WM	34	SE NW
1 N	10 E	WM	34	NW SW
1 N	10 E	WM	34	SW SW
1 S	10 E	WM	5	NE NE
1 S	10 E	WM	5	NW NE
1 S	10 E	WM	5	SW NE
1 S	10 E	WM	5	SE NE
1 S	10 E	WM	5	NE NW
1 S	10 E	WM	5	NW NW
1 S	10 E	WM	5	SE NW
1 S	10 E	WM	5	NE SW
1 S	10 E	WM	5	NW SW
1 S	10 E	WM	5	SW SW
1 S	10 E	WM	5	SE SW
1 S	10 E	WM	5	NE SE
1 S	10 E	WM	5	NW SE
1 S	10 E	WM	5	SW SE
1 S	10 E	WM	5	SE SE
1 S	10 E	WM	6	NE NE
1 S	10 E	WM	6	NW NE
1 S	10 E	WM	6	SE NE
1 S	10 E	WM	6	SE SW
1 S	10 E	WM	6	NE SE
1 S	10 E	WM	6	NW SE
1 S	10 E	WM	6	SW SE
1 S	10 E	WM	6	SE SE
1 S	10 E	WM	7	NE NE
1 S	10 E	WM	7	NW NE
1 S	10 E	WM	7	SW NE
1 S	10 E	WM	7	SE NE



Twp	Rng	Mer	Sec	Q-Q
1 S	10 E	WM	7	NE NW
1 S	10 E	WM	7	SE NW
1 S	10 E	WM	7	NE SW
1 S	10 E	WM	7	SE SW
1 S	10 E	WM	7	NE SE
1 S	10 E	WM	7	NW SE
1 S	10 E	WM	7	SW SE
1 S	10 E	WM	7	SE SE
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1 S	10 E	WM	8	SE NE
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1 S	10 E	WM	8	SE NW
1 S	10 E	WM	8	NW SW
1 S	10 E	WM	8	SW SW
1 S	10 E	WM	8	NE SE
1 S	10 E	WM	8	NW SE
1 S	10 E	WM	8	SW SE
1 S	10 E	WM	8	SE SE
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2 N	10 E	WM	12	SE SW
2 N	10 E	WM	12	NE SE
2 N	10 E	WM	12	NW SE
2 N	10 E	WM	12	SW SE
2 N	10 E	WM	12	SE SE
2 N	10 E	WM	13	NE NE

Twp	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	13	NW NE
2 N	10 E	WM	13	SW NE
2 N	10 E	WM	13	SE NE
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2 N	10 E	WM	21	SE NW
2 N	10 E	WM	21	NE SW
2 N	10 E	WM	21	NW SW
2 N	10 E	WM	21	SW SW
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2 N	10 E	WM	21	NE SE
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2 N	10 E	WM	21	SW SE
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2 N	10 E	WM	22	NE NE
2 N	10 E	WM	22	NW NE
2 N	10 E	WM	22	SW NE
2 N	10 E	WM	22	SE NE
2 N	10 E	WM	22	NE NW
2 N	10 E	WM	22	NW NW
2 N	10 E	WM	22	SW NW
2 N	10 E	WM	22	SE NW
2 N	10 E	WM	22	NE SW
2 N	10 E	WM	22	NW SW
2 N	10 E	WM	22	SW SW
2 N	10 E	WM	22	SE SW



Twps	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	22	NE SE
2 N	10 E	WM	22	NW SE
2 N	10 E	WM	22	SW SE
2 N	10 E	WM	22	SE SE
2 N	10 E	WM	23	NE NE
2 N	10 E	WM	23	NW NE
2 N	10 E	WM	23	SW NE
2 N	10 E	WM	23	SE NE
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2 N	10 E	WM	23	SW NW
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2 N	10 E	WM	24	SE SW
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2 N	10 E	WM	25	SE NW
2 N	10 E	WM	25	NE SW
2 N	10 E	WM	25	NW SW
2 N	10 E	WM	25	SW SW
2 N	10 E	WM	25	SE SW
2 N	10 E	WM	25	NE SE
2 N	10 E	WM	25	NW SE
2 N	10 E	WM	25	SW SE
2 N	10 E	WM	25	SE SE

Twps	Rng	Mer	Sec	Q-Q
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2 N	10 E	WM	26	SW NE
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2 N	10 E	WM	26	SE SW
2 N	10 E	WM	26	NE SE
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2 N	10 E	WM	27	SW SE
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2 N	10 E	WM	34	NW NW
2 N	10 E	WM	34	SW NW
2 N	10 E	WM	34	SE NW
2 N	10 E	WM	34	NE SW
2 N	10 E	WM	34	NW SW



Twp	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	34	SW SW
2 N	10 E	WM	34	SE SW
2 N	10 E	WM	34	NE SE
2 N	10 E	WM	34	NW SE
2 N	10 E	WM	34	SW SE
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2 N	10 E	WM	35	NE NW
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2 N	10 E	WM	35	SW NW
2 N	10 E	WM	35	SE NW
2 N	10 E	WM	35	NE SW
2 N	10 E	WM	35	NW SW
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2 N	10 E	WM	36	NE SW
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2 N	11 E	WM	6	SW SW
2 N	11 E	WM	6	SE SW
2 N	11 E	WM	6	NW SE
2 N	11 E	WM	6	SW SE
2 N	11 E	WM	7	NW NE
2 N	11 E	WM	7	SW NE
2 N	11 E	WM	7	NE NW

Twp	Rng	Mer	Sec	Q-Q
2 N	11 E	WM	7	NW NW
2 N	11 E	WM	7	SW NW
2 N	11 E	WM	7	SE NW
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2 N	11 E	WM	7	NW SW
2 N	11 E	WM	7	SW SW
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2 N	11 E	WM	19	SW SW
2 N	11 E	WM	19	SE SW
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2 N	11 E	WM	30	SW NW
2 N	11 E	WM	30	SE NW
2 N	11 E	WM	30	NW SW
2 N	11 E	WM	30	SW SW
2 N	11 E	WM	30	NW SE
3 N	10 E	WM	25	SE SE
3 N	10 E	WM	36	SE NE
3 N	10 E	WM	36	NE SE
3 N	10 E	WM	36	SE SE



Twp	Rng	Mer	Sec	Q-Q
3 N	11 E	WM	30	SW SW
3 N	11 E	WM	30	SE SW
3 N	11 E	WM	31	NE NW
3 N	11 E	WM	31	NW NW
3 N	11 E	WM	31	SW NW

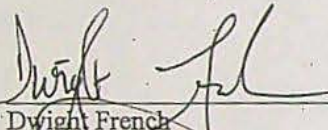
Twp	Rng	Mer	Sec	Q-Q
3 N	11 E	WM	31	SE NW
3 N	11 E	WM	31	NE SW
3 N	11 E	WM	31	NW SW
3 N	11 E	WM	31	SW SW
3 N	11 E	WM	31	SE SW

The right granted herein is limited to the amount which can be applied to beneficial use and shall not exceed 0.65 CFS measured at the point of diversion.

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

This certificate is issued as the final increment of partial perfection of Permit S-34186 for 0.65 CFS, as described in OAR 690-320-0040 and by an order of the Water Resources Director entered **FEB 23 2024**, 2024 at Special Order Volume 129, Pages 658-659.

Issued **FEB 23 2024**

  
Dwight French  
Water Right Services Division Administrator, for  
Douglas E. Woodcock, Acting Director  
Oregon Water Resources Department



**PIERCEALL Jeffrey D \* WRD**

---

**From:** PIERCEALL Jeffrey D \* WRD  
**Sent:** Friday, May 13, 2022 2:46 PM  
**To:** Fred Schatz  
**Subject:** RE: Crystal Springs Extension Progress Reports

No.

Jeffrey D. Pierceall  
Extension Specialist  
Oregon Water Resources Department  
503-979-3213  
Jeffrey.D.Pierceall@oregon.gov



---

**From:** Fred Schatz <Fred@cswdhr.com>  
**Sent:** Friday, May 13, 2022 2:46 PM  
**To:** PIERCEALL Jeffrey D \* WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>  
**Subject:** RE: Crystal Springs Extension Progress Reports

Jeff,

Is there a fee to submit the progress report?

Thanks for your time,

Frederick W. Schatz  
Superintendent  
Crystal Springs Water District  
Office: 541-354-1818  
Cell: 541-399-3926





---

**From:** PIERCEALL Jeffrey D \* WRD <[Jeffrey.D.PIERCEALL@water.oregon.gov](mailto:Jeffrey.D.PIERCEALL@water.oregon.gov)>

**Sent:** Friday, May 13, 2022 9:46 AM

**To:** Fred Schatz <[Fred@cswdhr.com](mailto:Fred@cswdhr.com)>

**Subject:** Crystal Springs Extension Progress Reports

Fred,

I had an opportunity to review the file this morning, and I do see that the Progress Report for 2014 was submitted. The next Progress Report, due October 1, 2019, has not been submitted. Attached is a copy of the 2019 Progress Report Form, and a copy of the Final Order on the Extension of Time, which contains the condition requiring the submittal of the reports.

Jeffrey D. Pierceall

Extension Specialist

Oregon Water Resources Department

503-979-3213

[Jeffrey.D.Pierceall@oregon.gov](mailto:Jeffrey.D.Pierceall@oregon.gov)



OREGON  
WATER  
RESOURCES  
DEPARTMENT





## LETTER OF TRANSMITTAL

To:	Oregon Water Resource Department 725 Summer Street NE, Suite A Salem, OR 97301-1266
Attention:	Mr. Gerry Clark

Date:	6/29/2022
Subject:	Crystal Springs Water District - Partial Perfection & COBU for Permit No. S-34196
Job No.:	21828

Transmittal is via: ☒ US Mail ☐ Courier \_\_\_\_\_ hour ☐ Email ☐ Fed Ex ☐ FedEx Overnight ☐ FedEx Two-day

We are sending you the following: ☒ Attached/Enclosed ☐ Under separate cover  
☐ Shop Drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications  
☐ Copy of Letter ☐ Change Order ☒ Other: See Below

No. of Copies	Date	No. of Pages	Description
1			Partial Perfection & COBU for Permit No. S-34196 with Attachments
1			Certificate Reimbursement Authority Estimate Application
1			CSWD Check No. 5137 - \$125
1			COBU Map (Mylar)
			RECEIVED
			JUL 01 2022
			OWRD

## THESE ARE TRANSMITTED as checked below:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> For approval      | <input type="checkbox"/> Approved as submitted  | <input type="checkbox"/> For your use             |
| <input type="checkbox"/> Approved as noted | <input type="checkbox"/> As requested           | <input type="checkbox"/> Returned for corrections |
| <input type="checkbox"/> For recording     | <input type="checkbox"/> For review and comment | <input type="checkbox"/> Other:                   |

Remarks:	
----------	--

Signed: William Pavlich, PE, CWRE

Copy To:	File/Chron
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If enclosures are not as noted, please notify us at once.





June 29, 2022

Mr. Gerry Clark  
Oregon Water Resources Department  
725 Summer Street NE, Suite A  
Salem, OR 97301-1266

RECEIVED

JUL 01 2022

OWRD

**Subject: Crystal Springs Water District - Partial Perfection & COBU for Permit No. S-34196  
PACE Project No. 21828**

Dear Mr. Clark:

Please find the enclosed Claim of Beneficial Use (COBU), COBU map, and other materials related to the Crystal Springs Water District's request for partial perfection of the District's Municipal Water Permit No. S-34196. The District completed a partial perfection for this permit and received a certificate issued on May 31, 2017, for 2.85 cfs. The current application is for the remainder of the permit (0.65 cfs).

In support of this partial perfection request, we note the following, consistent with the requirements of OAR 690-320-0040 Incremental Perfection of a Municipal Water Permit:

- Water diversions for the last five water years available, 2017-2021, from OWRD's website are attached. The report for water year 2021 has been annotated to show the correct usage. The recorded meter readings were off by a factor of 10. Prior years are significantly lower suggesting underrecording associated with accumulated wear on the old flowmeter. The District recently submitted these corrections to OWRD.
- Infrastructure for the collection and transmission of spring flow is complete. The District is largely developed in terms of the extent of mains and areas of the District served; however, development density in most of the District is relatively low.
- There is no current plan to expand water use outside the current service area. Water use may expand to include quarter-quarter sections within the District boundaries that are not presently served; however, there are no specific plans to expand usage within these areas other than to respond to requests for service if and when they occur. District boundaries and areas of current water usage are shown on the enclosed COBU map.

The District intends to upgrade its recently installed flowmeter to include data logging. This will allow better characterization of peak system usage, and diurnal and seasonal variations in use.

Also enclosed is a copy of an email exchange documenting OWRD's approval (waiver) for the map scale and the provision of water system information on a separate District water system map.

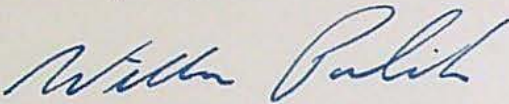


The District is interested in requesting an expedited review. We have included the completed Certificate Reimbursement Authority Estimate Application form and a check in the amount of \$125 for the associated fee.

Thank you for your consideration of this request and please call if you have any questions regarding the enclosed materials.

Sincerely,

PACE Engineers, Inc.



William Pavlich, PE, CWRE  
Senior Project Manager

Attachments

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# Entity Water Use Report



**2017**  
start water year

SUPERINTENDENT FREDERICK SCHATZ  
CRYSTAL SPRINGS WATER DISTRICT

**2021**  
end water year

Records per page: 10

Acre-feet (AF) of Water Used

Water Year <sup>a</sup>	Report ID	Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Water Used	Irrigated Acres
2021	<a href="#">12538</a>	CRYSTAL SPRINGS	165.89	212.80	214.02	222.89	235.48	205.00	244.33	196.25	183.77	258.00	237.88	287.31	2663.62	
					<del>2140.17</del>		<del>2354.79</del>	<del>2050.01</del>	<del>2443.32</del>	<del>1962.54</del>	<del>1837.70</del>	<del>2579.96</del>	<del>2378.77</del>	<del>2873.05</del>	<del>21221.88</del>	
2020	<a href="#">12538</a>	CRYSTAL SPRINGS	161.52	167.99	169.04	164.55	129.30	164.08	181.59	143.13	149.59	200.19	163.84	144.98	1939.79	
2019	<a href="#">12538</a>	CRYSTAL SPRINGS	170.91	160.28	159.46	158.37	143.54	164.39	166.65	172.48	164.79	164.26	164.54	164.00	1953.66	
2018	<a href="#">12538</a>	CRYSTAL SPRINGS	164.13	154.25	160.64	157.40	151.78	153.82	169.60	166.61	169.60	172.75	170.29	168.47	1959.34	
2017	<a href="#">12538</a>	CRYSTAL SPRINGS	166.66	153.32	159.64	165.67	149.64	157.01	167.29	167.38	165.12	169.93	170.78	168.21	1960.65	

\*The water year is named for the calendar year in which it ends. Example: the 2014 water year begins Oct. 1, 2013 and ends Sep. 30, 2014.

- Monthly amounts indicate:
  - For diverted rights, the total amount diverted during the month;
  - For storage rights, the amount generally stored in the reservoir/pond during the month, as represented by the volume of water impounded on approximately the same day each month.
- Water Use amounts have all been converted to "acre-feet" (AF), regardless of the original measurement unit reported. One AF is the volume of water that will cover an acre of ground one foot deep = 325,850 gallons
- Zeroes indicate that a report was received, stating that no water was used during those months; if a year is not listed, no report of water use was received for that year

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## Bill Pavlich

---

**From:** CLARK Gerald E \* WRD <Gerald.E.CLARK@water.oregon.gov>  
**Sent:** Thursday, May 05, 2022 10:38 AM  
**To:** Bill Pavlich  
**Subject:** RE: COBU Map Waiver for Crystal Springs Water District

Bill,

Sorry for the delay. Your proposal to the Department is acceptable and your waiver is approved as requested.

Have a great day!

Gerry

Gerry Clark  
He/Him/His  
Oregon Water Resources Department  
Program Analyst, Certificate Section, Water Right Services Division  
725 Summer Street NE, Suite A Salem, OR 97301 | Phone 503-979-9103

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**From:** Bill Pavlich <billp@paceengrs.com>  
**Sent:** Monday, May 2, 2022 2:22 PM  
**To:** CLARK Gerald E \* WRD <Gerald.E.CLARK@water.oregon.gov>  
**Subject:** COBU Map Waiver for Crystal Springs Water District

Hi Gerry,

I am currently working with the Crystal Springs Water District located in Hood River County. They want to perfect a municipal permit (S-34196). The District is very large, so we are requesting a waiver on the Claim Of Beneficial Use Map to allow a scale of 1"=5,280' which will result in a 17"x22" map. The map will include the District boundaries, Range/Township/Section and quarter-quarters, quarter-quarters in which consumptive use is occurring will be hatched or highlighted, the source will be identified on the map and in a more detailed inset. We will also provide an unstamped 11"x17" paper copy of the District's water system map (from the District's OHA approved 2016 water master plan) that has been updated to include two recently completed reservoirs. Thank you.

Bill Pavlich

#454WRE

Bill Pavlich  
Sr. Project Manager  
4500 Kruse Way | Suite 250  
Lake Oswego OR 97035  
503.597.3222



Connect with us at [LinkedIn](#) | [Instagram](#) | [Facebook](#) | [PACEengrs.com](#)

Voted Zweig Best Places to Work and PSBJ Top 100 Fastest Growing Firms in the Northwest



**CLAIM OF  
BENEFICIAL USE  
for Surface Water Permits  
claiming more than 0.1 cfs**



Oregon Water Resources Department  
725 Summer Street NE, Suite A  
Salem, Oregon 97301-1266  
(503) 986-0900  
[www.oregon.gov/OWRD](http://www.oregon.gov/OWRD)

**A fee of \$230 must accompany this form for permits  
with priority dates of July 9, 1987, or later.**

**A separate form shall be completed for each permit.**

*In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.*

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:  
<https://www.oregon.gov/OWRD/Forms/Pages/default.aspx>

Go to "Resources for Water Right Examiners (CWRE)" Page

<https://www.oregon.gov/OWRD/programs/WaterRights/COBU/Pages/default.aspx>

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

"Section 8" of this form is intended to aid in the completion of this form and should not be submitted.

If you have questions regarding the completion of this form, please call 503-979-9103.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see

<https://www.oregon.gov/OWRD/programs/WaterRights/RA/Pages/default.aspx>

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**SECTION 1**

**GENERAL INFORMATION**

**1. File Information:**

APPLICATION # <b>S-45826</b>	PERMIT # <b>S-34196</b>	PERMIT AMENDMENT # <b>NA</b>
---------------------------------	----------------------------	---------------------------------



**2. Property Owner (current owner information):**

APPLICANT/BUSINESS NAME <b>Crystal Springs Water District</b>		PHONE NO. <b>541.354.1818</b>	ADDITIONAL CONTACT NO. <b>NA</b>
ADDRESS <b>P.O. Box 186</b>			
CITY <b>Odell</b>	STATE <b>OR</b>	ZIP <b>97044</b>	E-MAIL <b>office@cswdhr.com</b>

If the current property owner is not the permit holder of record, it is recommended that an assignment be filed with the Department. **Each** permit holder of record must sign this form.

**3. Permit or holder of record (this may, or may not, be the current property owner):**

PERMIT HOLDER OF RECORD <b>Crystal Springs Water District</b>		
ADDRESS <b>P.O. Box 186</b>		
CITY <b>Odell</b>	STATE <b>OR</b>	ZIP <b>97044</b>

ADDITIONAL PERMIT HOLDER OF RECORD <b>NA</b>		
ADDRESS		
CITY	STATE	ZIP

**4. Date of Site Inspection:**

May 4, 2022

*Note: Site visit/inspection by William Pavlich, PE, CWRE. Mr. Pavlich is a Sr. Project Manager with PACE Engineers, Inc. (PACE). PACE is the District's Engineer of Record. PACE completed a Water Master Plan (2015) for the District and has worked with the District on implementation of the CIP from that plan. Mr. Pavlich prepared the District's first partial perfection for Permit #S-34196. Communication between PACE and CSWD is ongoing and frequent.*

**5. Person(s) interviewed and description of their association with the project:**

NAME	DATE	ASSOCIATION WITH THE PROJECT
Fred Schatz	May 4, 2022	District Superintendent
Tom Ferrell, PE	May 4, 2022	District's Engineer (PACE Engineers, Inc.)

*Note: See item (4) above. Project related discussions have taken place on many occasions since the first partial perfection was completed and submitted to OWRD on December 30, 2016.*

**6. County:**

Hood River



7. If any property described in the place of use of the permit final order is excluded from this report, identify the owner of record for that property (ORS 537.230(5)):

OWNER OF RECORD NA		
ADDRESS		
CITY	STATE	ZIP

Add additional tables for owners of record as needed

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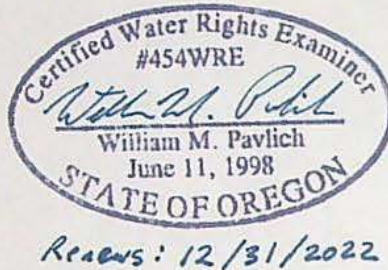


## SECTION 2 SIGNATURES

### CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.

Seal and Signature



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CWRE NAME <b>William Pavlich</b>		PHONE NO. <b>503.597.3222</b>	ADDITIONAL CONTACT NO. <b>NA</b>
ADDRESS <b>PACE Engineers, Inc. 4500 Kruse Way, Suite 250</b>			
CITY <b>Lake Oswego</b>	STATE <b>OREGON</b>	ZIP <b>97035</b>	E-MAIL <b>billp@paceengrs.com</b>

### Permit Holder of Record Signature or Acknowledgement

Each permit holder of record must sign this form in the space provided below.

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	TITLE	DATE
	<b>Fred Schatz</b>	<b>Superintendent CSWD</b>	<b>6/16/22</b>



**SECTION 3**  
**CLAIM DESCRIPTION**

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**1. Point of diversion name or number:**

POINT OF DIVERSION (POD) NAME OR NUMBER (CORRESPOND TO MAP)
Crystal Springs
S-34196

**2. Point of diversion source and tributary:**

POD NAME OR NUMBER	SOURCE	TRIBUTARY
Crystal Springs	Crystal Springs	East Fork of Hood River
S-34196		

**3. Developed use(s), period of use, and rate for each use:**

POD NAME OR NUMBER	USES	IF IRRIGATION, LIST CROP TYPE	SEASON OR MONTHS WHEN WATER WAS USED	ACTUAL RATE OR VOLUME USED (CFS, GPM, OR AF)
S-34196	Municipal	NA	All	2,663.62 AF*
Total Quantity of Water Used				2,663.62 AF

*\*Note: corrected report for total water used for water year 2021. The District installed a new water meter in November 2020. The prior meter was old and appears to have been underreporting. The new meter appears to have been misread or misreported by a factor of 10 for most of the months. The figure entered above is based on the Entity Water Use Report figures for 2021 recalculated using the recorded figures for October, November, and January, and dividing the remaining month's figures by a factor of 10. The recalculated "Total Water Used" is 2,663.62 AF. The corrected figures have been submitted to OWRD.*

**4. Provide a general narrative description of the distribution works. This description must trace the water system from each point of diversion to the place of use:**

See Attachment A.

Reminder: The map associated with this claim must identify the location of the point(s) of diversion, Donation Land Claims (DLC), Government Lots (GLot), and Quarter-Quarters (QQ).

**5. Variations:**

Was the use developed differently from what was authorized by the permit, or permit amendment final order? If yes, describe below.

YES NO

(e.g. "The permit allowed three points of diversion. The water user only developed one of the points." or "The permit allowed 40.0 acres of irrigation. The water user only developed 10.0 acres.")

NA



**6. Claim Summary:**

POD NAME OR #	MAXIMUM RATE AUTHORIZED	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED	USE	# OF ACRES ALLOWED	# OF ACRES DEVELOPED
<b>S-34196</b>	<b>3.5 cfs</b>	<b>7.15 cfs</b>	<b>3.845 cfs*</b>	<b>Municipal</b>	<b>NA</b>	<b>NA</b>

*\*Note: total permitted rate for the spring is 7.15 cfs.*



## SECTION 4 SYSTEM DESCRIPTION

Are there multiple PODs?

YES NO

If "YES" you will need to copy and complete a separate Section 4 for each POD.

POD Name or Number this section describes (only needed if there is more than one):

NA

### A. Place of Use

1. Is the right for municipal use?

YES NO

Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (GLot), Quarter Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, GLot, and QQ.

### B. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion to the place of use.

1. Is a pump used?

YES NO

7. Is the distribution system piped?

YES NO

If "NO" items 8 through item 13 may be deleted.

#### 8. Mainline Information:

MAINLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
14-inch	4,890 LF	Cast Iron	Buried
8-inch	4,890 LF	PVC	Buried
14-inch	5,767 LF	Cast Iron	Buried

#### 9. Lateral or Handline Information: NA

LATERAL OR HANDLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND

#### 10. Sprinkler Information: NA

SIZE	OPERATING PSI	SPRINKLER OUTPUT (GPM)	TOTAL NUMBER OF SPRINKLERS	MAXIMUM NUMBER USED	TOTAL SPRINKLER OUTPUT (CFS)

Reminder: For sprinkler output determination use the reference information at the end of this document.

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### 11. Drip Emitter Information: **NA**

SIZE	OPERATING PSI	EMITTER OUTPUT (GPM)	TOTAL NUMBER OF EMITTERS	MAXIMUM NUMBER USED	TOTAL EMITTER OUTPUT (CFS)

### 12. Drip Tape Information: **NA**

DRIPPER SPACING IN INCHES	GPM PER 100 FEET	TOTAL LENGTH OF TAPE	MAXIMUM LENGTH OF TAPE USED	TOTAL TAPE OUTPUT (CFS)	ADDITIONAL INFORMATION

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### 13. Pivot Information: **NA**

MANUFACTURER	MAXIMUM WETTED RADIUS	OPERATING PSI	TOTAL PIVOT OUTPUT (GPM)	TOTAL PIVOT OUTPUT (CFS)

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## C. Storage

1. Does the distribution system include in-system storage (e.g., storage tank, bulge in system / reservoir)?

YES NO

If "NO", item 2 and 3 relating to this section may be deleted.

If "YES" is it a: Storage Tank  
Bulge in System / Reservoir

YES NO  
YES NO

Complete appropriate table(s), unused table may be deleted.

### 2. Storage Tank:

MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.)	CAPACITY (IN GALLONS)	ABOVE GROUND OR BURIED
Concrete	700,000 gallons	Above Ground
Concrete	400,000 gallons	Above Ground
Concrete	870,000 gallons	Above Ground
Concrete	570,000 gallons	Above Ground
Concrete	80,000 gallons	Above Ground

## D. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

YES NO

If "NO", items 2 through 4 relating to this section may be deleted.



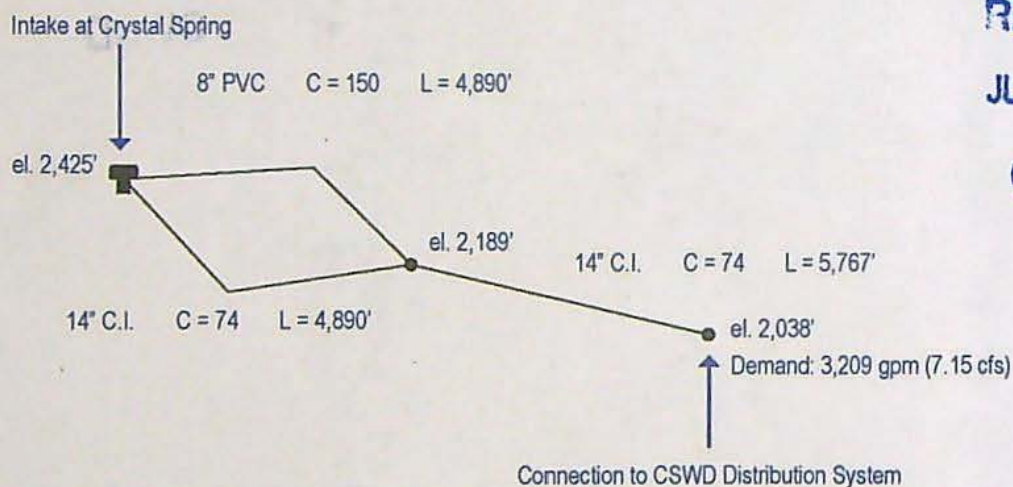
2. Complete the table:

PIPE SIZE	PIPE TYPE	"C" FACTOR	AMOUNT OF FALL	LENGTH OF PIPE	SLOPE	COMPUTED RATE OF WATER FLOW (IN CFS)
14-inch	C.I.	74	387 feet	10,657 LF	0.0363	7.15 cfs @ 71.52 psi

3. Provide calculations:

The transmission main between the intake at Crystal Springs and the connection with the District's distribution system was modelled using EPANET2 modelling software that incorporates the Hazen-Williams formula. Modelling was completed to show hydraulic capacity is sufficient to accommodate the District's total water rights of 7.15 cfs (3,209 gpm). The model schematic and input data are shown in Figure 1. Results indicate 71.52 psi residual pressure at the connection with the CSWD distribution system and verify the capacity to accommodate the claim of beneficial use. (For comparison, OWRD's Pipe Capacity Calculator, using the same data, indicates 8.007 cfs capacity, but does not indicate a residual pressure.)

Figure 1: Crystal Springs Transmission Main Model - Model Data



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4. If an actual measurement was taken, provide the following:

DATE OF MEASUREMENT	WHO MADE THE MEASUREMENT	MEASUREMENT METHOD	MEASURED QUANTITY OF WATER (IN CFS)
5/4/2022	Fred Schatz (CSWD)	Flowmeter readings	3.845 cfs (6-hour average)

Attach measurement notes. See Attachment B.



### E. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

YES NO

F. Additional notes or comments related to the system:

See Attachment A.

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## SECTION 5 CONDITIONS

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All conditions contained in the permit, permit amendment, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

### 1. Time Limits:

Permits and any extension final orders contain any or all of the following dates: the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use was to be completed. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit or permit extension of time:

	DATE FROM PERMIT	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	August 25, 1969		
BEGIN CONSTRUCTION (A)	August 25, 1970	1967	Permit Application notes construction in 1967-1969
COMPLETE CONSTRUCTION (B)	October 1, 1971	1969	Completed prior to (A) date
COMPLETE APPLICATION OF WATER (C)	October 1, 1972 (ext. 10/1/2058)	May 4, 2022	Based on flowmeter readings and calculation of 6-hour average

\* MUST BE WITHIN PERIOD BETWEEN PERMIT OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

### 2. Is there an extension final order(s)?

YES NO

If "NO", items a and b relating to this section may be deleted.

a. Did the Extension Final Order require the submittal of Progress Reports?

YES NO

If "NO", item b relating to this section may be deleted.

b. Were the Progress Reports submitted?

YES NO

If the reports have not been submitted, attach a copy of the reports if available.

### 3. Measurement Conditions:

a. Does the permit, permit amendment, or any extension final order require the installation of a meter or approved measuring device?

YES NO

### 4. Recording and reporting conditions:

a. Is the water user required to report the water use to the Department?

YES NO

If "NO", item b relating to this section may be deleted.

b. Have the reports been submitted?

YES NO

If the reports have not been submitted, attach a copy of the reports if available.



**5. Fish Screening:**

- a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion? YES NO

**6. By-pass Devices:**

- a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion? YES NO

**7. Other conditions required by permit, permit amendment final order, or extension final order:**

- a. Was the water user required to restore the riparian area if it was disturbed? YES NO  
b. Was a fishway required? YES NO  
c. Was submittal of a water management and conservation plan required? YES NO  
d. Other conditions? YES NO

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

The extension Final Order requires the District to submit a progress report by October 1 of the years: 2009, 2014, 2019, 2024, 2029, 2034, 2039, 2044, 2049, and 2054. The District has submitted Progress Reports for 2009, 2014, and 2019.

**SECTION 6**

**ATTACHMENTS**

Provide a list of any additional documents you are attaching to this report:

ATTACHMENT NAME	DESCRIPTION
Attachment A	Water System Description
Attachment A.1	Crystal Springs Site Plan
Attachment A.2	Existing Water System Map
Attachment B	Flow Measurement Notes

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## SECTION 7

### CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series, and the aerial photo identification number.

The map is based on a PACE Engineers, Inc. GIS map of the Crystal Springs Water District. Section, township, range, and quarter-quarter data were obtained from OWRD. The inset map is based on: an assessor's map, gps coordinates of the concrete spring cap corners, and record drawings for the facility shape and relative locations. Quarter-quarters are highlighted to show areas of water usage. Areas of usage were determined through review of the District's water system map, the mapped quarter-quarters, and aerial photography. Usage area has not changed (in terms of quarter-quarters) since the 2016 COBU map that was prepared for the partial perfection of Permit S-34196.

#### Map Checklist

Please be sure that the map you submit includes ALL the items listed below.

(Reminder: Incomplete maps and/or claims may be returned.)

- ☒ Map on polyester film
- ☒ Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map). *Obtained waiver for municipal right: 1" = 5,280'. Inset map at 1" = 400'.*
- ☒ Township, Range, Section, Donation Land Claims, and Government Lots
- ☐ If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- ☐ Locations of fish screens and/or fish by-pass devices in relationship to point of diversion
- ☒ Locations of meters and/or measuring devices in relationship to point of diversion or appropriation
- ☒ Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.) *See Attachment A.2.*
- ☒ Point(s) of diversion or appropriation (illustrated and coordinates)
- ☒ Tax lot boundaries and numbers. *On COBU inset map.*
- ☒ Source illustrated if surface water
- ☒ Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- ☒ Application and permit number or transfer number
- ☒ North arrow
- ☒ Legend
- ☒ CWRE stamp and signature

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**ATTACHMENT A:**  
**CRYSTAL SPRINGS WATER DISTRICT EXISTING**  
**WATER SYSTEM**

**INTRODUCTION**

The Crystal Springs Water District (District) owns and operates a municipal water system that currently provides service to areas within the District boundary. In 2021, there were 2,585 metered water connections, 2,449 of which were residential.

The water system dates to the early 1930s. The Crystal Springs Water Company's water permit application (No. 9831, June 30, 1930) proposed that a small (8 foot by 10 foot) concrete collection box be constructed on Crystal Spring for a service area population estimated in the permit at 2,500 persons in 1930 with projected growth to 5,000 persons in 1940. The Crystal Springs Water Company was reorganized as the Crystal Springs Water District on October 2, 1963. The District completed its first comprehensive water system plan in 1963 and followed up with a water permit application (No. 13490, January 22, 1964) that proposed a collection system at the spring that consisted of two 12-inch perforated collector pipes with a concrete control box and a 14-inch effluent pipe, overflow, and drain. In addition, the permit called for 65,700 feet of 14-inch transmission main from the spring to Booth Hill Reservoir. (Service area population at that time was estimated at 3,050 persons.) Water permit application (No. 45826, March 3, 1969) notes that the work was completed in 1967 – 1968 and included: headworks, new storage reservoir, 60,000 feet of pipelines; and that work under contract for completion by September 1969 included a new storage reservoir (Pine Grove) and 125,000 feet of new pipe. (Service area population at that time was estimated at 3,950 persons.)

The District completed another comprehensive water system plan (Water System Analysis, Lee Engineering, Inc., March 1991, revised February 1992) that proposed many system improvements including source (disinfection), storage, and transmission/distribution pipeline additions or replacements, some of which were constructed in the following years.

The spring box/inlet/control structure was rebuilt following flood damage sustained during the severe weather of winter 1996.

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Planning efforts in 2000 and 2006 identified additional main and pressure zone modifications (by means of additional pressure control valves) that were implemented largely by District staff.

The District continues to add services and has extensively replaced mains or added new distribution mains. Between 2009 and 2014, District staff constructed 75,217 lineal feet of main. A new Water Master Plan (Plan) was completed in 2015. Oregon Health Authority (OHA) approved the Plan in March 2016.

The 2015 Plan included approximately \$48M in recommended Capital Improvement Plan (CIP) improvements. Since that time, the District has constructed two new reservoirs (570,000 gallons and 870,000 gallons) and associated transmission and distribution system improvements. The District also acquired (was given) infrastructure (a small pump station, an 80,000-gallon reservoir, and distribution mains) associated with a small development that includes 14 lots. Currently, the District is moving forward on design and construction of other improvements identified in the CIP.

In 2017, the District completed a partial perfection of its municipal water right (S-34196).

The District recently acquired The Odell Water Company (OWC). OWC is located within the District service area and operates with a different system pressure. There is an existing intertie. The District can supply the OWC system but not cannot receive water from OWC. The OWC spring source infrastructure needs to be evaluated and followed by the design and construction of any needed improvements. OWC is currently operated separately and was not provided water during the flow measurement period on May 4, 2022, used to perfect District's municipal water right (S-34196).

## CRYSTAL SPRINGS WATER DISTRICT WATER RIGHTS

Water rights for the Crystal Springs Water District are summarized in Table 1.

**Table 1: Water Rights**

Source/Type <sup>1</sup>	Permit No.	Certificate No.	Priority Date	Quantity	Use
Crystal Spring (S)	9831	10115	6/30/1930	1.0 cfs	Domestic
Crystal Spring (S)	29377		1/22/1964	2.65 cfs	Domestic
Crystal Spring (S)	34196 <sup>2</sup>		3/03/1969	3.5 cfs	Municipal

<sup>1</sup> Source type: (S) Surface Water, (G) Groundwater, (R) Reservoir

<sup>2</sup> Partial perfection of 2.85 cfs (Certificate 93129) issued on May 31, 2017.

Permit 29377 has been extended to October 1, 2028; permit 34196 has been extended to October 1, 2058.

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## CURRENT SOURCE

The District's current and only water source is Crystal Spring, which is located at elevation 2,425 feet in Weygandt Canyon on the northeast side of Mount Hood, approximately 1,000 feet west of Highway 35. Evidence from water rights applications and permits suggest the source was first developed in the early 1930s.

Geologic and hydrologic studies of the spring and recharge area were conducted by: CH2M in 1963, Lee Engineering in 1991, AGI Technologies in 1994, Mark Yinger Associates (Yinger) in 2002, and ODHS in 2003. The District has copies of all listed studies.

Topography in Weygandt Canyon varies from gently sloping to very steep with side slopes from 5% to as steep as 90%. The elevation range is from 2,425 feet at the intake to 4,800 feet at the upper end of the canyon. Yinger identifies one potential recharge area that extends to 7,300 feet in elevation among other recharge area delineations discussed. Geology of the area is complex, so while the general recharge area is known, delineations of that area to date are not definitive.

Precipitation is estimated to vary from 55 inches to 135 inches per year. The mean annual soil temperature is estimated at about 42° F, which corresponds to the relatively constant water temperature of the spring.

There is no discernible stream channel within Weygandt Canyon upstream of the spring. Organic litter throughout the canyon consists primarily of decomposing needles and twigs from mountain hemlock, larch, and fir. The litter varies in thickness from 4 inches to 12 inches and provides an excellent filter for surface water which drains through the canyon.

Spring flow is strongly correlated with mean monthly air temperature; Yinger notes that 37% of the variation in spring flow can be attributed to air temperature alone. Yinger also notes a poor correlation between effective monthly precipitation (from elevations below 4,400 feet) and spring flow suggest that the "true zone of contribution" may extend to higher elevations with lingering summer snowpacks. Nevertheless, ODHS notes that the lack of well-developed surface runoff channels in the zone of contribution suggests that much of the precipitation infiltrates directly into the soil.

Mean annual flows in Crystal Springs as measured by Lee Engineering were: 2.89 mgd (million gallons per day) in 1988, 3.03 mgd in 1989, and 2.56 mgd in 1990. The Lee figures were based on combining metered intake flow with flow calculations of water bypassing



over the weir in the intake structure and, as such, would not include spring water that bypassed the intake system (to the extent that this is occurring). CH2M measured 3.95 mgd for the period August 1962 to August 1963. The CH2M measurement was based on a weir constructed across Crystal Springs Creek plus metered flow (0.72 mgd) diverted to the intake. Year 2014 spring flows averaged 3.57 mgd using the Lee Engineering 1988-1990 methodology. The maximum monthly flow in 2014 was 4.31 mgd in April.

Water from the spring is collected by perforated pipes located under talus slopes that direct most of the water to the concrete spring box that includes the inlet to the District's 14-inch transmission main and an overflow (See Attachments A.1). The spring collection system and intake were substantially reconstructed in 1996 following damage caused by high storm flow associated with severe weather. The spring collection area was covered with a large concrete cap (approximately 230 feet in length) that includes a stormwater/debris channel to help control unusually high storm flows and protect the subsurface collection system and associated structures, should a similar event occur. The reconstruction also involved expansion of the piping to collect spring flow more efficiently. The dendritic collection system consists of terminal perforated pipes (6-inch; 10-inch; and 18-inch) connected to 10-inch and 18-inch pipes that convey water to the intake structure where the gravity flow passes either to the water system (in accordance with water system demands) or to an overflow at the lower end of the concrete cap. The flowmeter is located on the pipe in the vault adjacent to the intake structure (noted as "Existing Distribution Bldg." on Attachment A.1). A new flowmeter (McCrometer model 7-MLI1XD-14-SDD) was installed in November 2022. Flow meter readings are manually recorded once per day. (Note: The District is currently considering the addition of a data logger to expand data collection capabilities). Overflow from the control structure is directed to the stream channel just below the concrete spring cap. Overflow separation occurs prior to the District's production flowmeter and disinfection process. After passing through the (production) flowmeter (on the 14-inch main), flow splits via a tee to a parallel 8-inch main creating a dual 14-inch and 8-inch transmission system. The parallel system extends 4,890 feet, where the 8-inch line ties back into the 14-inch line. The 14-inch line then continues 5,767 feet to connect to the District's distribution system.

The Oregon Health Authority – Drinking Water Program (*Source Water Assessment Report*, ODHS 2003) considers the aquifer that feeds the spring "to be highly sensitive due to the shallow unconfined nature of the aquifer, the occurrence of cobbles, boulders

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and gravel within the aquifer, the presence of fractured bedrock being exposed at the outflow point, the low specific conductance ...” They also note the highly permeable soil covering in the northern half of the capture zone and the susceptibility to microbial contamination.

## **TREATMENT**

The current source water has been classified as groundwater by OHA; consequently, filtration is not required. Treatment is currently limited to disinfection. The District uses an onsite hypochlorite generator system located in a building adjacent to the spring site. The solution is fed into the system by a flow-paced metering pump which adjusts the dosing rate to match flow in the transmission main to the water system.

The treatment building includes the chemical generation, storage, and feed components; electrical panels; flowmeter, turbidimeter, chlorine analyzer, and a standby power generator.

## **STORAGE RESERVOIRS**

Crystal Springs Water District has five existing ground-level, treated water reservoirs. These are described below.

### **Booth Hill Reservoir**

Location:	South of Odell off Booth Hill Road
Volume:	700,000 gallons
Construction Date:	1968
Material:	Concrete
Height (to overflow):	24 feet
Diameter:	75 feet

### **Pine Grove Reservoir**

Location:	East of Pine Grove off Wells Drive
Volume:	400,000 gallons
Construction Date:	1968
Material:	Concrete
Height (to overflow):	16 feet
Diameter:	60 feet

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### **West Side Reservoir**

Location: West of Odell, northwest of Sylvester Road (on HRC Forest Property)

Volume: 570,000 gallons

Construction Date: March 2022

Material: Pre-stressed Concrete

Height (to overflow): 21 feet

Diameter: 68 feet

### **South Side Reservoir**

Location: South of the Parkdale, south of Dog River Road (on HRC Forest Property)

Volume: 870,000 gallons

Construction Date: May 2022

Material: Pre-stressed Concrete

Height (to overflow): 32 feet

Diameter: 68 feet

### **Pine Crest Reservoir**

Location: Northeast of Pine Grove off Old Dalles Road (on private property)

Volume: 80,000 gallons

Construction Date: 2017

Material: Concrete

Height (to overflow): 19 feet

Diameter: 24 feet

### **PUMP STATIONS**

Current system operation is primarily by gravity; the only pump station (Pine Crest Pump Station with duplex 25 hp pumps) in the system serves a small development with 14 lots on a separate pressure zone connected to its own reservoir (Pine Crest Reservoir). Very high system pressures in many parts of the District allow development on nearby hillsides without the need for booster pumping.

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## TRANSMISSION AND DISTRIBUTION

Mains in the District range up to 14-inch diameter. Main material is primarily cast iron, ductile iron, and "steam grade" steel boiler pipe, but some PVC pipe is present in lower pressure areas. The District has standardized on ductile iron class 52 pipe for all new main construction. Service lines include a large variety of sizes and materials; however, the District has standardized on copper or PEXa for all new construction of service lines 2-inch in diameter and smaller. The distinction between main and service lateral is blurred in the District where very high system pressures allow for adequate system flows through small diameter pipe that would be typically thought of as being suitable for service line only use. The District has many "mains" that are ¾-inch in diameter and are several hundred feet to almost 1,500 feet in length. Table 2 includes a breakdown of main lengths for the various materials and diameters present.

**Table 2: District Water Main Characteristics**

Diameter (in.)	Length (feet)	% of Total	Material	Length (feet)	% of Total
0.75	14,458	2.0	Cast Iron	249,868	34.9
1.00	83,331	11.6	Copper	17,037	2.4
1.25	20,974	2.9	Ductile Iron	191,873	26.8
1.50	18,517	2.6	Galvanized	15,960	2.2
2.00	74,296	10.4	PEX	8,173	1.1
2.50	346	0.0	PVC	88,075	12.3
3.00	7,745	1.1	"Steam Grade" <sup>1</sup>	90,698	12.7
4.00	159,173	22.2	Not Identified	54,696	7.6
5.00	2,892	0.4	<b>Total</b>	<b>716,380</b>	<b>100.0</b>
6.00	211,867	29.6			
8.00	38,922	5.4			
10.00	36,638	5.1			
12.00	22,329	3.1			
14.00	24,892	3.5			
<b>Total</b>	<b>716,380</b>	<b>100.0</b>			

<sup>1</sup>Steel boiler pipe.

The information in Table 2 is based on the District's 2016 GIS database. Notable additions associated with three recent projects include:

*West Side Reservoir Project:*

- 6,600 LF 10" ductile iron
- 6,300 LF 12" ductile iron

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*South Reservoir Project:*

- 2,300 LF 12" ductile iron

*Pine Crest Development:*

- 5,500 LF 6" C-900 PVC

The system is a complex mix of dendritic (characterized by deadend lines) and looped mains. Some of the looping is via very small diameter lines.

There are more than 40 pressure reducing valve and/or pressure relief valve vaults.

A map of the current water system is included as Attachment A.2.

### **SERVICE AREAS AND PRESSURE ZONES**

Because of the District's varying topography and the magnitude of elevation differences, the water system is currently divided into 11 pressure zones and service areas. In most cases, the pressure zones are connected via pressure reducing valves (PRVs). System pressures vary from approximately 50 psi to 280 psi. In general, areas with high pressures (on the order of 80 psi or more) have individual pressure reducing valves on the service lines. A few lines may have service connections that approach the regulatory minimum pressure (as measured at the customer's meter) of 20 psi.

### **SCADA AND TELEMETRY**

SCADA and telemetry are currently being installed and not yet operational. Until recently, the system did not have SCADA and telemetry. Currently, flowmeter readings are physically observed and recorded daily by staff. Collected data is entered manually into spreadsheets at the District office.

### **WATER QUALITY AND REGULATORY STATUS**

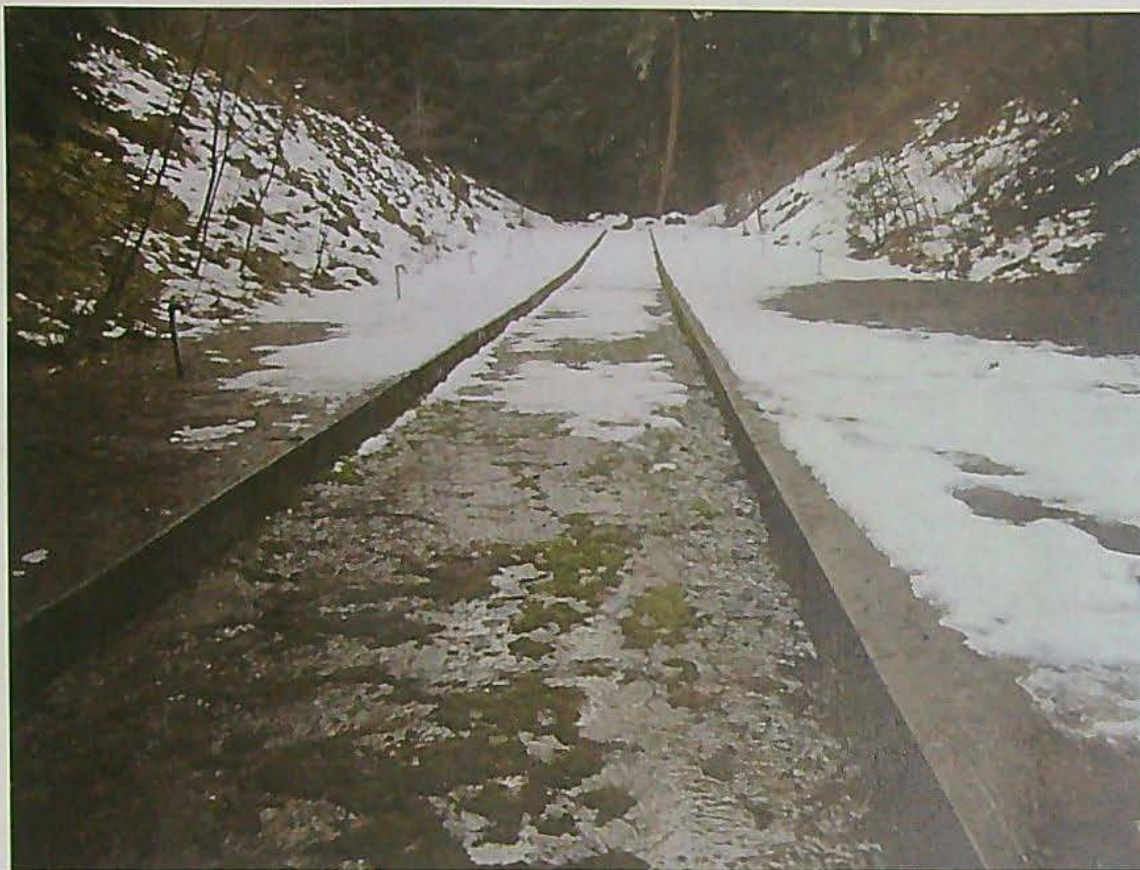
The District is in compliance with all water quality related regulatory requirements. OHA classified the spring as groundwater so only disinfection is required for treatment. The District's last OHA Water System Survey (October 14, 2021) designated the utility as an "outstanding performer."

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Concrete Spring Cap and High Flow Channel (view to west).

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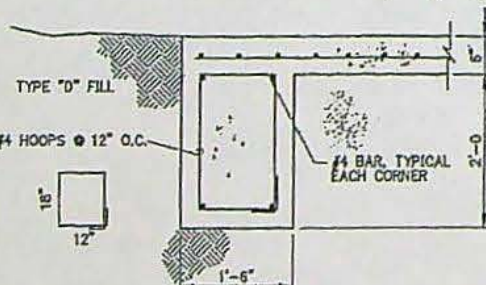
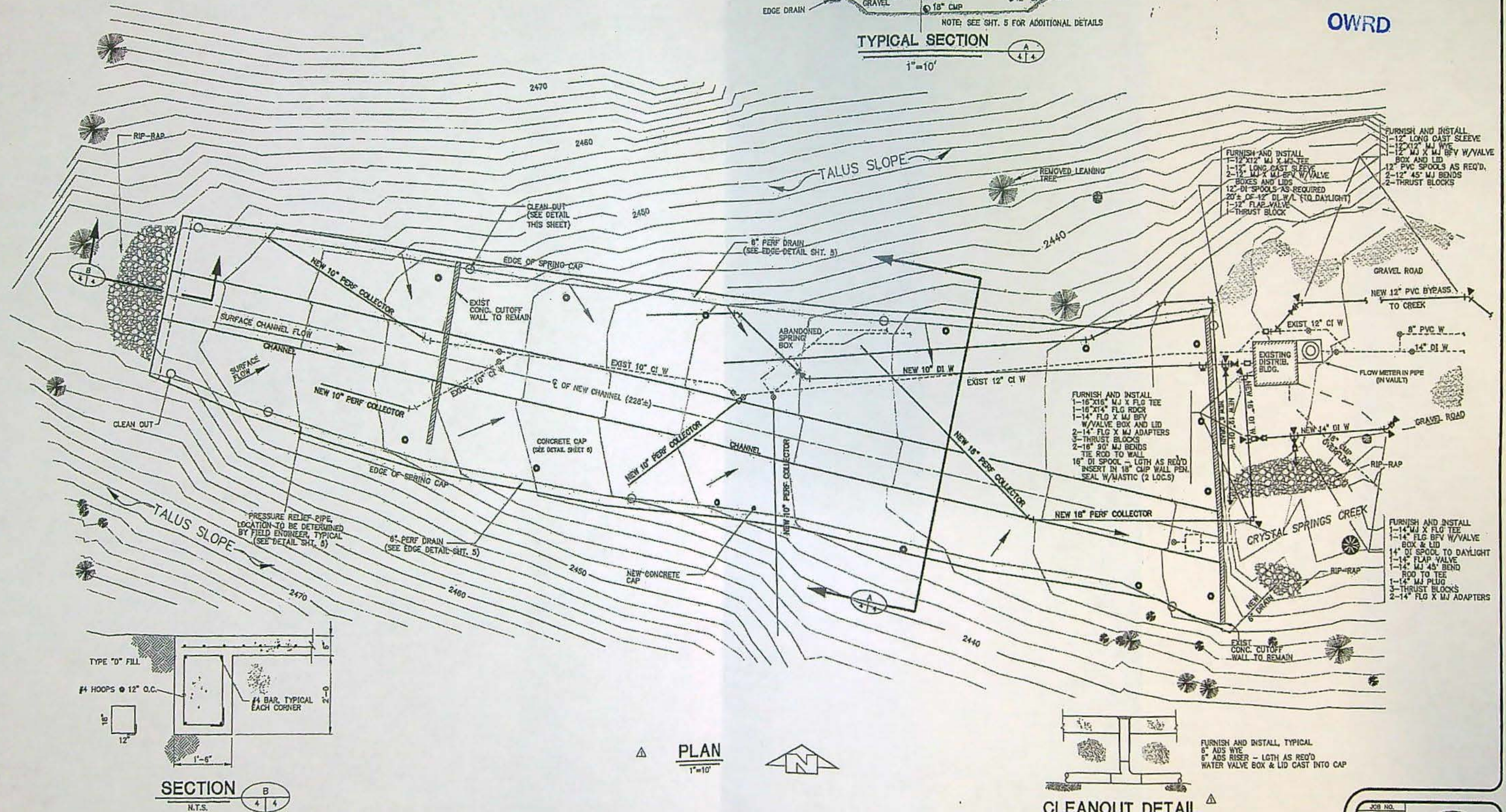
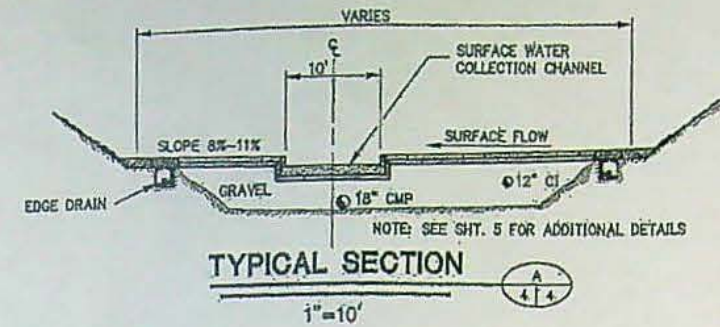
Disinfection Building (left); Intake Structure (middle right); Concrete Spring Cap (lower right) The water meter is located in the vault behind the intake structure (view to east).



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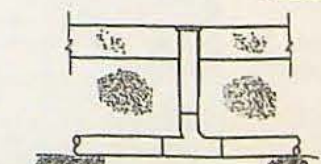
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SECTION B

N.T.S.

PLAN  
1"=10'

CLEANOUT DETAIL

N.T.S.

DATE	NO.	REVISION	BY	DES.	CHK.	DATE	PROJECT
12/17/96	1	DRAWING OF RECORD	JRS	JRS	KRE	MAY '98	CRYSTAL SPRINGS WATER DISTRICT SPRING REPAIRS
					FDL		

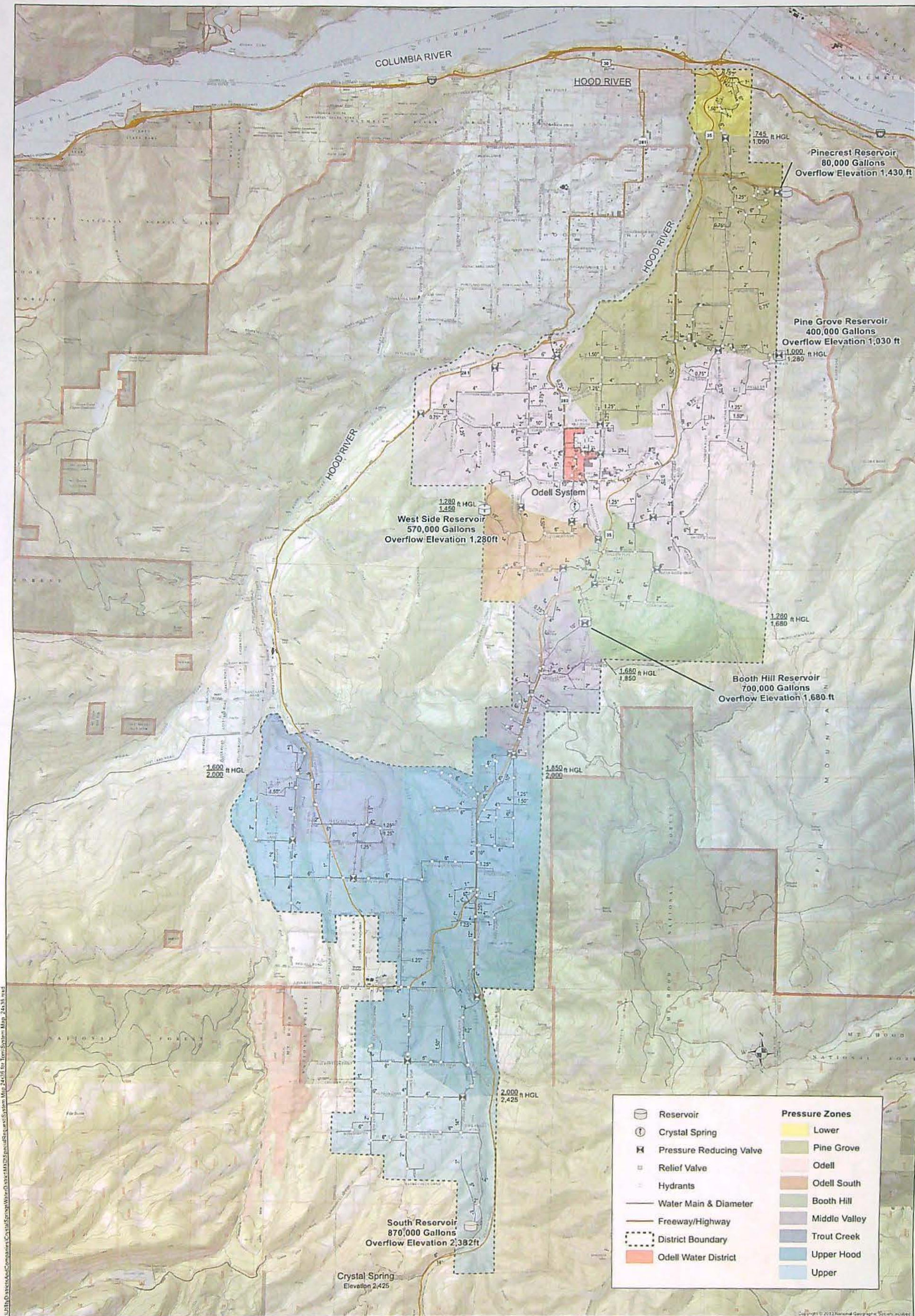
CRYSTAL SPRINGS WATER DISTRICT  
SPRING REPAIRS

IMPERVIOUS SPRING CAP, COLLECTOR PLAN,  
AND SURFACE DRAINAGE PLAN

LEE ENGINEERING, INC.  
CONSULTING ENGINEERS  
OREGON CITY, OREGON

JOB NO.	1558
SHEET NO.	4
DATE	SEP. 15, 1998
DESIGNED BY	JAMES R. SHAWER
CHECKED BY	JAMES R. SHAWER
DATE	SEP. 15, 1998







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Attachment B

**Crystal Springs Water District**  
**Claim of Beneficial Use (Permit S-34196)**  
**Flowmeter Data and Flow Computation**

**Flowmeter:**

McCrometer Model 7-MLI1XD-14-SDD

Size: 14-inch

Installed: November 2020

**Methodology:**

The spring flowmeter was read and data recorded at half hour intervals during the test day, May 4, 2022.

The data and computations of the 6-hour average flows are provided in the table below.

Date: May 4, 2022 Time	Totalizer Reading*	1/2-hour Flow (gallons)	6-Hour Flow (gallons)	6-Hour Avg. Flow (gpm)	6-Hour Avg. Flow (cfs)
7:00 AM	13493850				
7:30	13494350	50,000			
8:00	13494848	49,800			
8:30	13495438	59,000			
9:00	13495840	40,200			
9:30	13496350	51,000			
10:00	13496864	51,400			
10:30	13497384	52,000			
11:00	13497900	51,600			
11:30	13498422	52,200			
12:00	13498854	43,200			
12:30	13499450	59,600			
1:00	13499972	52,200	612,200	1,701	3.789
1:30	13500497	52,500	614,700	1,708	3.805
2:00	13501011	51,400	616,300	1,712	3.814
2:30	13501528	51,700	609,000	1,692	3.769
3:00	13502045	51,700	620,500	1,724	3.840
3:30	13502562	51,700	621,200	1,726	3.845
4:00	13503070	50,800	620,600	1,724	3.841

\*Note: multiply reading by 100 to get gallons.

**Results:**

Peak 6-Hour average flow was 3.845 cfs.



BEFORE THE WATER RESOURCES DIRECTOR OF OREGON

HOOD RIVER COUNTY

IN THE MATTER OF PARTIAL PERFECTION OF )  
WATER RIGHT PERMIT S-34196 IN THE NAME )  
OF CRYSTAL SPRINGS WATER DISTRICT )

ORDER

STATEMENT

On January 18, 2017, the Water Resources Department received a request from Crystal Springs Water District to partially perfect the use of water under water right permit S-34196.

FINDINGS OF FACT

Permit S-34196 allows for the use of 3.5 cubic feet per second (CFS) from Crystal Springs, a tributary of East Fork Hood River, for municipal use.

Crystal Springs Water District has requested partial perfection of permit S-34196 and issuance of a water right certificate for 2.85 CFS. The request was accompanied by the survey required under ORS 537.230(4). The survey shows, to the satisfaction of the Director, that the appropriation has been partially perfected in accordance with the provision of the Water Rights Act.

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

The Department finds that the City has perfected 2.85 CFS. The quantity of water is equal or greater than the 25 percent of the original quantity of water allowed under permit S-34196.

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

**NOTICE OF RIGHT TO PETITION FOR JUDICIAL REVIEW OR  
RECONSIDERATION**

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.482. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.482 and ORS 536.075. Pursuant to ORS 183.482, ORS 536.075 and OAR 137-003-0675, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.



As of the date of this order, crystal Springs Water District has an approved extension of time (to Oct 1, 2058) for this municipal water use permit to completely apply water to beneficial use under Permit S-34196.

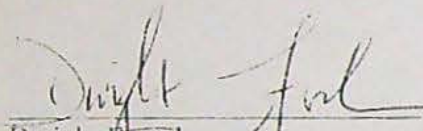
#### ULTIMATE FINDING OF FACT

Crystal Springs Water District is now entitled to a certificate in the amount of 2.85 CFS. The Director has determined the permittee has complied with the requirements to partially perfect permit S-34196 pursuant to ORS 537.250 and 537.260.

#### ORDER

The Department finds that there is 0.65 CFS remaining to be perfected under Permit S-34196 and that a certificate in the amount of 2.85 CFS shall be issued to Crystal Springs Water District.

Dated MAY 31 2017



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





**Oregon**  
Kate Brown, Governor

**Water Resources Department**  
725 Summer St NE, Suite A  
Salem, OR 97301  
(503) 986-0900  
Fax (503) 986-0904

**DATE MAILED: MAY 31 2017**

**NOTICE OF CERTIFICATE ISSUANCE**

The attached certificate confirms the water right established under the terms of a permit issued by this Department. The water right is now appurtenant to the specific place where the use was established as described by the certificate. The water right is limited to a specific amount of water, but not more than can be beneficially used for the purposes stated within the certificate.

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

Oregon law does not allow the Director to reissue a certificate because of a change in the ownership of the appurtenant place of use. The water must be controlled and not wasted. To change the location of the point of diversion, the character of use, or the location of use requires the advance approval of the Water Resources Director.

If any portion of this water right is not used for five or more consecutive years that portion of the right may be subject to forfeiture according to ORS 540.610. Land enrolled in a Federal Reserve Program is not subject to forfeiture during the period of enrollment. Other exceptions to forfeiture are explained in ORS 540.610.

If you have any questions please contact Kerry Kavanagh at 503-986-0927.



STATE OF OREGON  
COUNTY OF HOOD RIVER  
CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 186  
ODELL OR 97044

confirms the right to the use of water perfected under the terms of Permit S-34196. The amount of water used to which this right is entitled is limited to the amount used beneficially, and shall not exceed the amount specified, or its equivalent in the case of rotation, measured at the point of diversion from the source. The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: S-45826

SOURCE OF WATER: CRYSTAL SPRINGS, A TRIBUTARY OF EAST FORK HOOD RIVER

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 2.85 CUBIC FEET PER SECOND

DATE OF PRIORITY: MARCH 3, 1969

The point of diversion is located as follows:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
1 S	10 E	WM	29	NW NW	500 FEET SOUTH AND 310 FEET EAST FROM NW CORNER, SECTION 29

A description of the place of use is as follows:

Twp	Rng	Mer	Sec	Q-Q
1 N	9 E	WM	24	NE NE
1 N	9 E	WM	24	SE NE
1 N	9 E	WM	24	NE SE
1 N	9 E	WM	24	NW SE
1 N	9 E	WM	24	SE SE
1 N	9 E	WM	25	NE NE
1 N	9 E	WM	25	SE NE
1 N	10 E	WM	1	NW NE
1 N	10 E	WM	1	SW NE
1 N	10 E	WM	1	NE NW

Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	1	NW NW
1 N	10 E	WM	1	SW NW
1 N	10 E	WM	1	SE NW
1 N	10 E	WM	1	NE SW
1 N	10 E	WM	1	NW SW
1 N	10 E	WM	1	NW SE
1 N	10 E	WM	2	NE NE
1 N	10 E	WM	2	NW NE
1 N	10 E	WM	2	SW NE
1 N	10 E	WM	2	SE NE

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

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



Twtp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	2	NE NW
1 N	10 E	WM	2	NW NW
1 N	10 E	WM	2	SW NW
1 N	10 E	WM	2	SE NW
1 N	10 E	WM	2	NE SW
1 N	10 E	WM	2	NW SW
1 N	10 E	WM	2	SW SW
1 N	10 E	WM	2	SE SW
1 N	10 E	WM	2	NE SE
1 N	10 E	WM	2	NW SE
1 N	10 E	WM	2	SW SE
1 N	10 E	WM	3	NE NE
1 N	10 E	WM	3	NW NE
1 N	10 E	WM	3	SE NE
1 N	10 E	WM	3	NE NW
1 N	10 E	WM	3	NW NW
1 N	10 E	WM	3	NE SE
1 N	10 E	WM	3	NW SE
1 N	10 E	WM	3	SE SE
1 N	10 E	WM	10	NE NE
1 N	10 E	WM	10	SW NE
1 N	10 E	WM	10	SE NE
1 N	10 E	WM	10	NE SE
1 N	10 E	WM	10	NW SE
1 N	10 E	WM	10	SW SE
1 N	10 E	WM	10	SE SE
1 N	10 E	WM	11	NW NE
1 N	10 E	WM	11	SW NE
1 N	10 E	WM	11	NE NW
1 N	10 E	WM	11	NW NW
1 N	10 E	WM	11	SW NW
1 N	10 E	WM	11	SE NW
1 N	10 E	WM	11	NE SW
1 N	10 E	WM	11	NW SW
1 N	10 E	WM	11	SW SW
1 N	10 E	WM	11	SE SW
1 N	10 E	WM	11	NW SE
1 N	10 E	WM	11	SW SE
1 N	10 E	WM	15	NE NE
1 N	10 E	WM	15	NW NE
1 N	10 E	WM	15	SW NE
1 N	10 E	WM	15	SE NE
1 N	10 E	WM	15	NE NW
1 N	10 E	WM	15	SE NW
1 N	10 E	WM	15	NE SW
1 N	10 E	WM	15	SW SW
1 N	10 E	WM	15	SE SW
1 N	10 E	WM	15	NE SE
1 N	10 E	WM	15	NW SE
1 N	10 E	WM	15	SW SE
1 N	10 E	WM	15	SE SE
1 N	10 E	WM	18	SE NW

Twtp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	18	NE SW
1 N	10 E	WM	18	SE SW
1 N	10 E	WM	18	NW SE
1 N	10 E	WM	18	SW SE
1 N	10 E	WM	19	NE NE
1 N	10 E	WM	19	NW NE
1 N	10 E	WM	19	SW NE
1 N	10 E	WM	19	SE NE
1 N	10 E	WM	19	NE NW
1 N	10 E	WM	19	NW NW
1 N	10 E	WM	19	SW NW
1 N	10 E	WM	19	SE NW
1 N	10 E	WM	19	NE SW
1 N	10 E	WM	19	NW SW
1 N	10 E	WM	19	SW SW
1 N	10 E	WM	19	SE SW
1 N	10 E	WM	19	NE SE
1 N	10 E	WM	19	NW SE
1 N	10 E	WM	19	SW SE
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1 N	10 E	WM	20	SW NE
1 N	10 E	WM	20	SE NW
1 N	10 E	WM	20	NE SW
1 N	10 E	WM	20	NW SW
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1 N	10 E	WM	22	NE NW
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1 N	10 E	WM	22	NE SW
1 N	10 E	WM	22	NW SW
1 N	10 E	WM	22	SW SW
1 N	10 E	WM	22	SE SW
1 N	10 E	WM	22	NE SE



Twp	Rng	Mer	Sec	Q-Q
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1 N	10 E	WM	22	SW SE
1 N	10 E	WM	27	NW NE
1 N	10 E	WM	27	SW NE
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1 N	10 E	WM	27	SE SW
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1 N	10 E	WM	28	SE NW
1 N	10 E	WM	28	NE SW
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1 N	10 E	WM	28	NW SE
1 N	10 E	WM	28	SW SE
1 N	10 E	WM	28	SE SE
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1 N	10 E	WM	29	SE NE
1 N	10 E	WM	29	NE NW
1 N	10 E	WM	29	NW NW
1 N	10 E	WM	29	SW NW
1 N	10 E	WM	29	SE NW
1 N	10 E	WM	29	NE SW
1 N	10 E	WM	29	NW SW
1 N	10 E	WM	29	SW SW
1 N	10 E	WM	29	SE SW
1 N	10 E	WM	29	NE SE
1 N	10 E	WM	30	NE NE
1 N	10 E	WM	30	NW NE
1 N	10 E	WM	30	SW NE
1 N	10 E	WM	30	SE NE
1 N	10 E	WM	30	NE NW
1 N	10 E	WM	30	NW NW
1 N	10 E	WM	30	SW NW
1 N	10 E	WM	30	SE NW
1 N	10 E	WM	30	NE SW

Twp	Rng	Mer	Sec	Q-Q
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1 N	10 E	WM	33	SE SW
1 N	10 E	WM	33	NE SE
1 N	10 E	WM	33	SW SE
1 N	10 E	WM	33	SE SE
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1 N	10 E	WM	34	NW NW
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1 S	10 E	WM	6	SE SE
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1 S	10 E	WM	7	NW NE
1 S	10 E	WM	7	SW NE
1 S	10 E	WM	7	SE NE
1 S	10 E	WM	7	NE NW
1 S	10 E	WM	7	SE NW



Twsp	Rng	Mer	Sec	Q-Q
1 S	10 E	WM	7	NE SW
1 S	10 E	WM	7	SE SW
1 S	10 E	WM	7	NE SE
1 S	10 E	WM	7	NW SE
1 S	10 E	WM	7	SW SE
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2 N	10 E	WM	12	SW SE
2 N	10 E	WM	12	SE SE
2 N	10 E	WM	13	NE NE
2 N	10 E	WM	13	NW NE
2 N	10 E	WM	13	SW NE

Twsp	Rng	Mer	Sec	Q-Q
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2 N	10 E	WM	13	NE NW
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2 N	10 E	WM	22	SE NE
2 N	10 E	WM	22	NE NW
2 N	10 E	WM	22	NW NW
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2 N	10 E	WM	22	SE NW
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2 N	10 E	WM	22	SW SW
2 N	10 E	WM	22	SE SW
2 N	10 E	WM	22	NE SE
2 N	10 E	WM	22	NW SE



Twp	Rng	Mer	Sec	Q-Q
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2 N	10 E	WM	22	SE SE
2 N	10 E	WM	23	NE NE
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2 N	10 E	WM	23	SW NE
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2 N	10 E	WM	26	NW NE

Twp	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	26	SW NE
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2 N	10 E	WM	34	NW SW
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2 N	10 E	WM	34	SE SW



Twp	Rng	Mer	Sec	Q-Q
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2 N	10 E	WM	34	SW SE
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2 N	11 E	WM	7	NW NW
2 N	11 E	WM	7	SW NW

Twp	Rng	Mer	Sec	Q-Q
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2 N	11 E	WM	7	NE SW
2 N	11 E	WM	7	NW SW
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2 N	11 E	WM	30	NW SW
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3 N	10 E	WM	36	SE NE
3 N	10 E	WM	36	NE SE
3 N	10 E	WM	36	SE SE
3 N	11 E	WM	30	SW SW
3 N	11 E	WM	30	SE SW



Twp	Rng	Mer	Sec	Q-Q
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3 N	11 E	WM	31	NW NW
3 N	11 E	WM	31	SW NW
3 N	11 E	WM	31	SE NW

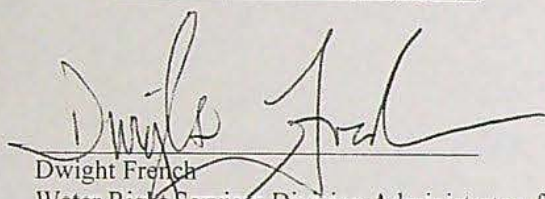
Twp	Rng	Mer	Sec	Q-Q
3 N	11 E	WM	31	NE SW
3 N	11 E	WM	31	NW SW
3 N	11 E	WM	31	SW SW
3 N	11 E	WM	31	SE SW

The right granted herein is limited to the amount which can be applied to beneficial use and shall not exceed 2.85 CFS measured at the point of diversion.

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

This certificate is issued for a partial perfection of Permit S-34196 as described in OAR 690-320-0040 and by an order of the Water Resources Director entered May 31, 2017.

Issued MAY 31 2017.

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



# RA Mailing List - Certificate & Order-Partial Perfection

Scheduled Mailing Date:

Application: S-45826

Permit: S-34196

**Certificate: 93120**

Certificate Holder:

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 186  
ODELL OR 97044

Copies Mailed	
by:	<u>Connie Vance</u> (STAFF)
on:	<b>MAY 31 2017</b> (DATE)

*5 maps*  
*5*

Copies of Final Certificate to be sent to:

1. Watermaster District 3 (include copy of map)
2. Water Availability
3. Vault ✓
4. File

Other persons to receive copies: (include map):

1. William Pavlich, CWRE
2. Kerri Cope/Chris Kowitz, WRD





December 30, 2016

Mr. Gerry Clark  
Oregon Water Resources Department  
725 Summer Street NE, Suite A  
Salem, OR 97301-1266

**Subject:** *Crystal Springs Water District - Partial Perfection & COBU for Permit No. S-34196*  
*PACE Project No. 15853*

Dear Mr. Clark:

Please find the enclosed Claim of Beneficial Use, claim map, and other materials related to the Crystal Springs Water District's request for partial perfection of the District's Municipal Water Permit No. S-34196.

In support of this partial perfection request, we note the following, consistent with the requirements of OAR 690-320-0040 Incremental Perfection of a Municipal Water Permit:

- Water diversions for the last three water years available, 2013-2015 from OWRD's website are attached.
- Infrastructure for the collection and transmission of spring flow is complete. The District is largely developed in terms of the extent of mains and areas of the District served; however, development density in most of the District is relatively low. Increased water usage will occur with increases in the customer base. There are a number of larger commercial and residential developments currently in the planning stage. We anticipate that perfection of the remaining 0.65 cfs will occur well within the period remaining on the permit extension (10/1/2058), but ultimately, this will depend on actual customer growth.
- There is no current plan to expand water use outside the current District boundary. Water use may expand to include quarter-quarter sections within the District boundaries that are not presently served; however, there are no specific plans to expand usage within these areas other than to respond to requests for service if and when they occur. District boundaries and areas of current water usage are shown on the enclosed COBU map.

The District is considering replacing its system flowmeter and upgrading it to include data logging. This will allow better characterization of peak system usage and provide documentation for the future perfection of the remainder of Permit No. S-34196.

Also enclosed is a copy of an email exchange documenting OWRD's approval (waiver) for the map scale and the provision of water system information on a separate District water system map.

RECEIVED  
JAN 04 2017  
OWRD

PACE Engineers, Inc.  
5000 Meadows Road | Suite 345  
Lake Oswego, Oregon 97035-2232  
p 503.597.3222 | f 503.597.7655

[www.paceengrs.com](http://www.paceengrs.com)



December 30, 2016  
Mr. Gerry Clark  
Oregon Water Resources Department  
Page 2 of 2

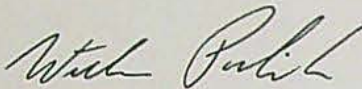
Engineers | Planners | Surveyors  
[www.paceengrs.com](http://www.paceengrs.com)

The District is interested in requesting an expedited review. We understand that OWRD will contact us to discuss the application, especially with regard to completeness. The District will then complete and submit an application and fee of \$125 to obtain from OWRD an estimate of the full cost to complete an expedited review of the COBU.

Thank you for your consideration of this request and please call if you have any questions regarding the enclosed materials.

Sincerely,

PACE Engineers, Inc.



William Pavlich, PE, CWRE  
Senior Project Manager

Attachments

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JAN 04 2017  
OWRD



# Entity Water Use Report



**2013**  
start water year

SUPERINTENDENT FREDERICK SCHATZ  
CRYSTAL SPRINGS WATER DISTRICT

**2015**  
end water year

Records per page: 10

## Acre-feet (AF) of Water Used

Water Year*	Report ID	Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Water Used	Irrigated Acres
2015	<u>12538</u>	CRYSTAL SPRINGS	130.02	109.75	150.22	169.15	150.29	170.40	116.28	179.40	170.90	160.83	166.57	138.62	1812.43	
2014	<u>12538</u>	CRYSTAL SPRINGS	114.99	145.50	15.22	146.41	115.87	131.87	159.27	171.68	155.05	179.73	162.92	172.92	1671.43	
2013	<u>12538</u>	CRYSTAL SPRINGS	128.90	159.85	142.74	145.08	123.64	125.40	143.56	184.86	159.52	186.40	155.38	178.93	1834.26	

\*The water year is named for the calendar year in which it ends. Example: the 2014 water year begins Oct. 1, 2013 and ends Sep. 30, 2014.

- Monthly amounts indicate:
  - For diverted rights, the total amount diverted during the month;
  - For storage rights, the amount generally stored in the reservoir/pond during the month, as represented by the volume of water impounded on approximately the same day each month.
- Water Use amounts have all been converted to "acre-feet" (AF), regardless of the original measurement unit reported. One AF is the volume of water that will cover an acre of ground one foot deep = 325,850 gallons.
- Zeroes indicate that a report was received, stating that no water was used during those months; if a year is not listed, no report of water use was received for that year

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## Bill Pavlich

---

**From:** CLARK Gerry E <gerald.e.clark@state.or.us>  
**Sent:** Friday, October 28, 2016 1:19 PM  
**To:** Bill Pavlich  
**Subject:** RE: COBU map waiver Crystal Springs Water District

Bill,

Your request for a waiver is approved as requested. Please attach a copy of this approval to your Claim.

Please let me know if you have any additional questions.

Gerry

Gerry Clark  
Water Right Services Division  
Water Resources Department  
725 Summer Street NE, Suite A  
Salem, Oregon 97301

Phone: 503-986-0811

---

**From:** Bill Pavlich [mailto:billp@paceengrs.com]  
**Sent:** Thursday, October 27, 2016 4:03 PM  
**To:** Gerry Clark (gerald.e.clark@state.or.us)  
**Subject:** COBU map waiver Crystal Springs Water District

Hi Gerry,

I am currently working with the Crystal Springs Water District located in Hood River County. They want to incrementally perfect a municipal permit (S-34196). The District is very large, so we are requesting a waiver on the Claim Of Beneficial Use Map to allow a scale of 1"=5,280' which will result in a 17"x22" map. The map will include the District boundaries, Range/Township/Section and quarter-quarters, quarter-quarters in which consumptive use is occurring will be hatched or highlighted, the source will be identified on the map and in a more detailed inset. We will also provide an unstamped 11"x17" paper copy of the District's water system map which was recently completed for the District's OHA approved 2016 water master plan. Thank you.

Bill Pavlich

#454WRE



**Bill Pavlich** | Sr. Project Manager  
5000 Meadows Road | Suite 345 | Lake Oswego, OR 97035  
p. 503.597.3222 | f. 503.597.7655

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**CLAIM OF  
BENEFICIAL USE  
for Permits claiming more  
than 0.1 cfs and All Transfers**



Oregon Water Resources Department  
725 Summer Street NE, Suite A  
Salem, Oregon 97301-1266  
(503) 986-0900  
[www.wrd.state.or.us](http://www.wrd.state.or.us)

**A fee of \$175 must accompany this form for permits  
with priority dates after July 8, 1987.**

**A fee of \$175 must accompany this form for any Transfer final orders  
including a water right with a priority date of July 9, 1987, or later.**

**Example – A transfer involves 5 rights and one of the rights  
has a priority date of July 9, 1987, or later, the fee is required.**

A separate form shall be completed for each permit.

*In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.*

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:  
[http://www.oregon.gov/owrd/pages/wr/cwre\\_info.aspx](http://www.oregon.gov/owrd/pages/wr/cwre_info.aspx)

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

"Section 8" of this form is intended to aid in the completion of this form and should not be submitted.

If you have questions regarding the completion of this form, please call 503-986-0900 and ask for the Certificate Section.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see  
[http://www.oregon.gov/owrd/pages/mgmt\\_reimbursement\\_authority.aspx](http://www.oregon.gov/owrd/pages/mgmt_reimbursement_authority.aspx)

**SECTION 1  
GENERAL INFORMATION**

**1. File Information**

APPLICATION # (G, R, S or T)	PERMIT # (IF APPLICABLE)	PERMIT AMENDMENT # (IF APPLICABLE)
S – 45826	S – 34196	N/A

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2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME <b>Crystal Springs Water District</b>		PHONE NO. <b>541.354.1818</b>	ADDITIONAL CONTACT NO. -
ADDRESS <b>P.O. Box 186</b>			
CITY <b>Odell</b>	STATE <b>OR</b>	ZIP <b>97041</b>	E-MAIL <b>office@cswdhr.com</b>

If the current property owner is not the permit or transfer holder of record, it is recommended that an assignment be filed with the Department. **Each** permit or transfer holder of record must sign this form.

3. Permit or transfer holder of record (this may, or may not, be the current property owner)

PERMIT OR TRANSFER HOLDER OF RECORD <b>Crystal Springs Water District</b>		
ADDRESS <b>P.O. Box 186</b>		
CITY <b>Odell</b>	STATE <b>OR</b>	ZIP <b>97041</b>

ADDITIONAL PERMIT OR TRANSFER HOLDER OF RECORD <b>N/A</b>		
ADDRESS		
CITY	STATE	ZIP

4. Date of Site Inspection: **February 2, 2015\***

*\*Note: Site visit/inspection by William Pavlich, PE, CWRE. Mr. Pavlich is a Sr. Project Manager with PACE Engineers, Inc. (PACE). PACE is the District Engineer of Record. PACE recently completed a Water Master Plan for the District and also prepared a SDWRLF funding application for \$4.5M in follow up system improvements. Communication is ongoing and frequent.*

5. Person(s) interviewed and description of their association with the project:

NAME	DATE	ASSOCIATION WITH THE PROJECT
<b>Fred Schatz</b>	<b>Multiple*</b>	<b>District Superintendent</b>
<b>Jim Shaver, PE</b>	<b>Multiple*</b>	<b>District Engineer</b>

6. County: **Hood River**

*\*Note: See note for item (4) above. Jim Shaver, PE, designed the comprehensive reconstruction of the Crystal Spring collector system and spring cap in 1996 following a catastrophic flood event that destroyed the previous system. Bill and Jim work in the same PACE office and are in frequent contact with the District.*

7. If any property described in the place of use of the permit or transfer final order is excluded from this report, identify the owner of record for that property (ORS 537.230(4)): **N/A**

OWNER OF RECORD		
ADDRESS		
CITY	STATE	ZIP

Add additional tables for owners of record as needed

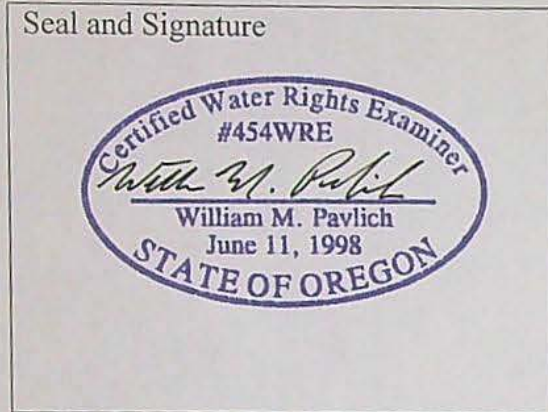
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## SECTION 2 SIGNATURES

### CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



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CWRE NAME <b>William Pavlich</b>	PHONE NO. <b>503.597.3222</b>	ADDITIONAL CONTACT NO.
ADDRESS <b>PACE Engineers, Inc. 5000 Meadows Road, Suite 345</b>		
CITY <b>Lake Oswego</b>	STATE <b>OR</b>	ZIP <b>97035</b>
E-MAIL <b>billp@paceengrs.com</b>		

### Permit or Transfer Holder's of Record Signature or Acknowledgement

***Each** permit or transfer holder of record must sign this form in the space provided below.*

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	TITLE	DATE
	<b>Fred Schatz</b>	<b>Superintendent CSWD</b>	<i>12-27-16</i>



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### SECTION 3 CLAIM DESCRIPTION

## 1. Point of diversion/appropriation name or number:

POINT OF DIVERSION/APPROPRIATION (POD/POA) NAME OR NUMBER (CORRESPOND TO MAP)	WELL LOG ID # FOR ALL WORK PERFORMED ON THE WELL (IF APPLICABLE)	WELL TAG # (IF APPLICABLE)
<b>Crystal Springs</b>	<b>N/A</b>	<b>N/A</b>
<b>S - 34196</b>		

Attach each well log available for the well (include the log for the original well and any subsequent alterations, reconstructions, or deepenings)

## 2. Point of diversion/appropriation source and, if from surface water, the tributary:

POD/POA NAME OR NUMBER	SOURCE	TRIBUTARY
<b>S - 34196</b>	<b>Crystal Springs</b>	<b>East Fork of Hood River</b>

## 3. Developed use(s), period of use, and rate for each use:

POD/POA NAME OR NUMBER	USES	IF IRRIGATION, LIST CROP TYPE	SEASON OR MONTHS WHEN WATER WAS USED	ACTUAL RATE OR VOLUME USED (CFS, GPM, OR AF)
<b>S - 34196</b>	<b>Municipal</b>	<b>N/A</b>	<b>All</b>	<b>1812.43 AF*</b>
<b>Total Quantity of Water Used</b>				<b>1812.43 AF*</b>

\*Note: Reported for Water Year 2015.

4. Provide a general narrative description of the distribution works. This description must trace the water system from **each** point of diversion or appropriation to the place of use:

See attachment #A.

**Reminder: The map associated with this claim must identify the location of the point(s) of diversion, Donation Land Claims (DLC), Government Lots (GLot), and Quarter-Quarters (QQ).**

## 5. Variations:

Was the use developed differently from what was authorized by the permit,  
permit amendment final order, or extension final order? If yes, describe below.

YES

NO

(e.g. "The permit allowed three points of diversion. The water user only developed one of the points." or "The permit allowed 40.0 acres of irrigation. The water user only developed 10.0 acres.")

N/A

## 6. Claim Summary:

POD / POA NAME OR #	MAXIMUM RATE AUTHORIZED	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED	USE	# OF ACRES ALLOWED	# OF ACRES DEVELOPED
<b>S - 34196</b>	<b>3.5 cfs</b>	<b>7.15 cfs*</b>	<b>2.85 cfs</b>	<b>Municipal</b>	<b>N/A</b>	<b>N/A</b>

\*Note: See Section 4 (E)(3) for discussion.



## SECTION 4 SYSTEM DESCRIPTION

Are there multiple PODs or POAs?

YES ☒ NO

If "YES" you will need to copy and complete Sections 4B through 4G for each POD/POA.

POD/POA Name or Number this section describes (only needed if there is more than one):

N/A

### A. Place of Use

1. Is the right for municipal use?

YES ☒ NO

### B. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion/appropriation to the place of use.

1. Is a pump used?

YES ☒ NO

7. Is the distribution system piped?

YES ☒ NO

If "NO" items 8 through item 11 may be deleted.

#### 8. Mainline Information

MAINLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
(1) 14-inch	4,890 LF	Cast Iron	Buried
(2) 8-inch	4,890 LF	PVC	Buried
(3) 14-inch	5,767 LF	Cast Iron	Buried

\*Note: (1) and (2) are parallel and connect to (3). (1) and (2) are upstream of (3).

#### 9. Lateral or Handline Information N/A – Municipal System

LATERAL OR HANDLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND

#### 10. Sprinkler Information N/A – Municipal System

SIZE	OPERATING PSI	SPRINKLER OUTPUT (GPM)	TOTAL NUMBER OF SPRINKLERS	MAXIMUM NUMBER USED	TOTAL SPRINKLER OUTPUT (CFS)

Reminder: For sprinkler output determination use the reference information at the end of this document.

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# 11. Pivot Information

N/A – Municipal System

MANUFACTURER	MAXIMUM WETTED RADIUS	OPERATING PSI	TOTAL PIVOT OUTPUT (GPM)	TOTAL PIVOT OUTPUT (CFS)

# 12. Additional notes or comments related to the system:

For description of the water distribution system, see Attachment A.

## C. Groundwater Source Information (Well and Sump)

1. Is the appropriation from ground water (well or sump)?

YES ☒ NO

## D. Storage

1. Does the distribution system include in-system storage (e.g. storage tank, bulge in system / reservoir)

☒ YES NO

If "NO", item 2 and 3 relating to this section may be deleted.

If "YES" is it a:

Storage Tank

☒ YES NO

Bulge in System / Reservoir

YES ☒ NO

Complete appropriate table(s), unused table may be deleted.

2. Storage Tank:

MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.)	CAPACITY (IN GALLONS)	ABOVE GROUND OR BURIED
Concrete	700,000 Gallons	Above Ground
Concrete	400,000 Gallons	Above Ground

## E. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

☒ YES NO

If "NO", items 2 through 4 relating to this section may be deleted.

2. Complete the table:

PIPE SIZE	PIPE TYPE	"C" FACTOR	AMOUNT OF FALL	LENGTH OF PIPE	SLOPE (FT/FT)	COMPUTED RATE OF WATER FLOW (IN CFS)
14-inch	C.I.	74	387 feet	10,657 feet	0.0363	7.15 cfs (@71.52 psi)*

\*Note: Residual pressure.

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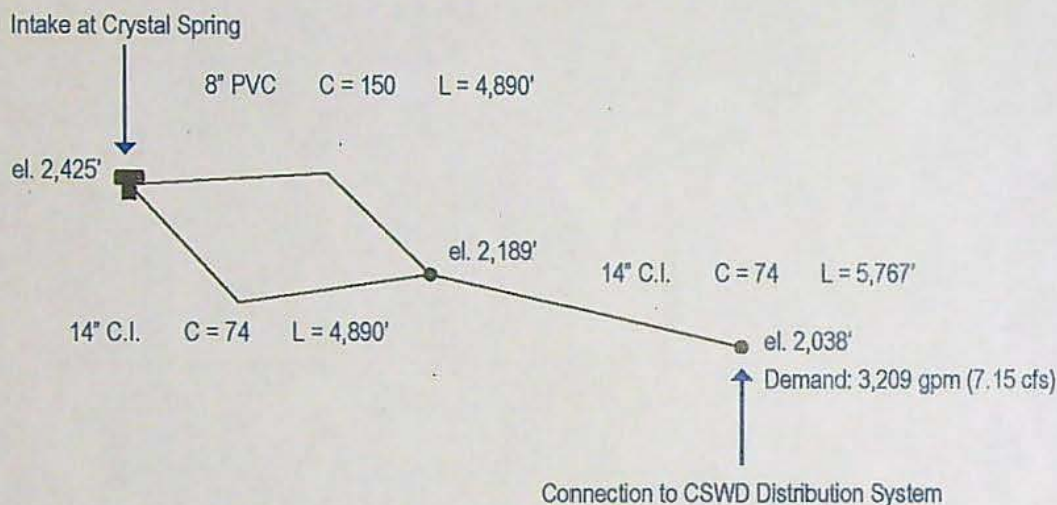
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3. Provide calculations:

The transmission main between the intake at Crystal Springs and the connection with the District's distribution system was modelled using EPANET2 modelling software that incorporates the Hazen-Williams formula. Modelling was completed to show hydraulic capacity is sufficient to accommodate the District's total water rights of 7.15 cfs (3,209 gpm). The model schematic and input data are shown in Figure 1. Results indicate 71.52 psi residual pressure at the connection with the CSWD distribution system and verify the capacity to accommodate the claim of beneficial use and partial perfection for 2.85 cfs. (For comparison, OWRD's Pipe Capacity Calculator, using the same data, indicates 8.007 cfs capacity, but does not indicate a residual pressure.)

Figure 1: Crystal Springs Transmission Main Model - Model Data



The claim for 2.85 cfs is based on recently collected flow meter readings by Fred Schatz, CSWD Superintendent at the request of William Pavlich, PE, CWRE. The District typically reads and records the flow meter display once per day. For purposes of the COBU, readings were taken in the morning and afternoon, approximately 6 hours apart. This was done each day from September 26-30, 2016. The data is summarized below.

Date	A.M.	P.M.	Minutes	Gallons	gpm	cfs
9/26	9:00	3:00	360	455,000	1,263.9	2.816
9/27	9:00	2:50	350	431,000	1,231.4	2.744
9/28	8:50	3:00	370	458,000	1,237.8	2.758
9/29	9:00	3:00	360	453,000	1,258.3	2.804
9/30	8:55	3:03	362	463,000	1,279.0	2.850

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4. If an actual measurement was taken, provide the following:

DATE OF MEASUREMENT	WHO MADE THE MEASUREMENT	MEASUREMENT METHOD	MEASURED QUANTITY OF WATER (IN CFS)
9/30/2016	Fred Schatz, CSWD	Flowmeter readings	2.850

*Note: See measurement notes in (3) above. Actual usage is known to exceed the 2.85 cfs requested for this partial perfection; however, data is limited to once daily, manually recorded readings. The claim for 2.85 cfs at this time is based on data available and the understanding that the District can and will, at a later date, perfect the remaining 0.65 cfs of Permit #S-34196.*

### F. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system? YES ☒ NO

### G. Reservoir

1. Does the claim involve a reservoir modified through a transfer? YES ☒ NO

**Reminder: Complete this section if the reservoir right has been modified through the transfer process. If the claim is for a permitted reservoir use the Claim of Beneficial Use form for reservoirs.**

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## SECTION 5 CONDITIONS

All conditions contained in the permit, permit amendment, transfer final order, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

### 1. Time Limits:

Permits, transfer final orders, and any extension final orders contain any or all of the following dates: the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use was to be completed. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit, extension or transfer final order:

	DATE FROM PERMIT OR TRANSFER	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	<b>August 25, 1969</b>		
BEGIN CONSTRUCTION (A)	<b>August 25, 1970</b>	<b>1967</b>	<b>Permit Application notes construction in 1967-1969</b>
COMPLETE CONSTRUCTION (B)	<b>October 1, 1971</b>	<b>1969</b>	<b>Completed prior to (A) date</b>
COMPLETE APPLICATION OF WATER (C)	<b>October 1, 1972 (ext. 10/1/2058)</b>	<b>Ongoing</b>	<b>District obtained extensions. Most recent extension to 10/1/2058.</b>

\* MUST BE WITHIN PERIOD BETWEEN PERMIT, TRANSFER FINAL ORDER, OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

\*Note: The permit application notes:

*"Headworks, second storage reservoir, and first 60,000 feet of new pipelines already constructed (1967-1968). Next 125,000 feet of new pipeline and third storage reservoir under contract now and due to be completed by September 1969."*

*No other construction is noted or required. The Permit Extension required progress reports. The District is in compliance with this requirement. The 2014 Progress Report notes construction of 75,217 lineal feet of main between October 1, 2009 and October 2014.*

### 2. Is there an extension final order(s)?

**YES** **NO**

If "NO", you may delete item 3 in this section.

### 3. If for a transfer extension order, provide the following information: **N/A (not a transfer)**

VOLUME	PAGE	DATE EXTENDED TO

### 4. Initial Water Level Measurements:

a. Was the water user required to submit an initial static water level measurement?

**YES** **NO**

### 5. Annual Static Water Level Measurements:

a. Was the water user required to submit annual static water level measurements?

**YES** **NO**

### 6. Pump Test (Required for most ground water permits prior to issuance of a certificate)

a. Did the permit require the submittal of a pump test?

**YES** **NO**

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7. Measurement Conditions:

- a. Does the permit, permit amendment, transfer final order, or any extension final order require the installation of a meter or approved measuring device?

YES ☒ NO

\*Note: Water is metered at the source just prior to discharge to the District's transmission main.

8. Recording and reporting conditions

- a. Is the water user required to report the water use to the Department?

☒ YES NO

If "NO", item 8b relating to this section may be deleted.

- b. Have the reports been submitted?

☒ YES NO

METHOD OF SUBMITTING REPORT (PAPER OR ELECTRONIC)	WATER USER REPORTING ID
Electronic	12538

If the reports have not been submitted, attach a copy of the reports if available.

9. Fish Screening

- a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion?

YES ☒ NO

10. By-pass Devices

- a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion?

YES ☒ NO

11. Other conditions required by permit, permit amendment final order, extension final order, or transfer final order:

- a. Were there special well construction standards?  
b. Was submittal of a ground water monitoring plan required?  
c. Was the water user required to restore the riparian area if it was disturbed?  
d. Was a fishway required?  
e. Was submittal of a letter from an engineer required prior to storage of water?  
f. Was submittal of a water management and conservation plan required?  
g. Other conditions?

YES ☒ NO

YES ☒ NO

YES ☒ NO

YES ☒ NO

YES ☒ NO

YES ☒ NO

☒ YES NO

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

**The extension Final Order requires the District to submit a progress report by October 1 of the years: 2009, 2014, 2019, 2024, 2029, 2034, 2039, 2044, 2049, and 2054. The District has submitted Progress Reports for 2009 and 2014.**

SECTION 6  
ATTACHMENTS

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Provide a list of any additional documents you are attaching to this report:

ATTACHMENT NAME	DESCRIPTION
Attachment A	Water System Description



## SECTION 7

### CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

**The map is based on a PACE Engineers, Inc. GIS map of the Crystal Springs Water District completed for the November 2015 Water Master Plan. Section, township, range, and quarter-quarter data was obtained from OWRD. Inset is based on: an assessor's map, gps coordinates of the concrete spring cap corners, and record drawings for the facility shape and relative locations. Quarter-quarters are highlighted to show areas of water usage. Areas of usage were determined through review of the District's water system map, the mapped quarter-quarters, and aerial photography.**

#### Map Checklist

Please be sure that the map you submit includes ALL the items listed below.

(Reminder: Incomplete maps and/or claims may be returned.)

- ☒ Map on polyester film
- ☒ Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map) *Obtained waiver for municipal right: 1" = 5,280'. Inset map at 1" = 400'.*
- ☒ Township, Range, Section, Donation Land Claims, and Government Lots
- ☐ If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters *N/A*
- ☐ Locations of fish screens and/or fish by-pass devices in relationship to point of diversion *N/A*
- ☒ Locations of meters and/or measuring devices in relationship to point of diversion or appropriation
- ☒ Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.) *On separate map.*
- ☒ Point(s) of diversion or appropriation (illustrated and coordinates)
- ☒ Tax lot boundaries and numbers *On inset map.*
- ☒ Source illustrated if surface water
- ☒ Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- ☒ Application and permit number or transfer number
- ☒ North arrow
- ☒ Legend
- ☒ CWRE stamp and signature

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**ATTACHMENT A:**  
**CRYSTAL SPRINGS WATER DISTRICT**  
**EXISTING WATER SYSTEM**

**INTRODUCTION**

The Crystal Springs Water District owns and operates a municipal water system that currently provides service to areas within the District boundary. In 2014, there were 2,189 metered water connections, 1,749 of which were residential.

The water system dates back to the early 1930s. The Crystal Springs Water Company's water permit application (No. 9831, June 30, 1930) proposed that a small (8 feet by 10 feet ) concrete collection box be constructed on Crystal Spring for a service area population estimated in the permit at 2,500 persons in 1930 with projected growth to 5,000 persons in 1940. The Crystal Springs Water Company was reorganized as the Crystal Springs Water District on October 2, 1963. The District completed its first comprehensive water system plan 1963 and followed up with a water permit application (No. 13490, January 22, 1964) that proposed a collection system at the spring that consisted of two 12-inch perforated collector pipes with a concrete control box and a 14-inch effluent pipe, overflow, and drain. In addition, the permit called for 65,700 feet of 14-inch transmission main from the spring to Booth Hill reservoir. (Service area population at that time was estimated at 3,050 persons.) Water permit application (No. 45826, March 3, 1969) notes the work completed in 1967 – 1968 to include: headworks, new storage reservoir, 60,000 feet of pipelines; and that work under contract for completion by September 1969 included a new storage reservoir (Pine Grove) and 125,000 feet of new pipe. (Service area population at that time was estimated at 3,950 persons.)

The District completed another comprehensive water system plan (Water System Analysis, Lee Engineering, Inc., March 1991 (revised February 1992)) that proposed many system improvements including source (disinfection), storage, and transmission/distribution pipeline additions or replacements, some of which were constructed in the following years.

The spring box/inlet/control structure was rebuilt following flood damage sustained during the severe weather of winter 1996.

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Planning efforts in 2000 and 2006 identified additional main and pressure zone modifications (by means of additional pressure control valves) that were implemented largely by District staff.

The District continues to add services and has extensively replaced mains or added new distribution mains. Between 2009 and 2014, District staff constructed 75,217 lineal feet of main. A new Water Master Plan was completed in 2015. Oregon Health Authority (OHA) approved the Plan in March 2016.

The recent Water Master Plan includes approximately \$48M in recommended CIP improvement. Currently, the District is moving forward on approximately \$4.5M in high priority projects.

### CRYSTAL SPRINGS WATER DISTRICT WATER RIGHTS

Water rights for the Crystal Springs Water District are summarized in Table 1.

**Table 1: Water Rights**

Source/Type <sup>1</sup>	Permit No.	Certificate No.	Priority Date	Quantity	Use
Crystal Spring (S)	9831	10115	6/30/1930	1.0 cfs	Domestic
Crystal Spring (S)	29377		1/22/1964	2.65 cfs	Domestic
Crystal Spring (S)	34196		3/03/1969	3.5 cfs	Municipal

<sup>1</sup> Source type: (S) Surface Water, (G) Groundwater, (R) Reservoir

Permit 29377 has been extended to October 1, 2028; permit 34196 has been extended to October 1, 2058.

### CURRENT SOURCE

The District's current and only water source is Crystal Spring, which is located at elevation 2,425 feet in Weygandt Canyon on the northeast side of Mount Hood, approximately 1,000 feet west of Highway 35. Evidence from water rights applications and permits suggest the source was first developed in the early 1930s.

Geologic and hydrologic studies of the spring and recharge area were conducted by: CH<sub>2</sub>M in 1963, Lee Engineering in 1991, AGI Technologies in 1994, Mark Yinger Associates in 2002, and ODHS in 2003. The District has copies of all the listed studies.

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Topography in Weygandt Canyon varies from gently sloping to very steep with side slopes from 5% to as steep as 90%. The elevation range is from 2,425 feet at the intake to 4,800 feet at the upper end of the canyon. Yinger identifies one potential recharge area that extends to 7,300 feet in elevation among other recharge area delineations discussed. Geology of the area is complex, so while the general recharge area is known, delineations of that area to date are not definitive.

Precipitation is estimated to vary from 55-inches to 135-inches per year. The mean annual soil temperature is estimated at about 42° F, which corresponds to the relatively constant water temperature of the spring.

There is no discernible stream channel within Weygandt Canyon upstream of the spring. Organic litter throughout the canyon consists primarily of decomposing needles and twigs from Mountain Hemlock, larch, and fir. The litter varies in thickness from 4-inches to 12-inches and provides an excellent filter for surface water which drains through the canyon.

Spring flow is strongly correlated with mean monthly air temperature; Yinger notes that 37% of the variation in spring flow can be attributed to air temperature alone. Yinger also notes a poor correlation between effective monthly precipitation (from elevations below 4,400 feet) and spring flow suggest that the "true zone of contribution" may extend to higher elevations with lingering summer snowpacks. Nevertheless, ODHS notes that the lack of well-developed surface runoff channels in the zone of contribution suggests that much of the precipitation infiltrates directly into the soil.

Mean annual flows in Crystal Springs as measured by Lee Engineering were: 2.89 mgd (million gallons per day) in 1988, 3.03 mgd in 1989, and 2.56 mgd in 1990. The Lee figures were based on combining metered intake flow with flow calculations of water bypassing over the weir in the intake structure, and as such, would not include spring water that bypassed the intake system – to the extent that this is occurring. CH<sub>2</sub>M measured 3.95 mgd for the period August 1962 to August 1963. The CH<sub>2</sub>M measurement was based on a weir constructed across Crystal Springs Creek plus metered flow (0.72 mgd) diverted to the intake. Year 2014 spring flows averaged 3.57 mgd using the Lee 1988-1990 methodology. The maximum monthly flow in 2014 was 4.31 mgd in April.

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Water from the spring is collected by perforated pipe located under talus slopes that direct most of the water to the concrete spring box that includes the inlet to the District's 14-inch transmission main and an overflow (See Attachments A.1). The spring collection system and intake was substantially reconstructed in 1996 following damage caused by high storm flow associated with severe weather. The spring collection area was covered with a large concrete cap (approximately 230 feet in length) that includes a stormwater/debris channel to help control unusually high storm flows and protect the subsurface collection system and associated structures should a similar event occur. The reconstruction also involved expansion of the piping to more efficiently collect spring flow. The dendritic collection system consists of terminal perforated pipe (6-inch; 10-inch; and 18-inch) connected to 10-inch and 18-inch pipes that convey water to the intake structure where the gravity flow passes either to the water system (in accordance with water system demands) or to an overflow at the lower end of the concrete cap. The flowmeter is located on the pipe in the vault adjacent to the intake structure (noted as "Existing Distribution Bldg." on Attachment A.1). Flow meter readings are manually recorded once per day. (Note: The District is currently considering the addition of a data logger to expand data collection capabilities). Overflow from the control structure is directed to the stream channel just below the concrete spring cap. Overflow separation occurs prior to the District's production flowmeter and disinfection process: After passing through the (production) flowmeter (on the 14-inch main), flow splits via a tee to a parallel 8-inch main creating a dual 14-inch and 8-inch transmission system. The parallel system extends 4,890 feet, where the 8-inch line ties back into the 14-inch line. The 14-inch line then continues 5,767 feet to connect to the District's distribution system.

The Oregon Health Authority – Drinking Water Program (*Source Water Assessment Report*, ODHS 2003) considers the aquifer that feeds the spring "to be highly sensitive due to the shallow unconfined nature of the aquifer, the occurrence of cobbles, boulders and gravel within the aquifer, the presence of fractured bedrock being exposed at the outflow point, the low specific conductance ..." They also note the highly permeable soil covering in the northern half of the capture zone and the susceptibility to microbial contamination.

## TREATMENT

The current source water has been classified as groundwater by OHA; consequently, filtration is not required. Treatment is currently limited to disinfection. The District uses an onsite disinfection system

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located in a building adjacent to the spring site. The solution is fed into the system by a flow-paced metering pump which adjusts the dosing rate to match flow in the transmission main to the water system.

The treatment building includes the chemical generation, storage, and feed components; electrical panels; flowmeter, turbidimeter, chlorine analyzer, and a standby power generator.

## **STORAGE RESERVOIRS**

Crystal Springs Water District has two existing ground-level, treated water reservoirs. These are described below.

### **Booth Hill Reservoir**

Location:	South of Odell off Booth Hill Road
Volume:	700,000 gallons
Construction Date:	1968
Material:	Concrete
Overflow elevation (approx.):	1,680 feet
Height (to overflow):	24 feet
Diameter:	75 feet

### **Pine Grove Reservoir**

Location:	East of Pine Grove off Wells Drive
Volume:	400,000 gallons
Construction Date:	1968
Material:	Concrete
Overflow elevation (approx.):	1,030 feet
Height (to overflow):	16 feet
Diameter:	60 feet

## **PUMP STATIONS**

Current system operation is entirely by gravity; there are no pump stations in the system. Very high system pressures in some parts of the District allow development on nearby hillsides without the need for booster pumping.

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## TRANSMISSION AND DISTRIBUTION

Mains in the District range up to 14-inch diameter. Main material is primarily cast iron, ductile iron, and "steam grade" steel boiler pipe, but some PVC pipe is present in lower pressure areas. The District has standardized on ductile iron class 52 pipe for all new main construction. Service lines include a large variety of sizes and materials; however, the District has standardized on copper for all new construction of service lines 2-inch in diameter and smaller. The distinction between main and service lateral is blurred in the District where very high system pressures allow for adequate system flows through small diameter pipe that would be typically thought of as being suitable for service line only use. The District has many "mains" that are  $\frac{3}{4}$ " in diameter and are several hundred feet to almost 1,500 feet in length. Table 2 includes a breakdown of main lengths for the various materials and diameters present. The information is based on the District's GIS database.

Table 2: District Water Main Characteristics

Diameter (in.)	Length (feet)	% of Total	Material	Length (feet)	% of Total
0.75	14,458	2.0	Cast Iron	249,868	34.9
1.00	83,331	11.6	Copper	17,037	2.4
1.25	20,974	2.9	Ductile Iron	191,873	26.8
1.50	18,517	2.6	Galvanized	15,960	2.2
2.00	74,296	10.4	PEX	8,173	1.1
2.50	346	0.0	PVC	88,075	12.3
3.00	7,745	1.1	"Steam Grade" <sup>1</sup>	90,698	12.7
4.00	159,173	22.2	Not Identified	54,696	7.6
5.00	2,892	0.4	<b>Total</b>	<b>716,380</b>	<b>100.0</b>
6.00	211,867	29.6	<sup>1</sup> Steel boiler pipe.		
8.00	38,922	5.4			
10.00	36,638	5.1			
12.00	22,329	3.1			
14.00	24,892	3.5			
<b>Total</b>	<b>716,380</b>	<b>100.0</b>			

The system is a fairly complex mix of dendritic (characterized by deadend lines) and looped mains. Some of the looping is via very small diameter lines.

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In 2014 there were 2,189 water meters, 1,749 of which were residential. According to District spreadsheet data, there are 42 pressure reducing valve and/or pressure relief valve vaults, and 481 hydrants.

A map of the water system is included as Attachment A.2.

### **SERVICE AREAS AND PRESSURE ZONES**

Because of the District's varying topography and the magnitude of elevation differences, the water system is currently divided into ten pressure zones and service areas. In most cases, the pressure zones are connected via pressure reducing valves (PRV). System pressures vary from approximately 50 psi to 280 psi. In general, areas with high pressures (on the order of 80 psi or more) have individual pressure reducing valves on the service lines. A few lines may have service connections that approach the regulatory minimum pressure (as measured at the customer's meter) of 20 psi.

### **SCADA AND TELEMETRY**

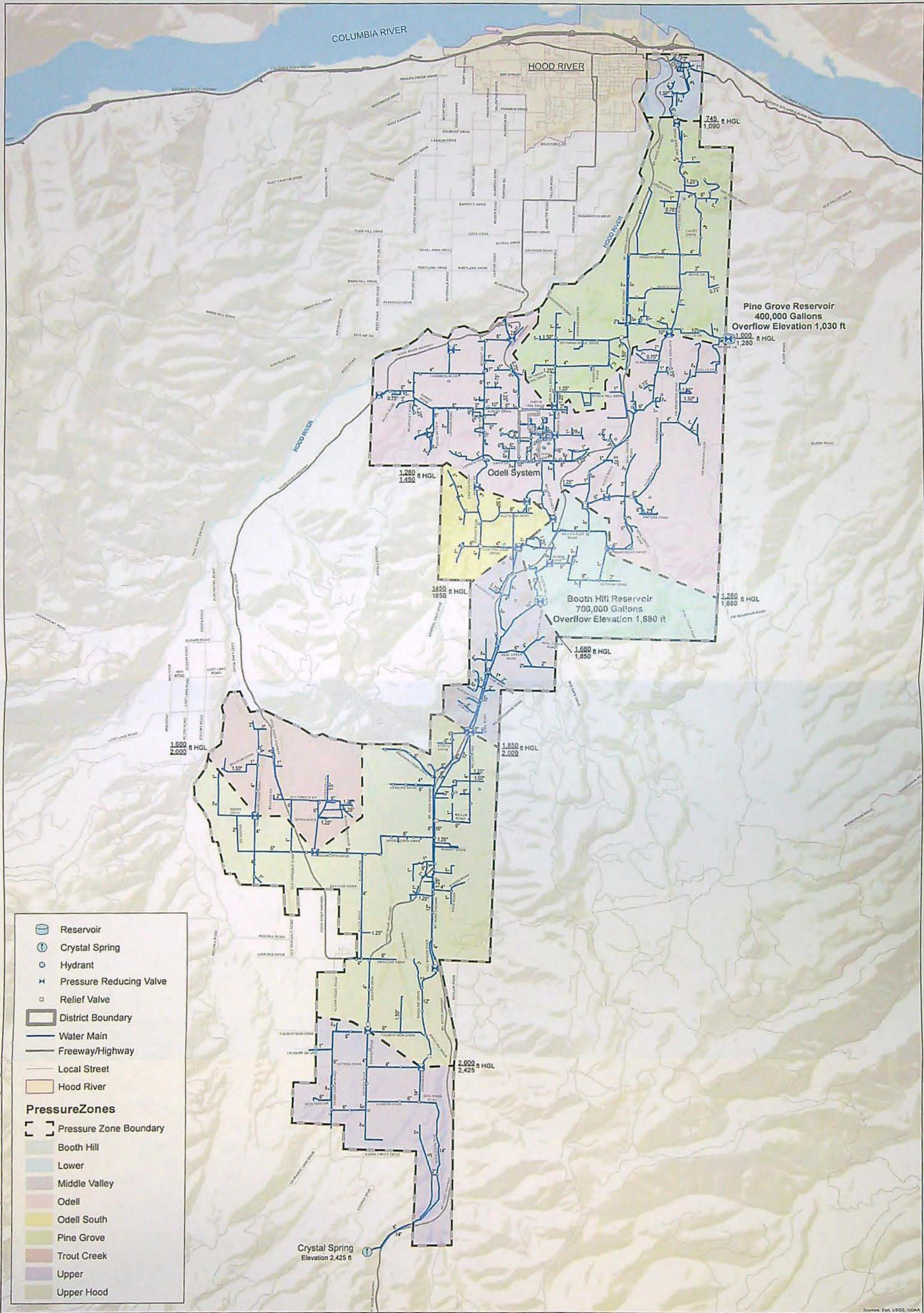
The system does not have SCADA or telemetry. Flowmeter readings are physically observed and recorded daily by staff. Collected data is entered manually into spreadsheets at the District office. There are no alarms.

### **WATER QUALITY AND REGULATORY STATUS**

The District is in compliance with all water quality related regulatory requirements. OHA classified the spring as groundwater so only disinfection is required for treatment. The District's last OHA Water System Survey (May 9, 2013) noted that "No significant deficiencies or rule violations were identified." The system was also designated as an "outstanding performer."

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J:\Utility Districts\andCompanies\Crystal Springs\Water\District\GIS\Surfmap\Map\_24\_06\_2015.mxd

Source: Esri, USGS, NOAA

ATTACHMENT A.2



**Attachment A.2**  
**Existing Water System Map**  
**Crystal Springs Water District**

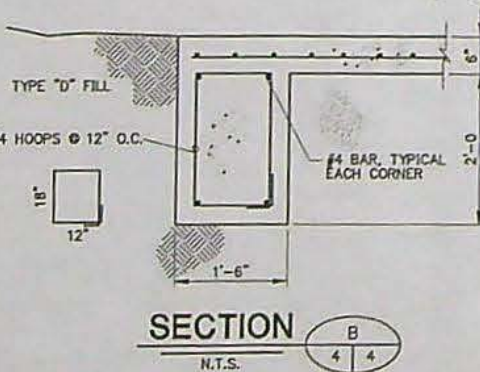
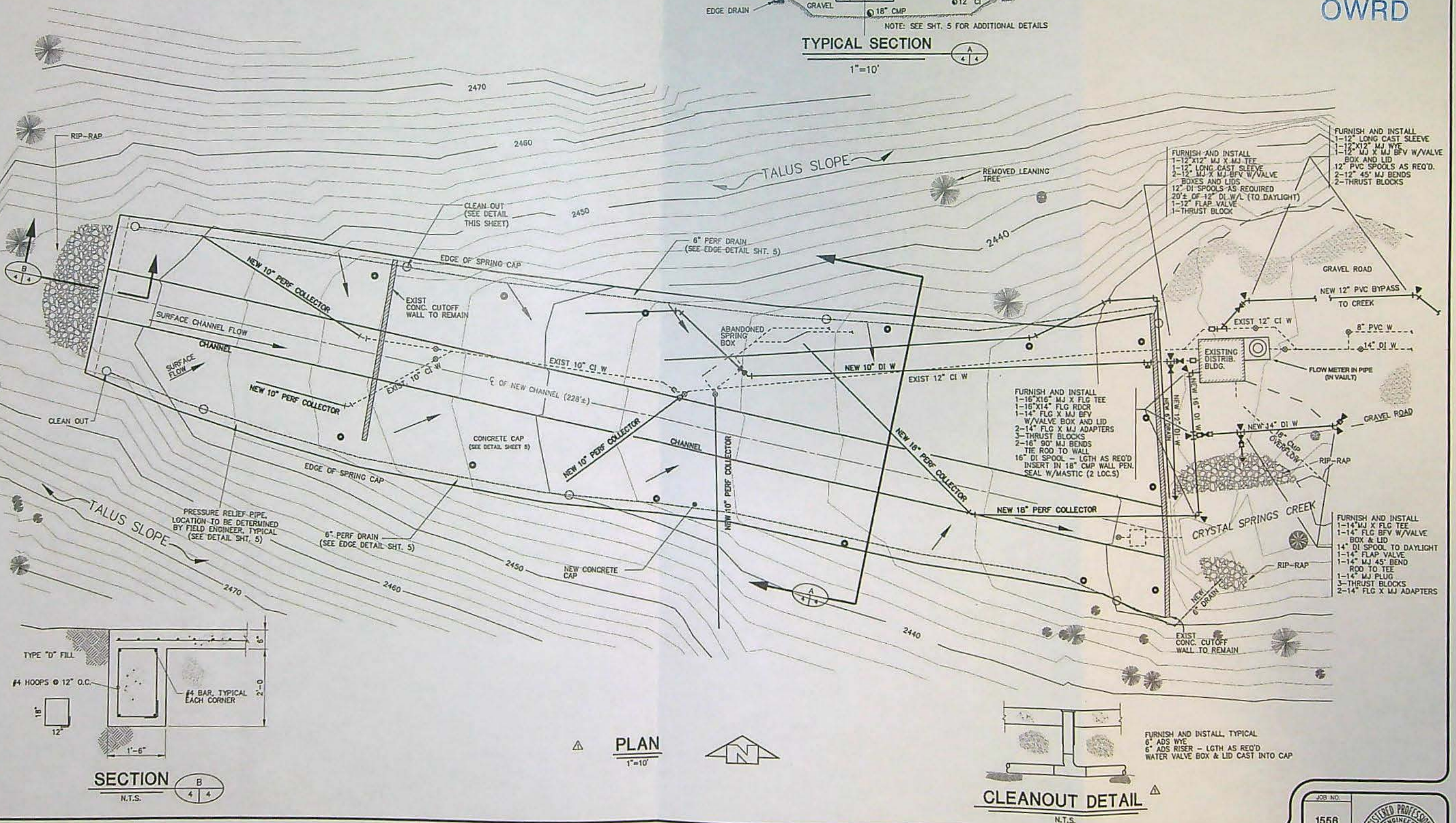
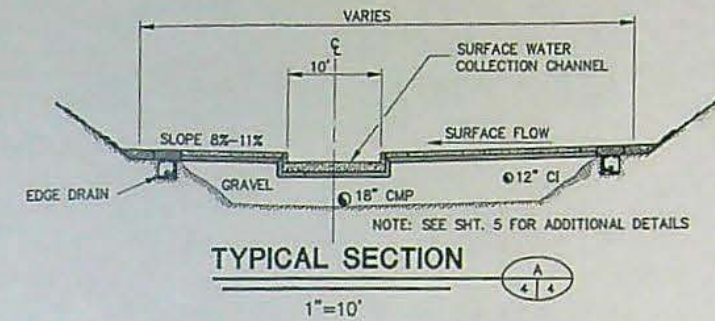
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**JAN 04 2017**  
**OWRD**



PLAN  
 1"=10'



DATE	NO.	REVISION	BY	CHK.	FILE NO.	SCALE	DATE
12/17/96	1	DRAWING OF RECORD	JRS	KRE	1556D04	AS SHOWN	MAY '96
				FDL			

CRYSTAL SPRINGS WATER DISTRICT  
 SPRING REPAIRS

IMPERVIOUS SPRING CAP, COLLECTOR PLAN,  
 AND SURFACE DRAINAGE PLAN

**LEE ENGINEERING, INC.**  
 CONSULTING ENGINEERS  
 OREGON CITY, OREGON

JOB NO.	1556
SHEET NO.	4
	5





# CRYSTAL SPRINGS WATER DISTRICT - 2nd partial permit

## Completion Checklist for Claims of Beneficial Use for POST JULY 1, 2004 Claims

CERT & FO

Application # <u>5-45826 / 5-34196</u>	WRD Reviewer <u>Kerry Kavinagh</u>
Transfer # <u>                    </u>	Claim Logged <u>YES</u>
Date Received <u>7-1-2022</u>	Oversized Map # <u>NA</u>
CWRE Name <u>William Pavlich</u>	<u>map waiver granted by Gary Clark</u>

### Map Review:

- ☒ Map on polyester film (OAR 690-014-0170(1) & 310-0050(1)(b))
- ☒ Application & permit #: or transfer # (OAR 690-014-0100(1))
- ☒ Disclaimer (OAR 690-014-0170(5))
- ☒ North arrow (OAR 690-310-0050(2)(c))
- ☒ CWRE stamp and signature (OAR 690-014 & 310-0050)
- ☒ Appropriate scale (1" = 1320', 1" = 400', or the original full-size scale of the county assessor map) (014 & 310)
- ☒ Township, range, section, and tax lot numbers (OAR 690-310-0050(4))
- ☒ Source illustrated if surface water (OAR 690-014-0170(3))
- ☒ Point(s) of diversion or appropriation (illustrated) (OAR 690-014(4) & 690-310-0050)
- ☒ Point(s) of diversion or appropriation (coordinates) (OAR 690-014(4) & 690-310-0050)
- ☒ Conveyance structures illustrated (pump, pipelines, ditches, etc.) (OAR 690-310-0050)
- ☒ Description of the location, in relation to the point of diversion or appropriation, of any fish screens, by-pass devices, and measuring devices required (OAR 690-014-0170(4))
- ☒ Place of use (1/4 1/4, or projected 1/4 1/4 lines within DLCs, or Gov Lots; if irrigation, # of acres in each subdivision; if for domestic or human consumption, location of dwelling or spigot) (OAR 690-310-0050, 690-014, 690-380-6010)

### Report Review:

- ☒ On form or format provided by the Department (OAR 690-014-0100(1))
- ☒ Application & permit #: or transfer # (OAR 690-014)
- ☒ Ownership information (OAR 690-014)
- ☒ Date of survey (OAR 690-014)
- ☒ Person interviewed (OAR 690-014)
- ☒ County (OAR 690-014) HOOD RIVER
- ☒ Description of conveyances system (from POD to POU) (OAR 690-014-0100)
- ☒ Source(s) of water (OAR 690-014-0100)
- ☒ Place of use location (OAR 690-014-0100)
- ☒ Type of use (OAR 690-014-0100)
- ☒ Extent of use (OAR 690-014-0100)
- ☒ Rate and Duty (OAR 690-014-0100)
- ☒ Diversion rate for each use (OAR 690-014-0100)
- ☒ Diversion works description (pump make, serial model, capacity, and description) (OAR 690-014-0100)
- ☒ System capacity (OAR 690-014-0100)
- ☒ Calculated capacity of system (required)
- ☒ Measured amount of use (optional)
- ☒ Permit/Transfer Final Order Conditions (OAR 690-014-0100)
- ☒ Time limits
- ☒ Initial water level measurements
- ☒ Annual static water level measurements
- ☒ Measurement, recording, and reporting
- ☒ Meter/measuring device
- ☒ Water use reporting not req by permit - but will report using flow meter
- ☒ Fish screening and/or by-pass
- ☒ Pump test (ground water)
- ☒ Other demonstration of beneficial use - COBU notes 6-hour readings per COBU, District submitted Progress Reports using flow meter in 2009, 2014 & 2019
- ☒ Conditions from Extension Final Order and/or Water Management Conservation Plan
- ☒ CWRE stamp and signature (OAR 690-014-0100)
- ☒ Signature(s) of permittee of transfer holder (OAR 690-014-0100)

DEF = deficient  
N/A = Not Applicable



App 5-45826

CERT d FO  
- 2nd incremental  
partial part.

# Certificate Issuance Processing Checklist

- ☒ Map and COBU reviewed
- ☒ Conflict check Any Conflicts? \_\_\_\_\_
- ☒ Check for ownership

Check Area of Interest ☒ YES ☐ NO

Identified Party Farmers ID, Middle Fork ID, East Fork ID

## Staff Recommendations:

☒ Proof to the Satisfaction has been established to the full extent as described in the permit or transfer order.

☐ Proof to the Satisfaction has been not been established to the full extent as described in the permit or transfer order and the right should be limited as follows: \_\_\_\_\_

☐ Proof to the Satisfaction has not been established for the following reasons: \_\_\_\_\_

### Proposed Actions:

Send letter requesting the following items/information: \_\_\_\_\_

Send letter recommending extension to cure deficiencies: \_\_\_\_\_

Can certificate be processed further?

☐ Yes

If "Yes":

☐ Proposed  
☐ Final

Certificate # \_\_\_\_\_

Mailing list:

Proposed:

Final:

cc: Farmers Ing. Dist  
Middle Fork Ing Dist  
East Fork Ing Dist



Application S-45826: Per 7-2-2022 COBU – “water from spring collected by perforated pipes”

### Pipe Capacity Calculator

for pipes flowing full, using the Hazen-Williams Formula

#### Data Entry (fill in underlined blanks)

Interior Diameter = 14 inches, or 1.166667 feet  
Roughness Coefficient (C) = 74  
Fall = 387 feet per 10657 feet of distance  
Grade = 0.03631416, or 3.6%

#### Results calculated

Area of cross-section = 1.069014 square feet  
Wetted Perimeter = 3.665191 feet  
Hydraulic Radius = 0.291667  
Velocity = 7.489742 feet per second

Pipe Capacity = **8.007** cubic feet per second

Per 7-1-2022 COBU – computed rate of flow is 7.15 cfs at 71.52 psi



Application # S-45826

Permit # S-34196 Transfer #

Crystal Springs Water  
DistrictN/A  
23Reimbursement Authority Process  
Itemized FINAL Sheetfor  
Certificates

	New Est. Time (hr)	Multiplie r	Est Hours	Individual	New Hourly Rate	New Est. Cost	Date/Act. Time
1. Review Claim of Beneficial Use report & map	1.75	31%	2.29	Kerry	\$73.84	\$ 169.28	
2. Conflict Check	0.00	31%	0.00	Kerry	\$73.84	\$ -	
3. Prep of def. letter - contingency time	0.00	31%	0.00	Kerry	\$73.84	\$ -	
4. Enter pump test data -	0.00	31%	0.00	Kerry	\$73.84	\$ -	
5. Prep of 1 cert - 0.65 cfs for MU - 2nd (final) incrm	5.25	31%	6.88	Kerry	\$73.84	\$ 507.83	
6a. Peer review - Tamera Smith	0.50		0.50	Tamera	\$51.08	\$ 25.54	
6b. Peer review	0.30		0.30	Dwight	\$104.86	\$ 31.46	
6c. Peer review	0.00	26%	0.00	Gerry	\$73.19	\$ -	
7. Project Management - 3rd Q 2022	1.25	31%	1.64	Kerry	\$73.84	\$ 120.91	
7. Project Management - 4th Q 2022	5.25	31%	6.88	Kerry	\$73.84	\$ 507.83	
8a. Water right data record update	0.50	31%	0.66	Support- Tonya	\$35.46	\$ 23.23	
8b. Water right data record update	1.25		1.25	Data Tech	\$53.81	\$ 67.26	
9. Pump test - N/A	0.00		0.00	Boschman n	\$71.83	\$ -	
<b>Total</b>	<b>16.05</b>		<b>20.39</b>		<b>Sub Total</b>	<b>\$1,453</b>	
					<b>10% Overhead</b>	<b>\$145.33</b>	
					<b>TOTAL</b>	<b>\$1,599</b>	

S11 over (estimated cost = \$1588)

Permit S-34196 issued 8-25-1969 A Date = 8-25-1970 B Date = 10-1-1971 C Date = 10-1-1972

3.50 CFS for "domestic-municipal use" POU by Section, T, R

Cert 93120 - partial perfection - issued 5-31-2017 for 2.85 CFS for municipal use &amp; Sp Ord 104 Pages 984-985 --&gt; 0.65 CFS remaining

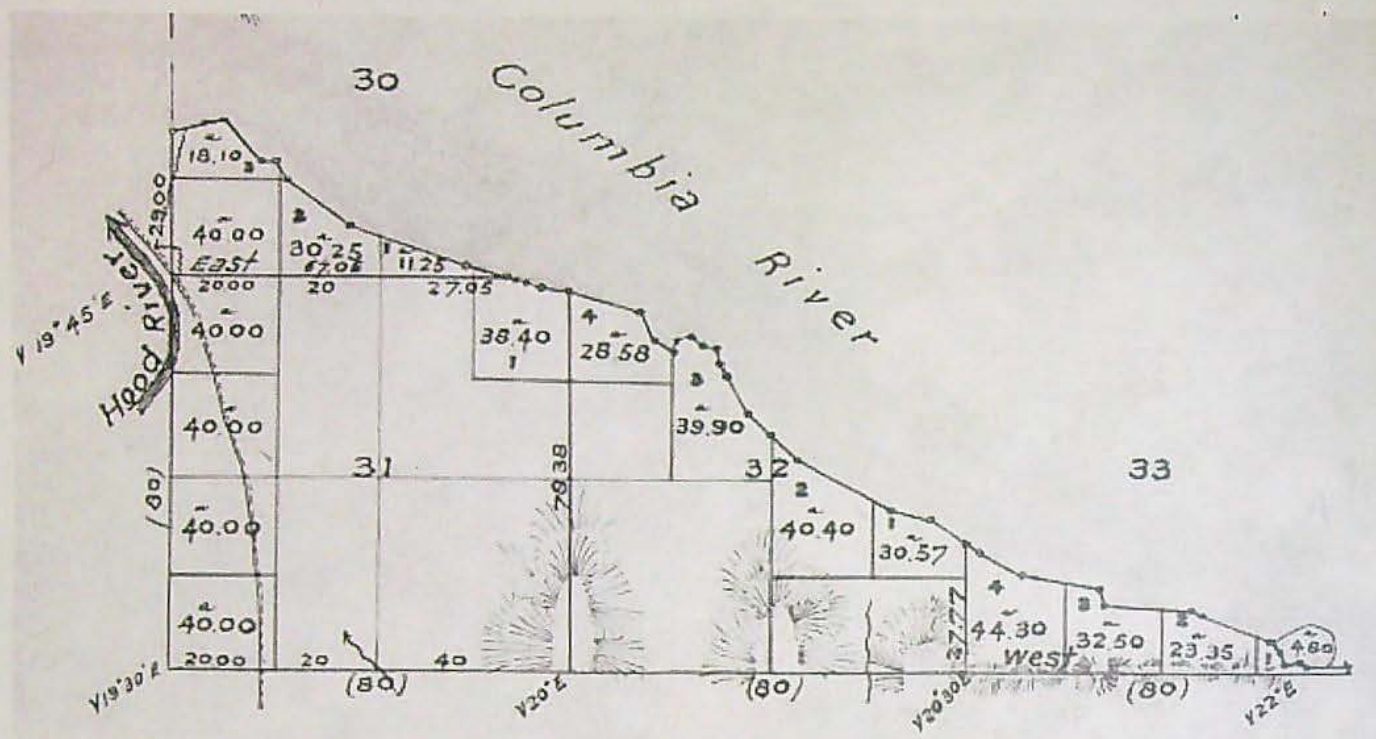
0.65 cfs remaining for 2nd increment (final)



[illegible]



Application S-45826 - Portion Cadastral Survey T3N, R11E, W.M. - 1860-07-13:



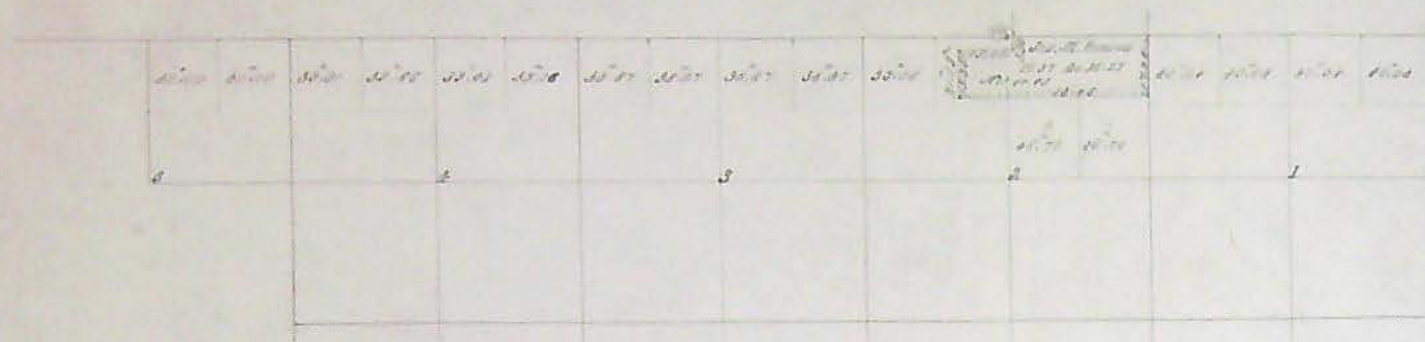
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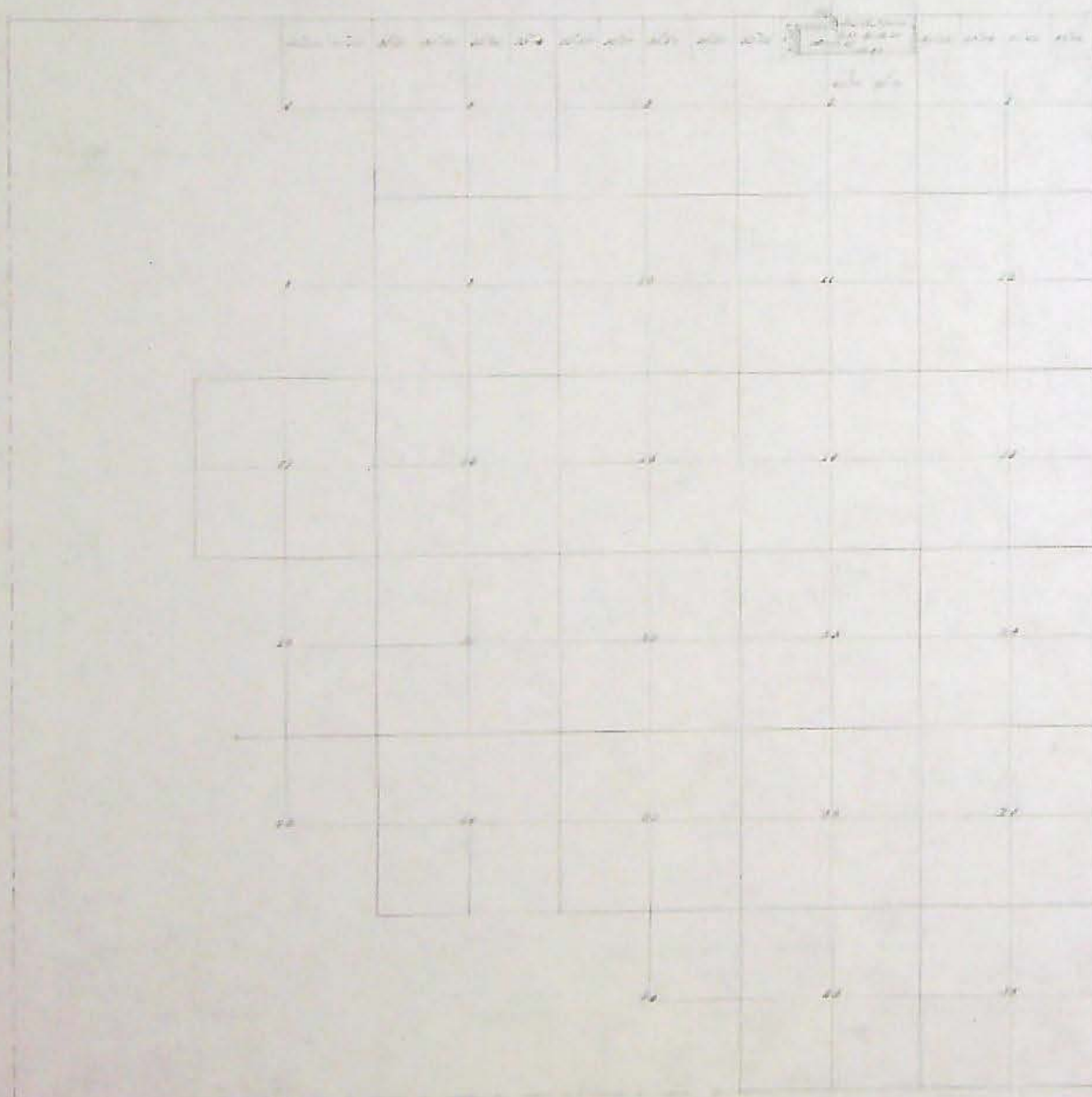
Application S-45826 - Portion Cadastral Survey T2N, R10E, W.M. - 1863-09-30:

*Township No. 2 North Range No. 10 East Willamette Meridian.*



Cadastral Survey T2N, R10E, W.M. - 1863-09-30:

*Township No. 2 North Range No. 10 East Willamette Meridian.*

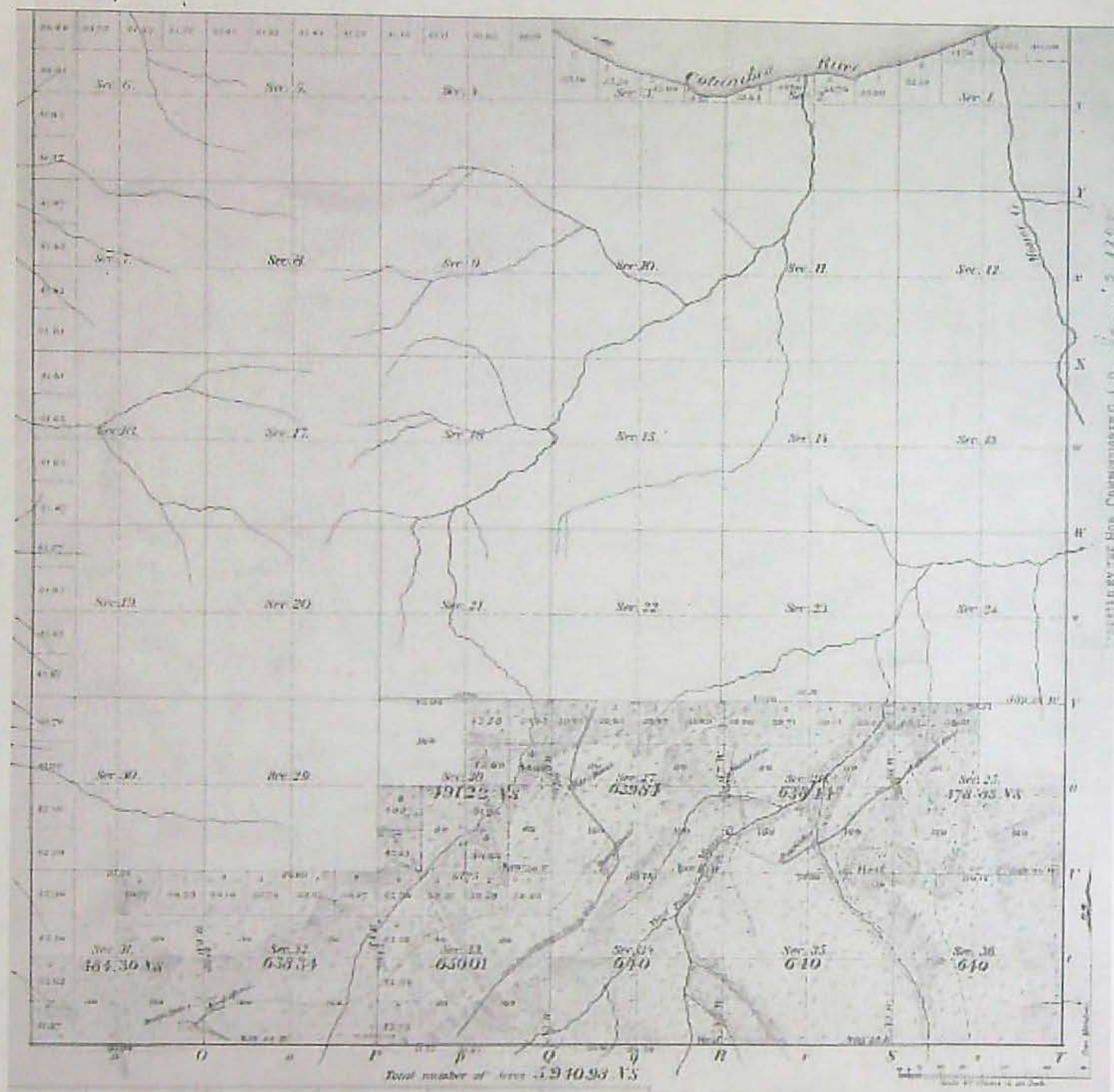






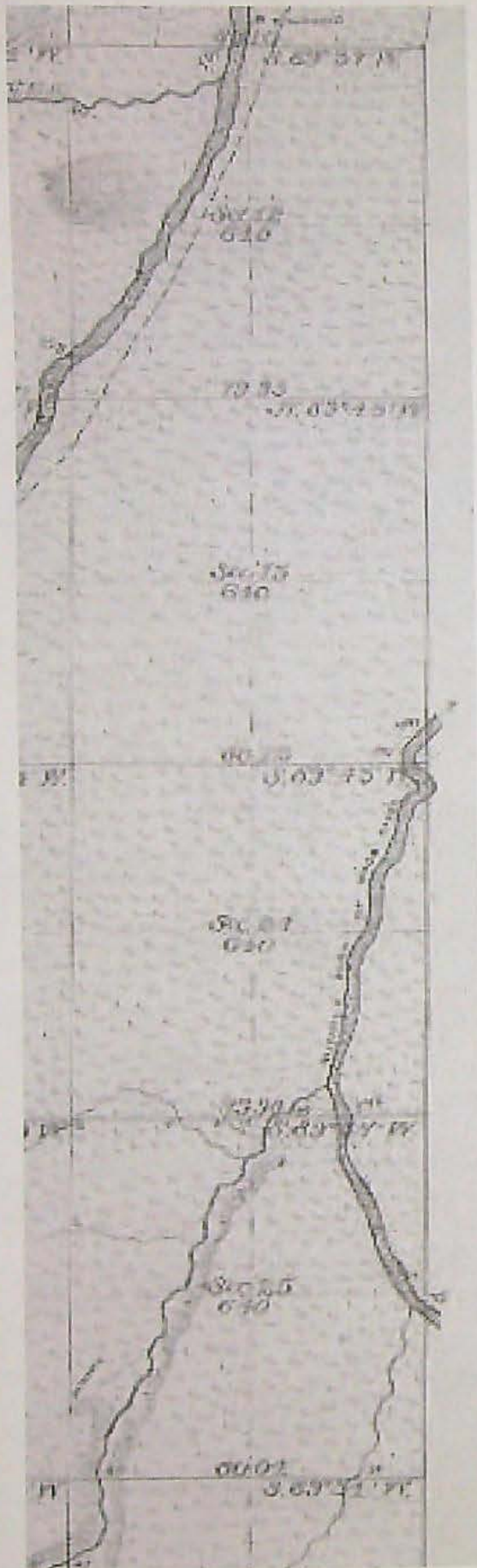


Application S-45826 - Cadastral Survey T2N, R11E, W.M. - 1894-11-08:





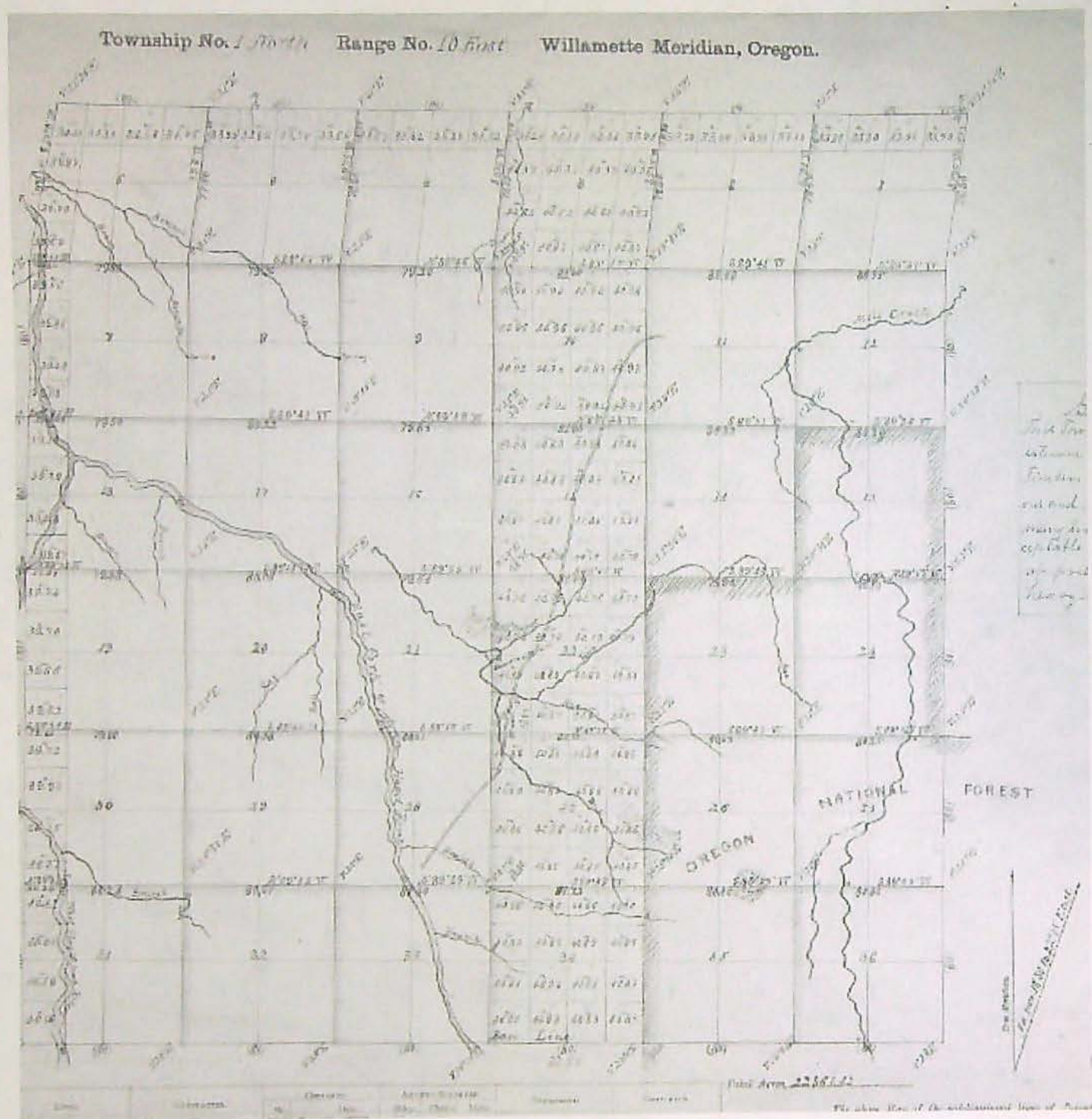
Application S-45826 - Portion Cadastral Survey T1N, R9E, W.M. -





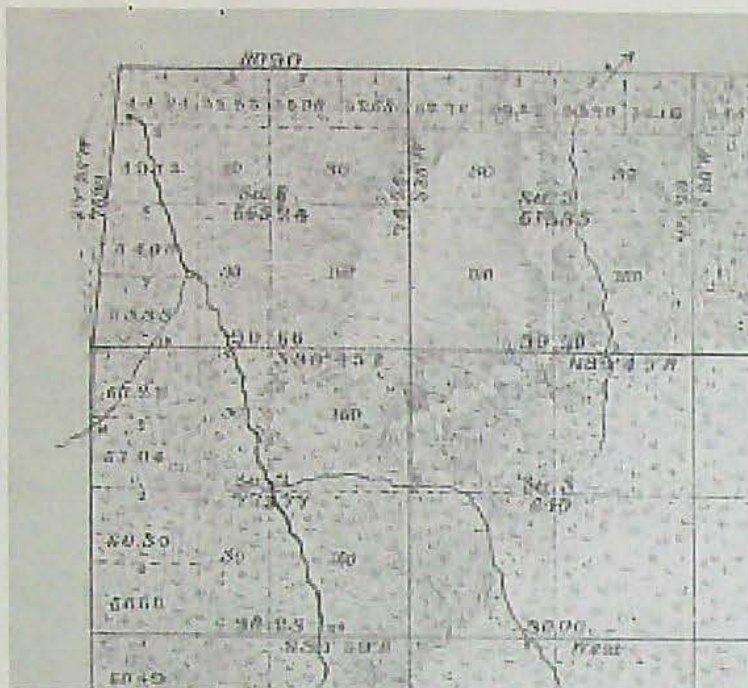




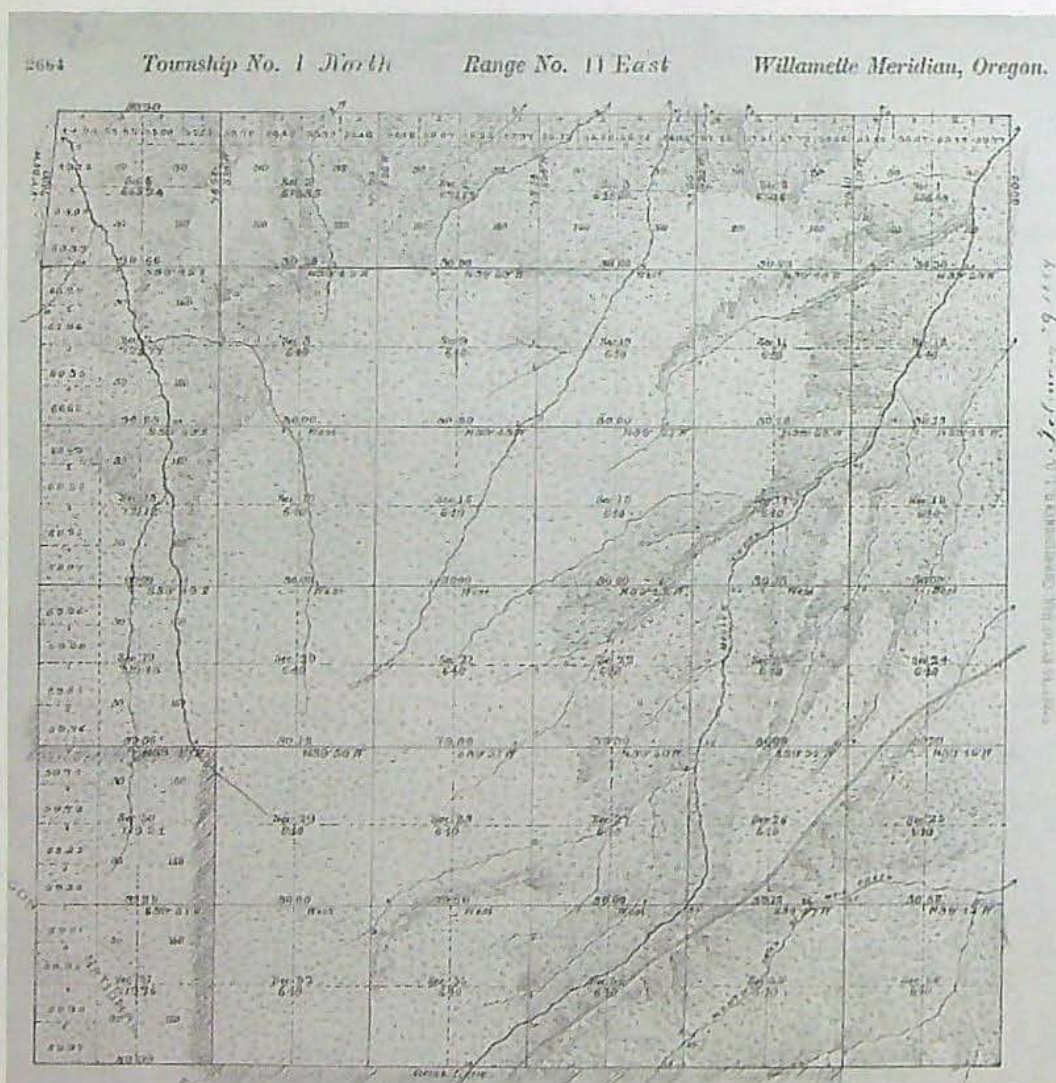




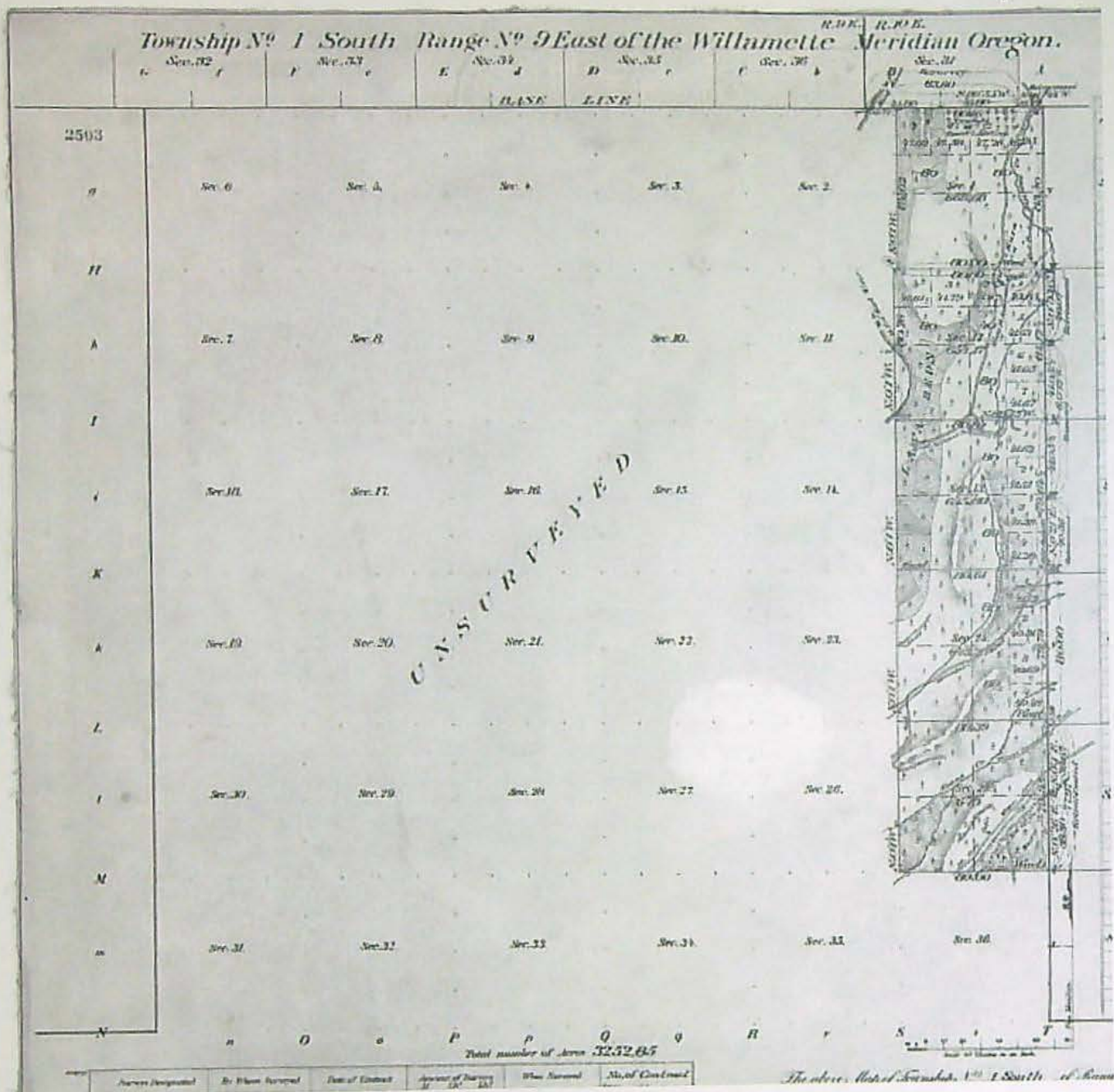
Application S-45826 - Portion Cadastral Survey T1N, R11E, W.M. - 1884-01-08:



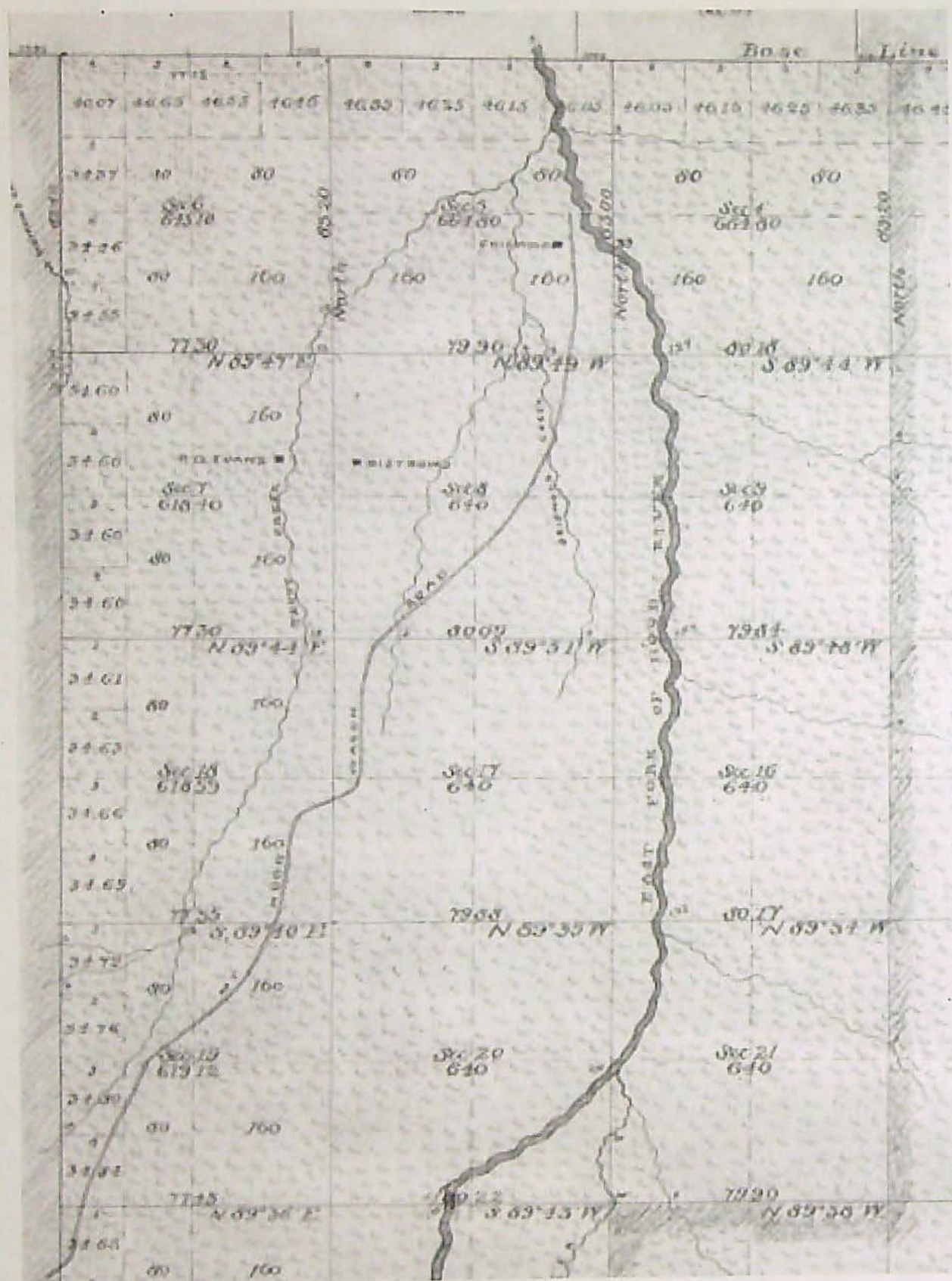
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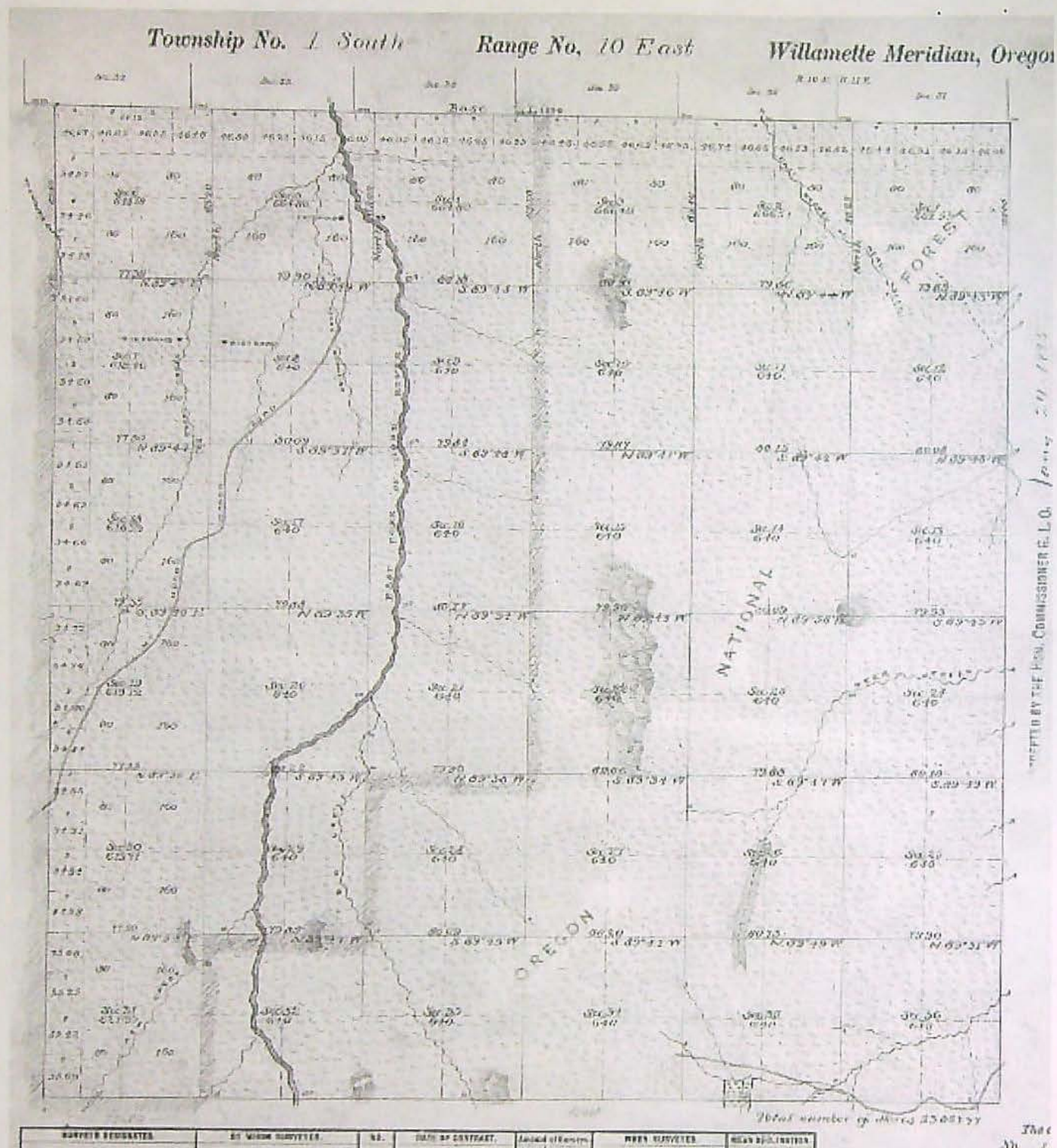














Application S-45826:



Farmers Irrigation District, 1985 Country Club Road, Hood River OR 97031

Middle Fork Irrigation District, PO Box 291, Parkdale OR 97041

East Fork Irrigation District, PO Box 162, Odell OR 97044



# Application S-45826:

**Oregon Water Resources Department**  
**Water Rights Mapping Tool**

[Main](#)   [Help](#)  
[Return](#)   [Contact Us](#)

**OWRD Only**

**Search**  
 Search: **Water Right by File**

Application: **S**   **45826**     
 Permit:     
 Certificate:     
 Claim:     
 Transfer:     
 Snap ID:     
 POD Source: **Equal**     
 Irr. District:

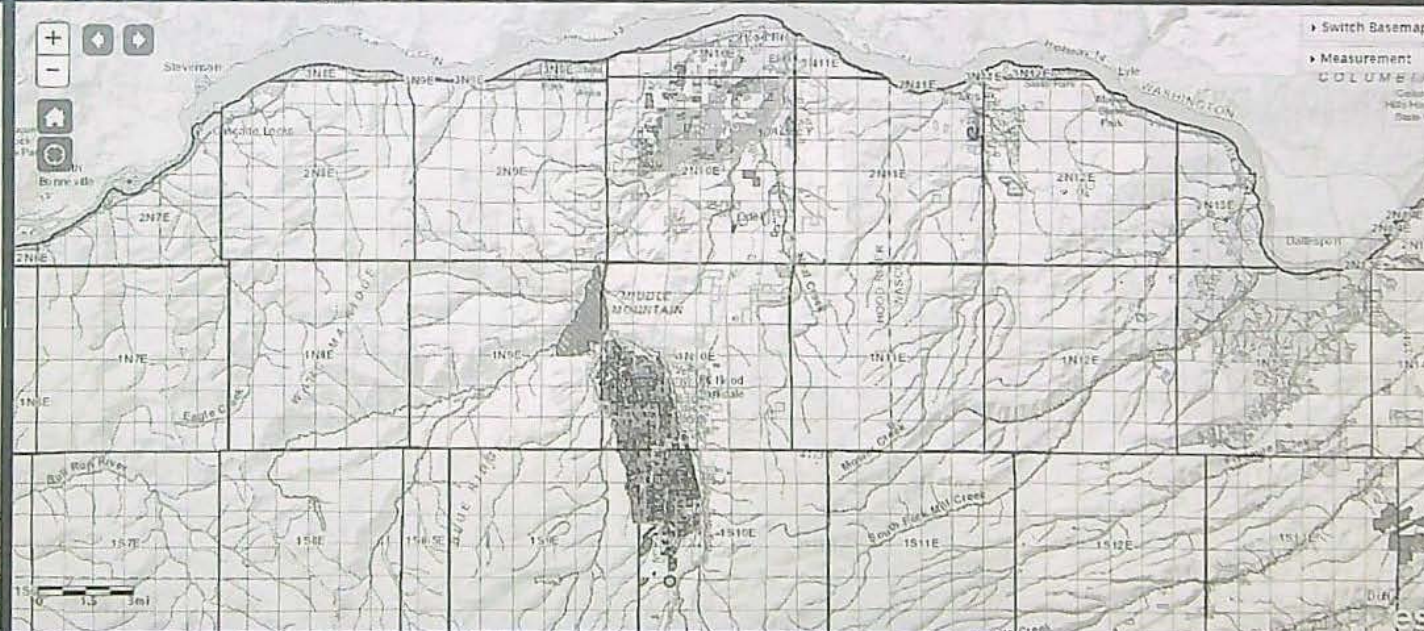
(Draw box on map)  
 Points of Diversion (Count: 2)  
 Places of Use (Count: 2)

**Identify Non-Water Right Features**  
 Tax Lots  
 Layers  
 Tools

**POD**   **POU**   **Irrigation Districts AOI**   **MCWC Planned POU**

All Fields    Search...

ID (select)	WRIS	Zoom	Water Right	Water Type	First Name	Last Name	Company	Use Desc.	Priority Date	Supp. Duty	Rate cfs	Rate cfs Est.	Max Rate cfs	Acre ft	Acre ft Est	Max Rate Acre ft	Stream Name
1	175974	<a href="#">Details</a>	<a href="#">Map WR</a>	Certi#93120 OR * MU	5W		CRYSTAL SPRINGS	MUNICIPAL USES	03/03/1969	-	2.85	-	2.85	-	-	-	CRYSTAL SPR CR > E FK HOOD



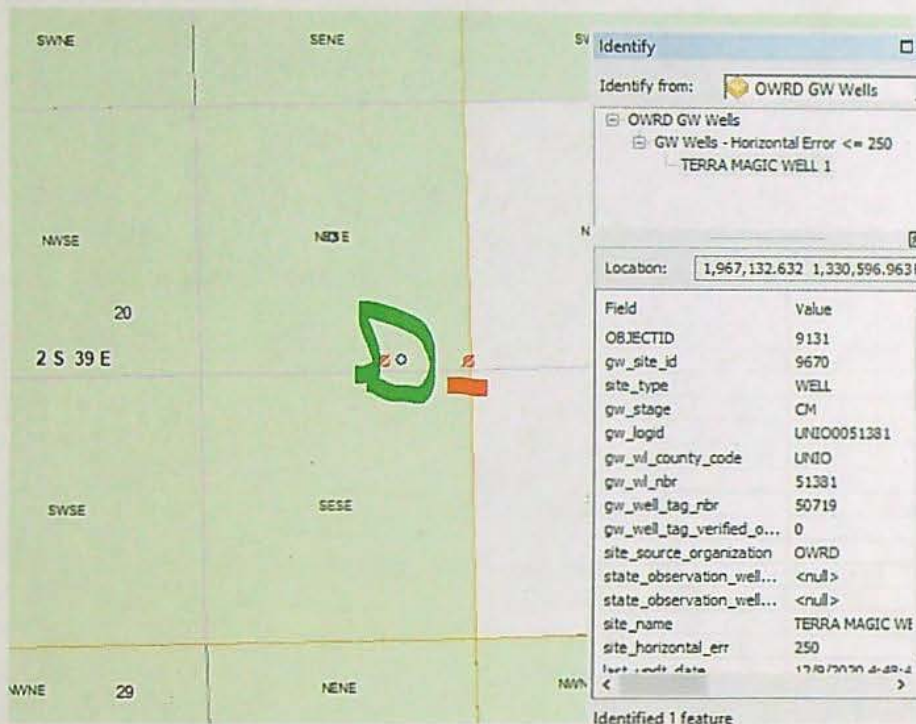


## KAVANAGH Kerry L \* WRD

**From:** GRAHAM Elisabeth A \* WRD  
**Sent:** Saturday, February 10, 2024 6:01 AM  
**To:** KAVANAGH Kerry L \* WRD  
**Subject:** RE: Certificate RA Project R12991-25 for Green LaGrande III involving Application G-16169 - Certificate 97636

Hey Kerry,

Sorry for the transposed numbers.



The green is the 1362 N and 460 W, the grey dot is the GW well layer (verified on permit), red line is the 1362 N and 46 W. I think the map has the typo.

Cheers,  
Lisa

**From:** KAVANAGH Kerry L \* WRD <Kerry.L.KAVANAGH@water.oregon.gov>  
**Sent:** Friday, February 9, 2024 5:21 PM  
**To:** GRAHAM Elisabeth A \* WRD <Elisabeth.A.GRAHAM@water.oregon.gov>  
**Cc:** KAVANAGH Kerry L \* WRD <Kerry.L.KAVANAGH@water.oregon.gov>  
**Subject:** RE: Certificate RA Project R12991-25 for Green LaGrande III involving Application G-16169 - Certificate 97636

Hello Lisa,

I have updated the Primary Irrigation POU table in Cert 97636.



I don't see the 64 feet west – COBU map describes Well 1 as 1362 feet north and 46 feet west from SE Corner Section 20, T2S, R39E, W.M.

Kerry

**Kerry Kavanagh**

Certificate Reimbursement Authority Program Coordinator  
Certificate Section, Water Rights Services Division  
725 Summer St NE Suite A | Salem OR 97301 | Direct 503.979.3208  
[kerry.l.kavanagh@water.oregon.gov](mailto:kerry.l.kavanagh@water.oregon.gov) | <https://www.oregon.gov/OWRD>



Integrity | Service | Technical Excellence | Teamwork | Forward-Looking

---

From: GRAHAM Elisabeth A \* WRD <[Elisabeth.A.GRAHAM@water.oregon.gov](mailto:Elisabeth.A.GRAHAM@water.oregon.gov)>  
Sent: Friday, February 09, 2024 9:34 AM  
To: KAVANAGH Kerry L \* WRD <[Kerry.L.KAVANAGH@water.oregon.gov](mailto:Kerry.L.KAVANAGH@water.oregon.gov)>; WRD\_DL\_is\_data\_techs <[WRD\\_DL\\_is\\_data\\_techs@water.oregon.gov](mailto:WRD_DL_is_data_techs@water.oregon.gov)>  
Subject: RE: Certificate RA Project R12991-25 for Green LaGrande III involving Application G-16169 - Certificate 97636

Hi Kerry,

This has been completed. Time 2 hours.

Couple things.

The primary irrigation on the document and the map are off, just looks like the original acres were not taken off of the document when you ran the template. Mapped only the 240 primary acres.

The Measured Distance may be missing a 0 in the WEST directional, 64 vs 640 FEET.

Please let me know what updates need to be made.

Cheers,  
Lisa

---

From: GRAHAM Elisabeth A \* WRD <[Elisabeth.A.GRAHAM@water.oregon.gov](mailto:Elisabeth.A.GRAHAM@water.oregon.gov)>  
Sent: Friday, February 9, 2024 6:07 AM  
To: KAVANAGH Kerry L \* WRD <[Kerry.L.KAVANAGH@water.oregon.gov](mailto:Kerry.L.KAVANAGH@water.oregon.gov)>; WRD\_DL\_is\_data\_techs <[WRD\\_DL\\_is\\_data\\_techs@water.oregon.gov](mailto:WRD_DL_is_data_techs@water.oregon.gov)>  
Subject: RE: Certificate RA Project R12991-25 for Green LaGrande III involving Application G-16169 - Certificate 97636

Hi Kerry,

I will begin working on this one now.

Thank you,  
Lisa



From: KAVANAGH Kerry L \* WRD <[Kerry.L.KAVANAGH@water.oregon.gov](mailto:Kerry.L.KAVANAGH@water.oregon.gov)>  
Sent: Thursday, February 8, 2024 2:47 PM  
To: WRD\_DL\_is\_data\_techs <[WRD\\_DL\\_is\\_data\\_techs@water.oregon.gov](mailto:WRD_DL_is_data_techs@water.oregon.gov)>  
Cc: KAVANAGH Kerry L \* WRD <[Kerry.L.KAVANAGH@water.oregon.gov](mailto:Kerry.L.KAVANAGH@water.oregon.gov)>  
Subject: Certificate RA Project R12991-25 for Green LaGrande III involving Application G-16169 - Certificate 97636

Hello,

I have received comments from the agent regarding the certificate. I have assigned Certificate number 97636. Please see the pdf of Certificate 97636 for your review/use.

I have attached a pdf of the COBU map.

Let me know if you have any questions.

Thank you!

Kerry

**Kerry Kavanagh**

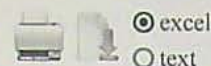
Certificate Reimbursement Authority Program Coordinator  
Certificate Section, Water Rights Services Division  
725 Summer St NE Suite A | Salem OR 97301 | Direct 503.979.3208  
[kerry.l.kavanagh@water.oregon.gov](mailto:kerry.l.kavanagh@water.oregon.gov) | <https://www.oregon.gov/OWRD>



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# Facility Water Use Report



## CRYSTAL SPRINGS Report ID 12538

CRYSTAL SPRINGS;  
500 FEET SOUTH AND 320 FEET EAST FROM NW CORNER, SECTION 29  
(1S-10E-29-NW NW)  
Permit: S 29377 \*  
Cert:10115 OR \*  
Cert:93120 OR \*  
Permit: S 34196 \*

CRYSTAL SPRINGS WATER DISTRICT

Records per page: 100

Acre-feet (AF) of Water Used

<u>Water Year*</u>	<u>Method of Measurement</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Total Water Used</u>	<u>Irrigated Acres</u>
2021	FMT	165.89	212.80	214.02	222.89	235.48	205.00	244.33	196.25	183.77	257.99	237.88	287.30	2663.60	
2020	FMT	161.52	167.99	169.04	164.55	129.30	164.08	181.59	143.13	149.59	200.19	163.84	144.98	1939.79	
2019	FMT	170.91	160.28	159.46	158.37	143.54	164.39	166.65	172.48	164.79	164.26	164.54	164.00	1953.66	
2018	FMT	164.13	154.25	160.64	157.40	151.78	153.82	169.60	166.61	169.60	172.75	170.29	168.47	1959.34	
2017	FMT	166.66	153.32	159.64	165.67	149.64	157.01	167.29	167.38	165.12	169.93	170.78	168.21	1960.65	
2016	FMT	158.88	156.71	157.37	159.96	144.15	1775.46	142.00	147.96	150.87	167.41	163.47	163.86	3488.09	
2015	FMT	130.02	109.75	150.22	169.15	150.29	170.40	116.28	179.40	170.90	160.83	166.57	138.62	1812.43	
2014	FMT	114.99	145.50	15.22	146.41	115.87	131.87	159.27	171.68	155.05	179.73	162.92	172.92	1671.43	
2013		128.90	159.85	142.74	145.08	123.64	125.40	143.56	184.86	159.52	186.40	155.38	178.93	1834.26	
2012		111.53	149.65	147.01	123.63	125.82	160.48	151.01	141.41	139.74	164.81	186.44	176.57	1778.09	
2011		114.29	128.05	123.94	126.71	112.16	117.39	120.43	141.56	141.03	154.88	147.96	153.13	1581.53	
2010		118.19	112.55	164.86	128.45	129.82	153.36	136.39	150.52	139.94	110.04	166.21	131.92	1642.26	
2009		107.28	107.08	101.12	95.00	92.49	155.25	142.93	148.62	137.71	121.65	157.23	134.58	1500.93	
2008		134.76	145.78	121.69	194.81	65.90	124.70	101.81	107.20	107.31	107.10	100.17	123.45	1434.68	
2007		141.22	124.16	143.55	138.29	127.52	145.29	142.93	128.13	129.80	158.51	151.24	152.06	1682.68	
2006		128.29	110.22	131.71	118.34	103.66	135.04	116.62	134.80	122.75	150.31	150.75	139.43	1541.91	
2005		138.00	130.94	130.25	110.24	113.40	129.47	112.73	135.59	124.49	139.09	139.35	130.50	1534.05	
2004		118.33	129.82	113.24	142.92	117.39	134.29	132.83	119.05	142.71	139.34	140.51	134.57	1565.01	
2003		115.79	108.39	121.15	120.29	110.87	125.48	111.87	120.93	121.84	136.54	140.23	133.76	1467.14	
2002		144.00	104.05	118.16	99.57	96.87	121.17	124.61	113.80	101.92	116.17	137.09	116.23	1393.65	
2001		196.99	190.97	169.75	191.12	186.33	176.29	155.63	178.27	160.81	156.60	142.64	144.47	2049.86	
2000		111.61	116.22	86.08	98.11	91.00	100.04	90.24	103.24	99.38	118.35	116.77	117.19	1248.22	
1999		131.86	99.83	100.08	113.13	93.22	102.66	107.34	73.24	120.25	99.11	125.43	114.36	1280.50	
1998		131.97	121.09	102.71	111.79	103.45	114.56	83.86	41.77	79.54	67.60	100.19	139.42	1197.96	
1997		115.18	117.17	70.42	109.94	105.92	112.32	117.95	94.63	90.67	96.86	114.26	121.70	1267.00	
1996		57.92	47.39	35.22	40.75	72.61	49.32	59.12	61.57	56.72	73.23	76.73	105.08	735.66	
1995		149.81	184.84	181.42	185.50	161.60	179.82	163.17	202.66	218.36	180.14	172.09	162.12	2141.55	
1994		179.67	184.27	165.35	175.46	152.26	167.59	156.41	152.51	140.30	166.83	170.10	174.42	1985.17	
1993		172.49	185.03	186.15	175.11	189.02	17.91	147.56	179.39	169.37	167.92	186.19	175.89	1952.02	



1992	184.14	182.78	184.16	190.00	164.89	183.90	189.17	166.08	187.16	196.76	193.63	173.94	2196.60
1991	200.52	187.29	188.15	181.61	168.09	181.04	181.18	190.21	159.65	195.55	170.87	172.62	2176.77
1990	183.16	183.74	195.46	199.48	213.83	206.43	200.09	198.33	206.94	200.22	202.09	208.54	2398.32
1989	186.73	175.03	181.84	224.62	167.38	183.18	189.94	229.72	183.92	230.93	183.98	230.38	2367.63

\*The water year is named for the calendar year in which it ends. Example: the 2014 water year begins Oct. 1, 2013 and ends Sep. 30, 2014.

#### Method(s) of Measurement:

FMT Flowmeter (recording monthly readings and then reporting the difference between one month's reading and the next)

- Monthly amounts indicate:
  - For diverted rights, the total amount diverted during the month;
  - For storage rights, the amount generally stored in the reservoir/pond during the month, as represented by the volume of water impounded on approximately the same day each month.
- Water Use amounts have all been converted to "acre-feet" (AF), regardless of the original measurement unit reported. One AF is the volume of water that will cover an acre of ground one foot deep = 325,850 gallons.
- Zeroes indicate that a report was received, stating that no water was used during those months; if a year is not listed, no report of water use was received for that year.



# Water Use Report Based on Water Right


☒ excel  
☐ text

Permit: S 34196 \*

CRYSTAL SPRINGS WATER DISTRICT PO BOX 186 ODELL, OR 97044

Records per page:  [View All](#)

## Acre-feet (AF) of Water Used

<u>Water Year*</u>	<u>Report ID</u>	<u>Facility</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Total Water Used</u>	<u>Irrigated Acres</u>
2021	<a href="#">12538</a>	CRYSTAL SPRINGS	165.89	212.80	214.02	222.89	235.48	205.00	244.33	196.25	183.77	257.99	237.88	287.30	2663.60	
2020	<a href="#">12538</a>	CRYSTAL SPRINGS	161.52	167.99	169.04	164.55	129.30	164.08	181.59	143.13	149.59	200.19	163.84	144.98	1939.79	
2019	<a href="#">12538</a>	CRYSTAL SPRINGS	170.91	160.28	159.46	158.37	143.54	164.39	166.65	172.48	164.79	164.26	164.54	164.00	1953.66	
2018	<a href="#">12538</a>	CRYSTAL SPRINGS	164.13	154.25	160.64	157.40	151.78	153.82	169.60	166.61	169.60	172.75	170.29	168.47	1959.34	
2017	<a href="#">12538</a>	CRYSTAL SPRINGS	166.66	153.32	159.64	165.67	149.64	157.01	167.29	167.38	165.12	169.93	170.78	168.21	1960.65	
2016	<a href="#">12538</a>	CRYSTAL SPRINGS	158.88	156.71	157.37	159.96	144.15	1775.46	142.00	147.96	150.87	167.41	163.47	163.86	3488.09	
2015	<a href="#">12538</a>	CRYSTAL SPRINGS	130.02	109.75	150.22	169.15	150.29	170.40	116.28	179.40	170.90	160.83	166.57	138.62	1812.43	
2014	<a href="#">12538</a>	CRYSTAL SPRINGS	114.99	145.50	15.22	146.41	115.87	131.87	159.27	171.68	155.05	179.73	162.92	172.92	1671.43	
2013	<a href="#">12538</a>	CRYSTAL SPRINGS	128.90	159.85	142.74	145.08	123.64	125.40	143.56	184.86	159.52	186.40	155.38	178.93	1834.26	
2012	<a href="#">12538</a>	CRYSTAL SPRINGS	111.53	149.65	147.01	123.63	125.82	160.48	151.01	141.41	139.74	164.81	186.44	176.57	1778.09	
2011	<a href="#">12538</a>	CRYSTAL SPRINGS	114.29	128.05	123.94	126.71	112.16	117.39	120.43	141.56	141.03	154.88	147.96	153.13	1581.53	
2010	<a href="#">12538</a>	CRYSTAL SPRINGS	118.19	112.55	164.86	128.45	129.82	153.36	136.39	150.52	139.94	110.04	166.21	131.92	1642.26	
2009	<a href="#">12538</a>	CRYSTAL SPRINGS	107.28	107.08	101.12	95.00	92.49	155.25	142.93	148.62	137.71	121.65	157.23	134.58	1500.93	
2008	<a href="#">12538</a>	CRYSTAL SPRINGS	134.76	145.78	121.69	194.81	65.90	124.70	101.81	107.20	107.31	107.10	100.17	123.45	1434.68	
2007	<a href="#">12538</a>	CRYSTAL SPRINGS	141.22	124.16	143.55	138.29	127.52	145.29	142.93	128.13	129.80	158.51	151.24	152.06	1682.68	
2006	<a href="#">12538</a>	CRYSTAL SPRINGS	128.29	110.22	131.71	118.34	103.66	135.04	116.62	134.80	122.75	150.31	150.75	139.43	1541.91	
2005	<a href="#">12538</a>	CRYSTAL SPRINGS	138.00	130.94	130.25	110.24	113.40	129.47	112.73	135.59	124.49	139.09	139.35	130.50	1534.05	
2004	<a href="#">12538</a>	CRYSTAL SPRINGS	118.33	129.82	113.24	142.92	117.39	134.29	132.83	119.05	142.71	139.34	140.51	134.57	1565.01	
2003	<a href="#">12538</a>	CRYSTAL SPRINGS	115.79	108.39	121.15	120.29	110.87	125.48	111.87	120.93	121.84	136.54	140.23	133.76	1467.14	
2002	<a href="#">12538</a>	CRYSTAL SPRINGS	144.00	104.05	118.16	99.57	96.87	121.17	124.61	113.80	101.92	116.17	137.09	116.23	1393.65	
2001	<a href="#">12538</a>	CRYSTAL SPRINGS	196.99	190.97	169.75	191.12	186.33	176.29	155.63	178.27	160.81	156.60	142.64	144.47	2049.86	
2000	<a href="#">12538</a>	CRYSTAL SPRINGS	111.61	116.22	86.08	98.11	91.00	100.04	90.24	103.24	99.38	118.35	116.77	117.19	1248.22	



1999	<u>12538</u>	CRYSTAL SPRINGS	131.86	99.83	100.08	113.13	93.22	102.66	107.34	73.24	120.25	99.11	125.43	114.36	1280.50
1998	<u>12538</u>	CRYSTAL SPRINGS	131.97	121.09	102.71	111.79	103.45	114.56	83.86	41.77	79.54	67.60	100.19	139.42	1197.96
1997	<u>12538</u>	CRYSTAL SPRINGS	115.18	117.17	70.42	109.94	105.92	112.32	117.95	94.63	90.67	96.86	114.26	121.70	1267.00
1996	<u>12538</u>	CRYSTAL SPRINGS	57.92	47.39	35.22	40.75	72.61	49.32	59.12	61.57	56.72	73.23	76.73	105.08	735.66
1995	<u>12538</u>	CRYSTAL SPRINGS	149.81	184.84	181.42	185.50	161.60	179.82	163.17	202.66	218.36	180.14	172.09	162.12	2141.55
1994	<u>12538</u>	CRYSTAL SPRINGS	179.67	184.27	165.35	175.46	152.26	167.59	156.41	152.51	140.30	166.83	170.10	174.42	1985.17
1993	<u>12538</u>	CRYSTAL SPRINGS	172.49	185.03	186.15	175.11	189.02	17.91	147.56	179.39	169.37	167.92	186.19	175.89	1952.02
1992	<u>12538</u>	CRYSTAL SPRINGS	184.14	182.78	184.16	190.00	164.89	183.90	189.17	166.08	187.16	196.76	193.63	173.94	2196.60
1991	<u>12538</u>	CRYSTAL SPRINGS	200.52	187.29	188.15	181.61	168.09	181.04	181.18	190.21	159.65	195.55	170.87	172.62	2176.77
1990	<u>12538</u>	CRYSTAL SPRINGS	183.16	183.74	195.46	199.48	213.83	206.43	200.09	198.33	206.94	200.22	202.09	208.54	2398.32
1989	<u>12538</u>	CRYSTAL SPRINGS	186.73	175.03	181.84	224.62	167.38	183.18	189.94	229.72	183.92	230.93	183.98	230.38	2367.63

\*The water year is named for the calendar year in which it ends. Example: the 2018 water year begins Oct. 1, 2017 and ends Sep. 30, 2018.

- The Water Resources Department makes reasonable efforts to screen the data for quality control; however, the Department cannot accept responsibility for errors, omissions, or accuracy of the information. Notification of any errors is appreciated. Send notifications to [owrd.waterusereporting@water.oregon.gov](mailto:owrd.waterusereporting@water.oregon.gov) or call 971-345-7489.
- Water use is reported by point of diversion (POD), rather than by water right.
- If a POD is shared with multiple water rights, it is not feasible to separate out the amount used under the water right being queried from water used by other rights using this same POD.
- Monthly amounts indicate:
  - For diverted rights, the total amount diverted during the month;
  - For storage rights, the amount generally stored in the reservoir/pond during the month, as represented by the volume of water impounded on approximately the same day each month.
- Water use amounts have all been converted to "acre-feet" (AF), regardless of the original measurement unit reported. One AF is the volume of water that will cover an acre of ground one foot deep = 325,850 gallons.
- Zeroes indicate that a report was received stating that no water was used during those months; if a year is not listed, no report of water use was received for that year.



RECEIVED  
MAR 3 1969

STATE ENGINEER  
SALEM, OREGON

\*APPLICATION FOR PERMIT

Permit No. 34196

## To Appropriate the Public Waters of the State of Oregon

I, Crystal Springs Water District  
(Name of applicant)  
of P.O. Box 35, Hood River 97031  
(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  
2 October 1963, Hood River

1. The source of the proposed appropriation is Crystal Springs  
(Name of stream)  
East Fork of Hood River, a tributary of  
2. The amount of water which the applicant intends to apply to beneficial use is 3.50  
cubic feet per second.  
(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 domestic-municipal use  
(Irrigation, power, mining, manufacturing, domestic supplies, etc.)

4. The point of diversion is located 500 ft. S. and 320 ft. E. from the N. W.  
(N. or S.) (E. or W.)  
corner of Section 29, T1S, R10E, WM  
(Section or subdivision)

(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 NW1/4 of the NW1/4 of Sec. 29, Tp. 1S  
(Give smallest legal subdivision) (N. or S.)  
R. 10E, W. M., in the county of Hood River  
(E. or W.)

5. The pipelines (Main ditch, canal or pipe line) to be variable (Miles or feet)  
in length, terminating in the NE1/4 of NW1/4 of Sec. 31, Tp. 3N  
(Smallest legal subdivision) (N. or S.)  
R. 11E, W. M., the proposed location being shown throughout on the accompanying map.  
(E. or W.)

See map accompanying Application 39422 - Permit 29377.

### DESCRIPTION OF WORKS

Diversion Works—

6. (a) Height of dam \_\_\_\_\_ feet, length on top \_\_\_\_\_ feet, length at bottom  
\_\_\_\_\_ feet; material to be used and character of construction \_\_\_\_\_  
(Loose rock, concrete, masonry,

rock and brush, timber crib, etc., wasteway over or around dam)

(b) Description of headgate See attached Drawing C 3711-1 sheets 5 & 6.  
(Timber, concrete, etc., number and size of openings)

(c) If water is to be pumped give general description \_\_\_\_\_  
(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.



(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.

8. Location of area to be irrigated, or place of use: see map accompanying Application  
39422 - Permit 29377

[illegible]

(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 ..... feet.

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

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

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

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

....., Sec. ...., Tp. ...., R. ...., W. M.

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

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



Supplement to Item 8  
Application for the Crystal Springs Water District

29377

Town	Range	Section	Forty-Acre Tract
1N	9E	24	All E $\frac{1}{2}$ Sec. 24, except NW $\frac{1}{4}$ of NE $\frac{1}{4}$
1N	9E	25	E $\frac{1}{2}$ of NE $\frac{1}{4}$
1N	10E	1	All
"	"	2	All
"	"	3	All, except SW $\frac{1}{4}$
"	"	10	E $\frac{1}{2}$
"	"	11	All, except E $\frac{1}{2}$ of NE $\frac{1}{4}$ and SE $\frac{1}{4}$
"	"	15	All, except W $\frac{1}{2}$ of NW $\frac{1}{4}$
"	"	17	All except NW $\frac{1}{4}$ , NE $\frac{1}{4}$ , NE $\frac{1}{4}$ of SW $\frac{1}{4}$ and N $\frac{1}{2}$ of SE $\frac{1}{4}$
"	"	18	All, except NE $\frac{1}{4}$ and N $\frac{1}{2}$ of NW $\frac{1}{4}$
"	"	19	All
"	"	20	All
"	"	21	All, except N $\frac{1}{2}$ of NW $\frac{1}{4}$ and N $\frac{1}{2}$ of NE $\frac{1}{4}$
"	"	22	All
"	"	27	All
"	"	28	All
"	"	29	All
"	"	30	All
"	"	32	NW $\frac{1}{4}$ of NW $\frac{1}{4}$ and E $\frac{1}{2}$ of NE $\frac{1}{4}$
"	"	33	All
"	"	34	All
1N	11E	6	All
2N	10E	1	NE $\frac{1}{4}$ and SE $\frac{1}{4}$
"	"	12	All, except W $\frac{1}{2}$ of NW $\frac{1}{4}$

**RECEIVED**  
MAR 3 1969  
STATE ENGINEER  
SALEM, OREGON

Application No. 45826  
Permit No. 34196



Supplement to Item 8 (continued)

Town	Range	Section	Forty-Acre Tract
2N	10E	13	All
"	"	14	All, except $W\frac{1}{2}$ of $NW\frac{1}{4}$
"	"	15	$SE\frac{1}{4}$ and $S\frac{1}{2}$ of $SW\frac{1}{4}$
"	"	16	$S\frac{1}{2}$ of $SE\frac{1}{4}$
"	"	21	All
"	"	22	All
"	"	23	All
"	"	24	All
"	"	25	All
"	"	26	All
"	"	27	All
"	"	28	All, except $S\frac{1}{2}$ of $SE\frac{1}{4}$ and $S\frac{1}{2}$ of $SW\frac{1}{4}$
"	"	34	All
2N	10E	35	All
"	"	36	All
2N	11E	6	All
"	"	7	All
"	"	18	All
"	"	19	All
"	"	30	All
2N	11E	31	All
3N	10E	25	$SE\frac{1}{4}$ of the $SE\frac{1}{4}$
"	"	36	$SE\frac{1}{4}$ of $NE\frac{1}{4}$ and $E\frac{1}{2}$ of $SE\frac{1}{4}$
3N	11E	30	$S\frac{1}{2}$ of the $SW\frac{1}{4}$
"	"	31	$NW\frac{1}{4}$ and $SW\frac{1}{4}$

Application No. 45826  
Permit No. 34196



Township North or South	Range E. or W. of Williamsburg Meridian	Section	Party-own Trust	Number Acres To Be Released
1S	R10E	4	W $\frac{1}{2}$ of SW $\frac{1}{4}$	
"		5	All	
"		6	All Except W $\frac{1}{2}$ of NW $\frac{1}{4}$ and NW $\frac{1}{4}$ of SW $\frac{1}{4}$	
"		7	All except W $\frac{1}{2}$ of NW $\frac{1}{4}$ and NW $\frac{1}{4}$ of SW $\frac{1}{4}$	
"		8	All	
"		9	W $\frac{1}{2}$ of NW $\frac{1}{4}$ and W $\frac{1}{2}$ of SW $\frac{1}{4}$	
"		16	W $\frac{1}{2}$ of NW $\frac{1}{4}$ and W $\frac{1}{2}$ of SW $\frac{1}{4}$	
"		17	All except S $\frac{1}{2}$ of SW $\frac{1}{4}$ and SW $\frac{1}{4}$ of SE $\frac{1}{4}$ N $\frac{1}{2}$ of NW $\frac{1}{4}$ , N $\frac{1}{2}$ of NE $\frac{1}{4}$ , SE $\frac{1}{4}$ of NE $\frac{1}{4}$ and NE $\frac{1}{4}$ of SE $\frac{1}{4}$	
"		18		
"		20	E $\frac{1}{2}$ of NE $\frac{1}{4}$	
"		21	W $\frac{1}{2}$ of NW $\frac{1}{4}$	
"			(Also see attached sheets)	

(If more space required, attach separate sheet)

*extended  
to C 58*

Application No. 45826  
Permit No. 34196



10. (a) To supply the city of Crystal Springs Water District  
Hood River County, having a present population of 3950  
(Name of)  
 and an estimated population of, 8000 in 19 2000.  
 (b) If for domestic use state number of families to be supplied 2290

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

11. Estimated cost of proposed works, \$1,500,000  
 12. Construction work will begin on or before January 1968  
 13. Construction work will be completed on or before January 1970  
 14. The water will be completely applied to the proposed use on or before year 2000

Gowlan Wells  
(Signature of applicant)  
 by Gowlan Wells, Chairman, Board of Commiss.

Remarks: Headworks, second storage reservoir, and first 60,000 feet of new  
pipelines already constructed (1967-1968). Next 125,000 feet of new pipelines  
and third storage reservoir under contract now and due to be completed by  
September 1969.

Domestic and industrial growth will require full use of all of existing water  
rights plus this application prior to year 2000.

Existing rights and permits are as follows:

Application 13490 - Permit 9831 for 1.0 cfs

Application 39422 - Permit 29377 for 2.65 cfs

Spring yield during water system high demand period is about 7.1 cfs.

Granting of this application will give the District rights to 7.15 cfs at the spring.

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

In order to retain its priority, this application must be returned to the State Engineer, with corrections on or before , 19

WITNESS my hand this day of , 19

STATE ENGINEER

By ASSISTANT



PERMIT

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 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 3.5 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 Crystal Springs

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 March 3, 1969

Actual construction work shall begin on or before August 25, 1970 and shall

thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1971  
Extended to October 1, 1983

Complete application of the water to the proposed use shall be made on or before October 1, 1972  
Extended to October 1, 1983

WITNESS my hand this 25th day of August, 1969  
Extended to Oct. 1, 1978  
Extended to October 1, 1993

B+C to 10-1-98

*Chris L. Meier*  
STATE ENGINEER

Application No. 45826  
Permit No. 34196

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 3rd day of March  
1969, at 8:00 o'clock A. M.

Returned to applicant:

Approved:

August 25, 1969

Recorded in book No. \_\_\_\_\_ of \_\_\_\_\_

Permits on page 34196

CHRIS L. MEIER  
STATE ENGINEER

Drainage Basin No. 4 page 24

Fees \$31.00



STATE OF OREGON  
WATER SOURCES DEPARTMENT

725 Summer St. N.E. Ste. A  
SALEM, OR 97301-4172

(503) 986-0900 / (503) 986-0904 (fax)

RECEIPT # 138781

INVOICE # \_\_\_\_\_

RECEIVED FROM: Crystal Springs Water District  
BY: \_\_\_\_\_

APPLICATION 5-45826  
PERMIT \_\_\_\_\_  
TRANSFER \_\_\_\_\_

CASH: ☐ CHECK: # 5186 OTHER: (IDENTIFY) \_\_\_\_\_

TOTAL REC'D \$ 1,588.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 47126 R 12890.23 \$ \_\_\_\_\_  
0413 OTHER: (IDENTIFY) Certificate Reimbursement Authority \$ 1,588.00  
0243 I/S Lease \_\_\_\_\_ 0244 Muni Water Mgmt. Plan \_\_\_\_\_ 0245 Cons. Water \_\_\_\_\_

4270 WRD OPERATING ACCT

MISCELLANEOUS

0407 COPY & TAPE FEES \$ \_\_\_\_\_  
0410 RESEARCH FEES \$ \_\_\_\_\_  
0408 MISC REVENUE: (IDENTIFY) \_\_\_\_\_ \$ \_\_\_\_\_  
TC162 DEPOSIT LIAB. (IDENTIFY) \_\_\_\_\_ \$ \_\_\_\_\_  
0240 EXTENSION OF TIME \_\_\_\_\_ \$ \_\_\_\_\_

WATER RIGHTS:

	EXAM FEE		RECORD FEE
0201 SURFACE WATER	\$ _____	0202	\$ _____
0203 GROUND WATER	\$ _____	0204	\$ _____

0205 TRANSFER \$ \_\_\_\_\_

WELL CONSTRUCTION

	EXAM FEE		LICENSE FEE
0218 WELL DRILL CONSTRUCTOR	\$ _____	0219	\$ _____
LANDOWNER'S PERMIT		0220	\$ _____

OTHER (IDENTIFY) \_\_\_\_\_

0536 TREASURY 0437 WELL CONST. START FEE

0211 WELL CONST START FEE \$ \_\_\_\_\_ CARD# \_\_\_\_\_  
0210 MONITORING WELLS \$ \_\_\_\_\_ CARD# \_\_\_\_\_

OTHER (IDENTIFY) \_\_\_\_\_

0607 TREASURY 0467 HYDRO ACTIVITY

0233 POWER LICENSE FEE (FW/WRD) \_\_\_\_\_ \$ \_\_\_\_\_  
0231 HYDRO LICENSE FEE (FW/WRD) \_\_\_\_\_ \$ \_\_\_\_\_  
HYDRO APPLICATION \_\_\_\_\_ \$ \_\_\_\_\_

TREASURY OTHER / RDX

FUND \_\_\_\_\_ TITLE \_\_\_\_\_

OBJ. CODE \_\_\_\_\_ VENDOR # \_\_\_\_\_

DESCRIPTION \_\_\_\_\_ \$ \_\_\_\_\_

RECEIPT: 138781

DATE: 7-29-2022 BY: [Signature]

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal

STATE OF OREGON  
WATER SOURCES DEPARTMENT

725 Summer St. N.E. Ste. A  
SALEM, OR 97301-4172

(503) 986-0900 / (503) 986-0904 (fax)

RECEIPT # 138781

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BY: \_\_\_\_\_

APPLICATION 5-45826  
PERMIT \_\_\_\_\_  
TRANSFER \_\_\_\_\_

CASH: ☐ CHECK: # 5186 OTHER: (IDENTIFY) \_\_\_\_\_

TOTAL REC'D \$ 1,588.00

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0407 COPIES 47126 R 12890.23 \$ \_\_\_\_\_  
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4270 WRD OPERATING ACCT

MISCELLANEOUS

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0410 RESEARCH FEES \$ \_\_\_\_\_  
0408 MISC REVENUE: (IDENTIFY) \_\_\_\_\_ \$ \_\_\_\_\_  
TC162 DEPOSIT LIAB. (IDENTIFY) \_\_\_\_\_ \$ \_\_\_\_\_  
0240 EXTENSION OF TIME \_\_\_\_\_ \$ \_\_\_\_\_

WATER RIGHTS:

	EXAM FEE		RECORD FEE
0201 SURFACE WATER	\$ _____	0202	\$ _____
0203 GROUND WATER	\$ _____	0204	\$ _____

0205 TRANSFER \$ \_\_\_\_\_

WELL CONSTRUCTION

	EXAM FEE		LICENSE FEE
0218 WELL DRILL CONSTRUCTOR	\$ _____	0219	\$ _____
LANDOWNER'S PERMIT		0220	\$ _____

OTHER (IDENTIFY) \_\_\_\_\_

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0211 WELL CONST START FEE \$ \_\_\_\_\_ CARD# \_\_\_\_\_  
0210 MONITORING WELLS \$ \_\_\_\_\_ CARD# \_\_\_\_\_

OTHER (IDENTIFY) \_\_\_\_\_

0607 TREASURY 0467 HYDRO ACTIVITY

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0231 HYDRO LICENSE FEE (FW/WRD) \_\_\_\_\_ \$ \_\_\_\_\_  
HYDRO APPLICATION \_\_\_\_\_ \$ \_\_\_\_\_

TREASURY OTHER / RDX

FUND \_\_\_\_\_ TITLE \_\_\_\_\_

OBJ. CODE \_\_\_\_\_ VENDOR # \_\_\_\_\_

DESCRIPTION \_\_\_\_\_ \$ \_\_\_\_\_

RECEIPT: 138781

DATE: 7-29-2022 BY: [Signature]

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal





OREGON WATER RESOURCES DEPARTMENT  
CERTIFICATE REIMBURSEMENT AUTHORITY  
APPLICANT'S AGREEMENT  
Contract Number: R12890-23

This Agreement is between the Oregon Water Resources Department, hereafter OWRD, and Crystal Springs Water District, hereafter Applicant, hereafter known together as the parties.

**OWRD Information**

Project Contact: Kerry Kavanagh  
Reimbursement Authority  
Oregon Water Resources Department

725 Summer Street NE  
Salem, OR 97301-1271  
Phone: 503-979-3208

Email: [Kerry.L.Kavanagh@water.oregon.gov](mailto:Kerry.L.Kavanagh@water.oregon.gov)

**Applicant's Information**

Name: Fred Schatz  
Title: Superintendent  
Company: Crystal Springs  
Water District

Address: PO Box 186  
Odell, OR 97044  
Phone: 541-354-1818

Email\*: [office@cswdhr.com](mailto:office@cswdhr.com)

**Applicant's Representative**

Name: William Pavlich  
Title: Representative  
Company: PACE Engineers, Inc.

Address: 4500 Kruse Way, Ste 250  
Lake Oswego OR 97035  
Phone: 503-597-3222

Email\*: [billp@paceengrs.com](mailto:billp@paceengrs.com)

\*By providing an Email address, consent is given to receive all correspondence electronically. (Paper copies of the certificate and final order documents will also be mailed.)

1. **Purpose.** The purpose of this Agreement is to expedite the processing of the **Claim of Beneficial Use**. (Application Number: S-45826)
2. **Authority.** ORS 536.055 authorizes the OWRD to enter into a voluntary agreement with any applicant, permittee or regulated entity (collectively Applicant) for expediting or enhancing a regulatory process. In making this agreement, OWRD shall require the applicant to pay the full cost of expedited process.
3. **Restrictions.** Crystal Springs Water District and OWRD agree that this Agreement shall not be construed to restrict in any way the decisions and actions by OWRD. OWRD shall be free to exercise independent judgment consistent with existing laws and regulations.
4. **Effective Date and Duration.** Unless otherwise terminated by non-deposit of funds by the Applicant, this Agreement shall become effective on the date on which both parties have signed the Agreement and the full deposit of the estimated cost of the proposed service has been received by OWRD.
5. **Consideration.** Crystal Springs Water District shall pay OWRD in advance for actual costs incurred by OWRD. Crystal Springs Water District agrees to pay the full amount of **\$1588** to OWRD prior to commencement of any work stated in this Agreement. This payment will be placed in an account administered by OWRD and drawn upon as costs are actually incurred. If the actual cost of performing the work is less than payments received, OWRD will refund the unspent balance. If the actual cost of processing exceeds the estimate, the Applicant can either elect to terminate this Agreement or amend the Agreement to reflect the increase in cost. The do not include the statutory application processing and filing fees.
6. **Confidentiality.** Crystal Springs Water District agrees that any information by OWRD under this Agreement will be subject to the Oregon Public Information Act and considered public records.
7. **Indemnity.** Applicant shall defend, save, hold harmless, and indemnify OWRD and their officers, employees, and agents from and against all claims, damages, liabilities, costs and expenses of any nature resulting from or arising out of the work of Applicant or its representatives, officers, employees, contractors, or agents under this Agreement or with respect to the expedited service. The Applicant acknowledges that the Oregon Water Resources Department cannot and does not guarantee a favorable review under the subject regulatory process.

RECEIVED

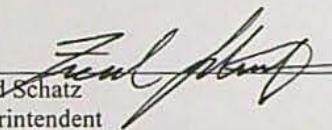
JUL 29 2022

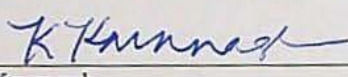
OWRD

PCA 47126



8. **Termination.** Applicant may request to terminate this agreement only in writing at any time during the process. The Applicant agrees to pay for the work done by the Reimbursement Authority personnel up until the time of the written termination request. OWRD, upon receiving such written termination request from the Applicant, will refund any unspent balance after paying the Reimbursement Authority personnel for the work done.
9. **Funds Authorized and Available.** By its execution of this Agreement, Applicants certifies that sufficient funds are authorized and available to cover the expenditures contemplated by this Agreement.
10. **Duration of Estimate.** The Estimate of Time to complete the work is no later than one hundred and twenty days (120) days once this Agreement has been fully executed and payment of the estimated cost deposited. However, this estimate is contingent on the Applicant's expeditious resolution of any deficiency and may be affected by the Department's work load. This Estimate of Time may become null and void after thirty (30) days from the date the Applicant's Agreement is mailed. If the Applicant's Agreement is not received by the Department within thirty (30) days of mailing the Agreement, the Applicant may need to re-apply for a new estimate.
11. **Completion Date.** OWRD, by the execution of this Agreement does not guarantee the completion date indicated in this Agreement. Completion date is only an estimate and may be affected by the Department's workload, issues arising from the processing of the requested services and Applicant's timely response to requests for additional information.
12. **Captions.** The captions or headings in this Agreement are for the convenience only and in no way define limit or describe the scope or intent of any provision of this Agreement.
13. **Amendment and Merger.** The terms of this Agreement shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, except by written instrument signed by both parties. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements or representations, oral or written, not specified herein regarding this Agreement.
14. **Signatures.** All parties, by the authorized representative's signature below, hereby acknowledge that they have read this Agreement, understand it and agree to be bound by its terms and conditions.

Applicant:   
Name: Fred Schatz  
Title: Superintendent  
Company: Crystal Springs Water District  
Date: \_\_\_\_\_

For OWRD:   
Name: Kerry Kavanagh  
Water Right Services Division  
Date: 8-3-2022

Mail signed Agreement to:

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

PCA 47126





OREGON WATER RESOURCES DEPARTMENT  
CERTIFICATE REIMBURSEMENT AUTHORITY  
ESTIMATE APPLICATION

ORS 536.055 authorizes the Oregon Water Resources Department to expedite or enhance regulatory processes voluntarily requested under the agreement.

The purpose of this application is to obtain estimates of the cost and time required to process a Certificate Request. A separate estimate application is required for each application and/or transfer number. There is a non-refundable application fee of \$125.00 per request.

REQUEST	TYPE	FILE NUMBER
<input checked="" type="checkbox"/>	Certificate Request	Application Number S-45826 Permit Number S-34196 Transfer Number/Permit Amendment (if applicable) NA

	Applicant Information	Applicant's Representative/Contact
Name:	Fred Schatz, Crystal Springs Water District	William Pavlich, PACE Engineers, Inc.
Address:	PO Box 186 Odell, OR 97044	4500 Kruse Way, Suite 250 Lake Oswego, OR 97035
Phone:	541.354.1818	503.597.3222
Fax:		503.597.7655
E-Mail Address:	office@cswdhr.com	billp@paceengrs.com

I certify that I (check one):

- ☐ have previously filed a Claim of Beneficial Use  
☒ am attaching the Claim of Beneficial Use with this request and have included the app

I understand the following:

- That upon receipt of my non-refundable application fee in the amount of \$ 125.00, OW (14) days, notify me in writing of the estimates of cost and time frame for the expedited
- That this fee covers the reimbursement authority staff to evaluate and provide the estim request.
- That upon receiving the estimate I may agree or decline to enter into a formal contract t in advance to initiate the expedited service.
- An incomplete or inaccurate Claim of Beneficial Use may delay the process and increas to process my request.
- Expedited processing does not guarantee a favorable review of my request.
- Send completed Application and payment to:  
Oregon Water Resources Department  
Certificate Reimbursement Authority Program  
725 Summer St. NE, Suite A  
Salem, OR 97301-1271

I certify that I am the (check one):

- ☐ Applicant ☒ Applicant's Representative ☐ Other (Please specify) \_\_\_\_\_

Name: William Pavlich, PE, CWRE

Signature: William Pavlich

OWRD USE ONLY: Reimbursement Authority Number: R12 890-23

RECEIVED

JUL 29 2022

OWRD

RECEIVED

JUL 01 2022

OWRD



## KAVANAGH Kerry L \* WRD

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Friday, July 22, 2022 9:22 AM  
**To:** office@cswdhr.com; billp@paceengrs.com  
**Cc:** KAVANAGH Kerry L \* WRD  
**Subject:** Certificate RA Estimate R12890-23 for Crystal Springs Water District involving Application S-45826  
**Attachments:** RA contract\_S-45826.pdf; RA estimate request\_S-45826.pdf; RA estimate receipt\_S-45826.pdf

Hello Fred and Bill,

Please find the attached estimate and agreement to review the claim of beneficial use (Claim). If the proposed agreement is acceptable to you, please return a signed copy to our office along with the payment of the estimated cost to review the claim of beneficial use.

If you have any questions, please send me an email at [kerry.l.kavanagh@water.oregon.gov](mailto:kerry.l.kavanagh@water.oregon.gov).

Thanks,  
Kerry

### ***Kerry Kavanagh***

Certificate Reimbursement Authority Program Coordinator  
Certificate Section, Water Rights Services Division  
725 Summer St NE Suite A | Salem OR 97301 | Direct 503.979.3208  
[kerry.l.kavanagh@water.oregon.gov](mailto:kerry.l.kavanagh@water.oregon.gov) | <https://www.oregon.gov/OWRD>



Integrity | Service | Technical Excellence | Teamwork | Forward-Looking



STATE OF OREGON  
WATER RESOURCES DEPARTMENT  
725 Summer St. N.E. Ste. A  
SALEM, OR 97301-4172  
(503) 986-0900 / (503) 986-0904 (fax)

RECEIPT # 138556

INVOICE #

RECEIVED FROM: Crysta Springs Water District  
BY:

APPLICATION S-45826  
PERMIT  
TRANSFER

CASH: ☐ CHECK: # 5137 OTHER: (IDENTIFY) ☐

TOTAL REC'D \$ 125.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 41726 R12890-23 \$  
0413 OTHER: (IDENTIFY) Reimbursement Authority \$ 125.00

0243 I/S Lease 0244 Muni Water Mgmt. Plan 0245 Cons. Water

4270 WRD OPERATING ACCT

MISCELLANEOUS

0407 COPY & TAPE FEES \$  
0410 RESEARCH FEES \$  
0408 MISC REVENUE: (IDENTIFY) \$  
TC162 DEPOSIT LIAB. (IDENTIFY) \$  
0240 EXTENSION OF TIME \$

WATER RIGHTS:

0201 SURFACE WATER EXAM FEE 0202 RECORD FEE \$  
0203 GROUND WATER EXAM FEE 0204 RECORD FEE \$  
0205 TRANSFER EXAM FEE

WELL CONSTRUCTION

0218 WELL DRILL CONSTRUCTOR EXAM FEE 0219 LICENSE FEE \$  
LANDOWNER'S PERMIT 0220 LICENSE FEE \$

OTHER (IDENTIFY)

0536 TREASURY 0437 WELL CONST. START FEE

0211 WELL CONST START FEE \$ CARD#  
0210 MONITORING WELLS \$ CARD#

OTHER (IDENTIFY)

0607 TREASURY 0467 HYDRO ACTIVITY LIC NUMBER

0233 POWER LICENSE FEE (FW/WRD) \$  
0231 HYDRO LICENSE FEE (FW/WRD) \$  
HYDRO APPLICATION \$

TREASURY OTHER / RDX

FUND TITLE

OBJ. CODE VENDOR #

DESCRIPTION \$

RECEIPT: 138556

DATED 7-1-2022 BY

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal

STATE OF OREGON  
WATER RESOURCES DEPARTMENT  
725 Summer St. N.E. Ste. A  
SALEM, OR 97301-4172  
(503) 986-0900 / (503) 986-0904 (fax)

RECEIPT # 138556

INVOICE #

RECEIVED FROM: Crysta Springs Water District  
BY:

APPLICATION S-45826  
PERMIT  
TRANSFER

CASH: ☐ CHECK: # 5137 OTHER: (IDENTIFY) ☐

TOTAL REC'D \$ 125.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 41726 R12890-23 \$  
0413 OTHER: (IDENTIFY) Reimbursement Authority \$ 125.00

0243 I/S Lease 0244 Muni Water Mgmt. Plan 0245 Cons. Water

4270 WRD OPERATING ACCT

MISCELLANEOUS

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OTHER (IDENTIFY)

0536 TREASURY 0437 WELL CONST. START FEE

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OTHER (IDENTIFY)

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0231 HYDRO LICENSE FEE (FW/WRD) \$  
HYDRO APPLICATION \$

TREASURY OTHER / RDX

FUND TITLE

OBJ. CODE VENDOR #

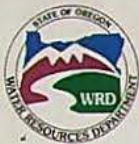
DESCRIPTION \$

RECEIPT: 138556

DATED 7-1-2022 BY

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal





OREGON WATER RESOURCES DEPARTMENT  
CERTIFICATE REIMBURSEMENT AUTHORITY  
ESTIMATE APPLICATION

ORS 536.055 authorizes the Oregon Water Resources Department to expedite or enhance regulatory processes voluntarily requested under the agreement.

The purpose of this application is to obtain estimates of the cost and time required to process a Certificate Request. A separate estimate application is required for each application and/or transfer number. There is a non-refundable application fee of \$125.00 per request.

REQUEST	TYPE	FILE NUMBER
<input checked="" type="checkbox"/>	Certificate Request	Application Number <u>S-45826</u> Permit Number <u>S-34196</u> Transfer Number/Permit Amendment (if applicable) <u>NA</u>

	Applicant Information	Applicant's Representative/Contact
Name:	<u>Fred Schatz, Crystal Springs Water District</u>	<u>William Pavlich, PACE Engineers, Inc.</u>
Address:	<u>PO Box 186</u>	<u>4500 Kruse Way, Suite 250</u>
	<u>Odell, OR 97044</u>	<u>Lake Oswego, OR 97035</u>
Phone:	<u>541.354.1818</u>	<u>503.597.3222</u>
Fax:		<u>503.597.7655</u>
E-Mail Address:	<u>office@cswdhr.com</u>	<u>billp@paceengrs.com</u>

I certify that I (check one):

- ☐ have previously filed a Claim of Beneficial Use  
☒ am attaching the Claim of Beneficial Use with this request and have included the appropriate claim fee.

I understand the following:

- That upon receipt of my non-refundable application fee in the amount of \$ 125.00, OWRD will, within fourteen (14) days, notify me in writing of the estimates of cost and time frame for the expedited service.
- That this fee covers the reimbursement authority staff to evaluate and provide the estimate for processing of the request.
- That upon receiving the estimate I may agree or decline to enter into a formal contract to pay the estimated cost in advance to initiate the expedited service.
- An incomplete or inaccurate Claim of Beneficial Use may delay the process and increase the cost to process my request.
- Expedited processing does not guarantee a favorable review of my request.
- Send completed Application and payment to:

Oregon Water Resources Department  
Certificate Reimbursement Authority Program  
725 Summer St. NE, Suite A  
Salem, OR 97301-1271

RECEIVED

JUL 01 2022

OWRD

I certify that I am the (check one):

- ☐ Applicant ☒ Applicant's Representative ☐ Other (Please specify) \_\_\_\_\_

Name: William Pavlich, PE, CWRE

Signature:

OWRD USE ONLY: Reimbursement Authority Number: R12 890-23



# CRYSTAL SPRINGS WATER DISTRICT [Partial Perfection - 2.85 cfs]

## Completion Checklist for Claims of Beneficial Use for

POST JULY 1, 2004 Claims

Application # <u>5-45826 / Permit</u> <u>S-34196</u>	WRD Reviewer <u>Kerry Kavanagh</u>
Transfer # <u>      </u>	Claim Logged <u>      </u>
Date Received <u>1-4-17</u>	Oversized Map # <u>1060</u>
CWRE Name <u>William M. Pavlich</u>	<u>Jessica Joye 5/16/17</u>

### Map Review:

- ☒ Map on polyester film (OAR 690-014-0170(1) & 310-0050(1)(b))
- ☒ Application & permit #; or transfer # (OAR 690-014-0100(1)) → Permit S-34196 issued 8-25-1969  
date = 10-1-1972  
Extended to 10-1-2058  
3.5 cfs for MU from Crystal Springs
- ☒ Disclaimer (OAR 690-014-0170(5))
- ☒ North arrow (OAR 690-310-0050(2)(c))
- ☒ CWRE stamp and signature (OAR 690-014 & 310-0050)
- ☒ Appropriate scale 1" = 1320', 1" = 400', or the original full-size scale of the county assessor map) (014 & 310)
- ☒ Township, range, section, and tax lot numbers (OAR 690-310-0050(4))
- ☒ Source illustrated if surface water (OAR 690-014-0170(3))
- ☒ Point(s) of diversion or appropriation (illustrated) (OAR 690-014(4) & 690-310-0050)
- ☒ Point(s) of diversion or appropriation (coordinates) (OAR 690-014(4) & 690-310-0050)
- ☒ Conveyance structures illustrated (pump, pipelines, ditches, etc.) (OAR 690-310-0050)
- ☒ Description of the location, in relation to the point of diversion or appropriation, of any fish screens, by-pass devices, and measuring devices required (OAR 690-014-0170(4))
- ☒ Place of use (1/4 1/4, or projected 1/4 1/4 lines within DLCs, or Gov Lots; if irrigation, # of acres in each subdivision; if for domestic or human consumption, location of dwelling or spigot) (OAR 690-310-0050, 690-014, 690-380-6010)

### Report Review:

- ☒ On form or format provided by the Department (OAR 690-014-0100(1))
- ☒ Application & permit #; or transfer # (OAR 690-014)
- ☒ Ownership information (OAR 690-014)
- ☒ Date of survey (OAR 690-014)
- ☒ Person interviewed (OAR 690-014)
- ☒ County (OAR 690-014) HOOD RIVER COUNTY
- ☒ Description of conveyances system (from POD to POU) (OAR 690-014-0100) gravity flow pipe
- ☒ Source(s) of water (OAR 690-014-0100) East Fork Hood River
- ☒ Place of use location (OAR 690-014-0100)
- ☒ Type of use (OAR 690-014-0100) MU
- ☒ Extent of use (OAR 690-014-0100)
- ☒ Rate and Duty (OAR 690-014-0100)
- ☒ Diversion rate for each use (OAR 690-014-0100) one use - MU
- ☒ Diversion works description (pump make, serial model, capacity, and description) (OAR 690-014-0100)
- ☒ System capacity (OAR 690-014-0100)
- ☒ Calculated capacity of system (required) 7.15 cfs
- ☒ Measured amount of use (optional) 2.85 cfs
- ☒ Permit/Transfer Final Order Conditions (OAR 690-014-0100)
- ☒ Time limits
- ☒ Initial water level measurements
- ☒ Annual static water level measurements
- ☒ Measurement, recording, and reporting
- ☒ Meter/measuring device
- ☒ Water use reporting report because gov't entity - not req by permit
- ☒ Fish screening and/or by-pass
- ☒ Pump test (ground water)
- ☒ Other 4 in 8 - CORBU pg 7 of 11
- ☒ Water use for last 3 years
- ☒ Conditions from Extension Final Order and/or Water Management Conservation Plan extended O&C dates to 10-1-2058
- ☒ Progress Reports by Oct 1 in 2010, 2014, 2019, 2024, 2029, 2034, 2039, 2044, 2049
- ☒ Go water user submitted progress reports in 2010 & 2014 & 2054
- ☒ CWRE stamp and signature (OAR 690-014-0100)
- ☒ Signature(s) of permittee or transfer holder (OAR 690-014-0100)

DEF = deficient

N/A = Not Applicable



## Certificate Issuance Processing Checklist

☒ Map and COBU reviewed  
☒ Conflict check Any Conflicts? ml  
☒ Check for ownership ml

Check Area of Interest ☐ YES ☒ NO  
Identified Party \_\_\_\_\_

### Staff Recommendations:

\_\_\_\_\_ Proof to the Satisfaction has been established to the full extent as described in the permit or transfer order.

\_\_\_\_\_ ☒ Proof to the Satisfaction has been not been established to the full extent as described in the permit or transfer order and the right should be limited as follows: Requesting Partial Perfection of 2.85 CFS (of 3.5 CFS authorized)

\_\_\_\_\_ Proof to the Satisfaction has not been established for the following reasons: \_\_\_\_\_

\_\_\_\_\_ **Proposed Actions:**  
Send letter requesting the following items/information: \_\_\_\_\_  
Send letter recommending extension to cure deficiencies: \_\_\_\_\_

Can certificate be processed further?

\_\_\_\_\_ Yes

If "Yes":

\_\_\_\_\_ Proposed  
\_\_\_\_\_ Final

Certificate # \_\_\_\_\_

Mailing list:

Proposed:

Final:

• 11-25-14 WRD rec'd progress report

• 8-4-04 FO approving Extension of Time - extended B d C. dates to 10-1-2058

• COBU addendum describes water rights:

	Priority	
Permit S-9831 Cert 10115	6-30-1930	1.0 CFS DDM
Permit S-29377	1-22-1964	2.65 CFS DDM
Permit S-34196	3-03-1969	3.5 CFS MUNI
		+
		TOTAL = 7.14 CFS

App  
App  
\* App S-45826



Oregon Water Resources Department  
Water Rights Division

Water Rights Application  
Number S-45826

Final Order  
Extension of Time for Permit Number S-34196

***Appeal Rights***

**This is a final order other than contested case.** Pursuant to ORS 536.075 and OAR 137-004-080 and OAR 690-01-005 you may either petition the Director for reconsideration of this order or petition for judicial review of this order. As provided in ORS 536.075, this order is subject to judicial review under ORS 183.484. Any petition for judicial review of the order must be filed within the 60 day time period specified by ORS 183.484(2).

***Application History***

On MARCH 1, 1999, CRYSTAL SPRINGS WATER DISTRICT submitted an application to the Department for an extension of time for permit number S-34196. The Department issued permit number S-34196 on AUGUST 25, 1969. The permit called for completion of construction of the water development project by OCTOBER 1, 1971, and complete application of water to the full beneficial use by OCTOBER 1, 1972. In accordance with OAR 690-320-0010(8), on MARCH 28, 2000, the Department issued a Proposed Final Order proposing to extend the time to complete construction of the water development project and the time to fully apply water to beneficial use to OCTOBER 1, 2058. The protest period closed MAY 12, 2000. On MAY 12, 2000, the Department received one protest filed jointly by WaterWatch of Oregon and Oregon Trout. On JULY 23, 2004, however, the protestants withdrew the protest to the Proposed Final Order for Extension of Time for Permit #S-34196.

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

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

**CONDITIONS**

**In accordance with OAR 690-320-0010(10), the permittee must submit a written progress report to the Department by October 1, of the years 2009, 2014, 2019, 2024, 2029, 2034, 2039, 2044, 2049 and 2054. The report must be received by the Department**



not sooner than 90 days prior to the due date. The permittee's report must describe in detail the work done each year since the last extension was granted or the last progress report submitted. The report shall include:

- a) The amount of construction completed;
- b) The amount of beneficial use of water being made, including the total volume of water used, water used relative to the specific authorizations (types of use, acres irrigated, etc.) contained in the permit, and the percent of the total allowable water use that this represents;
- c) A review of the permittee's compliance with terms and conditions of the permit and/or previous extension; and
- d) Financial investments made toward developing the beneficial water use.

The Department will review the progress report to determine whether the permittee is exercising diligence towards completion of the project and complying with the terms and conditions of the permit and extension.

***Failure to submit a progress report by the due date above may jeopardize continued development under the permit.***

The Department will take into consideration annual reports submitted under OAR 690, Division 86 or ORS 537.099, and any other report that demonstrates diligence.

Other reports, however, are not a substitute for the progress reports and anything submitted must clearly show that diligence towards perfecting the water right permit is being attempted.

If the Department finds that diligence is questionable, the Department may:

- a) request the permittee to submit additional information with which to evaluate diligence; or
- b) apply additional conditions and performance criteria for perfection of the right; or
- c) cancel the undeveloped portion of the permit pursuant to ORS 537.260 or 537.410 to 537.450. The Department will grant the permittee a hearing on the cancellation, if one is requested.

In determining whether the permittee has been diligent, the Department will consider any information submitted to the Department by the permittee and any information submitted during the 30-day public comment period following public notice of submittal of the progress report.

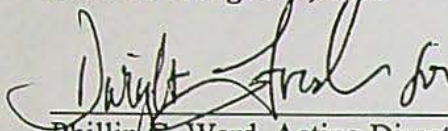
If information is received through the public notice process indicating that the applicant has not been diligent toward completing the project, and if the director determines there are significant disputes related to the use of water, the Department will conduct a hearing.



Order

The extension of time for Application Number S-45826, Permit Number S-34196, therefore, is approved. The deadline for completing construction is extended to OCTOBER 1, 2058. The deadline for applying water to full beneficial use is extended to OCTOBER 1, 2058.

DATED: August 4, 2004

  
Phillip E. Ward, Acting Director

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

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



App 5-45426

### Pipe Capacity Calculator

for pipes flowing full, using the Hazen-Williams Formula

#### Data Entry (fill in underlined blanks)

Interior Diameter = 14 inches, or 1.166667 feet  
Roughness Coefficient (C) = 74  
Fall = 387 feet per 10657 feet of distance  
Grade = 0.03631416, or 3.6%

#### Results calculated

Area of cross-section = 1.069014 square feet  
Wetted Perimeter = 3.665191 feet  
Hydraulic Radius = 0.291667  
Velocity = 7.489742 feet per second

Pipe Capacity = 8.007 cubic feet per second



**537.260 Cancellation of permit for failure of proof of completion of appropriation; issuance of limited certificate; contest of issuance of certificate; exception for municipalities.**

(1) Except as provided under subsection (4) of this section for a permit issued to a municipality, whenever the time within which any appropriation under a permit should have been perfected has expired and the owner of the permit fails or refuses within three months thereafter to submit to the Water Resources Department proof of completion of the appropriation as required by ORS 537.230 and 537.250, the department may, after 60 days' notice by registered mail or by certified mail with return receipt, order the cancellation of the permit. The cancellation shall have the same force and effect as cancellation of a permit in the proceedings provided for in ORS 537.410 to 537.450.

(2) The department may determine the extent to which an appropriation has been perfected under any permit at the time of submission of final proof provided for in ORS 537.250, and shall limit the certificate provided for in that section to a description of such appropriation as has been actually perfected to the extent that the water applied for has been actually applied to the beneficial use contemplated in the permit.

(3) Any person owning an application, permit or water right certificate subsequent in priority may jointly or severally contest before the department the issuance of the water right certificate at any time before it has issued, and after the time has expired for the completion of the appropriation under the permit, or within three months after issuance of the certificate. The contest shall be brought upon application made, and hearing shall be had in the same manner and after notice as provided in ORS 537.420 for department, in a final order, may cancel the permit or determine the extent to which the appropriation claimed thereunder has been perfected, and issue a water right certificate accordingly, or if a certificate has been issued, in the case of a contest within three months after its issuance, the department may cancel the water right certificate, or affirm its issuance, and if the water right certificate in such case is canceled, the permit upon which it is based shall also be canceled.

**(4) A municipality may partially perfect not less than 25 percent of the water authorized by its permit without loss of priority or cancellation of the municipality's permit under this section. If a municipality defers perfection of its water right under this section, the department shall issue a certificate under ORS 537.250 only for the amount perfected. Upon perfection of the deferred amount, the municipality shall request a water right certificate for the remaining portion of the water applied for in the original permit application. As used in this section, "municipality" includes a city, a port formed under ORS 777.005 to 777.725 and 777.915 to 777.953, a domestic water supply district formed under ORS chapter 264 or a water authority formed under ORS chapter 450.**

[Amended by 1983 c.740 §211; 1985 c.673 §38; 1989 c.707 §2; 1991 c.249 §43; 1993 c.577 §35; 1995 c.416 §37]



### Incremental Perfection of a Municipal Water Right

(1) A municipal supplier may incrementally perfect a portion of the quantity of water authorized by any of its municipal water use permits. For the purpose of incrementally perfecting water rights, a municipal supplier means:

- (a) Any incorporated city, village, or town;
- (b) A port formed under ORS 777.005 to 777.725 and ORS 777.915 to 777.953;
- (c) A domestic water supply district formed under ORS Chapter 264; or
- (d) A water supply authority formed under ORS Chapter 450.

(2) The portion of water use that may be incrementally perfected by a municipal supplier shall not be less than 25 percent of the quantity originally authorized by permit. The perfection, or proof of appropriation, of each increment of water shall conform to the proof of appropriation requirements of OAR 690-330-0010.

(3) When a portion of a permit issued for municipal use is perfected by a municipal supplier, the remaining unperfected quantity of water shall remain in permit status without loss of priority. The increment of water perfected and confirmed by certificate shall be subtracted from the quantity of water originally authorized by permit. The remainder shall be the quantity of water subject to future perfection under the terms of the permit.

(4) A municipal supplier shall notify the Department, in writing, of its intent to incrementally perfect a portion of its water right. Written notice shall include the following information:

- (a) The quantity of water diverted from each point of diversion, by month, for the preceding three years;
  - (b) A plan of how the municipal supplier intends to develop successive increments of its water right; and
  - (c) Maps that show where water will be put to use. Maps accompanying notification of intent to perfect an increment of a water right shall be prepared to the specifications described in OAR 690-310-0050, except that a standard even scale less than 4" = 1 mile may be used if appropriate.
- (5) Municipal suppliers that incrementally perfect less than the full quantity of water authorized by permit may request further extension of the time limit to complete construction and apply water to beneficial use for the remaining, unperfected quantity of water. OAR 690-320-0010 governing extension of time limits applies to unperfected municipal water rights.

Stat. Auth.: ORS 536.025 & ORS 536.027,

Stats. Implemented: ORS 536.220, ORS 536.300, ORS 536.310, ORS 537.260 & ORS 540

Hist.: WRD 19-1990, f. & cert. ef. 12-14-90; WRD 9-1992, f. & cert. ef. 7-1-92, Renumbered from 690-011-0130; WRD 1-1996, f. & cert. ef. 1-31-96, Renumbered from 690-011-0235



# Water Use Report Based on Water Right


☒ excel  
☐ text

Permit: S 54664 \*

SAVIERS, RICHARD L. PO BOX 837 COOS BAY, OR 97420

Records per page: 

<u>Water Year*</u>	<u>Report ID</u>	<u>Facility</u>	<u>Acre-feet (AF) of Water Used</u>												<u>Total Water Used</u>	<u>Irrigated Acres</u>
			<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>		
2011	<a href="#">64716</a>	GLENN CR							0.01	0.00	0.00	0.01	0.00	0.00	0.02	
2012	<a href="#">64716</a>	GLENN CR	0.01	0.00	0.01	0.00	0.00	0.04	0.03	0.01	0.01	0.01	0.05	0.07	0.24	
2013	<a href="#">64716</a>	GLENN CR	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.00	0.00	0.12	
2014	<a href="#">64716</a>	GLENN CR	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09	0.00
2015	<a href="#">64716</a>	GLENN CR	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.13	
2016	<a href="#">64716</a>	GLENN CR	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.11	

\*The water year is named for the calendar year in which it ends. Example: the 2014 water year begins Oct. 1, 2013 and ends Sep. 30, 2014.

- Water use is reported by point of diversion (POD), rather than by water right.
- If a POD is shared with multiple water rights, it is not feasible to separate out the amount used under the water right being queried from water used by other rights using this same POD.
- Monthly amounts indicate:
  - For diverted rights, the total amount diverted during the month;
  - For storage rights, the amount generally stored in the reservoir/pond during the month, as represented by the volume of water impounded on approximately the same day each month.
- Water Use amounts have all been converted to "acre-feet" (AF), regardless of the original measurement unit reported. One AF is the volume of water that will cover an acre of ground one foot deep = 325,850 gallons.
- Zeroes indicate that a report was received, stating that no water was used during those months; if a year is not listed, no report of water use was received for that year.





# Oregon Water Resources Department Water Rights Information Query

Permit: S 34196 \*

[Main](#)   [Help](#)  
[Return](#)   [Contact Us](#)

## Contact Information (Click to Collapse...)

### Current contact information

OWNER:  
 CRYSTAL SPRINGS WATER DISTRICT  
 PO BOX 186  
 ODELL, OR 97044

## Water Right Information (Click to Collapse...)

Status: Non-Cancelled  
 County: Hood River  
 File Folder Location: Salem  
 Watermaster District: 3

## Workflow (Click to Collapse...)

### Application: S 45826

Received: 3/3/1969

### Permit: S 34196 document

Signature: 8/25/1969

### Permit Workflow

Action	Date	Result	Completed By
Permit Issued	8/25/1969		
Extension Application Received	3/1/1999		ANN REECE
Extension PFO 315 Issued	3/28/2000		ANN REECE
Extension FO Issued	8/4/2004		
Extension Checkpoint 315 Received	9/22/2009		SCOTT KUDLEMYER
Extension Checkpoint 320 Received	9/22/2009		
Extension Checkpoint 320 Public Notice	9/29/2009		SCOTT KUDLEMYER
Extension Checkpoint 320 Received	11/25/2014		
Extension Checkpoint 320 Public Notice	12/9/2014		
Extended Completion Date [Extension C Date]	10/1/2058		ANN REECE

### Order(s)

Order Origin	Volume-Page	Signature	Description
Special	25-100	9/16/1974	ORDER EXTENDING TIME IN WHICH TO COMPLETE CONSTRUCTION AND MAKE COMPLETE APPLICATION OF WATER UNDER CERTAIN PERMITS
Special	31-561	1/12/1979	EXTENDS TIME, CERTAIN PERMITS (385)
Special	38-225	5/1/1984	EXTENDS 266 PERMITS
Special	44-53	2/16/1990	EXTENSION ORDER
Special	48-113	2/9/1994	EXTENDS TIME LIMITS ON PERMITS

- View right with Web Mapping
- View Places of Use from Water Rights in the Same Area
- View Reported Water Use

## Scanned Documents (Click to Collapse...)

Records per page: 6

Document Type	Document Title	Date	Remarks
Permit	Permit S34196 Image	8/25/1969	
Order	Order Image - Volume: 25 Page: 100	9/16/1974	ORDER EXTENDING TIME IN WHICH TO COMPLETE CONSTRUCTION AND MAKE COMPLETE APPLICATION OF WATER UNDER CERTAIN PERMITS
Order	Order Image - Volume: 31 Page: 561	1/12/1979	EXTENDS TIME, CERTAIN PERMITS (385)
Order	Order Image - Volume: 38 Page: 225	5/1/1984	EXTENDS 266 PERMITS
Order	Order Image - Volume: 44 Page: 53	2/16/1990	EXTENSION ORDER
Order	Order Image - Volume: 48 Page: 113	2/9/1994	EXTENDS TIME LIMITS ON PERMITS

## Point(s) of Diversion (Click to Collapse...)

### POD 1 - CRYSTAL SPRINGS > EAST FORK HOOD RIVER

#### Description

- T-R-S-QQ: 1.00S-10.00E-29-NW NW
- Location Description: 500 FEET SOUTH AND 320 FEET EAST FROM NW CORNER, SECTION 29

#### POD Rate

Max Rate (cfs)	Rate (cfs)	Max Volume (af)	Volume (af)
3.5	3.5		

#### MUNICIPAL USES (Primary)

Priority Date	Max Rate (cfs)	Rate (cfs)	Max Volume (af)	Volume (af)	Elevation (ft)	Rate/Acre	Duty	Start Date	End Date	Remarks
3/3/1969	3.5	3.5						1/1	12/31	



Place(s) of Use (Click to Collapse...)

Add TRS grouping



## ▼ Use - MUNICIPAL USES

(Primary); Priority Date: 3/3/1969

T-R-S	QQ	DLC	Gov't Lot	Taxlot	Acres	Status	Linked PODs	Inchoate Info	Remarks
1.00N-9.00E-24	NE NE					NC			
1.00N-9.00E-24	SW NE					NC			
1.00N-9.00E-24	SE NE					NC			
1.00N-9.00E-24	NE SE					NC			
1.00N-9.00E-24	NW SE					NC			
1.00N-9.00E-24	SW SE					NC			
1.00N-9.00E-24	SE SE					NC			
1.00N-9.00E-25	NE NE					NC			
1.00N-9.00E-25	SE NE					NC			
1.00N-10.00E-1	NE NE					NC			
1.00N-10.00E-1	NW NE					NC			
1.00N-10.00E-1	SW NE					NC			
1.00N-10.00E-1	SE NE					NC			
1.00N-10.00E-1	NE NW					NC			
1.00N-10.00E-1	NW NW					NC			
1.00N-10.00E-1	SW NW					NC			
1.00N-10.00E-1	SE NW					NC			
1.00N-10.00E-1	NE SW					NC			
1.00N-10.00E-1	NW SW					NC			
1.00N-10.00E-1	SW SW					NC			
1.00N-10.00E-1	SE SW					NC			
1.00N-10.00E-1	NE SE					NC			
1.00N-10.00E-1	NW SE					NC			
1.00N-10.00E-1	SW SE					NC			
1.00N-10.00E-1	SE SE					NC			
1.00N-10.00E-2	NE NE					NC			
1.00N-10.00E-2	NW NE					NC			
1.00N-10.00E-2	SW NE					NC			
1.00N-10.00E-2	SE NE					NC			
1.00N-10.00E-2	NE NW					NC			
1.00N-10.00E-2	NW NW					NC			
1.00N-10.00E-2	SW NW					NC			
1.00N-10.00E-2	SE NW					NC			
1.00N-10.00E-2	NE SW					NC			
1.00N-10.00E-2	NW SW					NC			
1.00N-10.00E-2	SW SW					NC			
1.00N-10.00E-2	SE SW					NC			
1.00N-10.00E-2	NE SE					NC			
1.00N-10.00E-2	NW SE					NC			
1.00N-10.00E-2	SW SE					NC			
1.00N-10.00E-2	SE SE					NC			
1.00N-10.00E-3	NE NE					NC			
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2.00N-10.00E-22	NW NW				NC		



2.00N-10.00E-22	SW NW					NC			
2.00N-10.00E-22	SE NW					NC			
2.00N-10.00E-22	NE SW					NC			
2.00N-10.00E-22	NW SW					NC			
2.00N-10.00E-22	SW SW					NC			
2.00N-10.00E-22	SE SW					NC			
2.00N-10.00E-22	NE SE					NC			
2.00N-10.00E-22	NW SE					NC			
2.00N-10.00E-22	SW SE					NC			
2.00N-10.00E-22	SE SE					NC			
2.00N-10.00E-23	NE NE					NC			
2.00N-10.00E-23	NW NE					NC			
2.00N-10.00E-23	SW NE					NC			
2.00N-10.00E-23	SE NE					NC			
2.00N-10.00E-23	NE NW					NC			
2.00N-10.00E-23	NW NW					NC			
2.00N-10.00E-23	SW NW					NC			
2.00N-10.00E-23	SE NW					NC			
2.00N-10.00E-23	NE SW					NC			
2.00N-10.00E-23	NW SW					NC			
2.00N-10.00E-23	SW SW					NC			
2.00N-10.00E-23	SE SW					NC			
2.00N-10.00E-23	NE SE					NC			
2.00N-10.00E-23	NW SE					NC			
2.00N-10.00E-23	SW SE					NC			
2.00N-10.00E-23	SE SE					NC			
2.00N-10.00E-24	NE NE					NC			
2.00N-10.00E-24	NW NE					NC			
2.00N-10.00E-24	SW NE					NC			
2.00N-10.00E-24	SE NE					NC			
2.00N-10.00E-24	NE NW					NC			
2.00N-10.00E-24	NW NW					NC			
2.00N-10.00E-24	SW NW					NC			
2.00N-10.00E-24	SE NW					NC			
2.00N-10.00E-24	NE SW					NC			
2.00N-10.00E-24	NW SW					NC			
2.00N-10.00E-24	SW SW					NC			
2.00N-10.00E-24	SE SW					NC			
2.00N-10.00E-24	NE SE					NC			
2.00N-10.00E-24	NW SE					NC			
2.00N-10.00E-24	SW SE					NC			
2.00N-10.00E-24	SE SE					NC			
2.00N-10.00E-25	NE NE					NC			
2.00N-10.00E-25	NW NE					NC			
2.00N-10.00E-25	SW NE					NC			
2.00N-10.00E-25	SE NE					NC			
2.00N-10.00E-25	NE NW					NC			
2.00N-10.00E-25	NW NW					NC			
2.00N-10.00E-25	SW NW					NC			
2.00N-10.00E-25	SE NW					NC			
2.00N-10.00E-25	NE SW					NC			
2.00N-10.00E-25	NW SW					NC			
2.00N-10.00E-25	SW SW					NC			
2.00N-10.00E-25	SE SW					NC			
2.00N-10.00E-25	NE SE					NC			
2.00N-10.00E-25	NW SE					NC			
2.00N-10.00E-25	SW SE					NC			
2.00N-10.00E-25	SE SE					NC			
2.00N-10.00E-26	NE NE					NC			
2.00N-10.00E-26	NW NE					NC			
2.00N-10.00E-26	SW NE					NC			
2.00N-10.00E-26	SE NE					NC			
2.00N-10.00E-26	NE NW					NC			
2.00N-10.00E-26	NW NW					NC			
2.00N-10.00E-26	SW NW					NC			



2.00N-10.00E-26	SE NW					NC			
2.00N-10.00E-26	NE SW					NC			
2.00N-10.00E-26	NW SW					NC			
2.00N-10.00E-26	SW SW					NC			
2.00N-10.00E-26	SE SW					NC			
2.00N-10.00E-26	NE SE					NC			
2.00N-10.00E-26	NW SE					NC			
2.00N-10.00E-26	SW SE					NC			
2.00N-10.00E-26	SE SE					NC			
2.00N-10.00E-27	NE NE					NC			
2.00N-10.00E-27	NW NE					NC			
2.00N-10.00E-27	SW NE					NC			
2.00N-10.00E-27	SE NE					NC			
2.00N-10.00E-27	NE NW					NC			
2.00N-10.00E-27	NW NW					NC			
2.00N-10.00E-27	SW NW					NC			
2.00N-10.00E-27	SE NW					NC			
2.00N-10.00E-27	NE SW					NC			
2.00N-10.00E-27	NW SW					NC			
2.00N-10.00E-27	SW SW					NC			
2.00N-10.00E-27	SE SW					NC			
2.00N-10.00E-27	NE SE					NC			
2.00N-10.00E-27	NW SE					NC			
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2.00N-10.00E-27	SE SE					NC			
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2.00N-10.00E-28	SE NE					NC			
2.00N-10.00E-28	NE NW					NC			
2.00N-10.00E-28	NW NW					NC			
2.00N-10.00E-28	SW NW					NC			
2.00N-10.00E-28	SE NW					NC			
2.00N-10.00E-28	NE SW					NC			
2.00N-10.00E-28	NW SW					NC			
2.00N-10.00E-28	NE SE					NC			
2.00N-10.00E-28	NW SE					NC			
2.00N-10.00E-34	NE NE					NC			
2.00N-10.00E-34	NW NE					NC			
2.00N-10.00E-34	SW NE					NC			
2.00N-10.00E-34	SE NE					NC			
2.00N-10.00E-34	NE NW					NC			
2.00N-10.00E-34	NW NW					NC			
2.00N-10.00E-34	SW NW					NC			
2.00N-10.00E-34	SE NW					NC			
2.00N-10.00E-34	NE SW					NC			
2.00N-10.00E-34	NW SW					NC			
2.00N-10.00E-34	SW SW					NC			
2.00N-10.00E-34	SE SW					NC			
2.00N-10.00E-34	NE SE					NC			
2.00N-10.00E-34	NW SE					NC			
2.00N-10.00E-34	SW SE					NC			
2.00N-10.00E-34	SE SE					NC			
2.00N-10.00E-35	NE NE					NC			
2.00N-10.00E-35	NW NE					NC			
2.00N-10.00E-35	SW NE					NC			
2.00N-10.00E-35	SE NE					NC			
2.00N-10.00E-35	NE NW					NC			
2.00N-10.00E-35	NW NW					NC			
2.00N-10.00E-35	SW NW					NC			
2.00N-10.00E-35	SE NW					NC			
2.00N-10.00E-35	NE SW					NC			
2.00N-10.00E-35	NW SW					NC			
2.00N-10.00E-35	SW SW					NC			
2.00N-10.00E-35	SE SW					NC			



2.00N-10.00E-35	NE SE				NC			
2.00N-10.00E-35	NW SE				NC			
2.00N-10.00E-35	SW SE				NC			
2.00N-10.00E-35	SE SE				NC			
2.00N-10.00E-36	NE NE				NC			
2.00N-10.00E-36	NW NE				NC			
2.00N-10.00E-36	SW NE				NC			
2.00N-10.00E-36	SE NE				NC			
2.00N-10.00E-36	NE NW				NC			
2.00N-10.00E-36	NW NW				NC			
2.00N-10.00E-36	SW NW				NC			
2.00N-10.00E-36	SE NW				NC			
2.00N-10.00E-36	NE SW				NC			
2.00N-10.00E-36	NW SW				NC			
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2.00N-10.00E-36	SE SW				NC			
2.00N-10.00E-36	NE SE				NC			
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2.00N-11.00E-6	NE NW				NC			
2.00N-11.00E-6	NW NW				NC			
2.00N-11.00E-6	SW NW				NC			
2.00N-11.00E-6	SE NW				NC			
2.00N-11.00E-6	NE SW				NC			
2.00N-11.00E-6	NW SW				NC			
2.00N-11.00E-6	SW SW				NC			
2.00N-11.00E-6	SE SW				NC			
2.00N-11.00E-6	NE SE				NC			
2.00N-11.00E-6	NW SE				NC			
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2.00N-11.00E-6	SE SE				NC			
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2.00N-11.00E-7	SE NE				NC			
2.00N-11.00E-7	NE NW				NC			
2.00N-11.00E-7	NW NW				NC			
2.00N-11.00E-7	SW NW				NC			
2.00N-11.00E-7	SE NW				NC			
2.00N-11.00E-7	NE SW				NC			
2.00N-11.00E-7	NW SW				NC			
2.00N-11.00E-7	SW SW				NC			
2.00N-11.00E-7	SE SW				NC			
2.00N-11.00E-7	NE SE				NC			
2.00N-11.00E-7	NW SE				NC			
2.00N-11.00E-7	SW SE				NC			
2.00N-11.00E-7	SE SE				NC			
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2.00N-11.00E-18	NW NE				NC			
2.00N-11.00E-18	SW NE				NC			
2.00N-11.00E-18	SE NE				NC			
2.00N-11.00E-18	NE NW				NC			
2.00N-11.00E-18	NW NW				NC			
2.00N-11.00E-18	SW NW				NC			
2.00N-11.00E-18	SE NW				NC			
2.00N-11.00E-18	NE SW				NC			
2.00N-11.00E-18	NW SW				NC			
2.00N-11.00E-18	SW SW				NC			
2.00N-11.00E-18	SE SW				NC			
2.00N-11.00E-18	NE SE				NC			



2.00N-11.00E-18	NW SE				NC		
2.00N-11.00E-18	SW SE				NC		
2.00N-11.00E-18	SE SE				NC		
2.00N-11.00E-19	NE NE				NC		
2.00N-11.00E-19	NW NE				NC		
2.00N-11.00E-19	SW NE				NC		
2.00N-11.00E-19	SE NE				NC		
2.00N-11.00E-19	NE NW				NC		
2.00N-11.00E-19	NW NW				NC		
2.00N-11.00E-19	SW NW				NC		
2.00N-11.00E-19	SE NW				NC		
2.00N-11.00E-19	NE SW				NC		
2.00N-11.00E-19	NW SW				NC		
2.00N-11.00E-19	SW SW				NC		
2.00N-11.00E-19	SE SW				NC		
2.00N-11.00E-19	NE SE				NC		
2.00N-11.00E-19	NW SE				NC		
2.00N-11.00E-19	SW SE				NC		
2.00N-11.00E-19	SE SE				NC		
2.00N-11.00E-30	NE NE				NC		
2.00N-11.00E-30	NW NE				NC		
2.00N-11.00E-30	SW NE				NC		
2.00N-11.00E-30	SE NE				NC		
2.00N-11.00E-30	NE NW				NC		
2.00N-11.00E-30	NW NW				NC		
2.00N-11.00E-30	SW NW				NC		
2.00N-11.00E-30	SE NW				NC		
2.00N-11.00E-30	NE SW				NC		
2.00N-11.00E-30	NW SW				NC		
2.00N-11.00E-30	SW SW				NC		
2.00N-11.00E-30	SE SW				NC		
2.00N-11.00E-30	NE SE				NC		
2.00N-11.00E-30	NW SE				NC		
2.00N-11.00E-30	SW SE				NC		
2.00N-11.00E-30	SE SE				NC		
2.00N-11.00E-31	NE NE				NC		
2.00N-11.00E-31	NW NE				NC		
2.00N-11.00E-31	SW NE				NC		
2.00N-11.00E-31	SE NE				NC		
2.00N-11.00E-31	NE NW				NC		
2.00N-11.00E-31	NW NW				NC		
2.00N-11.00E-31	SW NW				NC		
2.00N-11.00E-31	SE NW				NC		
2.00N-11.00E-31	NE SW				NC		
2.00N-11.00E-31	NW SW				NC		
2.00N-11.00E-31	SW SW				NC		
2.00N-11.00E-31	SE SW				NC		
2.00N-11.00E-31	NE SE				NC		
2.00N-11.00E-31	NW SE				NC		
2.00N-11.00E-31	SW SE				NC		
2.00N-11.00E-31	SE SE				NC		
3.00N-10.00E-25	SE SE				NC		
3.00N-10.00E-30	SW SW				NC		
3.00N-10.00E-30	SE SW				NC		
3.00N-10.00E-31	NW SW				NC		
3.00N-10.00E-36	SE NE				NC		
3.00N-10.00E-36	NE SE				NC		
3.00N-10.00E-36	SE SE				NC		
3.00N-11.00E-31	NE NW				NC		
3.00N-11.00E-31	NW NW				NC		
3.00N-11.00E-31	SW NW				NC		
3.00N-11.00E-31	SE NW				NC		
3.00N-11.00E-31	NE SW				NC		
3.00N-11.00E-31	SW SW				NC		
3.00N-11.00E-31	SE SW				NC		



Sum of Acres: 0.0

**Water Right Genealogy** (Click to Collapse...)

*No genealogy records available for this water right, try the family link below instead.*

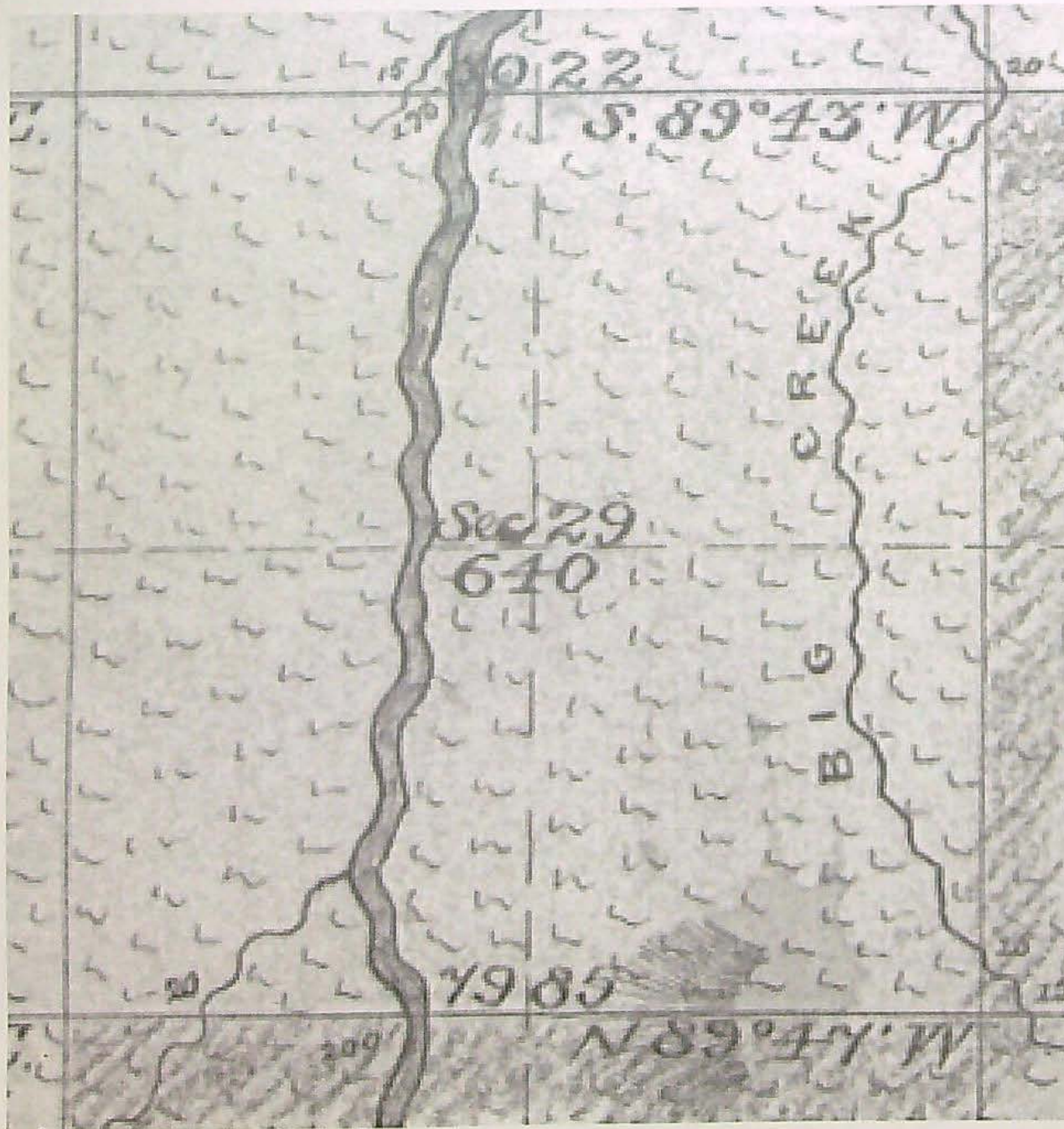


[View Water Rights in same Family](#)

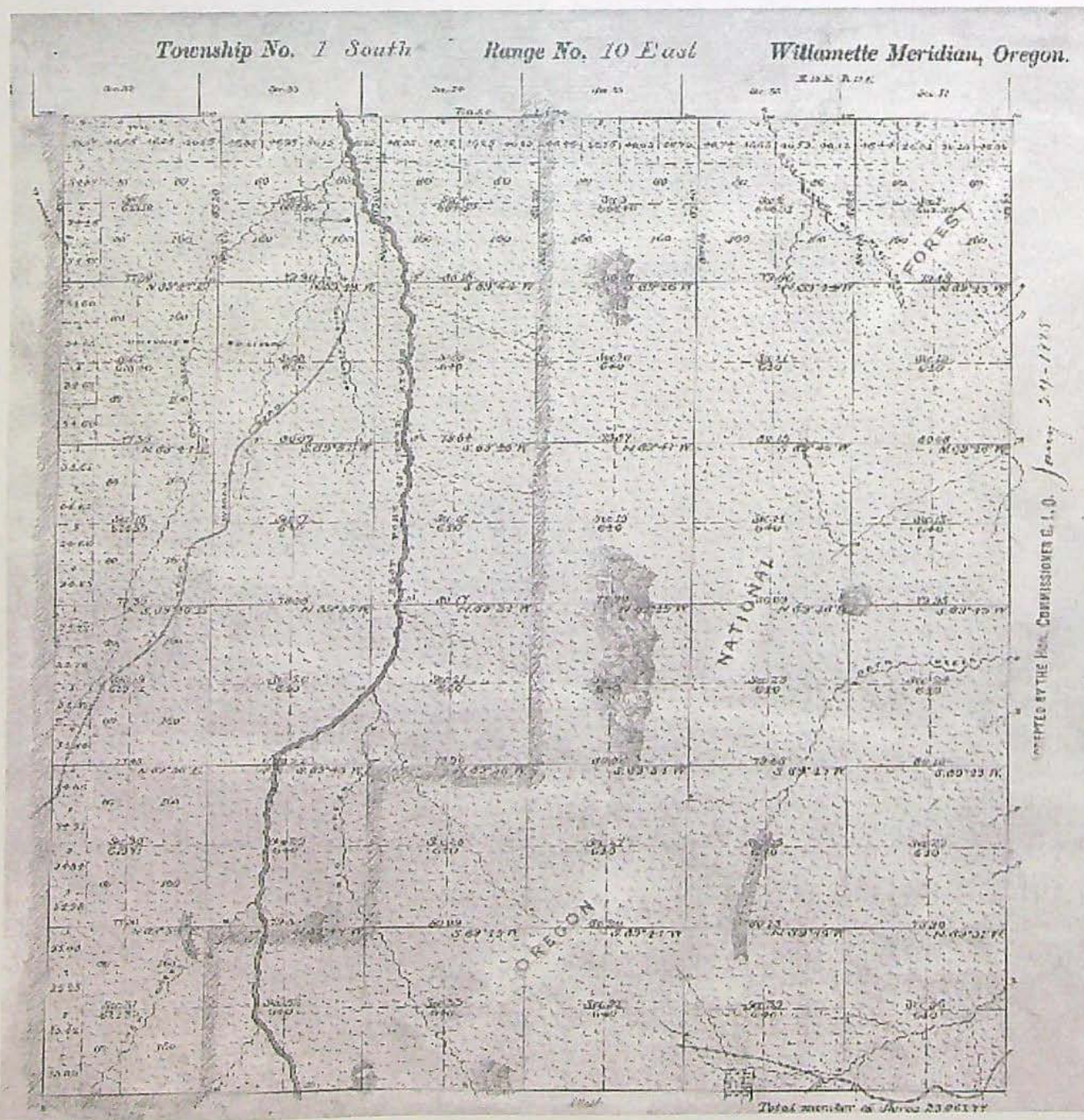
[Report Errors with Water Right Data](#)



Portion Cadastral Survey T1S, R10E, W.M. (POD) – 1884-12-24:











# Oregon Water Resources Department Water Rights Mapping Tool

OWRD **WAID**

725 Summer St NE, Sale

Return

Contact Us

Switch Basemap

Measurement

Search

Search: Water Right by File

Application:

Permit:

Certificate:

Claim:

Transfer:

Snap ID:

POD  
Source: Equals

Irr. District:

(Draw box on map.)

Points of Diversion: (Count: 4)

Places of Use: (Count: 11)

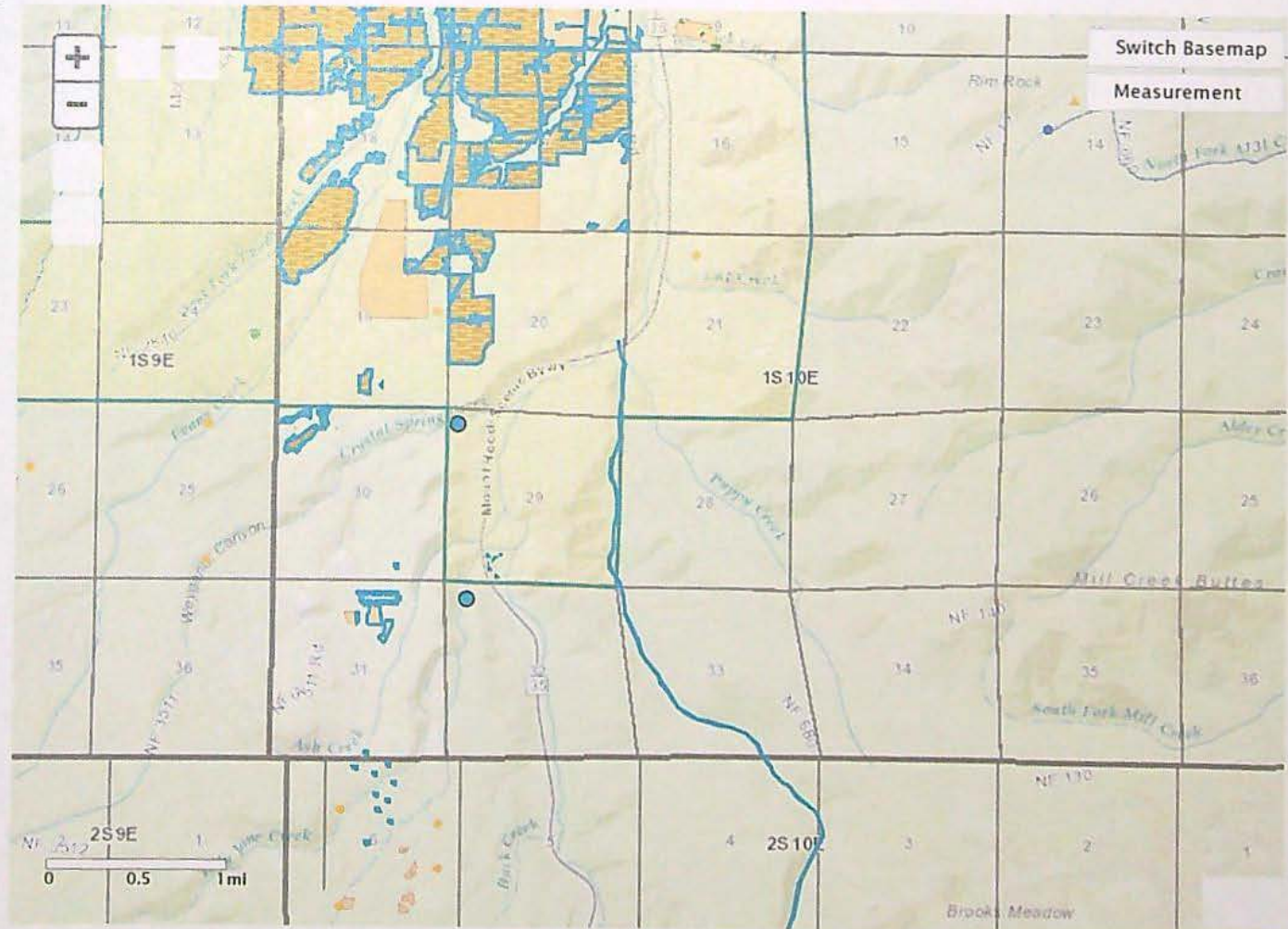
Identify Non-Water Right Features

Tax Lots

Tools

Layers

Bookmarks



POD

POU

Irrigation Districts AOI

WR By Time

All Fields

Search...

#	ID (select)	Organization	Website	Data Source
1	44	MIDDLE FORK IRRIGATION DISTRICT	<a href="#">Website</a>	Middle Fork Irrigation District December 2012



Application # S-45826 Permit # S-34196 Transfer #

Crystal Springs Water District RA# R12450-17 PARTIAL PERFECTION

PARTIAL PERFECTION

## Reimbursement Authority Process

### Itemized Estimate Sheet

for

### Certificates

	Est. Time (hr)	Individual	Hourly Rate	Est. Cost	Date	Act. Time (hr)
1. Review Claim of Beneficial Use report and map	2.25	Kerry	\$95	\$213	5-12-22 1.5 0.75	213
2. Conflict Check	0.00	Kerry	\$95	\$0		
3. Preparation of deficiency letter	0.00	Kerry	\$95	\$0		
4. Preparation of prop certificate and final order	2.25	Kerry	\$95	\$213	5-12-22 2.25 0.75	285
5a. Peer review	1.00	Kerri Cope/Chris K.	\$95	\$95	5-22 1.0	95
5b. Peer review	0.20	Dwight	\$120	\$24	5-31 0.2	24
5c. Peer review	1.25	Jessica	\$87	\$108	5-16 1.0 hr	87
6. Project Management	3.00	Kerry	\$95	\$284	2-22-23 5-18 9-12 0.5 0.25 0.75 0.75	213
7a. Water right data record update	0.40	Connie	\$60	\$23	5-31 0.4	24
7b. Water right data record update	2.50	Data Tech	\$58	\$145	5-19 3.0	174
8. Pump test - N/A	0.00	GW Staff	\$98	\$0		
<b>Total</b>	<b>12.85</b>			<b>\$1,104</b>		<b>4115</b>

1100

\$15 over

NO REFUND

COBU - partial perfection - requested 2.85 CFS (of 3.5 CFS total) = 81%

COBU - demonstrated 4 in 8 and volume from all POD's for last 3 years (per OAR 690-320-0040(4)(a)).

need to prepare proposed cert and final order

Permit S-34196 authorized 3.5 CFS from Crystal Springs for municipal - no period of time described

WMCP???

Progress Reports - submitted 2010 & 2014 -- also due in 2019, 2024, 2029, 2034, 2039, 2044, 2054, and 2059

C date extended until 10-1-2058.

Cert 93120 issued 5-31-17

FO - partial perfection - issued 5-3-17 in Special Order Vol. 104 Page 984



**KAVANAGH Kerry L \* WRD**

---

**From:** Fred Schatz <fred@cswdhr.com>  
**Sent:** Thursday, May 18, 2017 12:54 PM  
**To:** KAVANAGH Kerry L \* WRD  
**Subject:** RE: RA Project R12450-17 for Crystal Springs Water District involving Application S-45826

Kerry,

I have reviewed the proposed certificate and agree with what's proposed.

Thank You,

Fred Schatz  
Superintendent  
Crystal Springs Water District  
541-399-3926

---

**From:** KAVANAGH Kerry L \* WRD [<mailto:Kerry.L.Kavanagh@oregon.gov>]  
**Sent:** Wednesday, May 17, 2017 10:39 AM  
**To:** [fred@cswdhr.com](mailto:fred@cswdhr.com)  
**Subject:** RA Project R12450-17 for Crystal Springs Water District involving Application S-45826

Hello Fred,

Please find attached to this email the draft proposed certificate for Application S-45826 and the draft Order in the matter of Partial Perfection of water right Permit S-34196.

Please review and compare the draft proposed certificate and compare it to Permit S-34196 for accuracy and completeness. In addition, please review the draft Order in the matter of Partial Perfection of water right Permit S-34196.

For your convenience, here is a link to information regarding Application S-45826 in the Department's Water Rights Information System (WRIS) database:

[http://apps.wrd.state.or.us/apps/wr/wrinfo/wr\\_details.aspx?snp\\_id=44743](http://apps.wrd.state.or.us/apps/wr/wrinfo/wr_details.aspx?snp_id=44743)

Click on "document" to the right of "Permit S-34196" to view the permit.

Please provide me your comments or edits, should you have any. If you agree with the draft proposed certificate and let me know this, then I can proceed to issue the certificate along with the Order in the matter of Partial Perfection without waiting the standard 60-day notice period.

Thank you,  
Kerry

*Kerry Kavanagh* | Reimbursement Authority, Certificates, Water Right Services Division

Oregon Water Resources Department | 725 Summer St. NE, Suite A, Salem, Oregon 97301  
Voice 503.986.0927 | Fax 503.986.0901



**KAVANAGH Kerry L \* WRD**

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Wednesday, May 17, 2017 10:39 AM  
**To:** fred@cswdhr.com  
**Subject:** RA Project R12450-17 for Crystal Springs Water District involving Application S-45826  
**Attachments:** S-45826-or-prop\_DRAFT-2017-05-17.pdf; S-45826\_partial perfection-order\_DRAFT-2017-05-17.pdf

Hello Fred,

Please find attached to this email the draft proposed certificate for Application S-45826 and the draft Order in the matter of Partial Perfection of water right Permit S-34196.

Please review and compare the draft proposed certificate and compare it to Permit S-34196 for accuracy and completeness. In addition, please review the draft Order in the matter of Partial Perfection of water right Permit S-34196.

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Thank you,  
Kerry

*Kerry Kavanagh* | Reimbursement Authority, Certificates, Water Right Services Division

**Oregon Water Resources Department** | 725 Summer St. NE, Suite A, Salem, Oregon 97301

Voice 503.986.0927 | Fax 503.986.0901

Email: [Kerry.L.Kavanagh@oregon.gov](mailto:Kerry.L.Kavanagh@oregon.gov) Web: <http://oregon.gov/ORWD>



## STATE OF OREGON

## COUNTY OF HOOD RIVER

## CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 186  
ODELL OR 97044

confirms the right to the use of water perfected under the terms of Permit S-34196. The amount of water used to which this right is entitled is limited to the amount used beneficially, and shall not exceed the amount specified, or its equivalent in the case of rotation, measured at the point of diversion from the source. The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: S-45826

SOURCE OF WATER: CRYSTAL SPRINGS, A TRIBUTARY OF EAST FORK HOOD RIVER

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 2.85 CUBIC FEET PER SECOND

DATE OF PRIORITY: MARCH 3, 1969

The point of diversion is located as follows:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
1 S	10 E	WM	29	NW NW	500 FEET SOUTH AND 310 FEET EAST FROM NW CORNER, SECTION 29

A description of the place of use is as follows:

Twp	Rng	Mer	Sec	Q-Q
1 N	9 E	WM	24	NE NE
1 N	9 E	WM	24	SE NE
1 N	9 E	WM	24	NE SE
1 N	9 E	WM	24	NW SE
1 N	9 E	WM	24	SE SE
1 N	9 E	WM	25	NE NE
1 N	9 E	WM	25	SE NE
1 N	10 E	WM	1	NW NE
1 N	10 E	WM	1	SW NE
1 N	10 E	WM	1	NE NW

Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	1	NW NW
1 N	10 E	WM	1	SW NW
1 N	10 E	WM	1	SE NW
1 N	10 E	WM	1	NE SW
1 N	10 E	WM	1	NW SW
1 N	10 E	WM	1	NW SE
1 N	10 E	WM	2	NE NE
1 N	10 E	WM	2	NW NE
1 N	10 E	WM	2	SW NE
1 N	10 E	WM	2	SE NE

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

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



Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	2	NE NW
1 N	10 E	WM	2	NW NW
1 N	10 E	WM	2	SW NW
1 N	10 E	WM	2	SE NW
1 N	10 E	WM	2	NE SW
1 N	10 E	WM	2	NW SW
1 N	10 E	WM	2	SW SW
1 N	10 E	WM	2	SE SW
1 N	10 E	WM	2	NE SE
1 N	10 E	WM	2	NW SE
1 N	10 E	WM	2	SW SE
1 N	10 E	WM	3	NE NE
1 N	10 E	WM	3	NW NE
1 N	10 E	WM	3	SE NE
1 N	10 E	WM	3	NE NW
1 N	10 E	WM	3	NW NW
1 N	10 E	WM	3	NE SE
1 N	10 E	WM	3	NW SE
1 N	10 E	WM	3	SE SE
1 N	10 E	WM	10	NE NE
1 N	10 E	WM	10	SW NE
1 N	10 E	WM	10	SE NE
1 N	10 E	WM	10	NE SE
1 N	10 E	WM	10	NW SE
1 N	10 E	WM	10	SW SE
1 N	10 E	WM	10	SE SE
1 N	10 E	WM	11	NW NE
1 N	10 E	WM	11	SW NE
1 N	10 E	WM	11	NE NW
1 N	10 E	WM	11	NW NW
1 N	10 E	WM	11	SW NW
1 N	10 E	WM	11	SE NW
1 N	10 E	WM	11	NE SW
1 N	10 E	WM	11	NW SW
1 N	10 E	WM	11	SW SW
1 N	10 E	WM	11	SE SW
1 N	10 E	WM	11	NW SE
1 N	10 E	WM	11	SW SE
1 N	10 E	WM	15	NE NE
1 N	10 E	WM	15	NW NE
1 N	10 E	WM	15	SW NE
1 N	10 E	WM	15	SE NE
1 N	10 E	WM	15	NE NW
1 N	10 E	WM	15	SE NW
1 N	10 E	WM	15	NE SW
1 N	10 E	WM	15	SW SW
1 N	10 E	WM	15	SE SW
1 N	10 E	WM	15	NE SE
1 N	10 E	WM	15	NW SE
1 N	10 E	WM	15	SW SE
1 N	10 E	WM	15	SE SE
1 N	10 E	WM	18	SE NW

Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	18	NE SW
1 N	10 E	WM	18	SE SW
1 N	10 E	WM	18	NW SE
1 N	10 E	WM	18	SW SE
1 N	10 E	WM	19	NE NE
1 N	10 E	WM	19	NW NE
1 N	10 E	WM	19	SW NE
1 N	10 E	WM	19	SE NE
1 N	10 E	WM	19	NE NW
1 N	10 E	WM	19	NW NW
1 N	10 E	WM	19	SW NW
1 N	10 E	WM	19	SE NW
1 N	10 E	WM	19	NE SW
1 N	10 E	WM	19	NW SW
1 N	10 E	WM	19	SW SW
1 N	10 E	WM	19	SE SW
1 N	10 E	WM	19	NE SE
1 N	10 E	WM	19	NW SE
1 N	10 E	WM	19	SW SE
1 N	10 E	WM	19	SE SE
1 N	10 E	WM	20	SW NE
1 N	10 E	WM	20	SE NW
1 N	10 E	WM	20	NE SW
1 N	10 E	WM	20	NW SW
1 N	10 E	WM	20	SW SW
1 N	10 E	WM	20	SE SW
1 N	10 E	WM	20	NE SE
1 N	10 E	WM	20	NW SE
1 N	10 E	WM	20	SW SE
1 N	10 E	WM	20	SE SE
1 N	10 E	WM	21	SW NE
1 N	10 E	WM	21	SE NE
1 N	10 E	WM	21	SW NW
1 N	10 E	WM	21	SE NW
1 N	10 E	WM	21	NE SW
1 N	10 E	WM	21	NW SW
1 N	10 E	WM	21	NE SE
1 N	10 E	WM	21	NW SE
1 N	10 E	WM	21	SE SE
1 N	10 E	WM	22	NE NE
1 N	10 E	WM	22	NW NE
1 N	10 E	WM	22	SW NE
1 N	10 E	WM	22	SE NE
1 N	10 E	WM	22	NE NW
1 N	10 E	WM	22	NW NW
1 N	10 E	WM	22	SW NW
1 N	10 E	WM	22	SE NW
1 N	10 E	WM	22	NE SW
1 N	10 E	WM	22	NW SW
1 N	10 E	WM	22	SW SW
1 N	10 E	WM	22	SE SW
1 N	10 E	WM	22	NE SE



Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	22	NW SE
1 N	10 E	WM	22	SW SE
1 N	10 E	WM	27	NW NE
1 N	10 E	WM	27	SW NE
1 N	10 E	WM	27	SE NE
1 N	10 E	WM	27	NE NW
1 N	10 E	WM	27	NW NW
1 N	10 E	WM	27	SW NW
1 N	10 E	WM	27	SE NW
1 N	10 E	WM	27	NE SW
1 N	10 E	WM	27	NW SW
1 N	10 E	WM	27	SW SW
1 N	10 E	WM	27	SE SW
1 N	10 E	WM	27	NE SE
1 N	10 E	WM	27	SW SE
1 N	10 E	WM	27	SE SE
1 N	10 E	WM	28	NE NE
1 N	10 E	WM	28	NW NE
1 N	10 E	WM	28	SW NE
1 N	10 E	WM	28	SE NE
1 N	10 E	WM	28	NE NW
1 N	10 E	WM	28	NW NW
1 N	10 E	WM	28	SW NW
1 N	10 E	WM	28	SE NW
1 N	10 E	WM	28	NE SW
1 N	10 E	WM	28	NW SW
1 N	10 E	WM	28	SW SW
1 N	10 E	WM	28	NE SE
1 N	10 E	WM	28	NW SE
1 N	10 E	WM	28	SW SE
1 N	10 E	WM	28	SE SE
1 N	10 E	WM	29	NW NE
1 N	10 E	WM	29	SW NE
1 N	10 E	WM	29	SE NE
1 N	10 E	WM	29	NE NW
1 N	10 E	WM	29	NW NW
1 N	10 E	WM	29	SW NW
1 N	10 E	WM	29	SE NW
1 N	10 E	WM	29	NE SW
1 N	10 E	WM	29	NW SW
1 N	10 E	WM	29	NE SE
1 N	10 E	WM	29	NW SE
1 N	10 E	WM	29	SE SE
1 N	10 E	WM	30	NE NE
1 N	10 E	WM	30	NW NE
1 N	10 E	WM	30	SW NE
1 N	10 E	WM	30	SE NE
1 N	10 E	WM	30	NE NW
1 N	10 E	WM	30	NW NW
1 N	10 E	WM	30	SW NW
1 N	10 E	WM	30	SE NW
1 N	10 E	WM	30	NE SW

Twp	Rng	Mer	Sec	Q-Q
1 N	10 E	WM	30	SE SW
1 N	10 E	WM	30	NE SE
1 N	10 E	WM	30	NW SE
1 N	10 E	WM	30	SW SE
1 N	10 E	WM	32	NE NE
1 N	10 E	WM	32	SE NE
1 N	10 E	WM	33	NE NE
1 N	10 E	WM	33	NW NE
1 N	10 E	WM	33	SE NE
1 N	10 E	WM	33	NW NW
1 N	10 E	WM	33	SW NW
1 N	10 E	WM	33	NW SW
1 N	10 E	WM	33	SW SW
1 N	10 E	WM	33	SE SW
1 N	10 E	WM	33	NE SE
1 N	10 E	WM	33	SW SE
1 N	10 E	WM	33	SE SE
1 N	10 E	WM	34	NE NW
1 N	10 E	WM	34	NW NW
1 N	10 E	WM	34	SW NW
1 N	10 E	WM	34	SE NW
1 N	10 E	WM	34	NW SW
1 N	10 E	WM	34	SW SW
1 S	10 E	WM	5	NE NE
1 S	10 E	WM	5	NW NE
1 S	10 E	WM	5	SW NE
1 S	10 E	WM	5	SE NE
1 S	10 E	WM	5	NE NW
1 S	10 E	WM	5	NW NW
1 S	10 E	WM	5	SE NW
1 S	10 E	WM	5	NE SW
1 S	10 E	WM	5	NW SW
1 S	10 E	WM	5	SW SW
1 S	10 E	WM	5	SE SW
1 S	10 E	WM	5	NE SE
1 S	10 E	WM	5	NW SE
1 S	10 E	WM	5	SW SE
1 S	10 E	WM	5	SE SE
1 S	10 E	WM	6	NE NE
1 S	10 E	WM	6	NW NE
1 S	10 E	WM	6	SE NE
1 S	10 E	WM	6	SE SW
1 S	10 E	WM	6	NE SE
1 S	10 E	WM	6	NW SE
1 S	10 E	WM	6	SW SE
1 S	10 E	WM	6	SE SE
1 S	10 E	WM	7	NE NE
1 S	10 E	WM	7	NW NE
1 S	10 E	WM	7	SW NE
1 S	10 E	WM	7	SE NE
1 S	10 E	WM	7	NE NW
1 S	10 E	WM	7	SE NW



Twp	Rng	Mer	Sec	Q-Q
1 S	10 E	WM	7	NE SW
1 S	10 E	WM	7	SE SW
1 S	10 E	WM	7	NE SE
1 S	10 E	WM	7	NW SE
1 S	10 E	WM	7	SW SE
1 S	10 E	WM	7	SE SE
1 S	10 E	WM	8	NE NE
1 S	10 E	WM	8	NW NE
1 S	10 E	WM	8	SW NE
1 S	10 E	WM	8	SE NE
1 S	10 E	WM	8	NE NW
1 S	10 E	WM	8	NW NW
1 S	10 E	WM	8	SW NW
1 S	10 E	WM	8	SE NW
1 S	10 E	WM	8	NW SW
1 S	10 E	WM	8	SW SW
1 S	10 E	WM	8	NE SE
1 S	10 E	WM	8	NW SE
1 S	10 E	WM	8	SW SE
1 S	10 E	WM	8	SE SE
1 S	10 E	WM	9	SW NW
1 S	10 E	WM	9	NW SW
1 S	10 E	WM	17	NE NE
1 S	10 E	WM	17	SE NE
1 S	10 E	WM	17	NW NW
1 S	10 E	WM	17	SW NW
1 S	10 E	WM	17	NW SW
1 S	10 E	WM	18	NE NE
1 S	10 E	WM	18	NW NE
1 S	10 E	WM	18	SE NE
1 S	10 E	WM	18	NE NW
1 S	10 E	WM	18	NE SE
2 N	10 E	WM	1	NE NE
2 N	10 E	WM	1	SE NE
2 N	10 E	WM	1	NE SE
2 N	10 E	WM	1	NW SE
2 N	10 E	WM	1	SW SE
2 N	10 E	WM	1	SE SE
2 N	10 E	WM	12	NE NE
2 N	10 E	WM	12	NW NE
2 N	10 E	WM	12	SW NE
2 N	10 E	WM	12	SE NE
2 N	10 E	WM	12	SE NW
2 N	10 E	WM	12	NE SW
2 N	10 E	WM	12	SE SW
2 N	10 E	WM	12	NE SE
2 N	10 E	WM	12	NW SE
2 N	10 E	WM	12	SW SE
2 N	10 E	WM	12	SE SE
2 N	10 E	WM	13	NE NE
2 N	10 E	WM	13	NW NE
2 N	10 E	WM	13	SW NE

Twp	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	13	SE NE
2 N	10 E	WM	13	NE NW
2 N	10 E	WM	13	SE NW
2 N	10 E	WM	13	NE SW
2 N	10 E	WM	13	SW SW
2 N	10 E	WM	13	SE SW
2 N	10 E	WM	13	NE SE
2 N	10 E	WM	13	NW SE
2 N	10 E	WM	13	SW SE
2 N	10 E	WM	13	SE SE
2 N	10 E	WM	14	SW NE
2 N	10 E	WM	14	SE NW
2 N	10 E	WM	14	NE SW
2 N	10 E	WM	14	NW SW
2 N	10 E	WM	14	SW SW
2 N	10 E	WM	14	SE SW
2 N	10 E	WM	14	NE SE
2 N	10 E	WM	14	NW SE
2 N	10 E	WM	14	SW SE
2 N	10 E	WM	14	SE SE
2 N	10 E	WM	15	SW SW
2 N	10 E	WM	15	SE SW
2 N	10 E	WM	15	NE SE
2 N	10 E	WM	15	NW SE
2 N	10 E	WM	15	SW SE
2 N	10 E	WM	15	SE SE
2 N	10 E	WM	21	NE NE
2 N	10 E	WM	21	SW NE
2 N	10 E	WM	21	SE NE
2 N	10 E	WM	21	SE NW
2 N	10 E	WM	21	NE SW
2 N	10 E	WM	21	NW SW
2 N	10 E	WM	21	SW SW
2 N	10 E	WM	21	SE SW
2 N	10 E	WM	21	NE SE
2 N	10 E	WM	21	NW SE
2 N	10 E	WM	21	SW SE
2 N	10 E	WM	21	SE SE
2 N	10 E	WM	22	NE NE
2 N	10 E	WM	22	NW NE
2 N	10 E	WM	22	SW NE
2 N	10 E	WM	22	SE NE
2 N	10 E	WM	22	NE NW
2 N	10 E	WM	22	NW NW
2 N	10 E	WM	22	SW NW
2 N	10 E	WM	22	SE NW
2 N	10 E	WM	22	NE SW
2 N	10 E	WM	22	NW SW
2 N	10 E	WM	22	SW SW
2 N	10 E	WM	22	SE SW
2 N	10 E	WM	22	NE SE
2 N	10 E	WM	22	NW SE



TwP	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	22	SW SE
2 N	10 E	WM	22	SE SE
2 N	10 E	WM	23	NE NE
2 N	10 E	WM	23	NW NE
2 N	10 E	WM	23	SW NE
2 N	10 E	WM	23	SE NE
2 N	10 E	WM	23	NE NW
2 N	10 E	WM	23	NW NW
2 N	10 E	WM	23	SW NW
2 N	10 E	WM	23	SE NW
2 N	10 E	WM	23	NE SW
2 N	10 E	WM	23	NW SW
2 N	10 E	WM	23	SW SW
2 N	10 E	WM	23	SE SW
2 N	10 E	WM	23	NE SE
2 N	10 E	WM	23	NW SE
2 N	10 E	WM	23	SW SE
2 N	10 E	WM	23	SE SE
2 N	10 E	WM	24	NE NE
2 N	10 E	WM	24	NW NE
2 N	10 E	WM	24	SW NE
2 N	10 E	WM	24	SE NE
2 N	10 E	WM	24	NE NW
2 N	10 E	WM	24	NW NW
2 N	10 E	WM	24	SW NW
2 N	10 E	WM	24	SE NW
2 N	10 E	WM	24	NE SW
2 N	10 E	WM	24	NW SW
2 N	10 E	WM	24	SW SW
2 N	10 E	WM	24	SE SW
2 N	10 E	WM	24	NE SE
2 N	10 E	WM	24	NW SE
2 N	10 E	WM	24	SW SE
2 N	10 E	WM	24	SE SE
2 N	10 E	WM	25	NE NE
2 N	10 E	WM	25	NW NE
2 N	10 E	WM	25	SW NE
2 N	10 E	WM	25	SE NE
2 N	10 E	WM	25	NE NW
2 N	10 E	WM	25	NW NW
2 N	10 E	WM	25	SW NW
2 N	10 E	WM	25	SE NW
2 N	10 E	WM	25	NE SW
2 N	10 E	WM	25	NW SW
2 N	10 E	WM	25	SW SW
2 N	10 E	WM	25	SE SW
2 N	10 E	WM	25	NE SE
2 N	10 E	WM	25	NW SE
2 N	10 E	WM	25	SW SE
2 N	10 E	WM	25	SE SE
2 N	10 E	WM	26	NE NE
2 N	10 E	WM	26	NW NE

TwP	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	26	SW NE
2 N	10 E	WM	26	SE NE
2 N	10 E	WM	26	NE NW
2 N	10 E	WM	26	NW NW
2 N	10 E	WM	26	SW NW
2 N	10 E	WM	26	SE NW
2 N	10 E	WM	26	NE SW
2 N	10 E	WM	26	NW SW
2 N	10 E	WM	26	SW SW
2 N	10 E	WM	26	SE SW
2 N	10 E	WM	26	NE SE
2 N	10 E	WM	26	NW SE
2 N	10 E	WM	26	SW SE
2 N	10 E	WM	26	SE SE
2 N	10 E	WM	27	NE NE
2 N	10 E	WM	27	NW NE
2 N	10 E	WM	27	SW NE
2 N	10 E	WM	27	SE NE
2 N	10 E	WM	27	NE NW
2 N	10 E	WM	27	NW NW
2 N	10 E	WM	27	SW NW
2 N	10 E	WM	27	SE NW
2 N	10 E	WM	27	NE SW
2 N	10 E	WM	27	NW SW
2 N	10 E	WM	27	SW SW
2 N	10 E	WM	27	SE SW
2 N	10 E	WM	27	NE SE
2 N	10 E	WM	27	NW SE
2 N	10 E	WM	27	SW SE
2 N	10 E	WM	27	SE SE
2 N	10 E	WM	28	NE NE
2 N	10 E	WM	28	NW NE
2 N	10 E	WM	28	SW NE
2 N	10 E	WM	28	SE NE
2 N	10 E	WM	28	NE NW
2 N	10 E	WM	28	NW NW
2 N	10 E	WM	28	SW NW
2 N	10 E	WM	28	SE NW
2 N	10 E	WM	28	NE SW
2 N	10 E	WM	28	NE SE
2 N	10 E	WM	28	NW SE
2 N	10 E	WM	34	NE NE
2 N	10 E	WM	34	NW NE
2 N	10 E	WM	34	SW NE
2 N	10 E	WM	34	SE NE
2 N	10 E	WM	34	NE NW
2 N	10 E	WM	34	NW NW
2 N	10 E	WM	34	SW NW
2 N	10 E	WM	34	SE NW
2 N	10 E	WM	34	NE SW
2 N	10 E	WM	34	NW SW
2 N	10 E	WM	34	SW SW
2 N	10 E	WM	34	SE SW



Twp	Rng	Mer	Sec	Q-Q
2 N	10 E	WM	34	NE SE
2 N	10 E	WM	34	NW SE
2 N	10 E	WM	34	SW SE
2 N	10 E	WM	34	SE SE
2 N	10 E	WM	35	NE NE
2 N	10 E	WM	35	NW NE
2 N	10 E	WM	35	SW NE
2 N	10 E	WM	35	SE NE
2 N	10 E	WM	35	NE NW
2 N	10 E	WM	35	NW NW
2 N	10 E	WM	35	SW NW
2 N	10 E	WM	35	SE NW
2 N	10 E	WM	35	NE SW
2 N	10 E	WM	35	NW SW
2 N	10 E	WM	35	SW SW
2 N	10 E	WM	35	SE SW
2 N	10 E	WM	35	NE SE
2 N	10 E	WM	35	NW SE
2 N	10 E	WM	35	SW SE
2 N	10 E	WM	35	SE SE
2 N	10 E	WM	36	NE NE
2 N	10 E	WM	36	NW NE
2 N	10 E	WM	36	SW NE
2 N	10 E	WM	36	SE NE
2 N	10 E	WM	36	NE NW
2 N	10 E	WM	36	NW NW
2 N	10 E	WM	36	SW NW
2 N	10 E	WM	36	SE NW
2 N	10 E	WM	36	NE SW
2 N	10 E	WM	36	NW SW
2 N	10 E	WM	36	SW SW
2 N	10 E	WM	36	SE SW
2 N	10 E	WM	36	NE SE
2 N	10 E	WM	36	NW SE
2 N	10 E	WM	36	SW SE
2 N	10 E	WM	36	SE SE
2 N	11 E	WM	6	SW NE
2 N	11 E	WM	6	NE NW
2 N	11 E	WM	6	NW NW
2 N	11 E	WM	6	SW NW
2 N	11 E	WM	6	SE NW
2 N	11 E	WM	6	NE SW
2 N	11 E	WM	6	NW SW
2 N	11 E	WM	6	SW SW
2 N	11 E	WM	6	SE SW
2 N	11 E	WM	6	NW SE
2 N	11 E	WM	6	SW SE
2 N	11 E	WM	7	NW NE
2 N	11 E	WM	7	SW NE
2 N	11 E	WM	7	NE NW
2 N	11 E	WM	7	NW NW
2 N	11 E	WM	7	SW NW

Twp	Rng	Mer	Sec	Q-Q
2 N	11 E	WM	7	SE NW
2 N	11 E	WM	7	NE SW
2 N	11 E	WM	7	NW SW
2 N	11 E	WM	7	SW SW
2 N	11 E	WM	7	SE SW
2 N	11 E	WM	7	NW SE
2 N	11 E	WM	7	SW SE
2 N	11 E	WM	18	NE NE
2 N	11 E	WM	18	NW NE
2 N	11 E	WM	18	SW NE
2 N	11 E	WM	18	SE NE
2 N	11 E	WM	18	NE NW
2 N	11 E	WM	18	NW NW
2 N	11 E	WM	18	SW NW
2 N	11 E	WM	18	SE NW
2 N	11 E	WM	18	NE SW
2 N	11 E	WM	18	NW SW
2 N	11 E	WM	18	SW SW
2 N	11 E	WM	18	SE SW
2 N	11 E	WM	18	NE SE
2 N	11 E	WM	18	NW SE
2 N	11 E	WM	18	SW SE
2 N	11 E	WM	18	SE SE
2 N	11 E	WM	19	NE NE
2 N	11 E	WM	19	NW NE
2 N	11 E	WM	19	SW NE
2 N	11 E	WM	19	SE NE
2 N	11 E	WM	19	NE NW
2 N	11 E	WM	19	NW NW
2 N	11 E	WM	19	SW NW
2 N	11 E	WM	19	SE NW
2 N	11 E	WM	19	NE SW
2 N	11 E	WM	19	NW SW
2 N	11 E	WM	19	SW SW
2 N	11 E	WM	19	SE SW
2 N	11 E	WM	19	NW SE
2 N	11 E	WM	19	SW SE
2 N	11 E	WM	30	NW NE
2 N	11 E	WM	30	SW NE
2 N	11 E	WM	30	NE NW
2 N	11 E	WM	30	NW NW
2 N	11 E	WM	30	SW NW
2 N	11 E	WM	30	SE NW
2 N	11 E	WM	30	NW SW
2 N	11 E	WM	30	SW SW
2 N	11 E	WM	30	NW SE
3 N	10 E	WM	25	SE SE
3 N	10 E	WM	36	SE NE
3 N	10 E	WM	36	NE SE
3 N	10 E	WM	36	SE SE
3 N	11 E	WM	30	SW SW
3 N	11 E	WM	30	SE SW



Twp	Rng	Mer	Sec	Q-Q
3 N	11 E	WM	31	NE NW
3 N	11 E	WM	31	NW NW
3 N	11 E	WM	31	SW NW
3 N	11 E	WM	31	SE NW

Twp	Rng	Mer	Sec	Q-Q
3 N	11 E	WM	31	NE SW
3 N	11 E	WM	31	NW SW
3 N	11 E	WM	31	SW SW
3 N	11 E	WM	31	SE SW

The right granted herein is limited to the amount which can be applied to beneficial use and shall not exceed 2.85 CFS measured at the point of diversion.

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

This certificate is issued for a partial perfection of Permit S-34196 as described in OAR 690-320-0040 and by an order of the Water Resources Director entered \_\_\_\_\_, 2017.

Issued \_\_\_\_\_.

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



**BEFORE THE WATER RESOURCES DIRECTOR OF OREGON**

**HOOD RIVER COUNTY**

IN THE MATTER OF PARTIAL PERFECTION OF )  
WATER RIGHT PERMIT S-34196 IN THE NAME )  
OF CRYSTAL SPRINGS WATER DISTRICT )

**ORDER**

**STATEMENT**

On January 18, 2017, the Water Resources Department received a request from Crystal Springs Water District to partially perfect the use of water under water right permit S-34196.

**FINDINGS OF FACT**

Permit S-34196 allows for the use of 3.5 cubic feet per second (CFS) from Crystal Springs, a tributary of East Fork Hood River, for municipal use.

Crystal Springs Water District has requested partial perfection of permit S-34196 and issuance of a water right certificate for 2.85 CFS. The request was accompanied by the survey required under ORS 537.230(4). The survey shows, to the satisfaction of the Director, that the appropriation has been partially perfected in accordance with the provision of the Water Rights Act.

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

The Department finds that the City has perfected 2.85 CFS. The quantity of water is equal or greater than the 25 percent of the original quantity of water allowed under permit S-34196.

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

**NOTICE OF RIGHT TO PETITION FOR JUDICIAL REVIEW OR  
RECONSIDERATION**

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.482. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.482 and ORS 536.075. Pursuant to ORS 183.482, ORS 536.075 and OAR 137-003-0675, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.



As of the date of this order, crystal Springs Water District has an approved extension of time (to Oct 1, 2058) for this municipal water use permit to completely apply water to beneficial use under Permit S-34196.

#### ULTIMATE FINDING OF FACT

Crystal Springs Water District is now entitled to a certificate in the amount of 2.85 CFS. The Director has determined the permittee has complied with the requirements to partially perfect permit S-34196 pursuant to ORS 537.250 and 537.260.

#### ORDER

The Department finds that there is 0.65 CFS remaining to be perfected under Permit S-34196 and that a certificate in the amount of 2.85 CFS shall be issued to Crystal Springs Water District.

Dated \_\_\_\_\_

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



**KAVANAGH Kerry L \* WRD**

---

**From:** Bill Pavlich <billp@paceengrs.com>  
**Sent:** Thursday, February 23, 2017 2:31 PM  
**To:** KAVANAGH Kerry L \* WRD  
**Subject:** RE: RA Agreement R12450-17 for Crystal Springs Water District involving Application S-45826

Thanks Kerry.  
Bill



**Bill Pavlich** | Senior Project Manager  
5000 Meadows Road | Suite 345 | Lake Oswego, OR 97035  
p. 503.597.3222 | f. 503.597.7655  
[www.PACEENGRS.com](http://www.PACEENGRS.com)

---

**From:** KAVANAGH Kerry L \* WRD [<mailto:Kerry.L.Kavanagh@oregon.gov>]  
**Sent:** Thursday, February 23, 2017 2:26 PM  
**To:** Bill Pavlich <billp@paceengrs.com>  
**Subject:** FW: RA Agreement R12450-17 for Crystal Springs Water District involving Application S-45826

Hi Bill,

Here you go!

Kerry

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Wednesday, February 22, 2017 12:07 PM  
**To:** [fred@cswdhr.com](mailto:fred@cswdhr.com)  
**Subject:** RA Agreement R12450-17 for Crystal Springs Water District involving Application S-45826

Hello Fred,

Attached are copies of the fully executed Applicant's Agreement signed by the required parties and a receipt for the monies paid for these expedited services. The agreement details the terms and conditions that a work order was issued for the expedited services you requested.

If you have any questions, please contact me.

Thanks,  
Kerry

*Kerry Kavanagh* | Reimbursement Authority, Certificates, Water Right Services Division

**Oregon Water Resources Department** | 725 Summer St. NE, Suite A, Salem, Oregon 97301  
Voice 503.986.0927 | Fax 503.986.0901  
Email: [Kerry.L.Kavanagh@oregon.gov](mailto:Kerry.L.Kavanagh@oregon.gov) Web: <http://oregon.gov/ORWD>



**KAVANAGH Kerry L \* WRD**

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Thursday, February 23, 2017 2:25 PM  
**To:** 'billp@paceengrs.com'  
**Subject:** FW: RA Agreement R12450-17 for Crystal Springs Water District involving Application S-45826  
**Attachments:** RA contract executed\_S-45826.pdf; RA contract receipt\_S-45826.pdf

Hi Bill,

Here you go!

Kerry

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Wednesday, February 22, 2017 12:07 PM  
**To:** [fred@cswdhr.com](mailto:fred@cswdhr.com)  
**Subject:** RA Agreement R12450-17 for Crystal Springs Water District involving Application S-45826

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If you have any questions, please contact me.

Thanks,  
Kerry

*Kerry Kavanagh* | Reimbursement Authority, Certificates, Water Right Services Division

**Oregon Water Resources Department** | 725 Summer St. NE, Suite A, Salem, Oregon 97301  
Voice 503.986.0927 | Fax 503.986.0901  
Email: [Kerry.L.Kavanagh@oregon.gov](mailto:Kerry.L.Kavanagh@oregon.gov) Web: <http://oregon.gov/ORWD>



**KAVANAGH Kerry L \* WRD**

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Wednesday, February 22, 2017 12:07 PM  
**To:** fred@cswdhr.com  
**Subject:** RA Agreement R12450-17 for Crystal Springs Water District involving Application S-45826  
**Attachments:** RA contract executed\_S-45826.pdf; RA contract receipt\_S-45826.pdf

Hello Fred,

Attached are copies of the fully executed Applicant's Agreement signed by the required parties and a receipt for the monies paid for these expedited services. The agreement details the terms and conditions that a work order was issued for the expedited services you requested.

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Kerry

*Kerry Kavanagh* | Reimbursement Authority, Certificates, Water Right Services Division

**Oregon Water Resources Department** | 725 Summer St. NE, Suite A, Salem, Oregon 97301

Voice 503.986.0927 | Fax 503.986.0901

Email: [Kerry.L.Kavanagh@oregon.gov](mailto:Kerry.L.Kavanagh@oregon.gov) Web: <http://oregon.gov/ORWD>

RECEIVED

FEB 22 2017

OWRD



STATE OF OREGON  
WATER SOURCES DEPARTMENT

RECEIPT # 122682

Summer St. N.E. Ste. A  
SALEM, OR 97301-4172  
(503) 986-0900 / (503) 986-0904 (fax)

INVOICE #

RECEIVED FROM: Crystal Springs Water District  
BY:

APPLICATION 5-45826  
PERMIT  
TRANSFER

CASH: ☐ CHECK: # 1212 ☒ OTHER: (IDENTIFY) ☐

TOTAL REC'D \$1,100.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 47126 R-12430-17  
0408 OTHER: (IDENTIFY) Reimbursement Authority \$1,100.00

0243 I/S Lease 0244 Muni Water Mgmt. Plan 0245 Cons. Water

4270 WRD OPERATING ACCT

MISCELLANEOUS

0407 COPY & TAPE FEES \$  
0410 RESEARCH FEES \$  
0408 MISC REVENUE: (IDENTIFY) \$  
TC162 DEPOSIT LIAB. (IDENTIFY) \$  
0240 EXTENSION OF TIME \$

WATER RIGHTS:

0201 SURFACE WATER EXAM FEE \$ 0202 RECORD FEE \$  
0203 GROUND WATER \$ 0204 \$  
0205 TRANSFER \$

WELL CONSTRUCTION

0218 WELL DRILL CONSTRUCTOR EXAM FEE \$ 0219 LICENSE FEE \$  
LANDOWNER'S PERMIT 0220 \$

OTHER (IDENTIFY)

0536 TREASURY 0437 WELL CONST. START FEE

0211 WELL CONST START FEE \$ CARD #  
0210 MONITORING WELLS \$ CARD #

OTHER (IDENTIFY)

0607 TREASURY 0467 HYDRO ACTIVITY LIC NUMBER

0233 POWER LICENSE FEE (FW/WRD) \$  
0231 HYDRO LICENSE FEE (FW/WRD) \$  
HYDRO APPLICATION \$

TREASURY OTHER / RDX

FUND TITLE

OBJ. CODE VENDOR #

DESCRIPTION \$

RECEIPT: 122682

DATED: 2/21/17 BY: Vzielinski

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal

STATE OF OREGON  
WATER SOURCES DEPARTMENT

RECEIPT # 122682

Summer St. N.E. Ste. A  
SALEM, OR 97301-4172  
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0231 HYDRO LICENSE FEE (FW/WRD) \$  
HYDRO APPLICATION \$

TREASURY OTHER / RDX

FUND TITLE

OBJ. CODE VENDOR #

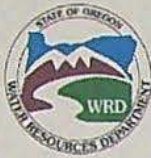
DESCRIPTION \$

RECEIPT: 122682

DATED: 2/21/17 BY: Vzielinski

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal





OREGON WATER RESOURCES DEPARTMENT  
CERTIFICATE REIMBURSEMENT AUTHORITY  
APPLICANT'S AGREEMENT

Contract Number: **R12450-17**



This Agreement is between the **Oregon Water Resources Department**, hereafter OWRD, and **Crystal Springs Water District**, hereafter Applicant, hereafter known together as the parties.

**OWRD Information**

Project Contact: Kerry Kavanagh  
Reimbursement Authority  
Oregon Water Resources Department  
725 Summer Street NE  
Salem, OR 97301-1271  
Phone: 503-986-0927  
Email: [Kerry.L.Kavanagh@state.or.us](mailto:Kerry.L.Kavanagh@state.or.us)

**Applicant's Information**

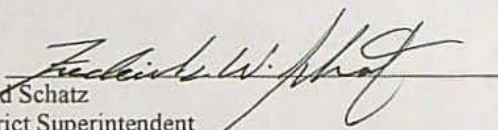
Name: Fred Schatz  
Title: District Superintendent  
Company: Crystal Springs Water District  
Address: PO Box 186  
Odell, OR 97041  
Phone: 541-354-1818  
Email: [fred@cswdhr.com](mailto:fred@cswdhr.com)

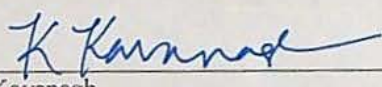
1. **Purpose.** The purpose of this Agreement is to expedite the processing of the **Claim of Beneficial Use**. (Application Number: S-45826)
2. **Authority.** ORS 536.055 authorizes the OWRD to enter into a voluntary agreement with any applicant, permittee or regulated entity (collectively Applicant) for expediting or enhancing a regulatory process. In making this agreement, OWRD shall require the applicant to pay the full cost of expedited process.
3. **Restrictions.** Crystal Springs Water District and OWRD agree that this Agreement shall not be construed to restrict in any way the decisions and actions by OWRD. OWRD shall be free to exercise independent judgment consistent with existing laws and regulations.
4. **Effective Date and Duration.** Unless otherwise terminated by non-deposit of funds by the Applicant, this Agreement shall become effective on the date on which both parties have signed the Agreement and the full deposit of the estimated cost of the proposed service has been received by OWRD.
5. **Consideration.** Crystal Springs Water District shall pay OWRD in advance for actual costs incurred by OWRD. Crystal Springs Water District agrees to pay the full amount of **\$1100** to OWRD prior to commencement of any work stated in this Agreement. This payment will be placed in an account administered by OWRD and drawn upon as costs are actually incurred. If the actual cost of performing the work is less than payments received, OWRD will refund the unspent balance. If the actual cost of processing exceeds the estimate, the Applicant can either elect to terminate this Agreement or amend the Agreement to reflect the increase in cost. The costs stated in this Agreement do not include the statutory application processing and filing fees.
6. **Confidentiality.** Crystal Springs Water District agrees that any information provided to or acquired by OWRD under this Agreement will be subject to the Oregon Public Records Law and shall be considered public records.
7. **Indemnity.** Applicant shall defend, save, hold harmless, and indemnify the State of Oregon, OWRD, and their officers, employees, and agents from and against all claims, suits, actions, losses, damages, liabilities, costs and expenses of any nature resulting from or arising out of, or relating to the activities of Applicant or its representatives, officers, employees, contractors, or agents under this Agreement or with respect to the expedited service. The Applicant acknowledges that the Oregon Water Resources Department cannot and does not guarantee a favorable review under the subject regulatory process.

PCA 47126



8. **Termination.** Applicant may request to terminate this agreement only in writing at any time during the process. The Applicant agrees to pay for the work done by the Reimbursement Authority personnel up until the time of the written termination request. OWRD, upon receiving such written termination request from the Applicant, will refund any unspent balance after paying the Reimbursement Authority personnel for the work done.
9. **Funds Authorized and Available.** By its execution of this Agreement, Applicants certifies that sufficient funds are authorized and available to cover the expenditures contemplated by this Agreement.
10. **Duration of Estimate.** The Estimate of Time to complete the work is no later than one hundred and twenty days (120) days once this Agreement has been fully executed and payment of the estimated cost deposited. However, this estimate is contingent on the Applicant's expeditious resolution of any deficiency and may be affected by the Department's work load. This Estimate of Time may become null and void after thirty (30) days from the date the Applicant's Agreement is mailed. If the Applicant's Agreement is not received by the Department within thirty (30) days of mailing the Agreement, the Applicant may need to re-apply for a new estimate.
11. **Completion Date.** OWRD, by the execution of this Agreement does not guarantee the completion date indicated in this Agreement. Completion date is only an estimate and may be affected by the Department's workload, issues arising from the processing of the requested services and Applicant's timely response to requests for additional information.
12. **Captions.** The captions or headings in this Agreement are for the convenience only and in no way define limit or describe the scope or intent of any provision of this Agreement.
13. **Amendment and Merger.** The terms of this Agreement shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, except by written instrument signed by both parties. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements or representations, oral or written, not specified herein regarding this Agreement.
14. **Signatures.** All parties, by the authorized representative's signature below, hereby acknowledge that they have read this Agreement, understand it and agree to be bound by its terms and conditions.

Applicant:   
Name: Fred Schatz  
Title: District Superintendent  
Company: Crystal Springs Water District  
Date: 2-6-17

For OWRD:   
Name: Kerry Kavanagh  
Water Right Services Division  
Date: 2-21-17

Mail signed Agreement to:

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

PCA 47126



## KAVANAGH Kerry L \* WRD

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Monday, February 06, 2017 8:18 AM  
**To:** 'fred@cswdhr.com'  
**Subject:** RA Certificate Estimate R12450-17 for Crystal Springs Water District involving Application S-45826  
**Attachments:** RA contract\_S-45826.pdf; RA estimate receipt\_S-45826.pdf; RA estimate request\_S-45826.pdf

Hello Fred,

Please find the attached estimate and agreement to process the permit into a certificate. If the proposed agreement is acceptable to you, please return a signed copy to our office along with the payment of the estimated cost to process the permit into a certificate.

If you have any questions, please call me.

Thanks,  
Kerry

*Kerry Kavanagh* | Reimbursement Authority, Certificates, Water Right Services Division

**Oregon Water Resources Department** | 725 Summer St. NE, Suite A, Salem, Oregon 97301

Voice 503.986.0927 | Fax 503.986.0901

Email: [Kerry.L.Kavanagh@oregon.gov](mailto:Kerry.L.Kavanagh@oregon.gov) Web: <http://oregon.gov/ORWD>



## KAVANAGH Kerry L \* WRD

---

**From:** KAVANAGH Kerry L \* WRD  
**Sent:** Thursday, January 19, 2017 1:13 PM  
**To:** mike@cswdhr.com  
**Cc:** KAVANAGH Kerry L \* WRD  
**Subject:** RE: Application #S-45826

Hi Mike,

The Department recently received the Certificate Reimbursement Authority Estimate for Application S-45826, Permit S-34196. I found the Claim of Beneficial Use (Claim) report and map you had submitted January 4, 2017. Everything appears to be in order; so I have accepted the application for estimate. I will be sending you an agreement via email with the estimated cost to prepare a certificate for partial perfection of 2.85 CFS (of 3.5 CFS authorized by Permit S-34196) in the next week or so.

Thanks for following up.

Kerry

*Kerry Kavanagh* | Reimbursement Authority, Certificates, Water Right Services Division

Oregon Water Resources Department | 725 Summer St. NE, Suite A, Salem, Oregon 97301

Voice 503.986.0927 | Fax 503.986.0901

Email: [Kerry.L.Kavanagh@oregon.gov](mailto:Kerry.L.Kavanagh@oregon.gov) Web: <http://oregon.gov/ORWD>

---

**From:** Mike [<mailto:mike@cswdhr.com>]  
**Sent:** Thursday, January 19, 2017 1:03 PM  
**To:** KAVANAGH Kerry L \* WRD  
**Subject:** Application #S-45826

Kerry,

I wanted to contact you regards our payment for Application #S-45826 / Permit #S-34196. We have filled out our Certificate Reimbursement Authority Estimate Application, but our Superintendent is still gathering some more information to send with it. In the meantime, we accidentally processed the payment, Check #1130 / \$125.00 and mailed it to you. So if there is any confusion as to what that payment is for, it is for this application. Sorry for the confusion. If there is anything else you need from us in the interim, please let us know.

Thanks,

Mike Garrett

Crystal Springs Water District

PO Box 186 / 3006 Chevron Drive

Odell, Oregon 97044

(541) 354-1818



**KAVANAGH Kerry L \* WRD**

---

**From:** Mike <mike@cswdhr.com>  
**Sent:** Thursday, January 19, 2017 1:03 PM  
**To:** KAVANAGH Kerry L \* WRD  
**Subject:** Application #S-45826

Kerry,

I wanted to contact you regards our payment for Application #S-45826 / Permit #S-34196. We have filled out our Certificate Reimbursement Authority Estimate Application, but our Superintendent is still gathering some more information to send with it. In the meantime, we accidentally processed the payment, Check #1130 / \$125.00 and mailed it to you. So if there is any confusion as to what that payment is for, it is for this application. Sorry for the confusion. If there is anything else you need from us in the interim, please let us know.

Thanks,  
Mike Garrett  
Crystal Springs Water District  
PO Box 186 / 3006 Chevron Drive  
Odell, Oregon 97044  
(541) 354-1818



**KAVANAGH Kerry L \* WRD**

---

**From:** HAGE Trisha \* WRD  
**Sent:** Thursday, January 19, 2017 12:32 PM  
**To:** ZIELINSKI Vicki J \* WRD; SNYDER Lisa J \* WRD  
**Cc:** OPEIFA Salem B \* WRD; SUMPTION Mishelle K \* WRD; BROWN Felicia M \* WRD; WUETHRICH Courtney A \* WRD; KAVANAGH Kerry L \* WRD  
**Subject:** RE: Certificate RA

Hi Vicki,  
The RA number for Crystal Springs Water Dist. will be R12450-17 PCA 47126.  
Thanks,  
Trisha

---

**From:** ZIELINSKI Vicki J \* WRD  
**Sent:** Thursday, January 19, 2017 11:59 AM  
**To:** SNYDER Lisa J \* WRD  
**Cc:** OPEIFA Salem B \* WRD; SUMPTION Mishelle K \* WRD; BROWN Felicia M \* WRD; WUETHRICH Courtney A \* WRD; KAVANAGH Kerry L \* WRD; HAGE Trisha \* WRD  
**Subject:** Certificate RA

Hello,

Please help with this RA number.

Applicant: Crystal Springs Water District  
Related to Application : S-45826  
Receipt #: 122360

Thank you.

Vicki J. Zielinski, Receptionist, Administrative Services  
**Oregon Water Resources Department**  
725 Summer St NE, Suite A  
Salem, OR 97301-1266  
Desk: 503.986.0900



**KAVANAGH Kerry L \* WRD**

---

**From:** ZIELINSKI Vicki J \* WRD  
**Sent:** Thursday, January 19, 2017 11:59 AM  
**To:** SNYDER Lisa J \* WRD  
**Cc:** OPEIFA Salem B \* WRD; SUMPTION Mishelle K \* WRD; BROWN Felicia M \* WRD; WUETHRICH Courtney A \* WRD; KAVANAGH Kerry L \* WRD; HAGE Trisha \* WRD  
**Subject:** Certificate RA

Hello,

Please help with this RA number.

Applicant: Crystal Springs Water District  
Related to Application : S-45826  
Receipt #: 122360

Thank you.

Vicki J. Zielinski, Receptionist, Administrative Services

Oregon Water Resources Department  
725 Summer St NE, Suite A  
Salem, OR 97301-1266  
Desk: 503.986.0900



STATE OF OREGON  
WATER RESOURCES DEPARTMENT

RECEIPT # 122360

25 Summer St. N.E. Ste. A  
SALEM, OR 97301-4172  
(503) 986-0900 / (503) 986-0904 (fax)

INVOICE #

RECEIVED FROM: Crystal Springs Water District

APPLICATION 345826

BY:

PERMIT

TRANSFER

CASH: CHECK: # OTHER: (IDENTIFY)

☐

X 1130

☐

TOTAL REC'D \$ 125.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 47126 R 12450-17  
0408 OTHER: (IDENTIFY) Reimbursement Authority \$ 125.00

0243 I/S Lease 0244 Muni Water Mgmt. Plan 0245 Cons. Water

4270 WRD OPERATING ACCT

MISCELLANEOUS

0407 COPY & TAPE FEES \$  
0410 RESEARCH FEES \$  
0408 MISC REVENUE: (IDENTIFY) \$  
TC162 DEPOSIT LIAB. (IDENTIFY) \$  
0240 EXTENSION OF TIME \$

WATER RIGHTS:

0201 SURFACE WATER EXAM FEE \$ RECORD FEE \$  
0203 GROUND WATER \$ 0204 \$  
0205 TRANSFER \$

WELL CONSTRUCTION

0218 WELL DRILL CONSTRUCTOR EXAM FEE \$ LICENSE FEE \$  
LANDOWNER'S PERMIT 0219 \$  
0220 \$

OTHER (IDENTIFY)

0536 TREASURY 0437 WELL CONST. START FEE

0211 WELL CONST START FEE \$ CARD #  
0210 MONITORING WELLS \$ CARD #

OTHER (IDENTIFY)

0607 TREASURY 0467 HYDRO ACTIVITY LIC NUMBER

0233 POWER LICENSE FEE (FW/WRD) \$  
0231 HYDRO LICENSE FEE (FW/WRD) \$  
HYDRO APPLICATION \$

TREASURY OTHER / RDX

FUND TITLE

OBJ. CODE VENDOR #

DESCRIPTION \$

RECEIPT: 122360

DATED: 1/18/17 BY: Bilindis

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal

STATE OF OREGON  
WATER RESOURCES DEPARTMENT

RECEIPT # 122360

25 Summer St. N.E. Ste. A  
SALEM, OR 97301-4172  
(503) 986-0900 / (503) 986-0904 (fax)

INVOICE #

RECEIVED FROM: Crystal Springs Water District

APPLICATION 345826

BY:

PERMIT

TRANSFER

CASH: CHECK: # OTHER: (IDENTIFY)

☐

X 1130

☐

TOTAL REC'D \$ 125.00

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HYDRO APPLICATION \$

TREASURY OTHER / RDX

FUND TITLE

OBJ. CODE VENDOR #

DESCRIPTION \$

RECEIPT: 122360

DATED: 1/18/17 BY: Bilindis

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal





OREGON WATER RESOURCES DEPARTMENT  
CERTIFICATE REIMBURSEMENT AUTHORITY  
ESTIMATE APPLICATION

141

ORS 536.055 authorizes the Oregon Water Resources Department to expedite or enhance regulatory processes voluntarily requested under the agreement.

The purpose of this application is to obtain estimates of the cost and time required to process a Certificate Request. A separate estimate application is required for each application and/or transfer number. There is a non-refundable application fee of \$125.00 per request.

REQUEST	TYPE	FILE NUMBER
<input checked="" type="checkbox"/>	Certificate Request	Application Number S-45826 Permit Number S-34196 Transfer Number/Permit Amendment (if applicable)

	Applicant Information	Applicant's Representative/Contact
Name:	Crystal Springs Water District	Fred Schatz, District Superintendent
Address:	PO Box 186 Odell, Oregon 97041	PO Box 186 Odell, Oregon 97041
Phone:	541.354.1818	541.354.1818
Fax:		
E-Mail Address:	Office@cswdhr.com	fred@cswdhr.com

I certify that I (check one):

- ☒ have previously filed a Claim of Beneficial Use  
☐ am attaching the Claim of Beneficial Use with this request and have included the appropriate claim fee.

8834-1

I understand the following:

- That upon receipt of my non-refundable application fee in the amount of **\$ 125.00**, OWRD will, within fourteen (14) days, notify me in writing of the estimates of cost and time frame for the expedited service.
- That this fee covers the reimbursement authority staff to evaluate and provide the estimate for processing of the request.
- That upon receiving the estimate I may agree or decline to enter into a formal contract to pay the estimated cost in advance to initiate the expedited service.
- An incomplete or inaccurate Claim of Beneficial Use may delay the process and increase the cost to process my request.
- Expedited processing does not guarantee a favorable review of my request.
- Send completed Application and payment to:

Oregon Water Resources Department  
Certificate Reimbursement Authority Program  
725 Summer St. NE, Suite A  
Salem, OR 97301-1271

RECEIVED BY OWRD

JAN 18 2017

SALEM

I certify that I am the (check one):

- ☐ Applicant ☒ Applicant's Representative ☐ Other (Please specify) \_\_\_\_\_

Name: Fred Schatz

Signature: Fred Schatz

OWRD USE ONLY: Reimbursement Authority Number: R12450-17

*[Handwritten signature]*



**CLARK Gerry E**

---

**From:** CLARK Gerry E  
**Sent:** Friday, October 28, 2016 1:19 PM  
**To:** 'Bill Pavlich'  
**Subject:** RE: COBU map waiver Crystal Springs Water District

Bill,

Your request for a waiver is approved as requested. Please attach a copy of this approval to your Claim.

Please let me know if you have any additional questions.

Gerry

Gerry Clark  
Water Right Services Division  
Water Resources Department  
725 Summer Street NE, Suite A  
Salem, Oregon 97301

Phone: 503-986-0811

---

**From:** Bill Pavlich [<mailto:billp@paceengrs.com>]  
**Sent:** Thursday, October 27, 2016 4:03 PM  
**To:** Gerry Clark ([gerald.e.clark@state.or.us](mailto:gerald.e.clark@state.or.us))  
**Subject:** COBU map waiver Crystal Springs Water District

Hi Gerry,

I am currently working with the Crystal Springs Water District located in Hood River County. They want to incrementally perfect a municipal permit (S-34196). The District is very large, so we are requesting a waiver on the Claim Of Beneficial Use Map to allow a scale of 1"=5,280' which will result in a 17"x22" map. The map will include the District boundaries, Range/Township/Section and quarter-quarters, quarter-quarters in which consumptive use is occurring will be hatched or highlighted, the source will be identified on the map and in a more detailed inset. We will also provide an unstamped 11"x17" paper copy of the District's water system map which was recently completed for the District's OHA approved 2016 water master plan. Thank you.

Bill Pavlich

#454WRE



**Bill Pavlich** | Sr. Project Manager  
5000 Meadows Road | Suite 345 | Lake Oswego, OR 97035  
p. 503.597.3222 | f. 503.597.7655

*Celebrating 20+ Years of Success*





# Oregon

John A. Kitzhaber, MD, Governor

Water Resources Department  
North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1271  
503-986-0900  
FAX 503-986-0904

January 15, 2015

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 35  
HOOD RIVER, OR 97031

REFERENCE: Application **S-45826** / Permit S-34196

Dear Permit Holder:

The Water Right Services Division received your written progress report for Permit S-34196. Receipt of the progress report was published on the Department's weekly Public Notice, dated December 9, 2014. The Department did not receive any public comment on the progress report.

After reviewing your Progress Report, the Department determined that diligence toward completion of the project and compliance with the terms and conditions of the permit and extension has been demonstrated.

Your next written progress report for Permit S-34196 is due no later than **October 1, 2019**. The report must be received by the Department no sooner than 30 days prior to the due date. You also have (a) future report(s) that will be due by October 1, 2024, 2029, 2034, 2039, 2044, 2049, and 2054.

For your convenience, I have enclosed your next *Progress Report Form*. Please calendar this October 1, 2019 due date, as no further reminders will be sent.

As per your most recent extension, the date by which water must be applied to full beneficial use within the terms and conditions of your permit is October 1, 2058. ***Failure to submit a written progress report will most likely result in any future extensions being denied.***

If you have any questions, please feel free to contact me by telephone at (503) 986-0802.

Sincerely,

Machelle A Bamberger  
Extensions  
Water Right Services Division

Enclosure

cc: Application S-45826  
Watermaster District 3 – Robert Wood



## Route Slip.....Extension of Time Progress Report

### 1. Extension Specialist: Progress Report Review

Date Report was Due: 10/1/2014 (= "Deadline Date" for the corresponding ECP work flow record in WRIS)

Date Report Received: 11/25/2014

Report Complete: ☒ YES

☐ NO – Send letter requesting missing information.  
☐ letter mailed on: \_\_\_\_\_

### 2. Support Staff: Publish on the Department's Public Notice

☐ 315 ☒ 320 OAR Division under which Progress Report was required

☒ Publish on Public Notice Date: 12/9/14

☒ Update workflow in WRIS

o (Fill in Extension Checkpoint 'Completed Date' in appropriate "ECP" work flow record and

o add record for Checkpoint Public Notice ("EPR" or "EP2")

☒ Return file to Machelle Bamberger.

### 3. Extension Specialist: Prepare Progress Report Confirmation Letter

See progress report procedures.doc

(date / mail out after 30 day comment period)

Date Confirmation Letter Needed: 1-1-15

☒ Update Progress Report Worksheet.xls

☐ Send to permit holder + anyone who made comments after 30 day public notice  
CC: Watermaster \_\_\_\_\_

File \_\_\_\_\_

## PUBLIC NOTICE INFORMATION

Permit Holder's Name: Crystal Springs Water District Attn:

Application: S-45826

Permit: S-34196

County: Hood River

Source: Crystal Springs

Use: Domestic-Municipal

2019, 24, 27, 34  
39, 44, 49, 54  
'C' 2058





Oregon Water Resources Department  
725 Summer Street NE, Suite A  
Salem Oregon 97301-1266  
(503) 986-0900  
www.wrd.state.or.us

# Extension of Time Progress Report Form For Checkpoints

TO THE DIRECTOR OF THE OREGON WATER RESOURCES DEPARTMENT

Permit Holder: **Crystal Springs Water District** Application **S-45826** Permit **S-34196**

Report Due no later than October 1, 2014

## Progress Report Form for 2014

As authorized in ORS 690-315-0050(6), this progress report is required in order to ensure diligence is exercised in the development and perfections of Permit S-34196. FAILURE TO SUBMIT THIS REPORT WILL MOST LIKELY RESULT IN ANY FUTURE EXTENSION BEING DENIED.

INSERT DATES	LIST ALL WORK ACCOMPLISHED and FINANCIAL INVESTMENTS For the period of time between October 1, 2009 to October 1, 2014	FINANCIAL INVESTMENT
Oct 1, 2009	4975 feet of six inch and larger	
Dec 31, 2009	2939 feet of two inch and smaller pipe 3 new Services	\$150,505.73
Jun 1	4300 feet of six inch and larger	
Dec 31 2010	1511 feet of two inch and smaller pipe 5 new Services	\$146,664.44
Jun 1	7060' of six inch pipe	
Dec 31 2011	4297 feet of two inch and smaller 4 new Services	\$202,186.75
Jun 1 -	5730' of 6 inch and larger	
Dec 31 2012	8926 feet of two inch + smaller 6 new Services	\$280,736.52
Jun 1 -	4750 feet of 6 inch and larger	
Dec 31, 2013	11,375 of two inch and larger 8 new Services	\$358,363.19
2012	Land purchased for Futer Reservoir	\$10,000
Jun 1 2014	5191 feet of 6 inch larger	
Oct 2014	7163 feet of two inch and smaller 10 New Services	\$167,815.14

2. Compliance with terms and conditions of the permit and/or previous extension.

Crystal Springs Water District has served all customers who have applied for water services. 36 services have been installed since Oct 1st 2009. Crystal Springs has invested 1,316,191.77 in new water lines since Oct 1st 2009.

RECEIVED BY OWRD

NOV 25 2014

3. Total number of acres irrigated to date= \_\_\_\_\_ (if applicable) SALEM, OR
4. Provide the maximum rate, or duty if applicable, of water diverted for beneficial use under this permit, if any, made to date.

Maximum rate used to date = 1.25 cfs (cubic feet per second)

Maximum rate used to date = \_\_\_\_\_ gpm (gallons per minute)

Acre-feet stored to date = \_\_\_\_\_ AF

Report the rate in the same units of measurement as specified in the permit, being cfs (cubic feet per second), gpm (gallons per minute) or AF (acre-feet). Do not provide daily, monthly or annual water volume totals.

INCOMPLETE REPORTS WILL BE RETURNED. AN ANSWER IS REQUIRED IN EACH ITEM. USE N/A FOR ITEM 3 IF THE USE IS NOT IRRIGATION.

Signature

*[Signature]*

Date Nov 20, 2014

Diligence Shown ☒ Yes ☐ No

For OWRD use only

Date Public Noticed: 12-9-14

Reviewed by: NAB

Date: 12-4-14





# Oregon

Theodore R. Kulongoski, Governor

Water Resources Department  
North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1266  
503-986-0900  
FAX 503-986-0904

March 29, 2010

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 35  
HOOD RIVER, OR 97301

REFERENCE: Application S-45826 / Permit S-34196

Dear Permit Holder:

The Water Rights and Adjudications Division received your written progress report for Permit S-34196 on September 22, 2009. Receipt of the progress report was published on the Department's weekly Public Notice, February 23, 2010. The Department did not receive any public comment on the progress report.

After reviewing your Progress Report, the Department determined that diligence toward completion of the project and compliance with the terms and conditions of the permit and extension has been demonstrated. For your convenience I have enclosed an additional Progress Report form due October 1, 2014.

If you have any questions, please feel free to contact me by telephone at (503) 986-0813.

Sincerely,

A handwritten signature in dark ink, appearing to be "S. Kudlemyer", with a long horizontal line extending to the right.

Scott Kudlemyer  
Extensions  
Water Rights and Adjudications Division

Enclosure

cc: Application S-45826 / Permit S-34196  
Watermaster District 3 / Bob Wood

*not: this had been on public notice in Sept 2009  
went on 2/23/10 pm (in error) but didn't send out this letter -  
no need to.*



## Route Slip.....Extension of Time Progress Report

### 1. Extension Specialist: Progress Report Review

Date Report Received: 9/22/2009

Report Complete: ☒ YES

☐ NO – Send letter requesting missing information.

☐ letter mailed on: \_\_\_\_\_

### 2. Jonnine: Publish on the Department's Public Notice

☒ 315 ☐ 320 OAR Division under which Progress Report was required

☒ Publish on Public Notice Date: 2/23/10

☒ Update workflow in WRIS (Fill in Extension Checkpoint 'Completed Date' in appropriate work flow record)

☒ Return to Extension Specialist

### 3. Extension Specialist: Prepare Progress Report Confirmation Letter

See ..\Procedures\_progress reports

(date / mail out after 30 day comment period)

Date Letter Needed: 3/29/2010

☒ Update Progress Report Worksheet.xls

☒ Send to permit holder + anyone who made comments after 30 day public notice

CC: Watermaster #3

File S-45826

### 4. Return file to cabinet

---

## PUBLIC NOTICE INFORMATION

Permit Holder's Name: Crystal Springs Water District Attn: \_\_\_\_\_

Permit Holder's Mailing Address: PO Box 35  
Hood River, OR 97301

Application: S-45826 Permit: S-34196

County: Hood River

Quantity of Water: 3.50 cfs

Source: Crystal Springs, tributary of East Fork of Hood River

Use: Domestic-Municipal Use

Current Authorized Extension Date: 10/1/2058





# Oregon

Theodore R. Kulongoski, Governor

Water Resources Department  
North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1266  
503-986-0900  
FAX 503-986-0904

October 29, 2009

CRYSTAL SPRINGS WATER DISTRICT  
PO BOX 186  
ODELL, OR 97044

REFERENCE: Application S-45826 / Permit S-34196

Dear Permit Holder:

The Water Rights and Adjudications Division received your written progress report for Permit S-34196. Receipt of the progress report was published on the Department's weekly Public Notice, dated September 29, 2009. The Department did not receive any public comment on the progress report.

After reviewing your Progress Report, the Department determined that diligence toward completion of the project and compliance with the terms and conditions of the permit and extension has been demonstrated.

If you have any questions, please feel free to contact me by telephone at (503) 986-0813.

Sincerely,

A handwritten signature in black ink, appearing to be "S. Kudlemyer", with a long horizontal line extending to the right.

Scott Kudlemyer  
Extensions  
Water Rights and Adjudications Division

Enclosure

cc: Application **S-45826** / Permit S-34196  
Watermaster District 4 / Bob Wood



## Route Slip.....Extension of Time Progress Report

### 1. Extension Specialist: Progress Report Review

Date Report Received: 9/22/2009

Report Complete: ☒ YES

☐ NO – Send letter requesting missing information.

☐ letter mailed on: \_\_\_\_\_

### 2. Jonnine: Publish on the Department's Public Notice

☐ 315 ☒ 320 OAR Division under which Progress Report was required

☒ Publish on Public Notice Date: 9/29/09 JNS

☒ Update workflow in WRIS (Fill in Extension Checkpoint 'Completed Date' in appropriate work flow record)

☒ Return to Extension Specialist

### 3. Extension Specialist: Prepare Progress Report Confirmation Letter

See ..\\Procedures progress reports

(date / mail out after 30 day comment period)

Date Letter Needed: 10/29/2009

☒ Update Progress Report Worksheet.xls

☒ Send to permit holder + anyone who made comments after 30 day public notice

CC: Watermaster WM # 4

File S-45826

10/29/09 JNS

### 4. Return file to cabinet

---

## PUBLIC NOTICE INFORMATION

Permit Holder's Name: Crystal Springs Water District Attn: Robert Duddles

Permit Holder's Mailing Address: PO Box 186  
Odell, OR  
97044

Application: S- 45826 Permit: S- 34196

County: Hood river

Quantity of Water: 3.5 cfs

Source: Crystal Springs tributary to East Fork Hood River

Use: Domestic-Municipal USe

Current Authorized Extension Date: 10/1/2058



# CRYSTAL SPRINGS WATER DISTRICT

FAX: 541.354.1821

DOMESTIC WATER SYSTEM  
~PO Box 186 ~ 3006 Chevron Drive ~ Odell OR 97044 ~

PHONE: 541.354.1818

September 21, 2009

## Progress Report

Extension of time for Permit #34196

### a) construction completed:

October 1 – December 31, 2003	906 feet of 6" pipe 206 feet of 2" or smaller pipe 6 new services
January 1 - December 31, 2004	5,266 feet of 6" pipe 4,713 feet of 2" or smaller pipe 20 new services
January 1 – December 31, 2005	4,066 feet of 6" pipe 4,153 feet of 2" or smaller pipe 46 new services
January 1 – December 31, 2006	8,401 feet of 6" pipe 2,635 feet of 2" or smaller pipe 13 new services
January 1 – December 31, 2007	5,020 feet of 6" pipe 3,811 feet of 2" or smaller pipe 30 new services
January 1 – December 31, 2008	4,790 feet of 6" pipe 1,475 feet of 2" or smaller pipe 10 new services
January 1 – September 15, 2009	5,070 Feet Of 6" pipe 3,225 feet of 2" or smaller pipe 5 new services

RECEIVED

SEP 22 2009

WATER RESOURCES DEPT  
SALEM, OREGON

### b) amount of beneficial use of water: 2.55 cfs of water is being used

<u>Priority date</u>	<u>Quantity allowed</u>	<u>status</u>	<u>use to date</u>
1930	1.00 cfs	certified – 10115 domestic	1.0 cfs
1964	2.65	extended -29377 group domestic	.67
1969	3.65	extended – 34196 municipal	.88

Note: Crystal Springs does not allow irrigation

### c) Permittee's compliance:

Crystal Springs Water District has served all customer who have applied for water service: 124 new service connections since October 1, 2003.

### d) financial investments:

Crystal Springs Water District has invested \$687,095.00 in new water lines since October 1, 2003.

Robert C. Duddles  
Superintendent Crystal Springs Water District

9/21/09  
date



**NOTE:** Include a copy of the "Important Notice" document along with the original copy of the Final Order being sent to the permit holder.

## Mailing List for Extension FO Copies

Application #S-45826

FO Date: August 4, 2004

Permit #S-34196

Original mailed to:

Crystal Springs Water District  
PO Box 186  
Odell, OR 97044

Copies Mailed

By: \_\_\_\_\_  
(SUPPORT STAFF)

on: \_\_\_\_\_  
(DATE)

For Extension FO's - Copies sent to:

1. WRD - Appl. File #S-45826 / Permit #S-34196
2. WRD - Watermaster District: #03 - Bob Wood, The Dalles
3. WRD - Regional Manager: NCR - Mike Ladd, Pendleton
4. ODFW - Biologist District: #7 - Steve Pribyl, The Dalles
5. WRD - Support Staff, Salem...*Permit record update*

Other interested parties:

6. Mark Womble  
Attorney at Law  
PO Box 1307  
Hood River, OR 97031

CASEWORKER: LJJ



## Extension "Final Order" Checklist

Application # S-45826 / Permit # S-34196

Permit Holder's Name Crystal Springs Water District

This Final Order is processed under: ~~CRD Div. 315 Rules~~ -or- ☒ Div. 320 Rules

✓ 1. Date Extension Request submitted: 3-1-99

✓ 2. Date permit was issued: 8-25-69

✓ 3. Original "B" Date from permit: 10-1-71  
(Date for completion of construction)

✓ 4. Original "C" Date from permit: 10-1-72  
(Date for complete application of water)

✓ 5. Extension PFO Date: 3-28-2000

✓ 6. WRD recommends extending "B" Date to: 10-1-2058  
and extending the "C" Date to: 10-1-2058

✓ 7. Any conditions from PFO: Yes - 5-yr Progress Reports

✓ 8. Protest Deadline Date from PFO: 5-12-2000

★ 9. <sup>jointly</sup> Protest filed by WaterWatch & Oregon Trout on 5-12-00.  
Any written Protests or written Comments received within the Protest period? (Yes / No)

★ However, Protest withdrawn on 7-23-04 by Fax from WaterWatch

CC: Mark S. Womble, Attorney at Law  
PO Box 1307  
Heald River, OR 97031

Reviewer's Name: [Signature]

Date: 7-29-04





# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1271  
503-986-0900  
FAX 503-986-0904

July 23, 2004

Daina Upite, ALJ  
Office of Administrative Hearings  
P.O. Box 14020  
Salem, OR 97309-4020

**Re: Water Right Application S-45826, Permit 34196 in the Name of  
Crystal Springs Water District**

Dear Administrative Law Judge Upite:

On May 12, 2004, the Oregon Water Resources Department (Department) referred the protest to Water Right Application S-45826, Permit 34196 in the Name of Crystal Springs Water District to the Office of Administrative Hearings (OAH).

The Department has received a letter from John DeVoe, representing WaterWatch of Oregon and Oregon Trout in this matter, that they withdraw their protest to extension of permit 34196. Accordingly, a contested case hearing is no longer necessary to resolve the issues raised by this protest and I am withdrawing this case from the Office of Administrative Hearings pursuant to OAR 137-003-0515. Pursuant to that rule, the Department is sending the enclosed letter to the parties notifying them that the issues raised in the protest have been resolved without the need for a hearing.

If you have any questions about this matter, please contact Kimberly Grigsby at (503) 986-0825.

Sincerely,

Richard D. Bailey, Administrator  
Water Rights and Adjudications Division

cc: Service List



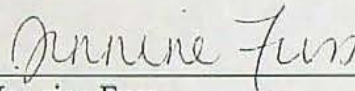
### CERTIFICATE OF SERVICE

I hereby certify that on July 23, 2004, I filed the original letter to Daina Upite, dated July 23, 2004, with Daina Upite by first class mail with postage prepaid to P.O. Box 14020, Salem, OR 97309-4924 and by facsimile to (503) 378-4067.

I further certify that true and correct copies of the above-described letter were served on the parties listed below by facsimile and first-class mail with postage prepaid.

John DeVoe  
WaterWatch  
213 SW Ash, Suite 208  
Portland, OR 97204  
Fax: 503-295-2791

Mark Womble  
PO Box 1307  
Hood River, OR 97031  
Fax: 541-298-7701

  
\_\_\_\_\_  
Jonnine Fuss





# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1271  
503-986-0900  
FAX 503-986-0904

July 23, 2004

John DeVoe  
WaterWatch  
213 SW Ash, Suite 208  
Portland, OR 97204

Mark Womble  
PO Box 1307  
Hood River, OR 97031

**Re: Extension for Water Right Permit 34196, Application S-45826 in the  
Name of Crystal Springs Water District**

Dear Mr. DeVoe and Mr. Womble:

As you are aware, WaterWatch of Oregon and Oregon Trout have withdrawn their protest to the extension for Water Right Permit 34196, Application S-45826, in the Name of Crystal Springs Water District. A copy of the letter is enclosed.

Since withdrawal of the protest resolves all of the issues raised by WaterWatch and Oregon Trout, there is no need to hold a hearing. Accordingly, the Department will withdraw the protest from the Office of Administrative Hearings pursuant to OAR 137-003-0515(4). The prehearing conference previously scheduled from July 26, 2004, is, consequently, canceled.

If you have any questions, please call me at (503) 986-0825.

Best regards,

Kimberly Grigsby  
Agency Representative

Enclosures







July 23, 2004

Kimberly Grigsby  
Agency Representative  
Oregon Water Resources Department  
725 Sumner St. NE, Suite A  
Salem, Oregon 97031  
Via Fax - 1-503-986-0901

Re: Crystal Springs Water District Extension Protest - Permit Number 34196

Dear Kimberly,

Thanks for speaking with me today about this matter. After further analysis and consideration, WaterWatch and Oregon Trout have decided to withdraw their protest in this matter. WaterWatch has authority to act on Oregon Trout's behalf for this purpose. If there are any additional steps beyond this letter which are necessary to withdraw this protest, please let me know.

This should obviate the need for the prehearing conference scheduled for Monday July 26 at 1:00 p.m. I trust you will notify the hearings officer and confirm that the conference has been taken off of the docket.

Please give me a call if you have any questions. Thanks for your professional courtesies in this matter.

Sincerely,

John DeVoe  
Executive Director  
WaterWatch of Oregon

CC - Joe Whitworth, Oregon Trout via fax - 503-222-9187  
Mark Womble, via fax - 1-541-298-7701



# Oregon Water Resources Department



Post-it® Fax Note

State	7671	Date	1/23/04	# of pages	5
To	# 114600				
Co./Dept.	# 114600				
Phone #	# 114600				
Fax #	# 114600				

TRANSMITTAL

OR. 97301-1271

To: John DeVoe

Fax Number: 503-295-2791

Date: 7/23/04

Pages: 5, including cover sheet

From: Kim Griqsbay

Phone: 503-986-0 825

Comments:

## DIRECTOR'S OFFICE

- Water Resources Commission
- Legislation and Rules
- Public Information

## FIELD SERVICES

- Regional Liaisons
- Transfers
- Hydrographics

## NORTHWEST REGION

- District 16 Watermaster

## ADMINISTRATIVE SERVICES

- Fiscal / Accounting
- Human Resources / Personnel
- Water Development Loan Fund
- Support Services

## TECHNICAL SERVICES

- Dam Safety
- Enforcement
- Ground Water
- Information Services
- GIS/Mapping
- Water Use Reporting

Fax: 503-986-0902

## WATER RIGHTS

- Water Rights Information
- Adjudications
- Hydroelectric
- Certificates / Final Proofs
- Hearings / Contested Cases

Fax: 503-986-0901

Fax: 503-986-0903 or  
503-986-0904



# Oregon Water Resources Department



State of Oregon  
Water Resources Department  
Post-it® Fax Note 7671

7/23/04

1144

1271

FA. INTAL

To: Mark Womble  
Date: 7/23/04  
From: Kim Grigsby

Fax Number: 541-298-7701  
Pages: 5, including cover sheet  
Phone: 503-986-0825

Comments:

1 page Missing reSent!

## DIRECTOR'S OFFICE

- Water Resources Commission
- Legislation and Rules
- Public Information

## FIELD SERVICES

- Regional Liaisons
- Transfers
- Hydrographics

## NORTHWEST REGION

- District 16 Watermaster

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- Dam Safety
- Enforcement
- Ground Water
- Information Services
- GIS/Mapping
- Water Use Reporting

Fax: 503-986-0902

## WATER RIGHTS

- Water Rights Information
- Adjudications
- Hydroelectric
- Certificates / Final Proofs
- Hearings / Contested Cases

Fax: 503-986-0901

Fax: 503-986-0903 or  
503-986-0904



# Oregon Water Resources Department



State  
Water  
725 S  
Phone  
<http://>

Post-it® Fax Note	7671	Date	# of pages
To	From	# 1143	
Co./Dept.	Co.		
Phone #	Phone #		
Fax #	Fax #		

## FAX TRANSMITTAL

To: Daina Upite, ALJ

Fax Number: 503-378-4067

Date: 7/23/04

Pages: 5, including cover sheet

From: Kim Griqsbay

Phone: 503-986-0 825

Comments:

### DIRECTOR'S OFFICE

- Water Resources Commission
- Legislation and Rules
- Public Information

### FIELD SERVICES

- Regional Liaisons
- Transfers
- Hydrographics

### NORTHWEST REGION

- District 16 Watermaster

### ADMINISTRATIVE SERVICES

- Fiscal / Accounting
- Human Resources / Personnel
- Water Development Loan Fund
- Support Services

### TECHNICAL SERVICES

- Dam Safety
- Enforcement
- Ground Water
- Information Services
- GIS/Mapping
- Water Use Reporting

Fax: 503-986-0902

### WATER RIGHTS

- Water Rights Information
- Adjudications
- Hydroelectric
- Certificates / Final Proofs
- Hearings / Contested Cases

Fax: 503-986-0901

Fax: 503-986-0903 or  
503-986-0904





213 SW ASH ST., SUITE 208  
PORTLAND, OR 97204  
503-295-4039

## BROADCAST FACSIMILE TRANSMISSION COVER SHEET

Date: 7/23/04Total pages including this page: 3From: John DeVoe

Fax number: 503-295-2791

To: Mark Womble  
Joe Whitworth  
Kimberly GrigsbyFax number: 1-541-298-7701  
503-222-9187  
1-503-986-0901

If you experience any difficulty receiving this transmission, please telephone  
WaterWatch immediately.

Re: Crystal Springs Water District Extension Protest -  
Permit No. 34196

Please call if you have any questions.  
John DeVoe

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION, OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE, AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS. THANK YOU.





July 23, 2004

Kimberly Grigsby  
Agency Representative  
Oregon Water Resources Department  
725 Sumner St. NE, Suite A  
Salem, Oregon 97031  
Via Fax - 1-503-986-0901

Re: Crystal Springs Water District Extension Protest - Permit Number 34196

Dear Kimberly,

Thanks for speaking with me today about this matter. After further analysis and consideration, WaterWatch and Oregon Trout have decided to withdraw their protest in this matter. WaterWatch has authority to act on Oregon Trout's behalf for this purpose. If there are any additional steps beyond this letter which are necessary to withdraw this protest, please let me know.

This should obviate the need for the prehearing conference scheduled for Monday July 26 at 1:00 p.m. I trust you will notify the hearings officer and confirm that the conference has been taken off of the docket.

Please give me a call if you have any questions. Thanks for your professional courtesies in this matter.

Sincerely,

John DeVoe  
Executive Director  
WaterWatch of Oregon

CC - Joe Whitworth, Oregon Trout via fax - 503-222-9187  
Mark Womble, via fax - 1-541-298-7701





July 23, 2004

Mark Womble  
Mark Womble, PC  
PO Box 1307  
Hood River, Oregon 97031  
Via Fax - 1-541-298-7701

Re: Crystal Springs Water District Extension Protest - Permit Number 34196

Dear Mark,

Thanks for speaking with me today about this matter. After further analysis and consideration, and for the reasons we discussed, WaterWatch and Oregon Trout have decided to withdraw their protest in this matter. WaterWatch has authority to act on Oregon Trout's behalf for this purpose. WaterWatch will take the steps necessary to withdraw or dismiss the pending protest. Accordingly, this should obviate the need for the prehearing conference scheduled for Monday July 26 at 1:00 p.m. I have spoken to Kimberly Grigsby at the Water Resources Department about this decision and will forward a letter to her dismissing or withdrawing the protest. I trust she will confirm with us that the conference has been taken off of the docket.

Please give me a call if you have any questions. Thanks for your professional courtesies in this matter.

Sincerely,

John DeVoe  
Executive Director  
WaterWatch of Oregon

CC - Joe Whitworth, Oregon Trout via fax - 503-222-9187  
Kimberly Grigsby, Oregon Water Resources Department via fax - 1-503-986-0901



STATE OF OREGON  
BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS  
FOR  
THE OREGON WATER RESOURCES COMMISSION

In the Matter of an Application for an	)	
Extension of Time for Permit 34196,	)	REVISED
Application S-45826, in the Name of	)	NOTICE OF CONTESTED
Crystal Springs Water District,	)	CASE AND PREHEARING
<i>Applicant</i>	)	CONFERENCE
vs.	)	
WaterWatch of Oregon and Oregon Trout,	)	
<i>Protestant</i>	)	

Pursuant to OAR 137-003-0505, this is the notice for a prehearing conference in the contested case proceeding on the protest filed against the Proposed Final Order for an Application for an Extension of Time for Permit 34196, Application S-45826 in the name of Crystal Springs Water District. The proposed final order for this application for extension of time was issued pursuant to ORS 537.230(2). The protests were filed pursuant to OAR 690-320-0010(8). A contested case hearing will be held pursuant to OAR Chapter 690 Division 2.

A telephone prehearing conference will be held on this matter from 1:00 to 2:00 p.m. on **July 26, 2004**. Representatives of the Applicant and the Protestant have approved the new date and time for the prehearing conference.

Please call Kimberly Grigsby by July 19, 2004, to advise of the telephone number where you can be reached for the conference call. Her telephone number is (503) 986-0825.

Administrative Law Judge Dina Upita of the Office of Administrative Hearings will conduct the prehearing conference. Parties may be represented by an attorney during this proceeding.

The purpose of the prehearing conference is to set a date and time for the contested case hearing, to determine a schedule for prehearing filings and discovery and to discuss and finalize the proposed issues listed below.

Proposed Issues

The Department believes the Protestant timely raised the following issues:

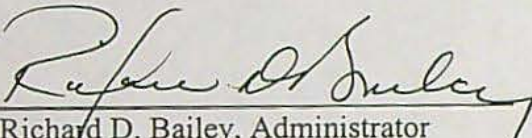
1. Whether the Department should find the Applicant cannot put the water under this permit to beneficial use because the Applicant can use water under its other certificated and permitted water rights. (Protest at 5.)



2. Whether Applicant can apply the water to beneficial use within a reasonable time. (Protest at 6.)
3. Whether the Department cannot find water will be put to beneficial use under this permit if the Department did not consider assumptions of water use efficiency. (Protest at 7.)
4. Whether the Department has failed to consider the competing demands for water as required by ORS 537.230 and 539.010. (Protest at 7—8.)
5. Whether the Applicant has failed to demonstrate diligent development of water under the permit. (Protest at 8—9.)
6. Whether the Department must deny the extension application because sixty years is not a “reasonable” time period pursuant to OAR 690-320-0010(7). (Protest at 9.)

Kimberly Grigsby, Agency Representative, will represent the Oregon Water Resources Department in this matter. A service list is attached along with a Statement of Party Rights in Contested Case Hearings.

DATED this 29 day of June, 2004.

  
Richard D. Bailey, Administrator  
Water Rights and Adjudications Division  
Oregon Water Resources Department




## CERTIFICATE OF FILING/SERVICE

I certify that on June 30, 2004, I filed the attached REVISED NOTICE OF CONTESTED CASE AND PREHEARING CONFERENCE and NOTICE OF CONTESTED CASES RIGHTS AND PROCEDURES with Daina Upita, Administrative Law Judge, Office of Administrative Hearings, PO Box 14020, Salem, OR 97309-4020 by certified mail, postage prepaid. I further certify that on June 30, 2004, true and exact copies of the above documents were served via certified mail, postage prepaid to the following:

WaterWatch of Oregon, Inc.  
213 SW Ash Suite 208  
Portland, OR 97204

Mark Womble  
PO Box 1307  
Hood River, OR 97031

Hand delivered:  
Kimberly Grigsby  
Agency Representative  
Oregon Water Resources Department  
725 Summer Street NE, Suite A  
Salem, OR 97301

  
Teri Hranac  
Oregon Water Resources Department





# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1271  
503-986-0900  
FAX 503-986-0904

May 12, 2004

Stacey Silbernagel  
Office of Administrative Hearings  
P.O. Box 14020  
Salem, OR 97309-4020

**RE: Referral of Protest to the Application for an Extension of Time for  
Permit 34196, Water Right Application S 45826, in the Name of  
Crystal Springs Water District**

Dear Ms. Silbernagel:

Enclosed are referral materials for the above-captioned matter. I am sending the Hearing Referral Form, the Notice of Contested Case and Prehearing Conference, the protest and a copy of the proposed final order issued by the agency in this case.

Please feel free to call or email me if you have any questions. My phone number is (503) 986-0825.

Sincerely,

Kimberly Grigsby  
Agency Representative

Enclosures



**For Panel Use Only**

Date Rcvd. \_\_\_\_\_

Assigned Case No. \_\_\_\_\_

**HEARING OFFICER PANEL****Agency/Board/Commission Hearing Referral Form**

(Instructions are on page 2)

**Required Case Information**Referral Date: May 12, 2004Agency/Board/Commission Name: Oregon Water Resources Department

If this is a corporation, please list the name: \_\_\_\_\_

Agency Case No: Permit 34196/Application 45826 Case Type: Water Right Extension ProtestDate of document or action from which hearing is requested: May 12, 2000Has this case been previously referred? Yes ☐ No ☒

If yes, complete only the items that need changing or updating since your previous referral.

**Identify the following parties with name, address and phone number:**

1. Party requesting hearing:

2. Representative of requestor:

Please see list of parties below

3. Agency representative for hearing:

4. Agency contact (if different from question 3):

Kimberly Grigsby725 Summer Street N.E., Suite ASalem, OR 97301(503) 986-08255. What is the expected length of the hearing? 1 day6. Is the hearing to be set and notice mailed by your Agency? Yes ☒ No ☐ If yes, contact us regarding the date and location, if necessary, to ensure that we have an ALJ available.

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Location: \_\_\_\_\_

(Street address, City, Room no.)

and provide a copy of your hearing notice with this transmittal.



7. If the hearing is to be set and notice mailed by the Hearing Officer Panel, answer a) & b). See above

a) Is a pre-hearing conference necessary? Yes ☐ No ☐

b) Give date and time scheduling preferences, requirements or restrictions.

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8. Is there specific language of issue(s) that you want to have stated on the notice of hearing?

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9. Does the notice of hearing require certified mailing? Yes ☐ No ☐ See above

10. May we conduct the hearing by telephone? Yes ☐ No ☒

11. If hearing must be in person, will your agency provide the location? Yes ☒ No ☐

Location: \_\_\_\_\_ Will schedule \_\_\_\_\_  
(Street address, City, Room no.)

12. Does this case require : Proposed Order ☒ Final Order ☐

13. Does the order require certified mailing? Yes ☐ No ☒

**Instructions:**

This is the Hearing Officer Panel's referral form. This form, together with the appropriate documents, is to be completed and sent to your assigned section within the Hearing Officer Panel every time you wish to refer a case for hearing. We will use the information both for scheduling cases and for collecting statistical data.

Permittee:

Crystal Springs Water District  
P.O. Box 186  
Odell, OR 97044  
(541) 354-1818

Represented by:

Mark Womble  
P.O. Box 1307  
Hood River, OR 97031  
(541) 386-7800

Protestant:

WaterWatch of Oregon and Oregon Trout  
Attention: Lisa Brown  
213 SW Ash, Suite 208  
Portland, OR 97204  
503-295-4039



STATE OF OREGON  
BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS  
FOR  
THE OREGON WATER RESOURCES COMMISSION

In the Matter of an Application for an	)	
Extension of Time for Permit 34196,	)	
Application S-45826, in the Name of	)	NOTICE OF CONTESTED
Crystal Springs Water District,	)	CASE AND PREHEARING
<i>Applicant</i>	)	CONFERENCE
vs.	)	
WaterWatch of Oregon and Oregon Trout,	)	
<i>Protestant</i>	)	

Pursuant to OAR 137-003-0505, this is the notice for a prehearing conference in the contested case proceeding on the protest filed against the Proposed Final Order for an Application for an Extension of Time for Permit 34196, Application S-45826 in the name of Crystal Springs Water District. The proposed final order for this application for extension of time was issued pursuant to ORS 537.230(2). The protests were filed pursuant to OAR 690-320-0010(8). A contested case hearing will be held pursuant to OAR Chapter 690 Division 2.

A telephone prehearing conference will be held on this matter from 10:00 to 11:00 a.m. on July 13, 2004.

Please call Kimberly Grigsby by July 6, 2004, to advise of the telephone number where you can be reached for the conference call. Her telephone number is (503) 986-0825.

Administrative Law Judge Dina Upita of the Office of Administrative Hearings will conduct the prehearing conference. Parties may be represented by an attorney during this proceeding.

The purpose of the prehearing conference is to set a date and time for the contested case hearing, to determine a schedule for prehearing filings and discovery and to discuss and finalize the proposed issues listed below.

Proposed Issues

The Department believes the Protestant timely raised the following issues:

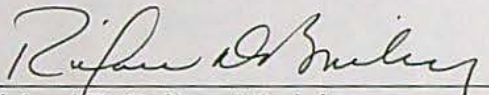
1. Whether the Department should find the Applicant cannot put the water under this permit to beneficial use because the Applicant can use water under its other certificated and permitted water rights. (Protest at 5.)



2. Whether Applicant can apply the water to beneficial use within a reasonable time. (Protest at 6.)
3. Whether the Department cannot find water will be put to beneficial use under this permit if the Department did not consider assumptions of water use efficiency. (Protest at 7.)
4. Whether the Department has failed to consider the competing demands for water as required by ORS 537.230 and 539.010. (Protest at 7—8.)
5. Whether the Applicant has failed to demonstrate diligent development of water under the permit. (Protest at 8—9.)
6. Whether the Department must deny the extension application because sixty years is not a “reasonable” time period pursuant to OAR 690-320-0010(7). (Protest at 9.)

Kimberly Grigsby, Agency Representative, will represent the Oregon Water Resources Department in this matter. A service list is attached along with a Statement of Party Rights in Contested Case Hearings.

DATED this 12 day of May, 2004.



Richard D. Bailey, Administrator  
Water Rights and Adjudications Division  
Oregon Water Resources Department



Crystal  
Springs  
Protest



Before the

Oregon Water Resources Department

In the matter of the Application for an	)	Protest of Proposed Final Order
Extension of Permit Number 34196	)	Oregon Trout
Water Right Application Number 45826	)	and
Crystal Springs Water District (Applicant)	)	WaterWatch

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### Introduction

Oregon Trout and WaterWatch (Protestants) file this protest and a check for \$25 pursuant to OAR 690-320-0010(8). Protestants strongly oppose the proposed extension of this permit. Information before this agency and argument presented in this protest show that significant questions exist relating to this proposed use of water. This proposed extension would allow the allocation of water far in excess of what is justified by Applicant. Applicant has not shown a need for water sufficient to ensure that the proposed use will not result in waste. Applicant has not indicated how the permitted right will be used in conjunction with other certificated and permitted rights to satisfy their water needs. Without this information, the Department is unable to ascertain the need for additional rights. In addition, Applicant's lack of diligence in completing appropriation of water prevents the finding of "good cause" necessary for granting an extension. Applicant's permitted rights are so far in excess of demonstrated needs that Applicant appears to have no plan to fully develop their water right. Under these conditions, the Department cannot logically make a finding of diligence. Applicant has not shown demand for water, an ability to use beneficially the permitted amount, or diligence in development and use of the permitted amount. The Department must deny the application for extension on the grounds that the Department has insufficient information to justify a finding of good cause under ORS 537.230(2).





### Statement of Protestant's Interest

Oregon Trout is a non-profit organization whose mission is to protect and restore native fish and their habitat. Many of Oregon's native fish species are in decline due to degradation of their habitat. While the factors that contribute to habitat degradation are numerous, primary among them is the reduction of instream flows due to the appropriation of water for out-of-stream uses. Where the Department's permitting practices promote an inefficient use of water for out-of-stream values, Oregon Trout's interest in preserving fish habitat is undermined. Granting of rights far in excess of envisioned beneficial use discourages conservation and so encourages this sort of inefficient use of water. Granting multiple rights to serve the same proposed beneficial use harms Protestants' interests in a similar way.

The Department is aware that both bull trout and summer and winter steelhead are listed as threatened under the federal Endangered Species Act (ESA). Both of these fish species are present in the Hood River, which is fed by the waters of Crystal Springs. Also, the Hood River retains a small population of coho salmon. Lower Columbia River coho are listed under Oregon's state ESA, and are a candidate species under the federal ESA. Oregon Trout's membership has an interest in protecting these threatened species and their habitat. Maintaining adequate instream flows through appropriate permitting practices is an important element in addressing the issues of water quality, and water temperature in particular.

WaterWatch is a non-profit, tax-exempt organization incorporated under the laws of Oregon. WaterWatch's mission is to promote water policies and water allocation decisions in Oregon that provide for the quality and quantity of water necessary to support fish, wildlife, recreation, ecological values, public health and a sound economy. WaterWatch has sought, and continues to seek, to modify or prevent further withdrawals from Oregon's streams and rivers in order to protect anadromous and resident fish populations and water quality in those streams. WaterWatch's actions with regard to the Hood River basin include petitioning the Water Resources commission in 1994 to withdraw all streams and hydraulically connected groundwater in the Hood River basin from further appropriation and opposing applications for new water developments that would harm instream water rights in the basin. WaterWatch was instrumental of the passage of the Instream Water Rights Act which mandated conversion of existing minimum perennial streamflows in the Hood River basin and elsewhere in the state to instream water rights. WaterWatch also participated in the proceedings that lead to the conversion of the minimum flows in the Hood River Basin to instream rights.

In addition, both Oregon Trout and WaterWatch are members of the Water Resources Department's work group formed to address Community Water Supply issues, including extensions of time for municipal permits. Both groups have invested staff resources and money in working on issues raised by this extension request.



WaterWatch and Oregon Trout are representing their organizational interests, the interests of their members and the public interest in the water resources at stake in the extension request.

### Statement of Public Interest

Oregon Trout's and WaterWatch's interest in streamflows and fish habitat is directly related to the public's interest in prudent management of the state's water resources. Water is a publicly owned resource, ORS 537.110, and the Department is charged with ensuring that extensions are granted for permits only when the applicant shows the ability to apply water to a beneficial use. ORS 539.010(5), OAR 690-320-0010(7). Where an appropriation of water is not for a beneficial use, the water is wasted. OAR 690-400-010(16). In addition, the public has entrusted the Department with the responsibility of "diligently enforc[ing] laws concerning cancellation, release and discharge of excessive unused claims to waters of this state to the end that such excessive and unused amounts may be made available for appropriation and beneficial use by the public." ORS 536.340(1)(b). The public interest is impaired when permits are extended without a proper showing that the permitted water right will be put to beneficial use within a reasonable time period.

The proposed extension would allow for increased diversions from Crystal Springs, a tributary of the East Fork of the Hood River which in turn flows into the Hood River mainstem and on to the Columbia. There are at least three instream water rights that will be effected by this proposed extension - Instream Certificate 59677 for the East Fork Hood River and Instream Certificates 59679 and 59747 for the mainstem Hood River. The priority date for instream certificate 59747 is 1966: three years senior to the priority date for the permit propopsed for extension. The instream water rights for the East Fork of the Hood River are intended to provide flows for coho salmon, summer and winter steelhead and rainbow trout. According to the Department's water availability information, the East Fork of the Hood River and the Hood River mainstem are over-appropriated year round. That means that instream water rights are not met year round. In addition, it appears that the Department's water availability analysis does not take into account all, or at least a portion of this permit requested for extension. If so, then fully exercising this permit will result in even further over-appropriation of the East Fork Hood River and the mainstem Hood River beyond even that shown in the Department's current analysis.

The public also shares Oregon Trout's and WaterWatch's interest in protecting fish species. The Oregon Legislature has endorsed and funded the Oregon Plan for Salmon and Watersheds, which aims to restore Oregon's wild salmon and trout populations. Under that plan, the Department is charged with protecting the public's interest in salmon and trout by conducting their permitting actions in a manner that will "minimize and mitigate adverse effects of the actions on salmonids or the habitat they depend on." Executive Order No. EO 99-01, paragraph 1(d)(a). The Oregon Plan forces the question of "whether it is good public policy to continue to issue water rights in those cases where there is little or no chance that the permittee will ever be





able to use water.” Letter from Governor John Kitzhaber to Martha Pagel, April 26, 2000. The issuance of extensions raises the same question.

#### Proposed Approval of Extension will Impair Protestant’s and Public’ Interests

The facts available to the Department do not show that water will be put to use under this permit within the reasonably foreseeable future. The department’s recent granting of an extension of thirty years to apply water under a previous permit suggests that the department does not foresee even an initial need for water under this permit until the year 2028. The Department’s forecast of the future rate of water development is both inexact and inaccurate. Even the very long period proposed for this extension would not allow Applicant to develop the full amount of the water, assuming a continuation of past rates of consumption. Approving the extension under these circumstances discourages the use of conservation as a source of water supply. By over-allocating water to out of stream uses, the Department ensures that those uses will take precedence over competing demands for water for instream use. This practice, especially when considered in the aggregate with other permitting decisions, contributes to the waste of water allocated for out-of-stream uses. This impairs Protestant’s interest in instream uses. The loss of this water for fish habitat will have a long-term effect on the ability of WaterWatch, Oregon Trout, the Public, and the State to protect sensitive fish species.

#### Extension Law

Oregon law provides that “the department, for good cause shown, shall order and allow an extension of time, . . . within which irrigation or other works shall be completed or the right perfected.” ORS 537.230(2). The applicant bears the burden of showing that good cause exists for the extension. In determining good cause, the Department must give due weight to:

“the cost of the appropriation and application of the water to a beneficial purpose, the good faith of the appropriator, the market for water or power to be supplied, the present demands therefor (sic), and the income or use that may be required to provide fair and reasonable returns upon the investment.” ORS 539.010(5).

Under the current circumstances, Applicant has not shown that good cause exists for granting this extension.

1. The Applicant Must Show the Extent of the Proposed Beneficial Use and that this Use Will Occur within a Reasonable Time

In determining whether to grant an extension, the Department is to consider the merits of the applied-for extension as they relate to “the appropriation and application of the water to a beneficial purpose.” See ORS 539.010(5).





a. Need Must be Justified Based Upon Projected Demands within Applicant's Service Area and Must be Considered in Conjunction with Supply

Whether Applicant will put their permitted water right to beneficial use depends on the demand for water and alternative supplies. The Department must first consider alternative sources of water in order to ensure that the permit under consideration for extension is necessary for the proposed beneficial use and so will, in fact, be put to beneficial use. In the present case, Applicant can draw water under other certificated and permitted water rights. Applicant has the following water rights and sources:

<u>Source</u>	<u>Priority Date</u>	<u>Quantity</u>	<u>Status</u>
Crystal Springs	1930	1 cfs	Certified
Crystal Springs	1964	2.65 cfs	Extended until 2028
Crystal Springs	1969	3.5 cfs	Extension?
		<hr/>	
Total:		7.15 cfs	



In determining the extent of a proposed beneficial use, logic requires that the Department compare the demand for water against the existing and applied-for supply. Where the applied-for source of water far exceeds the projected demands, the Department must make a determination as to what portion of the applied-for rights does not contemplate the application of water to a beneficial use.

Information provided by Applicant in their application does not clarify the question of when Applicant will put the permitted water to beneficial use. It is not clear to what extent they intend (or are able) to use the permitted 3.5 cfs in conjunction with their existing water rights.<sup>1</sup> The file contains conflicting evidence in this regard. In their application for extension, Applicant indicates that they have developed this permit (number 34196) to the extent of .94 cfs. They have developed permit number 29377 to the extent of .71 cfs, and are presumably using the entire 1 cfs of their certificated right, for a total of 2.65 cfs. In contradiction with this, Applicant has indicated to the Department in a telephone conversation that they have only developed water under their two more senior water rights and have made no use of the present permit.<sup>2</sup> This contradiction leaves unanswered the question of whether the present permit is being developed in order to meet current demands which cannot be satisfied under existing permits. Evidence, though, suggests that Applicant cannot make any use of this permit before 2028.

As for future demands, nothing in the file indicates that there is a plan for developing the present permit as a component of their water supply system. No plan exists for application of water under this permit other than to meet the potential needs of potential users in the far distant future. Applicant provides no information of the sort that might constitute a forecast of future demand. There is no

<sup>1</sup> The Department's application asks whether the applicant is "aware of alternative sources of water that may be able to satisfy the competing demands?" see Application, question 7-B. Applicant's response did not address the question.

<sup>2</sup> See file for application number 39422 (permit number 29377). A hand written note dated May 21, 1999 records a phone conversation with Bob Duddles (superintendent, Crystal Springs Water District) in which the following uses were discussed: total, 2.34 cfs; certificate 10115, 1.0 cfs; permit 29377, 1.34 cfs; permit 34196, zero cfs. This conversation took place during the time Applicant's more senior permit was being considered for an extension.



effort on the part of Applicant to quantify the amount of water needed under this permit in, for example, the year 2020.

Rather, the time requested for extension is based on an optimistic estimate of how quickly Applicant may be able to apply all of the water. In this instance, the proposed time for extension is calculated according to the past development of 1.34 cfs over 30 years. It is assumed that future development will occur at a similar rate. Even assuming that this method is a valid means of predicting application to beneficial use, the 3.5 cfs under this permit could be developed in no fewer than 78 years. When one accounts for Applicant's other permits--which the Department has determined will satisfy demands until 2028--it appears that Applicant could not fully apply this additional 3.5 cfs until the year 2106.

Applicant, though, has altered this methodology somewhat. They have allocated .94 cfs of their present use to this permit<sup>3</sup>, and so reason that they have already developed 27% of the permitted 3.5 cfs. Under this logic, Applicant estimates--and the Department accepts--that the additional 73% of the permitted amount could be developed in (roughly) twice the time that was required to develop the first 27%.<sup>4</sup> Thus, the proposed final order is for an extension of 60 years, until 2058. For the permitted amount to be applied in this time, there must be an even greater rate of development in the future than in the past. In order for Applicant to develop the entirety of their permitted rights by 2058, Applicant would have to develop water at a rate 1.86 times faster than they have over the past 30 years<sup>5</sup>. There is no evidence in the record to support this possibility.<sup>6</sup> For the Department to encourage this use of water is to discourage conservation and to encourage the possibility of waste.

Protestants believe that the Department's method of forecasting future use based on past use is not an acceptable substitute for forecasting application of water to beneficial use. It encourages excessive use of water over short periods of time in order to prove up on a permit, and so is a dangerous threat to the conservative management of the state's water resources. It rewards the applicant whose interest in water is speculative, and encourages them to use large quantities of water in a wasteful manner in order to achieve a certificated right. Extensions may be granted only in order to allow the applicant to "complete construction or to apply the water to a beneficial use." OAR 690-320-0010(6). Without more detailed information regarding efficiency, conservation, changes in use, and land use, it is not possible to predict future use with the degree of accuracy necessary to justify a finding of good cause to grant an extension. Also, in the present case, future beneficial use is not determined with the specificity which allows the good cause determination to be made in accordance with other legal mandates prohibiting waste and speculation. The present facts compel a finding of insufficient beneficial use to justify an extension.

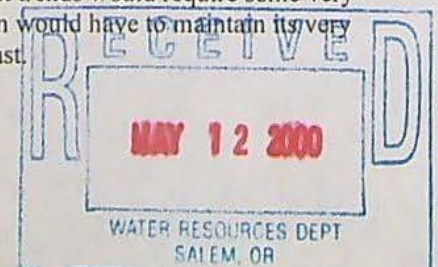
b. Demand Projections Must be Based on Minimum Levels of Efficiency and Conservation.

<sup>3</sup> This is despite the fact that Applicant claimed in 1999 that they had not developed any water under this permit. (see footnote 2, above).

<sup>4</sup> See Proposed Final Order, Water Right Permit Extension Application for Permit Number 34196, March 28, 2000.

<sup>5</sup>  $(4.81/58) / (1.34/30) = 1.86$

<sup>6</sup> Even without the failure to account for an existing extension to develop water under another permit which is predicted to satisfy needs until 2028, the method of projecting future beneficial use based on past trends would require some very difficult assumptions in this case. Either the current per capita peak daily consumption would have to maintain its very high level at 820 gpd, or population would have to grow at a greater rate than in the past.





Beneficial use is the basis, measure and limit of all rights to the use of water in Oregon. ORS 537.525(3), 540.610(1). "Beneficial use" in Oregon is essentially the efficient use of water for a purpose consistent with the laws and best interests of the people of this state. OAR 690-300-010(5). Oregon law calls for the state to "aggressively promote" water conservation and places a "high priority" on eliminating waste and improving the efficiency of water use. ORS 537.460(2)(a), OAR 690-410-060(1).

Thus, under this statutory structure, the "good cause" determination necessarily includes consideration of whether the water will be put to a beneficial use without waste. There is nothing in the file that indicates that Applicant's demand projections were evaluated in the context of water use efficiency. In fact, there is nothing in the file to show whether Applicant's present use of water is subject to any efficiency or conservation measures. There is no information regarding how the use of storage, if any exists, contributes to the meeting of peak need. There is no information regarding efficiency of Applicant's treatment plant; losses of water due to leakage; prevention of leakage through leak detection programs; use of variable rate structures; consumer conservation measures; or curtailment plans. There is even no information in the file to indicate what Applicant's peak demand is. The only record of present use (from 1987-88) indicates that peak monthly use occurs in September, when a total of 45 million gallons of water are diverted from Crystal Springs to meet the needs of 1,845 domestic users. This averages out to a per capita consumption of 820 gallons, every day, during the entire month. There is nothing in the file to explain this very high per capita use.



Even if the method of projecting demand had otherwise been reasonable, it has failed to take into account assumptions of water use efficiency. Failure to consider the potential of conservation as a source of future water supply prevents the Department from weighing the purported need against available sources, and so prevents a finding that the water under this permit will be put to beneficial use. Without sufficient evidence that the water will be put to beneficial use, good cause has not been shown, and the extension must be denied.

## 2. The Department Failed to Consider the Competing Demands for Water as Fish Habitat and so Cannot Find Good Cause to Grant an Extension.

The Department has limited its analysis of market value of water to the value of water for municipal use only, and so has failed to conduct an adequate analysis of demands for water. The good cause standard requires analysis of demand, and is not limited to consideration of out-of-stream uses. ORS 537.230 and 539.010. The good cause analysis can include whether the water would be of greater value for instream uses, such as fish habitat. *Id.* and Letter to Dick Bailey from Steve Sanders, pg. 8 (6/26/97).

The application that the Department uses in evaluating extension requests does not give the applicant the opportunity to explain whether there are competing demands on water for other uses, and for fish habitat in particular. The file contains no information regarding the existence of threatened bull trout and steelhead in the Hood River, and



does not contain any information relating to the potential impact of the proposed out-of-stream use on instream flows during critical, low flow times of the year. Consideration of competing demands shows that water is needed instream to protect listed salmon and steelhead. The agency's water availability analysis shows that these water needs are not met year round. Continued development of this permit will take away water needed for these instream water rights or other existing uses of water in the system. It even may further exacerbate already existing over-appropriation if the analysis does not take into account this permit.

Since the Department has failed to consider competing demands for the water, the Department cannot find that good cause exists for granting the extension, and must deny the extension request.

3. The Department Cannot Grant the Extension as Proposed Since Applicant has not Demonstrated Diligence in Developing the Permitted Amount.

Oregon law requires that the Department, in reviewing an application for an extension, consider the good faith of the applicant in pursuing application of the water. ORS 537.230(2), ORS 539.010(5). Logically, good faith includes a consideration of the diligence that the applicant has demonstrated in pursuing application of the permitted amount. Lack of diligence argues in favor of denial of the extension request and a requirement that the applicant "prove up" on the amount that they have appropriated for beneficial use.

The Department's extensions application form asks a number of questions designed to allow the applicant to show their diligence in pursuing construction and application to beneficial use. In instructions that accompany the application form, the Department asks for information that would be "useful in evaluating the time needed to complete the project and beneficially use water," such as might be provided in a business plan or a "phasing schedule showing how the project is to be fully developed and water applied in increments." Such a plan for development of the water would permit the Department to assess Applicant's progress.

In the present case, Applicant fails to set forth a plan for appropriating the full amount of their permitted right. The assumption is that water will be applied at a rate which corresponds to future population growth in Applicant's service area. As discussed above, the application fails to put forth any specific data relating to planned future population, demand, or use. As a result, Applicant is unable to demonstrate their diligence in advancing toward a defined goal. The reasons given by Applicant for delays in developing water under this permit do not relate to the slow growth in population, which is the true limit on their ability to use water. Instead, they relate to flood events that have affected the growth of infrastructure, but which have no relation to the speed with which water will be used under this permit.

Applicant, therefore, does not address the cause for the delay, unless it is due to the scope of the proposed use. Certainly, the scope of the permit is very large: 3.5 cfs,





when the Department has recently agreed that present supplies are adequate to meet demand until 2028, without, apparently, even considering future conservation. Also, inconsistencies in Applicant's reporting to the Department raise the question of whether any water at all has been developed under this permit. This suggests that, at present, the need for water under this permit is determined not by demand for beneficial use, or limitations on other sources, but only by Applicant's desire to secure it for potential future need. Shifting beneficial use from one permit to another for the purpose of perfecting both is not consistent with Oregon law. The Department must deny the requested extension on the grounds that Applicant has failed to use diligence in appropriating the water to beneficial use.

#### 4. The Law Does Not Allow Sixty Year Extensions

Water allocation in Oregon is built around a concept that the water will be used beneficially within a reasonable period of time. Beneficial use is the basis, measure and limit of all rights to the use of water in Oregon. ORS 537.525(3), 540.610(1). Water use permits in the state are only granted upon a showing of the intent and ability to use water beneficially. See ORS 537.170(8), ORS 537.190(1), ORS 537.140(1) and OAR 690-310-040(1)(a)(H) and (P). While the permit system essentially creates priority dates based on when applications for permits are filed, the permit system was meant only to make a record of water rights, not to eliminate the principle that water rights can be acquired and maintained only through use. See *Water Rights in Oregon: An Introduction to Oregon's Water Law and Water Rights System* at 14 (Oregon Water Resources Department, 1997). Permits can only be extended for a "reasonable" time period necessary to make beneficial use. OAR 690-320-0010(7).

Sixty years is not a reasonable time period in which to complete water use under this permit. Granting a sixty year extension today will mean that Applicant will have a total of 89 years to develop water under this permit. This is contrary to the fundamental premise of use found in Oregon's water law system and does not constitute a "reasonable" time period, even for municipal use.

There are good policy reasons not to allow water use permits far in advance of actual use. The "good cause" determination in an extension is a broad-based determination that must look at a divergent range of considerations. It is virtually impossible to predict what will be needed twenty, let alone sixty, years from now. The decision as to need should not be made sixty years in advance of the actual use. The decision should be made at the time the need is real, with knowledge and wisdom acquired in the intervening period. It should also be made with knowledge of the other factors that must be considered under the Department's good use analysis, such as competing demands on the resource for other uses, such as fish and recreation. It is impossible at this time to make an informed judgement of the sort contemplated by the good cause determination.





### Conclusion

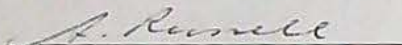
Applicant has not shown good cause for the requested extension. The facts in the record do not permit the Department to approve the requested extension of permit number 34196. Applicant has failed to show that market conditions for water within their water supply district are such that there is a need for additional municipal water sources under this permit. Applicant has also failed to demonstrate how they will put the permitted water to beneficial use, and failed to show diligence. Finally, the proposed conditions are inadequate to support a finding of "good cause" for extension.

### Requested Remedy

Oregon Trout and WaterWatch request that the PFO approving the extension for Permit No. 34196 be withdrawn and that the extension request be denied. Failing this, Protestants request a contested case on the proposed extension.

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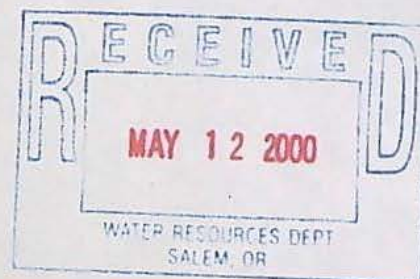
Submitted this 12<sup>th</sup> day of May, 2000.



Aubrey Russell  
Water Policy Advocate  
Oregon Trout  
117 S.W. Naito Parkway  
Portland, Oregon 97204  
(503) 222-909



Karen Russell  
Senior Staff Attorney  
Waterwatch  
213 S.W. Ash Street, Suite 208  
Portland, OR 97204  
(503) 295-4039





# CERTIFICATE OF SERVICE

I hereby certify that on May 12, 2000 I filed this Protest of the Proposed Final Order, by delivering the original to Martha Pagel at the Water Resources Department at the address set forth below. I further certify that I served a copy of said Protest on all the entities known to us to be parties in this proceeding by mailing said copy to the address set forth below, registered mail, by placing said copy in the United States Post Office in Portland, Oregon on May 12, 2000.

Martha Pagel, Director  
Water Resources Department  
158 12<sup>th</sup> Street N  
Salem, Oregon 97310

Crystal Springs Water District  
P.O. Box 186  
Odell, Oregon 97044

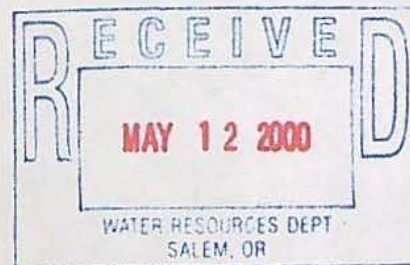
WaterWatch  
213 S.W. Ash Street, Suite 208  
Portland, Oregon 97204

Oregon Trout  
117 S.W. Naito Parkway  
Portland, Oregon 97204

Signed this 12<sup>th</sup> day of May, 2000

*A. Russell*

Aubrey Russell  
Oregon Trout





**ReneeM**

---

**From:** Mark Womble [womble@gorge.net]  
**Sent:** Thursday, March 04, 2004 3:20 PM  
**To:** Renee Moulun  
**Subject:** Fw: Crystal Springs Water District

----- Original Message -----

**From:** Mark Womble  
**To:** Renee Moulun  
**Sent:** Thursday, March 04, 2004 2:45 PM  
**Subject:** Crystal Springs Water District

Hi Renee:

I have attached a letter regarding the contested case hearing. Also, could you fax or mail a copy of the letter referenced in the protest (Steve Sanders to Dick Bailey 6-26-97), and I will reimburse.

Thank you.

Mark Womble

3/4/04



Prepared by:  
L. Juul on  
3-25-2002

## Crystal Springs Water District Fact Sheet

### Certificate #10115

Source: Crystal Springs, tributary to East Fork Hood River  
Use: Domestic  
Certificated Rate: 1.0 cfs (448.83 gpm)  
Priority: June 7, 1930

### Permit #S-29377 (Appl #S-39422)

Source: Crystal Springs, tributary to East Fork Hood River  
Use: Group Domestic  
Permitted Rate: 2.65 cfs (1,189.4 gpm)  
Priority: January 22, 1964

***"B" and "C" Dates Extended to: October 1, 2028 — Ext FO signed on Aug. 30, 1999***

### Permit #S-34196 (Appl #S-45826)

Source: Crystal Springs, tributary to East Fork Hood River  
Use: Municipal  
Permitted Rate: 3.5 cfs (1,570.9 gpm)  
Priority: March 3, 1969  
Extension PFO ***proposed*** to extend "B" and "C" Dates to: October 1, 2058

---

The following information was gathered from the March 1991 Water System Analysis (WSA) Report developed for the Crystal Springs Water District.

- (WSA, pg 14) Maximum flow of the spring is approximately 2,700 gpm, while the minimum flow is approximately 1,500 gpm. The maximum flow of 2,700 gpm from the spring equates to 6.02 cfs.
- (WSA, pg 16) states that "...Accounting for water loss, the total water use amounts to approximately 25% of the available water. Therefore, it is anticipated that the available spring water supply is of sufficient quantity to meet all of the expected needs of the water district..."
- (WSA, pg 16) further states that "...Although wintertime flows are less than summertime flows at the intake, being in the range of 1,500 gpm, there is still adequate supply at the spring to meet all foreseeable future needs of the District."



- (WSA, pg 15) Future Needs: Future water demand will depend upon the growth within the District and the ability of the District to reduce unaccounted-for water to a reasonable level.
- (WSA, pg 15) states that "...The average per capita water use in 1989 is estimated at slightly over 100 gallons per capita per day. A major increase in commercial use could increase per capita water use, but is not expected."

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The following information was provided by Robert Duddles, Superintendent of Crystal Springs Water District.... and was received by the Department by fax on July 13, 2000 and by mail on July 14, 2000.

- The total certificated and permitted water rights held by Crystal Springs Water District is 7.15 cfs (3,209.13 gpm), which is 1.13 cfs more than is available from the spring at the estimated maximum flow, being 6.02 cfs.
- Total current use of water by Crystal Springs Water District is as follows:

Certificate 10115	1.0 cfs
Permit #S-29377	0.34 cfs
Permit #S-34196	<u>0.46 cfs</u>
<b>Total:</b>	<b>1.8 cfs</b> (current water use)

Therefore...the quantity of water left to be developed is as follows:

Permit #S-29377	2.31 cfs left to be developed
Permit #S-34196	<u>3.04 cfs</u> left to be developed
<b>Total:</b>	<b>5.35 cfs</b> (remainder for development)

Current Service Growth Rate:	0.8 cfs in last 10 years and 403 service connections in last 10 years
------------------------------	--

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The following information was provided by Robert Duddles, Superintendent of Crystal Springs Water District, and was received by the Department on March 21, 2002.

- "...The District records only the number of connections, not the number of people at each connection..." Current (2002) peak day demand for CSWD, therefore, is figured as follows:

<u>Peak Month</u>	<u>Gallons/Day</u>	<u># of Connections</u>	<u>Gallons/Day per Connection</u>
1,453,812	(÷)	2,060	= 706



- Projected Population Growth Rate is as follows:

<u>Year</u>	<u>Population</u>
2010	5,900 - (Assuming 2010 population figure projected in March 1991 WSA Report)
2020	6,608 - (12% growth for this 10-year period)
2030	7,269 - (10% growth for this 10-year period)
2040	9,809 - (*9% growth for this 10-year period)
2050	10,692 - (9% growth for this 10-year period)
2058	11,440 - (7% growth for this 10-year period)

*\*the growth rate between 2030 and 2040 actually equates to a 35% growth rate*

<u>Year</u>	<u>Population</u>	<u>(÷) Average # of Persons/Connection</u>	<u>(=) # of Connections</u>	<u># Connections (x) 706 Gallons/Day</u> →	<u>Converted to CFS</u>
Current	4841	2.35**	2060.0	1,453,812	2.25 cfs
2010	5900	2.35**	2510.638	1,772,510	2.74 cfs
2020	6608	2.35**	2811.915	1,985,212	3.07 cfs
2030	7269	2.35**	3093.191	2,183,792	3.38 cfs
2040	9809	2.35**	4174.043	2,946,874	4.56 cfs
2050	10692	2.35**	4549.787	3,212,149	4.97 cfs
2058	11440	2.35**	4868.085	3,436,868	5.32 cfs

**Total Certificated and Permitted Water Rights for CSWD: 7.15 cfs**

**Maximum flow of water available from Crystal Springs: 6.02 cfs**

***Permitted amount remaining undeveloped by the year 2058: 0.7 cfs\*\*\****

\*\*This figure is an average based upon information contained on page 6 of the March 1991 WSA Report.

\*\*\*Mr. Duddles indicates in his letter (received by WRD on March 21, 2002) that "...this estimate [of 2.35 persons per connection] is not realistic for connections to commercial establishments, fruit packing houses, mobile home parks (e.g. one mobile home park has 200 residences and only 2 connections)."

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#### **Considerations for Market and Present Demand:**

- POD **is** located within a Division 33 (ST&E) Area for fish;
- POD is **NOT** located within or above a Scenic Waterway;
- POD is **NOT** located within a High Priority Area for Streamflow Restoration;
- POD is **NOT** located within a Ground Water Limited Area
- Instream Water Rights....see water availability report
- Hood River Basin Reservations....see water availability





# Water Availability for WID 30410509

printed on  
3-23-2002  
*[Signature]*

## WATER AVAILABILITY TABLE

Water Availability as of 1/1/\*\*\*\* for  
E FK HOOD R > HOOD R - AB DOG R

Watershed ID #: 30410509  
Time: 12:14

Basin: HOOD

Exceedance Level: 80

Date: 03/23/2002

Select an Item Number for More Details

Item #	Watershed ID #	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sto
1	192	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
2	30410575	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
3	30410513	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
4	189	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
5	30410509	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

## STREAM NAMES

Water Availability as of 1/1/\*\*\*\* for  
E FK HOOD R > HOOD R - AB DOG R

Watershed ID #: 30410509  
Time: 12:14

Basin: HOOD

Exceedance Level: 80

Date: 03/23/2002

Item Watershed ID Stream Name

1	192	HOOD R > COLUMBIA R - AT MOUTH
2	30410575	HOOD R > COLUMBIA R - AT RM 0.75
3	30410513	E FK HOOD R > HOOD R - AT MOUTH
4	189	E FK HOOD R > HOOD R - AB M FK HOOD R
5	30410509	E FK HOOD R > HOOD R - AB DOG R

## LIMITING WATERSHEDS

Water Availability as of 1/1/\*\*\*\* for  
E FK HOOD R > HOOD R - AB DOG R

Watershed ID #: 30410509  
Time: 12:14

Basin: HOOD

Exceedance Level: 80

Date: 03/23/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-144.0
2	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-130.0
3	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-69.0
4	189	E FK HOOD R > HOOD R - AB M FK HOOD R	NO	-28.9
5	189	E FK HOOD R > HOOD R - AB M FK HOOD R	NO	-46.2
6	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-285.0
7	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-434.0
8	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-523.0
9	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-471.0
10	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-358.0
11	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-95.5
12	30410575	HOOD R > COLUMBIA R - AT RM 0.75	NO	-87.2
Stor	30410509	E FK HOOD R > HOOD R - AB DOG R	YES	18600.0

## DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Water Availability as of 1/1/\*\*\*\* for  
HOOD R > COLUMBIA R - AT MOUTH

Watershed ID #: 192  
Time: 12:14

Basin: HOOD

Exceedance Level: 80

Date: 03/23/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	797.00	63.40	0.22	733.00	207.00	170.00	356.00
2	946.00	66.10	0.64	879.00	239.00	270.00	370.00
3	980.00	65.10	0.64	914.00	213.00	270.00	431.00

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- [water rights](#)
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4	1000.00	113.00	0.62	886.00	117.00	270.00	499.00
5	1020.00	185.00	0.23	834.00	100.00	170.00	564.00
6	745.00	231.00	0.36	513.00	48.30	170.00	295.00
7	588.00	272.00	0.41	316.00	0.14	130.00	186.00
8	457.00	230.00	0.27	227.00	0.11	100.00	127.00
9	438.00	159.00	0.19	279.00	0.12	100.00	179.00
10	423.00	60.90	0.08	362.00	0.17	100.00	262.00
11	591.00	61.10	0.14	530.00	25.20	100.00	404.00
12	764.00	62.30	0.18	701.00	119.00	170.00	413.00
Stor	721000	95000	239	626000	64100	121000	440000

DETAILED REPORT OF CONSUMPTIVE USES AND STORAGES

Water Availability as of 1/ 1/\*\*\*\* for

HOOD R > COLUMBIA R - AT MOUTH

Watershed ID #: 192 Basin: HOOD Exceedance Level: 80  
Time: 12:14 Date: 03/23/2002

Mo	Storage	Irrig	Munic	Ind/Man	Commer	Domest	Agricul	Other	Total
1	0.23	0.00	28.81	2.96	0.07	2.16	29.36	0.00	63.60
2	0.26	0.00	31.51	2.96	0.07	2.16	29.76	0.00	66.70
3	0.25	0.00	30.51	2.96	0.07	2.16	29.76	0.00	65.70
4	0.17	48.85	30.01	2.96	0.07	2.16	29.76	0.00	114.00
5	0.12	114.16	36.91	2.96	0.07	2.16	29.36	0.00	186.00
6	0.09	157.08	39.84	2.96	0.07	2.16	29.36	0.00	232.00
7	0.06	205.61	32.04	2.96	0.07	2.16	29.36	0.00	272.00
8	0.05	167.00	28.24	2.96	0.07	2.16	29.36	0.00	230.00
9	0.04	96.90	27.34	2.96	0.07	2.16	29.36	0.00	159.00
10	0.06	0.16	26.26	2.96	0.07	2.16	29.36	0.00	61.00
11	0.12	0.00	26.61	2.96	0.07	2.16	29.36	0.00	61.30
12	0.18	0.00	27.81	2.96	0.07	2.16	29.36	0.00	62.50

DETAILED REPORT OF RESERVATIONS FOR CONSUMPTIVE USE

Water Availability as of 1/ 1/\*\*\*\* for

HOOD R > COLUMBIA R - AT MOUTH

Watershed ID #: 192 Basin: HOOD Exceedance Level: 80  
Time: 12:14 Date: 03/23/2002

APP #	-80403A	-80402A	-80401A	0	0	0	0	TOTAL
Status	Reser.	Reser.	Reser.					
Use	Storage	Storage	Storage					
1	15.20	153.00	39.10	0.00	0.00	0.00	0.00	207.00
2	32.70	166.00	42.50	0.00	0.00	0.00	0.00	241.00
3	30.70	148.00	35.70	0.00	0.00	0.00	0.00	214.00
4	6.07	109.00	1.02	0.00	0.00	0.00	0.00	116.00
5	0.00	99.80	0.00	0.00	0.00	0.00	0.00	99.80
6	0.00	48.00	0.00	0.00	0.00	0.00	0.00	48.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	24.20	0.82	0.00	0.00	0.00	0.00	25.00
12	0.00	86.80	31.30	0.00	0.00	0.00	0.00	118.00

DETAILED REPORT OF INSTREAM REQUIREMENTS

Water Availability as of 1/ 1/\*\*\*\* for

HOOD R > COLUMBIA R - AT MOUTH

Watershed ID #: 192 Basin: HOOD Exceedance Level: 80  
Time: 12:14 Date: 03/23/2002

APP #	191A	192A	0	0	0	0	0	MAXIMUM
Status	Cert.	Cert.						
1	45.00	170.00	0.00	0.00	0.00	0.00	0.00	170.00
2	45.00	270.00	0.00	0.00	0.00	0.00	0.00	270.00
3	45.00	270.00	0.00	0.00	0.00	0.00	0.00	270.00



4	45.00	270.00	0.00	0.00	0.00	0.00	0.00	270.00
5	45.00	170.00	0.00	0.00	0.00	0.00	0.00	170.00
6	45.00	170.00	0.00	0.00	0.00	0.00	0.00	170.00
7	45.00	130.00	0.00	0.00	0.00	0.00	0.00	130.00
8	45.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00
9	45.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00
10	45.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00
11	45.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00
12	45.00	170.00	0.00	0.00	0.00	0.00	0.00	170.00

### DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Water Availability as of 1/ 1/\*\*\*\* for

HOOD R > COLUMBIA R - AT RM 0.75

Watershed ID #: 30410575

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	797.00	563.00	0.18	233.00	207.00	170.00	-144.00
2	946.00	566.00	0.61	379.00	239.00	270.00	-130.00
3	980.00	565.00	0.61	414.00	213.00	270.00	-69.00
4	1000.00	613.00	0.62	386.00	117.00	270.00	-1.08
5	1020.00	685.00	0.23	334.00	100.00	250.00	-16.10
6	745.00	731.00	0.36	13.40	48.30	250.00	-285.00
7	588.00	772.00	0.41	-184.00	0.14	250.00	-434.00
8	457.00	730.00	0.27	-273.00	0.11	250.00	-523.00
9	438.00	659.00	0.19	-221.00	0.12	250.00	-471.00
10	423.00	561.00	0.06	-138.00	0.17	220.00	-358.00
11	591.00	561.00	0.11	29.80	25.20	100.00	-95.50
12	764.00	562.00	0.14	202.00	119.00	170.00	-87.20
Stor	721000	457000	227	287000	64100	164000	118000

### DETAILED REPORT OF CONSUMPTIVE USES AND STORAGES

Water Availability as of 1/ 1/\*\*\*\* for

HOOD R > COLUMBIA R - AT RM 0.75

Watershed ID #: 30410575

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Mo	Storage	Irrig	Munic	Ind/Man	Commer	Domest	Agricul	Other	Total
1	0.19	0.00	28.80	2.96	0.07	2.16	29.40	500.00	564.00
2	0.22	0.00	31.51	2.96	0.07	2.16	29.76	500.00	567.00
3	0.22	0.00	30.51	2.96	0.07	2.16	29.76	500.00	566.00
4	0.17	48.85	30.01	2.96	0.07	2.16	29.76	500.00	614.00
5	0.12	114.16	36.91	2.96	0.07	2.16	29.36	500.00	686.00
6	0.09	157.08	39.84	2.96	0.07	2.16	29.36	500.00	732.00
7	0.06	205.61	32.04	2.96	0.07	2.16	29.36	500.00	772.00
8	0.05	167.00	28.24	2.96	0.07	2.16	29.36	500.00	730.00
9	0.04	96.90	27.34	2.96	0.07	2.16	29.36	500.00	659.00
10	0.04	0.16	26.26	2.96	0.07	2.16	29.36	500.00	561.00
11	0.08	0.00	26.61	2.96	0.07	2.16	29.36	500.00	561.00
12	0.14	0.00	27.81	2.96	0.07	2.16	29.36	500.00	562.00

### DETAILED REPORT OF RESERVATIONS FOR CONSUMPTIVE USE

Water Availability as of 1/ 1/\*\*\*\* for

HOOD R > COLUMBIA R - AT RM 0.75

Watershed ID #: 30410575

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Reservations								
APP #	-80403A	-80402A	-80401A	0	0	0	0	TOTAL
Status	Reser.	Reser.	Reser.					
Use	Storage	Storage	Storage					
1	15.20	153.00	39.10	0.00	0.00	0.00	0.00	207.00
2	32.70	166.00	42.50	0.00	0.00	0.00	0.00	241.00
3	30.70	148.00	35.70	0.00	0.00	0.00	0.00	214.00



4	6.07	109.00	1.02	0.00	0.00	0.00	0.00	116.00
5	0.00	99.80	0.00	0.00	0.00	0.00	0.00	99.80
6	0.00	48.00	0.00	0.00	0.00	0.00	0.00	48.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	24.20	0.82	0.00	0.00	0.00	0.00	25.00
12	0.00	86.80	31.30	0.00	0.00	0.00	0.00	118.00

DETAILED REPORT OF INSTREAM REQUIREMENTS  
Water Availability as of 1/ 1/\*\*\*\* for  
HOOD R > COLUMBIA R - AT RM 0.75

Watershed ID #: 30410575

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

-----ISWRs-----								
APP #	191B	192B	83969A	0	0	0	0	MAXIMUM
Status	Cert.	Cert.	PFO					
1	45.00	170.00	0.00	0.00	0.00	0.00	0.00	170.00
2	45.00	270.00	0.00	0.00	0.00	0.00	0.00	270.00
3	45.00	270.00	0.00	0.00	0.00	0.00	0.00	270.00
4	45.00	270.00	250.00	0.00	0.00	0.00	0.00	270.00
5	45.00	170.00	250.00	0.00	0.00	0.00	0.00	250.00
6	45.00	170.00	250.00	0.00	0.00	0.00	0.00	250.00
7	45.00	130.00	250.00	0.00	0.00	0.00	0.00	250.00
8	45.00	100.00	250.00	0.00	0.00	0.00	0.00	250.00
9	45.00	100.00	250.00	0.00	0.00	0.00	0.00	250.00
10	45.00	100.00	220.00	0.00	0.00	0.00	0.00	220.00
11	45.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00
12	45.00	170.00	0.00	0.00	0.00	0.00	0.00	170.00

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION  
Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AT MOUTH

Watershed ID #: 30410513

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	424.00	14.80	0.15	409.00	153.00	0.00	256.00
2	492.00	18.60	0.55	473.00	166.00	0.00	307.00
3	499.00	36.00	0.55	462.00	148.00	0.00	314.00
4	476.00	70.60	0.53	405.00	109.00	0.00	296.00
5	531.00	134.00	0.09	397.00	99.80	0.00	298.00
6	443.00	190.00	0.17	253.00	48.00	0.00	205.00
7	383.00	213.00	0.16	170.00	0.00	0.00	170.00
8	296.00	191.00	0.07	105.00	0.00	0.00	105.00
9	290.00	134.00	0.07	156.00	0.00	0.00	156.00
10	271.00	61.30	0.03	210.00	0.00	0.00	210.00
11	327.00	19.20	0.09	308.00	24.20	0.00	284.00
12	383.00	13.80	0.12	369.00	86.80	0.00	282.00
Stor	368000	66400	153	301000	50100	0	251000

DETAILED REPORT OF CONSUMPTIVE USES AND STORAGES

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AT MOUTH

Watershed ID #: 30410513

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Mo	Storage	Irrig	Munic	Ind/Man	Commer	Domest	Agricul	Other	Total
1	0.13	0.00	8.81	2.67	0.05	1.46	1.84	0.00	15.00
2	0.14	1.13	11.51	2.67	0.05	1.46	2.24	0.00	19.20
3	0.13	19.50	10.51	2.67	0.05	1.46	2.24	0.00	36.50
4	0.11	54.63	10.01	2.67	0.05	1.46	2.24	0.00	71.20



5	0.08	110.66	16.91	2.67	0.05	1.46	1.84	0.00	134.00
6	0.07	164.38	19.84	2.67	0.05	1.46	1.84	0.00	190.00
7	0.05	194.59	12.04	2.67	0.05	1.46	1.84	0.00	213.00
8	0.04	176.78	8.24	2.67	0.05	1.46	1.84	0.00	191.00
9	0.04	120.54	7.34	2.67	0.05	1.46	1.84	0.00	134.00
10	0.04	49.07	6.26	2.67	0.05	1.46	1.84	0.00	61.40
11	0.05	6.59	6.61	2.67	0.05	1.46	1.84	0.00	19.30
12	0.10	0.00	7.81	2.67	0.05	1.46	1.84	0.00	13.90

DETAILED REPORT OF RESERVATIONS FOR CONSUMPTIVE USE

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AT MOUTH

Watershed ID #: 30410513

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Reservations									
APP #	-80402A	0	0	0	0	0	0	0	TOTAL
Status	Reser.								
Use	Storage								
1	153.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	153.00
2	166.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	166.00
3	148.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	148.00
4	109.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.00
5	99.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.80
6	48.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	24.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.20
12	86.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.80

DETAILED REPORT OF INSTREAM REQUIREMENTS

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AT MOUTH

Watershed ID #: 30410513

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

ISWRs									
APP #	0	0	0	0	0	0	0	0	MAXIMUM
Status									
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AB M FK HOOD R

Watershed ID #: 189

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	207.00	13.20	0.15	194.00	153.00	100.00	-59.60
2	268.00	17.00	0.55	250.00	166.00	100.00	-15.20
3	286.00	34.40	0.55	251.00	148.00	100.00	2.84



7/1/03	Acct	Debit	Credit	Balance	Debit	Credit	Balance
4		288.00	57.20	0.53	230.00	109.00	150.00
5		308.00	104.00	0.09	204.00	99.80	150.00
6		253.00	150.00	0.17	102.00	48.00	150.00
7		206.00	161.00	0.16	44.70	0.00	100.00
8		152.00	149.00	0.07	2.99	0.00	100.00
9		146.00	109.00	0.07	37.20	0.00	100.00
10		134.00	59.70	0.03	74.30	0.00	150.00
11		163.00	17.50	0.09	145.00	24.20	150.00
12		190.00	12.20	0.12	178.00	86.80	150.00
Stor		206000	53600	153	152000	50100	90600

### DETAILED REPORT OF CONSUMPTIVE USES AND STORAGES

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AB M FK HOOD R

Watershed ID #:

189

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Mo	Storage	Irrig	Munic	Ind/Man	Commer	Domest	Agricul	Other	Total
1	0.13	0.00	8.81	2.42	0.05	1.08	0.83	0.00	13.30
2	0.14	1.13	11.51	2.42	0.05	1.08	1.24	0.00	17.60
3	0.13	19.50	10.51	2.42	0.05	1.08	1.24	0.00	34.90
4	0.12	42.80	10.01	2.42	0.05	1.08	1.24	0.00	57.70
5	0.09	83.00	16.91	2.42	0.05	1.08	0.83	0.00	104.00
6	0.08	126.34	19.84	2.42	0.05	1.08	0.83	0.00	151.00
7	0.05	144.80	12.04	2.42	0.05	1.08	0.83	0.00	161.00
8	0.04	136.34	8.24	2.42	0.05	1.08	0.83	0.00	149.00
9	0.03	97.09	7.34	2.42	0.05	1.08	0.83	0.00	109.00
10	0.03	49.07	6.26	2.42	0.05	1.08	0.83	0.00	59.70
11	0.05	6.59	6.61	2.42	0.05	1.08	0.83	0.00	17.60
12	0.09	0.00	7.81	2.42	0.05	1.08	0.83	0.00	12.30

## DETAILED REPORT OF RESERVATIONS FOR CONSUMPTIVE USE

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AB M FK HOOD R

Watershed ID #:

189

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

[illegible]

## DETAILED REPORT OF INSTREAM REQUIREMENTS

Water Availability as of 1/ 1/\*\*\*\* for

$$E_{FK} \text{ HOOD } R > \text{HOOD } R - AB \text{ } M_{FK} \text{ HOOD } R$$

Watershed ID #:

189

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

[illegible]



[illegible]

## DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AB DOG R

Watershed ID #: 30410509

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	172.00	4.40	0.13	167.00	153.00	0.00	14.20
2	193.00	4.40	0.14	188.00	166.00	0.00	22.90
3	192.00	4.40	0.13	187.00	148.00	0.00	39.20
4	206.00	4.48	0.12	201.00	109.00	0.00	92.20
5	273.00	4.58	0.09	268.00	99.80	0.00	169.00
6	234.00	4.65	0.16	229.00	48.00	0.00	181.00
7	192.00	4.73	0.16	187.00	0.00	0.00	187.00
8	142.00	4.67	0.07	137.00	0.00	0.00	137.00
9	138.00	4.55	0.07	133.00	0.00	0.00	133.00
10	128.00	4.40	0.03	124.00	0.00	0.00	124.00
11	153.00	4.40	0.09	149.00	24.20	0.00	124.00
12	184.00	4.40	0.11	179.00	86.80	0.00	92.70
Stor	166000	3260	78	163000	50100	0	113000

### DETAILED REPORT OF CONSUMPTIVE USES AND STORAGES

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AB DOG R

Watershed ID #: 30410509

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

Mo	Storage	Irrig	Munic	Ind/Man	Commer	Domest	Agricul	Other	Total
1	0.05	0.00	3.58	0.00	0.04	0.85	0.00	0.00	4.53
2	0.06	0.00	3.58	0.00	0.04	0.85	0.00	0.00	4.53
3	0.05	0.00	3.58	0.00	0.04	0.85	0.00	0.00	4.53
4	0.04	0.08	3.58	0.00	0.04	0.85	0.00	0.00	4.59
5	0.00	0.18	3.58	0.00	0.04	0.85	0.00	0.00	4.67
6	0.00	0.25	3.66	0.00	0.04	0.85	0.00	0.00	4.81
7	0.00	0.33	3.66	0.00	0.04	0.85	0.00	0.00	4.89
8	0.00	0.27	3.57	0.00	0.04	0.85	0.00	0.00	4.73
9	0.00	0.16	3.57	0.00	0.04	0.85	0.00	0.00	4.62
10	0.00	0.00	3.53	0.00	0.04	0.85	0.00	0.00	4.43
11	0.01	0.00	3.58	0.00	0.04	0.85	0.00	0.00	4.49
12	0.03	0.00	3.58	0.00	0.04	0.85	0.00	0.00	4.51

## DETAILED REPORT OF RESERVATIONS FOR CONSUMPTIVE USE

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AB DOG R

Watershed ID #: 30410509

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

[illegible]



4	109.00	0.00	0.00	0.00	0.00	0.00	0.00	109.00
5	99.80	0.00	0.00	0.00	0.00	0.00	0.00	99.80
6	48.00	0.00	0.00	0.00	0.00	0.00	0.00	48.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	24.20	0.00	0.00	0.00	0.00	0.00	0.00	24.20
12	86.80	0.00	0.00	0.00	0.00	0.00	0.00	86.80

DETAILED REPORT OF INSTREAM REQUIREMENTS

Water Availability as of 1/ 1/\*\*\*\* for

E FK HOOD R > HOOD R - AB DOG R

Watershed ID #: 30410509

Basin: HOOD

Exceedance Level: 80

Time: 12:14

Date: 03/23/2002

APP #	-----ISWRs-----							MAXIMUM
	0	0	0	0	0	0	0	
Status								
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Paul R. Cleary, Director

Oregon Water Resources Department • 158 12th ST. NE • Salem, OR 97310 • Phone: (503)378-8455 • Fax: (503)378-2496



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year now	pop	connect	gpd		1453812 cfs	
2010	5900	2.35	2510.638	706	1772511	2.74
2020	6608	2.35	2811.915	706	1985212	3.07
2030	7269	2.35	3093.191	706	2183793	3.38
2040	9809	2.35	4174.043	706	2946874	4.56
2050	10692	2.35	4549.787	706	3212150	4.97
2058	11440	2.35	4868.085	706	3436868	5.32
						6.02

0.883328

81



STATE OF OREGON  
WATER RESOURCES DEPARTMENT

725 Summer St. N.E. Ste. A  
SALEM, OR 97301-4172

(503) 986-0900 / (503) 986-0904 (fax)

RECEIPT # **66283**

INVOICE # \_\_\_\_\_

RECEIVED FROM: Mark Wamble PC

BY: \_\_\_\_\_

CASH: ☐ CHECK:# 1417 OTHER: (IDENTIFY) ☐

APPLICATION	
PERMIT	
TRANSFER	

TOTAL REC'D \$ 6.00

**1083 TREASURY 4170 WRD MISC CASH ACCT**

0407 COPIES \$  
OTHER: (IDENTIFY) \$

0243 I/S Lease \_\_\_\_\_ 0244 Muni Water Mgmt. Plan \_\_\_\_\_ 0245 Cons. Water \_\_\_\_\_

**4270 WRD OPERATING ACCT**

MISCELLANEOUS

PCA 46111

0407 COPY & TAPE FEES \$ 6.00  
0410 RESEARCH FEES \$  
0408 MISC REVENUE: (IDENTIFY) \$  
TC162 DEPOSIT LIAB. (IDENTIFY) \$  
0240 EXTENSION OF TIME \$

WATER RIGHTS:

	EXAM FEE		RECORD FEE
0201 SURFACE WATER	\$	0202	\$
0203 GROUND WATER	\$	0204	\$
0205 TRANSFER	\$		

WELL CONSTRUCTION

	EXAM FEE		LICENSE FEE
0218 WELL DRILL CONSTRUCTOR	\$	0219	\$
LANDOWNER'S PERMIT		0220	\$

OTHER (IDENTIFY) \_\_\_\_\_

**0536 TREASURY 0437 WELL CONST. START FEE**

0211 WELL CONST START FEE \$ CARD # \_\_\_\_\_  
0210 MONITORING WELLS \$ CARD # \_\_\_\_\_

OTHER (IDENTIFY) \_\_\_\_\_

**0607 TREASURY 0467 HYDRO ACTIVITY LIC NUMBER**

0233 POWER LICENSE FEE (FW/WRD) \$  
0231 HYDRO LICENSE FEE (FW/WRD) \$  
HYDRO APPLICATION \$

**TREASURY OTHER / RDX**

FUND \_\_\_\_\_ TITLE \_\_\_\_\_

OBJ. CODE \_\_\_\_\_ VENDOR # \_\_\_\_\_

DESCRIPTION \$

RECEIPT: **66283**

DATED: 3/30/04 BY: Linda Doeyle

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal

STATE OF OREGON  
WATER RESOURCES DEPARTMENT

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SALEM, OR 97301-4172

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0407 COPIES \$  
OTHER: (IDENTIFY) \$

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# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1271  
503-986-0900  
FAX 503-986-0904

VIA MAIL

March 8, 2004

Mark S. Womble  
Attorney at Law  
P.O. Box 1307  
Hood River, OR 97301

**RECEIVED**  
**MAR 30 2004**  
**WATER RESOURCES DEPT**  
**SALEM, OREGON**

RE: Crystal Springs Water District Extension Request for Permit 34196

Dear Mr. Womble:

Pursuant to your email request of March 4, 2004, enclosed is a copy of the Department of Justice letter opinion regarding extensions of time to complete a water right permit, dated June 26, 1997.

Please make payment in the amount of \$6.00 to the Oregon Water Resources Department and make clear that the payment is pursuant to your information request by referencing the permit number with your payment.

Sincerely,

Renee Moulun  
Protest Program Coordinator  
(503) 986-0824

Enclosure (as specified)



MARK WOMBLE, P.C.  
Attorney at Law

Mark S. Womble  
P.O. Box 1307  
Hood River, Oregon 97031

Telephone: Hood River (541) 386-7800  
The Dalles (541) 298-7700  
Fax: (541) 298-7701

March 4, 2004

Via Email to m.moulun@ wrd.state.or.us

Ms. Renee Moulun  
Water Resources Department  
Commerce Building  
158 12<sup>th</sup> St. NE  
Salem, OR 97301-4172

Re: Crystal Springs Water District  
Extension Request Re Permit No. 34196

Dear Renee:

Confirming our conversation yesterday, I understand that the department is referring this matter to the Office of Administrative Hearings for a contested case hearing. The District would like to have this matter resolved as soon as possible. Please advise as soon as scheduling is determined.

Thank you for your attention to this matter.

Very truly yours,

Mark S. Womble

cc: Crystal Springs Water District





# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1271  
503-986-0900  
FAX 503-986-0904

### VIA MAIL

March 8, 2004

Mark S. Womble  
Attorney at Law  
P.O. Box 1307  
Hood River, OR 97301

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Renee Moulun  
Protest Program Coordinator  
(503) 986-0824

Enclosure (as specified)



HARDY MYERS  
ATTORNEY GENERAL

DAVID SCHUMAN  
ATTORNEY GENERAL



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JUN 30 1997

WATER RESOURCES DEPT.  
SALEM, OREGON

Letter

1162 Court Street NE  
Salem, Oregon 97310

FAX: (503) 378-3802  
TDD: (503) 378-5938  
Telephone: (503) 378-4409

DEPARTMENT OF JUSTICE  
GENERAL COUNSEL DIVISION

June 26, 1997

Dick Bailey, Administrator  
Water Rights Division  
Water Resources Department  
158 12th St. NE  
Salem, OR 97310

Re: Extensions of Time to Complete a Water Right Permit  
DOJ File No. 690-303-GNS0403-95

Dear Mr. Bailey:

You have asked about the Water Resources Department's (department's) authority to grant water rights permittees extensions of time to complete their water projects and put the water to beneficial use. Water rights permits authorize the use of water if a system to use the water is developed within the time specified when the permit is granted. When the specified time to complete the permit (often referred to as the "B" or "C" date<sup>1/</sup>) has passed, the right to put more water to beneficial use under the permit ceases, even if the full amount allowed by the permit has not been developed, unless and until the permittee has applied for and been granted an extension.

This letter provides general advice on this subject and describes a method to analyze extension requests.

The department's authority to extend the time to complete a surface water permit is found in ORS 537.230(2), which specifies:

the department, for good cause shown, shall order and allow an extension of time, including an extension beyond the five-year limit established in subsection (1) of this section within which irrigation or other works shall be completed or the right perfected. In determining the extension, the department shall give due weight to the considerations described under ORS 539.010(5).

For ground water projects, an equivalent but not identical statute provides:

<sup>1/</sup> The "A" date is typically referred to as the date within which construction on the permit must begin. (See analysis under Section II, following). The "B" date is the date when the permit works are completed; the "C" date refers to the date water has been applied to beneficial use.



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SALEM, OREGON

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June 26, 1997

Actual construction of a well or other means of developing and securing the ground water shall begin not later than one year after the date of approval of the application for a permit under ORS 537.625. The construction shall be prosecuted with reasonable diligence and completed within a reasonable time fixed in the permit by the Water Resources Department, not to exceed five years after the date of approval of the application. The department, for good cause shown, shall order and allow an extension beyond the five year period, for the completion of the well or other means of developing and securing ground water or for complete application of water to beneficial use.

ORS 537.630(1).

The Water Resources Commission (commission) has adopted rules to implement these statutes, found in OAR 690-320-010. To determine whether a permittee should be granted an extension of time to complete the water right, we recommend that the department ask four questions: First, has the permittee completed the request for extension form and paid the fee; Second, did the permittee begin actual construction on the project within the time required by law; Third, can the permittee actually complete the project or put the water to beneficial use within the extension period; and Fourth, is there "good cause" to extend the time to complete the project. Each of these questions is discussed in turn below.

**I. Has the extension form been properly completed and the fee paid?**

An extension is not granted automatically. The department has created a form by which persons may apply for extensions of time. The statute requires the advance payment of a \$100 fee. ORS 536.050(1)(L). If the applicant has not paid the fee and provided the required information, the department would be without the basis to continue its evaluation of the request to grant the extension. Thus, while a failure to complete the form may not be a *per se* basis to deny the extension request, until one is properly filed, there is nothing for the department to grant.

The permittee need not apply for the extension before the expiration of the completion period specified in the decree, permit or prior extension. *See, e.g. In Re Waters of White River*, 141 Or 504, 516 (1933) (State Engineer authorized to consider and grant an extension filed six months after expiration of completion period fixed in decree). In many cases, a person may legally develop a water system without a water right; it is the appropriation of water for a beneficial use (i.e., the use of the system) that requires the right. Work done on a permit outside the time limits does not count toward perfection of the right.



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II. Did "actual construction work" begin in the period required by statute?

A. Time within which work must begin. ORS 537.230(1) requires that, with limited exceptions, actual construction work on proposed surface water irrigation or other works must begin within one year from the date the application is approved. For projects which also require a permit from the Federal Energy Regulatory Commission (FERC), the time for beginning construction in the state permit must conform to that established in the FERC permit. ORS 537.240(4). Construction must begin on a county, municipal or district reservoir project within 10 years after the date the permit is issued, but that time can be extended. ORS 537.248(1),(2). The application of a municipal corporation for a surface water right for municipal use is not subject to any statutory requirement to begin construction within a given time. ORS 537.230(1). Actual construction work on ground water permits must begin within one year from the date the permit is granted, without exception. ORS 537.630(1).

B. What Constitutes Actual Construction Work. Both the surface water and ground water statutes require that "actual construction" work shall begin within the one year period. The amount of construction work performed in the first year must be significant. In *Morse v. Gold Beach Water Co.*, 160 Or 301, 306 (1938) the court held that the amount of work must be "substantial," and demonstrate both the present good faith of the permittee and the permittee's intention to complete the project with "reasonable diligence."

We do not believe that planning a diversion system, formulating a business plan, securing financing, letting contracts or even surveying will satisfy the "actual construction" work requirement. Nor do we believe that construction work that is merely ancillary to work required by the permit satisfies this requirement.

C. Evidence of Actual Construction Work. A permittee is not statutorily required to report to the department that actual construction was begun within the statutory time, although ORS 537.450 authorizes the Commission to require, by rule, that owners submit proofs of commencement, prosecution and completion of work, and the application of water to beneficial use as required by the permits. The rules do not now require the permittee to submit this information.<sup>2/</sup> Similarly, the department is not required, at the conclusion of the statutory period, to verify that a permittee has performed sufficient work to satisfy the actual

---

<sup>2/</sup> Should the Commission adopt such rules, failure to comply with the rules would constitute prima facie evidence of a failure to meet the time deadlines and subject those permits governed by ORS 537.410 - 537.450 to cancellation. ORS 537.450.



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construction requirement. (Until the Commission adopts rules requiring the permittee to submit proof of construction work, the department is entitled to presume that a permittee will comply with the terms of the permit and all relevant statutory conditions.)

Many permittees submit "A" cards, or other evidence that they have begun construction within the required time. The department is entitled to rely on those representations to determine that the requirement has been met, and need not do an independent investigation of the fact. However, the department should verify compliance if it has reason to believe that construction was not begun within the required time. If there is a credible allegation that work did not begin within one year, then the department may well be called upon to determine that this requirement has been satisfied, whether an "A" card has been filed or not.

D. Effect of Failure to Begin Work. A permittee's failure to begin actual construction work means the permit cannot be extended: once the period for beginning construction has expired, the appropriation cannot be perfected, because the permit has lapsed. While the "actual construction work" requirement is not technically part of the legal test for an extension, *per se*,<sup>3/</sup> (Cf. ORS 537.230(1) and 537.230(2)) it is a condition for perfection of a water right. The department may neither waive the requirement nor extend the time for compliance. *Morse* at 305; Letter of Advice dated July 29, 1987, to Jerry Hedrick, Foreclosure Manager, Department of Veterans' Affairs (OP-6158). The department will be unable to issue a certificate because it cannot find that the appropriation "has been perfected in accordance with the provisions of the Water Rights Act" as required by ORS 537.250(1).<sup>4/</sup>

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<sup>3/</sup> Thus, the department is authorized to cancel a permit on which actual construction work was not begun at any time after the "begin construction" period passes, apart from an extension request.

<sup>4/</sup> We believe that if a certificate is mistakenly issued even though construction did not begin within a year, after the certificate has been issued and the appeal time has run, a water right nevertheless vests, and cannot be challenged for this reason. ORS 537.270 specifies that a water right certificate issued pursuant to ORS 537.250, after the expiration of three months from the date it is issued (with minor exceptions not relevant here) "shall be conclusive evidence of the priority and extent of the appropriation therein described in any proceeding in any court or tribunal of the state" unless the right is lost due to forfeiture or abandonment. See also *Wilber v. Wheeler* 273 Or 855 (1975).



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The reference in ORS 537.230(2) to ORS 539.010(5) reinforces this view. ORS 539.010(5) (discussed below) sets out a number of considerations for allowing additional time to complete a water right, but is restricted to situations where "actual construction work was commenced \* \* \* within that time provided in law."

While the *Morse* case began as a request for an extension, technically, the court upheld a State Engineer's order cancelling the permit, so the court did not explain under what circumstances an extension would be warranted. Rather it determined there was not valid permit that could be extended because failure to commence actual work was "fatal" to completion of the appropriation (*Morse* at 305) and any rights under a permit "lapsed" (*Id.* at 306). Lapse means to "go out of existence," "disappear," "terminate." WEBSTER'S THIRD INTERNATIONAL DICTIONARY (1991). If a permittee has failed to begin work within the required time, the rights granted by the permit cease and the permit has no further force or effect, even if the department had previously granted extensions of time for the permit. The department may not waive the statutory requirement to begin construction, and thus is not bound by its approval of previous extension requests premised on a mistaken assumption (or even finding) that construction work had begun as required by law. *Morse* at 305.

ORS 537.410(1) similarly provides for permit cancellation:

Whenever the owner of the permit to appropriate the public waters of Oregon fails to commence actual construction work within the time required by law, or having commenced construction work as required by law, fails or neglects to prosecute the construction work with reasonable diligence, or fails to complete the construction work within the time required by law, or as fixed in the permit, or within such further time as may be allowed by ORS 537.230, or having completed construction work, fails or neglects to apply the water to beneficial use within the time fixed in the permit, the Water Resources Commission may cancel the permit on the records of the Water Resources Department as provided in ORS 537.410 to 537.450.

This statute is independent authority to cancel permits, and has some exceptions that are not applicable to cancellations for failure to commence work arising under ORS 537.230.<sup>5/</sup> ORS 537.410 to 537.450 lays out a procedural mechanism for cancellations under these provisions.

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<sup>5/</sup> Permits issued to irrigation districts for reclamation under state irrigation district laws, to municipal corporations for municipal purposes, or to public utilities operating under a site certificate issued by the Energy Facility Siting Council are not subject to cancellation under this statutory provision.



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SALEM, OREGONDick Bailey  
June 26, 1997  
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E. Permit vs. "Project" Analysis. In situations where a permittee may hold a number of permits to develop land in an area that might be characterized as a "project," the requirement to begin construction applies separately to each individual permit (even if a number of permits have been issued to a single permittee for adjacent parcels). Neither ORS 537.230(1) nor 537.630(1) directly address the relationship between individual permits and a group of permits that might be characterized as a "project." The statutes make no allowance for a "project," however, and instead refer to "the application" and "the/a permit." Nothing in the statutes suggest that an appropriator may aggregate permits for the purpose of demonstrating beginning actual construction, unless the work is directly connected to and specifically advances the completion of a particular permit. *See, e.g., Morse* (work on a project of which a permit was a part did not satisfy statutory work requirement for specific permit in question). We believe it would create an anomalous result if a permittee were entitled to apply serially for a group of permits but avoid the requirement to begin construction on any but a single permit by characterizing all the permits as a single project. Such an interpretation would also frustrate the purpose of the "actual construction work" requirement, which is to prevent hoarding of water by mandating prompt development of the water right.

**III. Can the permittee actually complete the works or apply the water to beneficial use within the time allowed by the rules for the extension?**

A. Purpose of the Extension. By statute, the department may allow an extension of time "within which irrigation or other works shall be completed or the right perfected" (ORS 537.230(2)) or "for the completion of the well or other means of developing and securing ground water or for complete application of water to beneficial use." (537.630(1)) (emphasis added).

The distinction between "completing the project" and "applying the water to beneficial use" recognizes that even though the project works may be complete, water may still not have been applied to beneficial use during the required time period. For example, if the works are completed past the end of the irrigation season, the permittee is not legally entitled to apply the water to beneficial use until the beginning of the next irrigation season. To qualify for a certificate perfecting the right, ORS 537.230(3) requires "completion of beneficial use," not merely the completion of the works. Neither statute nor rule, however, allows an extension of time if the permittee merely proposes to work further on, but not to complete, the works required by the permit or application of the water to beneficial use.

B. Extension Period. Neither ORS 537.230(2) nor 537.630(1) identifies how long an extension the department may grant. By administrative rule, however, the commission



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has restricted the time to five years for municipal, quasi-municipal, district, and group domestic permits. All other permits are limited to one year extensions. OAR 690-320-010(3).

C. Multiple Extensions. Because extensions can be granted for two purposes, a permittee could be granted one extension to complete the works and another to apply the water to beneficial use. The department may also grant a subsequent extension even if it had already granted an extension for the same purpose. However, the applicant's failure to complete the works during the prior extension period should be considered in evaluating the "good cause" for the extension. (See IV below).

**IV. Is there "good cause" to extend the time to complete construction and/or perfect the right for the permit in question?**

A. Statutory Criteria. ORS 537.230(2) and 537.630(1) allow the department to grant an extension of time "for good cause shown". For surface water rights,<sup>6</sup> the department must consider at least the factors in ORS 539.010(5), which include:

the cost of the appropriation and application of the water to a beneficial purpose, the good faith of the appropriator, the market for water or power to be supplied, the present demands therefor, and the income or use that may be required to provide fair and reasonable returns upon the investment.

Neither the statutes nor rules "specify or limit what particular factors the [director] may consider" to determine whether "good cause" has been shown. (OP-6158, p. 2). We conclude that "good cause" is a delegative term, meaning that the agency has wide discretion to interpret and apply it.

B. What Constitutes Good Cause. Oregon cases interpreting "good cause" uphold agency interpretations if "the agency has not exceeded the limits of its discretion or acted inconsistently with another administrative, statutory or constitutional provision." *Lechner v. Employment Dept.* 135 Or App. 181, 185 (1995). Similarly, in *Hunt v. Employment Department* 139 Or App. 440, 443 (1996) the Court of Appeals reviewed a challenge to Employment Department rule interpreting what constituted "good cause" to terminate

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<sup>6</sup> While statutorily, only surface water right extension requests must consider the factors in ORS 537.010(5), by rule, these considerations are also applicable to all ground water extension requests. OAR 690-320-010.



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June 26, 1997  
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employment. The Court held that because its review focussed on "the quintessentially delegative term 'good cause,' our review is limited to determining whether the rule is within the range of discretion allowed by the general policy of the statute." The court held that the Employment Appeals Board, and not the employee was entitled to determine from its perspective what constituted good cause.

"Good cause" should be viewed from the department's perspective, consistent with the statutory guidance and the agency's policy goals. The minimum statutory guidance is found in ORS 539.010(5), cited above. We believe the agency's analysis of whether good cause has been shown may include whether the water would be of greater value for other uses or should remain allocated to the currently permitted purpose. For example, the department could find there is not good cause to extend the limit because there was now a greater demand for the water to protect endangered fish runs, or that the water would generate more income when used for power production or other out-of-stream uses. Conversely, even if a permittee had not demonstrated significant diligence toward completion of the project, so long as the minimum requirements of I, II and III above had been met, the department could nevertheless grant the extension request, provided other good cause factors weighed in favor of granting the extension.

This discretion is not unlimited, however. If the permittee has completed the vast majority of the work under a permit, and needs only relatively minor work for completion, the permittee will probably be entitled to the extension unless other factors strongly argue otherwise. *See, e.g. In Re Waters of White River*, 141 Or at 511 (extension allowed where company had already spent \$221,000 and could finish project with expenditure of another \$2,000 to \$5,000 to develop a storage site authorized by the right, without which the entire system would be of little value).

C. Administrative Rule Criteria. By rule, the commission has incorporated the factors of ORS 539.010 into the "good cause" analysis of both ground and surface water extension requests. OAR 690-320-010(2). The "good faith" of the appropriator listed as a factor in ORS 539.010(5) is equivalent to the reasonable diligence required of the permittee in the rules. The reasonable diligence required to complete the project during the initial permit period essentially constitutes a continuing test of whether to grant an extension. OAR 690-320-010(4) authorizes the director to determine "whether some progress has been made to complete the construction or use, but if diligence is questionable, the director may deny



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Dick Bailey  
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the request, condition the permit or decide that no further extensions can be granted.<sup>77</sup> By rule the commission could establish even more specific (and exclusive) criteria by which "good cause" would be evaluated.

D. Time Period Over Which "Good Cause" is Evaluated. Neither the rules nor the statute restrict the department's consideration of "good cause" to the last extension period. The last extension period, however, provides the most relevant evidence of a permittee's diligence or good faith toward completion of the permit. There may be factors unrelated to the most recent extension that bear on the question of good faith, but the test is whether the extension should be granted now. Other factors the department must consider are entirely unrelated to the last extension period, or anything the permittee has ever done or failed to do. For example the "market for water or power to be supplied [and] the present demands therefor" (ORS 539.010(5)) are considerations outside what the permittee's control. The basic test is whether the department should grant an extension now, based on its evaluation of current circumstances.

Please feel free to call with additional questions you may have about this advice.

Sincerely,



Stephen E.A. Sanders  
Assistant Attorney General  
Natural Resources Section

SEAS:prv:/SEA0280.LET

c: John Bagg  
Denise Fjordbeck

---

<sup>77</sup> When approving an extension request, it may be improvident for the Director to determine that no further extension requests could be granted. We believe that each extension request should be evaluated on the facts and merits of the request when it is made. Because "good cause" may include an evaluation of conditions which may have changed since the grant of a former extension, a prediction of what the director would do at the next extension request undercuts the determination that the project will be completed during the granted extension, and may needlessly restrict the director's discretion should another extension request be filed.





# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

Commerce Building  
158 12th Street NE  
Salem, OR 97301-4172  
503-378-3739  
FAX 503-378-8130

August 29, 2003

Oregon Trout  
Attn: Aubrey Russell  
117 SW Naito Parkway  
Portland, OR 97204

REFERENCE: Application #S-45826 (Permit #S-34196)

Dear Mr. Russell:

As you are aware, on March 28, 2000, the Department issued a proposed final order in accordance with Oregon Administrative Rule (OAR) Division 690, Chapter 320 to grant an extension of time in which to complete construction and accomplish full beneficial use of water under Permit #S-34196 through October 1, 2058.

The Department hereby acknowledges receipt of your protest, on behalf of Oregon Trout and WaterWatch of Oregon, to the proposed final order for extension of Permit #S-34196 issued on March 28, 2000. Your protest and the appropriate fee were received in the Salem office of the Water Resources Department on May 12, 2000. A copy of your receipt numbered 37478 is enclosed for your reference.

The Department will first try to reach an informal negotiated resolution with both parties. If this approach fails, the Department will then proceed with a formal hearing process.

If you have any questions, you may contact me by telephone at (503) 378-8455, extension 239.

Sincerely,

Renee Moulun  
Hearings Coordinator  
Water Rights and Adjudication Division

enclosure

cc: Appl #S-45826 (Permit #S-34196)  
WaterWatch of Oregon, Attn: Karen Russell, 213 Ash Street, Suite 208, Portland, OR 97204





MARK WOMBLE, P.C.  
Attorney at Law

Mark S. Womble  
P.O. Box 1307  
Hood River, Oregon 97031

Telephone: Hood River (541) 386-7800  
The Dalles (541) 298-7700  
Fax: (541) 298-7701

April 29, 2003

Ms. Renee Moulun  
Water Resources Department  
Commerce Building  
158 12<sup>th</sup> St. NE  
Salem, OR 97301-4172

Re: Crystal Springs Water District  
Extension Request Re Permit No. 34196

Dear Ms. Moulun:

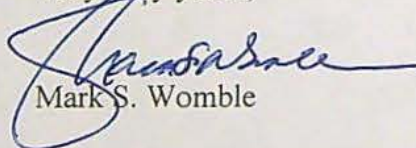
I understand from my conversation with Dwight French that you are working on the above-referenced extension request for the department. Confirming that conversation, the District desires to proceed under our current extension request, and wishes to submit the following additional information.

I have again reviewed the protest of Oregon Trout and Water Watch. The protest appears to be based upon the assumption that the District is not presently appropriating water to beneficial use under permit 34196. Rather, the assumption is made that the District is presently only appropriating water under permits 10115 and 29377. However, this assumption is mistaken for the reason that the District currently provides water for a variety of municipal (non-domestic) purposes. Only no. 34196 permits appropriation for municipal purposes. 10115 and 29377 permit appropriation for domestic uses. I am attaching new information compiled by the District regarding non-domestic use and users since June 2001.

Please do not hesitate to contact me should you have additional questions.

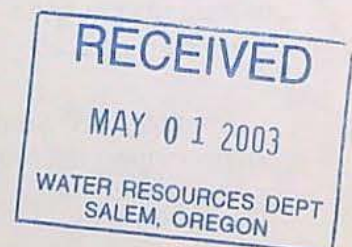
Thank you.

Very truly yours,



Mark S. Womble

cc: Crystal Springs Water District





# CRYSTAL SPRINGS WATER DISTRICT

## DOMESTIC WATER SYSTEM

FAX: 541.354.1821 ~PO Box 186 ~ 3006 Chevron Drive ~ Odell OR 97044 ~ PHONE: 541.354.1818

April 17, 2003

Mark Womble  
PO Box 1307  
Hood River OR 97031

Re: data for water permit extension application

Total meters of record 2109

225 fire hydrants

Ytd use since 6-2001 approximately 469,004,000 gallons

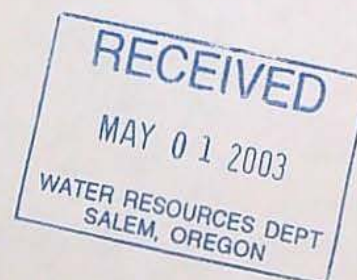
Nondomestic meters

Approximately 515....


Ytd use since 6-2001 approximately 294,321,000 gallons

Non domestic user/types:

Schools	2
Meat packing	1
Restaurants	6
Grocery stores	3
Mobile home parks	2 serving 300+ units
Fruit packing/cold storage	11
Fruit stands	7+
Orchards/tenant labor camps	10+
Government - odot/forestry/	3
County/state parks	4
Fire departments	4
Churches	4
Utilities	6
Veterinary	1
Bed & breakfast	1
Community center/fair	2
Retail bldgs	2
Equestrian center/riding stables	6
Vineyards	2
Lumber mill	1
Agricultural chemical vendors	3
Mechanic/garage/gas station	3
Storage facility	1
Fruit juicing facilities	2+
Work center	1
Upholstery shop	1
Nursery/plants	3
Homeowners assoc	2
Crag rats/grange	2
Tortilla mfg	1
Bryant / hr sand & gravel	2
River bend	1
Carpet store/hardware	2
Wy'east labs	1
Light industrial	3
Adult foster homes	1+







June 7, 2000

To: Brendalee Wilson  
From: Roger Bachman

Re: Panther Creek Water District application for extension

If I had not been out of the country for a month, this would have resulted in a formal protest to go along with the Crystal Springs protest. I am writing this letter despite being past the deadline for protest or comment because it is one more example of the lack of diligence by WRD staff in processing such applications. I am writing this letter, rather than having Aubrey Russell do so, because I am familiar with the Panther Creek situation. He is not.

The applicant's statements are deficient in several respects. At 6A in response to a question about changes in the market since the permit was issued, the applicant merely says, "Yes, real estate development peaks and valleys every few years." That is not adequate. WRD should have asked for details about how many hookups have been made in recent years showing how high the peaks and valleys are, giving the processing official some way to gauge whether there is some likelihood that 400 hookups will eventually be made. A phone call to the Lincoln planning department would have told you something about how many housing units are anticipated in that neighborhood. And the applicant offers no information as to the adequacy of a fifteen year extension.

At 7B re alternative sources of water a few inquiries would have revealed that the District has drilled two very deep wells high on the western ridge of the valley, but they produce only about 35 gpm, compared to the district's claimed present need for an average of 80 gpm. Mr. Hume told me that he is studying the feasibility of drilling another well on some property owned by the District a little to the west near the wells that supply the Echo Mountain district to the west.

A resident who owns the property on which the stream diversion lies, and whose home is supplied by a 200 foot well quite close to the diversion works, has offered Mr. Hume the opportunity to drill a well on his property near his producing well. The pumping cost difference between a 200 foot well and an 800 foot well could add up to paying for a lot of improvements to the District's system. I do not know whether Mr. Hume considered this offer, but the fact that it is on the eastern side of the canyon and has a producing well now suggests that it might be a good alternative.

Roger A. Bachman *Naturalist*

4436 SW Warrens Way Portland, OR 97221-3248

**RECEIVED**

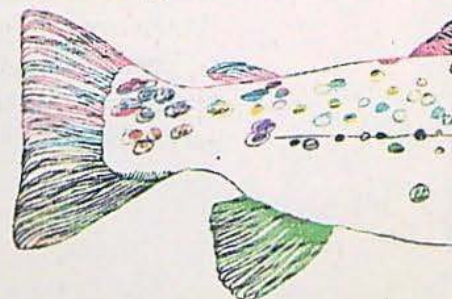
JUN 09 2000

E-mail: ebach4882@aol.com

503-223-4882

Mobile: 503-805-5840

WATER RESOURCES DEPT.  
SALEM, OREGON





Mr. Hume told me last summer that he would like to rely completely on groundwater both because of quality issues and also because the stream is home to spawning coho salmon and steelhead, although ODFW considers it a low priority stream because it is so small. The landowner mentioned above brought this situation to Oregon Trout's attention several years ago, and the district told our representative that they were going to try to switch completely to groundwater, so we did not follow up on it. Then last summer the landowner called again because the stream was so low and the pool from which the District was pumping held juvenile salmonid fish.

There are several agency officials who are familiar with this situation and could have told the WRD processing person about the situation. The Watermaster, to start with, then the District Biologist of ODFW, and the local watershed council coordinator.

Brendalee, this is the same kind of problem we have been pointing for several years now. When is the Department going to do a diligent job of processing these applications? We will be watching and pounding away until we see some evidence of good work coming out of the Department.

Cc: Meg Reeves

A handwritten signature in blue ink, appearing to read "Roger Bachman". The signature is fluid and cursive, with the first name "Roger" written in a larger, more prominent script than the last name "Bachman".



# OREGON WATER RESOURCES DEPARTMENT



State of Oregon  
Water Resources Department  
158 12<sup>th</sup> ST NE, Salem, OR 97301  
(503) 378-8455  
[www.wrd.state.or.us](http://www.wrd.state.or.us)

**FAXED**  
3-13-03

1:45 pm  
to Larry Toll  
- [Signature]

## FAX TRANSMITTAL

TO: Larry Toll FAX NUMBER: 541-298-2459  
DATE: 3-13-03 PAGES: 15, INCLUDING COVER SHEET  
FROM: Lisa Juul PHONE: (503) 378-8455 EXT. 272  
COMMENTS: \_\_\_\_\_

Crystal Springs  
protest

### DIRECTOR'S OFFICE

- Water Resources Commission
- Legislation and Rules
- Public Information

### FIELD & TECHNICAL SERVICES

- Hydrographics
- Ground Water
- Information Services
- GIS/Mapping

FAX: (503) 378-2496

### ADMINISTRATIVE SERVICES

- Fiscal / Accounting
- Human Resources / Personnel
- Water Development Loan Fund
- Support Services

### FIELD & TECHNICAL SERVICES

- Dam Safety
- Enforcement
- Regional Liaisons
- Transfers

FAX: (503) 378-8130

### WATER RIGHTS

- Water Rights information
- Adjudications
- Hydroelectric
- Certifications / Final Proofs
- Hearings / Contested Cases

### NORTHWEST REGION

- District 16 Watermaster

FAX: (503) 378-6203



To: Lisa.J.JUUL@wrд.state.or.us, grigsbkj@funnel.wrд.state.or.us  
Subject: Fwd: Applic 45826, Permit 34196  
Cc: Larry.M.TOLL@wrд.state.or.us

I'm not sure which one of you penned the letter referred to in Larry's email.  
Please handle.  
thanks  
Dwight

*Sent / faxed  
copy of protest  
to Larry Toll  
on 3-13-03.*

X-Sender: tollm@mailhub.wrд.state.or.us  
X-Mailer: QUALCOMM Windows Eudora Version 5.2.0.9  
Date: Wed, 12 Mar 2003 15:14:32 -0800  
To: Dwight.W.FRENCH@wrд.state.or.us  
From: Larry Toll <Larry.M.TOLL@wrд.state.or.us>  
Subject: Applic 45826, Permit 34196

You sent a letter on February 26 to Mark Womble concerning this file and a timely protest filed by waterwatch, with options to pursue. Mark, I believe, is the attorney for Crystal Springs Water District.

Would you send me information on the basis of the protest of this municipal water right. I have received a couple of inquiries.

Thank You

-----  
"The Watermiser"

Larry Toll	
Watermaster District 3	
Oregon Water Resources Department	Address:
Phone: 541-298-4110	County Annex B, Room 218
Fax: 541-298-2459	421 East 7th Street
E-mail: Larry.M.Toll@wrд.state.or.us	The Dalles, OR 97058

=====

Dwight French  
Water Rights Section Manager, Water Rights Division  
Oregon Water Resources Department  
158 12th ST NE, Salem Oregon 97301-4172  
Phone: 503 378-8455 x268  
Fax: 503 378-6203

Oregon Water Resources web page: <http://www.wrд.state.or.us/>





# Oregon

Theodore R. Kulongoski, Governor

File # S-45826  
Water Resources Department  
Commerce Building  
158 12th Street NE  
Salem, OR 97301-4172  
503-378-3739  
FAX 503-378-8130

February 26, 2003

Mark Wamble  
PO Box 1307  
Hood River, OR 97031

REFERENCE: Application #S-45826 (Permit #S-34196)

Dear Mr. Wamble:

As you are aware, on March 28, 2000, the Department issued a proposed final order in accordance with Oregon Administrative Rule (OAR) Division 690, Chapter 320 to grant an extension of time in which to complete construction and to accomplish full beneficial use of water under Permit #S-34196 through October 1, 2058.

The Department received a timely protest to the proposed final order for extension of Permit #S-34196 from WaterWatch of Oregon and Oregon Trout on May 12, 2000.

Since that time, the Municipal and Quasi-Municipal Water Use Permit Extension Rules under OAR 690-315-0070 through 690-315-0100 were adopted by the Water Resources Commission and became effective on November 1, 2002.

In light of the adoption of the Municipal and Quasi-Municipal Water Use Permit Extension Rules, you may choose to pursue one of the following options:

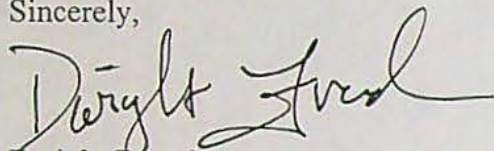
1. You may inform the Department, at any time, that you wish to proceed with the scheduling of a contested case hearing under your current extension request;
2. You may be able to enter into a stipulated agreement with the protestants that is consistent with the new Municipal and Quasi-Municipal Water Use Permit Extension Rules under OAR Chapter 690, Division 315; or
3. You may withdraw the current extension request and submit a new extension of time application to be processed in accordance with the Municipal and Quasi-Municipal Water Use Permit Extension Rules under OAR Chapter 690, Division 315.



For your reference, I am enclosing copies of the OAR Chapter 690, Division 315 permit extension rules and the OAR Chapter 690, Division 86 Rules water management and conservation plan rules.

If you have any further questions concerning this issue, please feel free to contact me by telephone at (503) 378-8455, extension 268.

Sincerely,

A handwritten signature in black ink, appearing to read "Dwight French". The signature is fluid and cursive, with the first name "Dwight" being more prominent than the last name "French".

Dwight French

Water Rights Section Manager

Water Rights and Adjudication Division

cc: File #S-45826 (Permit #S-34196)  
Larry Toll, Watermaster District #3  
Crystal Springs Water District, PO Box 186, Odell, OR 97044  
Aubrey Russell, Oregon Trout, 117 SW Front Ave, Portland, OR 97204  
Karen Russell, Water Watch of Oregon 213 SW Ash St, Suite 208, Portland, OR 97204



RECEIVED

AUG 23 2002

WATER RESOURCES DEPT.  
SALEM, OREGON

MARK WOMBLE, P.C.  
Attorney at Law

Mark S. Womble  
P.O. Box 1307  
Hood River, Oregon 97031

Telephone: Hood River (541) 386-7800  
The Dalles (541) 298-7700  
Fax: (541) 298-7701

August 20, 2002

Mr. Dwight French  
Water Resources Department  
Commerce Building  
158 12<sup>th</sup> St. NE  
Salem, OR 97301-4172

Re: Crystal Springs Water District  
Extension Request Re Permit No. 34196

Dear Mr. French:

Confirming my voice mail messages to you of July 25 and August 5, the Crystal Springs Water District would like to finalize its pending extension application without further delay. I have received no response and thought it best to notify you in writing of the District's desire to conclude this matter.

When we spoke on February 22 of this year, you indicated that you were working on the new rules with the Community Water Supply Working Group and that Oregon Trout and Water Watch of Oregon were participating. You indicated that you did not want to impact those negotiations by finalizing the previously issued proposed order granting our extension to 2058. That proposed order was issued back in March 28, 2000, but due to a series of staffing changes in your office no further action was taken following the notice of appeal.

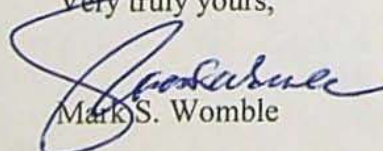
We then received a letter from Lisa Juul dated February 26 seeking additional information. The District responded promptly by letter of March 19.

When we spoke on April 30, you indicated that our application was complete, and presented several options, one of which was to wait until the new rules were adopted in August. We now understand that the adoption of rules has been once again delayed, and according to a memorandum from your office, the conservation stakeholders have ceased further participation.

I am sure you will agree that the District has been quite patient in this matter. The District requests that the final order be issued. We continue to believe that the appeal is without merit under the applicable guidelines and that the District has acted in good faith and with reasonable diligence. If necessary, please schedule a contested case hearing.

Thank you.

Very truly yours,



Mark S. Womble

cc: Crystal Springs Water District



RECEIVED

MAY 22 2002

WATER RESOURCES DE  
SALEM, OREGON



DAVID MERIWETHER  
COUNTY ADMINISTRATOR

TEL. (541) 386-3970  
FAX (541) 386-9392



May 20, 2002

HOOD RIVER COUNTY

BOARD OF COMMISSIONERS

JOHN R. ARENS - CHAIR  
CAROL YORK - DISTRICT NO. 1  
BOB HASTINGS - DISTRICT NO. 2  
CHUCK THOMSEN - DISTRICT NO. 3  
LES PERKINS - DISTRICT NO. 4

309 STATE STREET

HOOD RIVER, OREGON 97031-2093

Oregon Water Resources Department  
Mr. Dwight French, Water Rights Manager  
Water Rights and Adjudication Division  
Commerce Building  
158 12<sup>th</sup> Street NE  
Salem OR 97031-4172

RE: Application #S-45826 (Permit #S-34196)

Dear Mr. French:

The Hood River County Board of Commissioners would like to express concern over the delay in granting the extension of Permit #S-34196 for Crystal Springs Water District. Crystal Springs Water District is a crucial water source that provides domestic water to more than 25% of the residences in Hood River County as well as many farms and businesses.

Hood River County has one of the highest unemployment rates in Oregon. Attracting new business and industry to the area is of paramount importance. The ability to supply adequate potable water to current (as well as possible future) residential, business, industrial, and agricultural customers is critical. It is imperative that our ability to supply future customers is protected.

Crystal Springs Water District has proven to be a good steward of our water. The residents and businesses served by this district have high quality water delivered at a reasonable price. Crystal Springs Water District is a resource that is invaluable and vital to the health and future prosperity of Hood River County. Please take into consideration the impact that your decision has on the well being of Hood River County today and in the future.

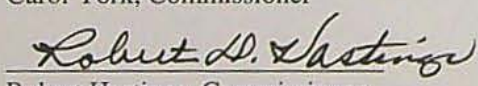
Thank you for your consideration in this matter.

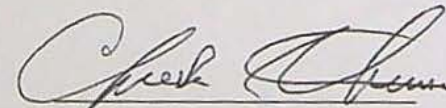
Sincerely,

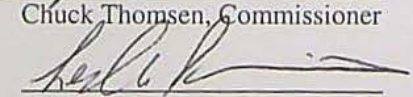
Hood River County  
Board of Commissioners

  
John R. Arens, Chair

  
Carol York, Commissioner

  
Robert Hastings, Commissioner

  
Chuck Thomsen, Commissioner

  
Les Perkins, Commissioner





# Oregon

John A. Kitzhaber, M.D., Governor

## Water Resources Department

Commerce Building  
158 12th Street NE  
Salem, OR 97301-4172  
(503) 378-3739  
FAX (503) 378-8130  
www.wrd.state.or.us

May 1, 2002

Mark Wamble  
PO Box 1307  
Hood River, OR 97031

REFERENCE: Application #S-45826 (Permit #S-34196)

Dear Mr. Wamble:

Thank you for taking time this morning to discuss Crystal Springs Water District's Permit #S-34196. As I indicated in our telephone conversation, the Department has decided that it is not comfortable denying the protests against Permit #S-34196 and issuing a final order to grant an extension of time.

In light of this decision, there are a few options for you to consider:

1. You may inform the Department, at any time, that you wish to proceed with the scheduling of a contested case hearing;
2. You may wait until the Community Water Supply Working Group has finished their work and the amended Division 315 extension rules are adopted. Once that occurs, you may be able to enter into a stipulated agreement with the protestants that is consistent with the revised rules for extension. The Department is currently anticipating adoption of these rules at the Commission meeting to be held on August 8 and 9, 2002; or
3. You may withdraw the current extension request and submit a new extension of time application to be processed under the amended Division 315 rules once they are adopted; or
4. You may wait until after the rules are adopted and then decide it is in your best interests to request a contested case hearing. However, after the rules are adopted addressing community water supply extension issues, we can not guarantee that we would want to hold a hearing.

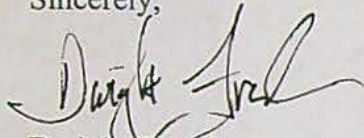
For your reference, I have enclosed material detailing the work being done by the Community Water Supply Working Group.



Mark Wamble; Crystal Springs Water District  
April 30, 2002  
Page 2

If you have any further questions concerning this issue, please feel free to contact me by telephone at (503) 378-8455, extension 268.

Sincerely,

A handwritten signature in black ink, appearing to read "Dwight French", written over a horizontal line.

Dwight French  
Water Rights Section Manager  
Water Rights and Adjudication Division

cc: File #S-45826 (Permit #S-34196)  
Larry Toll, Watermaster District #3  
Crystal Springs Water District, PO Box 186, Odell, OR 97044  
Aubrey Russell, Oregon Trout, 117 SW Front Ave, Portland, OR 97204  
Karen Russell, Water Watch of Oregon 213 SW Ash St, Suite 208, Portland, OR 97204





# Oregon

John A. Kitzhaber, M.D., Governor

File # S-45826

## Water Resources Department

Commerce Building  
158 12th Street NE  
Salem, OR 97301-4172  
(503) 378-3739  
FAX (503) 378-8130  
www.wrd.state.or.us

February 26, 2002

Mark Wamble, Attorney  
c/o Crystal Springs Water District  
PO Box 186  
Odell, OR 97044

REFERENCE: File #S-45826 (Permit #S-34196)

Dear Mr. Wamble:

Thank you for your telephone call last week regarding the status of Permit #S-34196 for Crystal Springs Water District. After a detailed review of the March 1991 "Water System Analysis" report and other information supplied by the District, additional information is needed before the Department can decide whether to issue a final order for extension of time or schedule a contested case hearing for Permit #S-34196. The Department, therefore, requests that the following information be provided:

### Demand for Water

1. What is the current maximum peak day demand for water in gallons/capita/day for the District?
2. The District is requesting an extension of time through the year 2058. What are the District's projected maximum peak day demands for water in gallons/capita/day for the years 2010, 2020, 2030, 2040, 2050 and 2058?

### Population Projections

3. According to the March 1991 "Water System Analysis," the District was serving a population of 2,500 in the year 1963. That figure increased to a population of 4,500 being served by the District in 1990. The report also projected that by the year 2010, the District would be serving a population of approximately 5,900. Finally, the report projects that the District will ultimately end up serving a population of 7,860. No information was provided as to the date when this projected maximum population will be reached. Please indicate the projected population that the District will be serving in the years 2020, 2030, 2040, 2050 and 2058.



4. The Crystal Springs Water District's March 1991 "Water System Analysis" report indicates the approximate population served by the District in 1990 was 4,500. Additionally, the report projects that figure will reach approximately 5,900 by the year 2010. This data suggests that the District will experience a population growth rate of approximately 1.36 percent per year through 2010.

Further, the report indicates the District will ultimately end up serving a projected maximum total of 7,860. Since no information was provided as to the date when this projected maximum population will be reached, the requested date for extension (the year 2058) was assumed. This data results in a projected population growth rate of 0.59 percent per year through 2058.

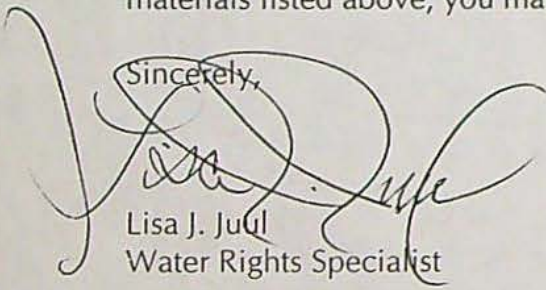
A letter received from the District on July 14, 2000, however, states that a growth rate of 3 percent per year through the year 2075 is expected. **Please address this discrepancy and explain how the District determined a growth rate of 3 percent per year through 2075 when data contained in the March 1991 "Water System Analysis" report equates to a maximum growth rate of 1.36 percent per year through 2010, and drops to approximately 0.59 percent per year thereafter.**

Please submit this information by **Friday, March 29, 2002**. Failure to submit the requested information by this deadline **may** result in the proposed rejection of your extension request.

*If you need to request additional time to submit the information requested above, a written request must be received in the Salem office of the Department by the deadline above. The Department will evaluate timely requests and determine whether or not the request may be granted.*

If you should have any questions concerning your extension request or the required materials listed above, you may contact me at (503) 378-8455, extension 272.

Sincerely,



Lisa J. Juul  
Water Rights Specialist

cc: File #S-45826 (Permit #S-34196)  
Larry Toll, Watermaster District #3  
Aubrey Russell, Oregon Trout, 117 SW Front Ave, Portland, OR 97204  
Karen Russell, Water Watch of Oregon, 213 SW Ash St, Suite 208, Portland, OR 97204



Reply-To: <William.H.FUJII@wrld.state.or.us>  
From: "Bill Fujii" <William.H.FUJII@wrld.state.or.us>  
To: <Lisa.J.JUUL@wrld.state.or.us>  
Cc: "Tom Paul" <Thomas.J.PAUL@wrld.state.or.us>  
Subject: RE: Crystal Springs Water Dist - Div 86 Plan???  
Date: Tue, 26 Feb 2002 09:27:24 -0800  
X-Mailer: Microsoft Outlook IMO, Build 9.0.2416 (9.0.2910.0)  
Importance: Normal

Response from  
Bill Fujii on  
2-26-02.

I'm not aware of any plan. Nor does there seem to be one in the filing cabinet. If one is required by permit, let's give these folks about 2 years to get one together.

-----Original Message-----

**From:** Tom Paul [mailto:Thomas.J.PAUL@wrld.state.or.us]  
**Sent:** Tuesday, February 26, 2002 7:40 AM  
**To:** William.H.FUJII@wrld.state.or.us  
**Cc:** Lisa.J.JUUL@wrld.state.or.us  
**Subject:** Fwd: Crystal Springs Water Dist - Div 86 Plan???

Bill, would you please check on this and respond to Lisa.

Thanks

Tom

X-Sender: juullj@mailhub.wrld.state.or.us  
X-Mailer: QUALCOMM Windows Eudora Version 5.0.2  
Date: Mon, 25 Feb 2002 14:38:18 -0800  
To: Thomas.J.PAUL@wrld.state.or.us  
From: Lisa J Juul <Lisa.J.JUUL@wrld.state.or.us>  
Subject: Crystal Springs Water Dist - Div 86 Plan???

Hi Tom,

I am working on an extension for File #S-45826 (Permit #S-34196) for Crystal Spring Water District in Hood River County. Has a Division 86 plan ever been submitted for this water district? If so, can I make a copy of it for their file?

Thank you,  
Lisa

Lisa J. Juul  
Water Rights Specialist  
Water Rights & Adjudications Division  
Oregon Water Resources Department  
158 - 12th Street NE  
Salem, Oregon 97301-4172

Phone # (503) 378-8455, extension 272  
FAX # (503) 378-6203  
Homepage/Website Address - <http://www.wrld.state.or.us>





# Oregon

John A. Kitzhaber, M.D., Governor

## Water Resources Department

Commerce Building  
158 12th Street NE  
Salem, OR 97301-4172  
(503) 378-3739  
FAX (503) 378-8130

July 14, 2000

Robert Duddles 541-354-1821  
Superintendent  
Crystal Springs Water District

Mr. Duddles:

In reviewing the answers to your questionnaire, I came across some discrepancies that need some clarification as to the amount of each permit used to date for your two permits. The discrepancies are as follows:

### AMOUNT OF PERMIT USED TO DATE

Permit No.	Extension Application 3/1/99	Phone call with R. Duddles 5/21/99	Questionnaire 7/13/00
29377	.71 .32	1.34	.34
34196	.94 .43	0	.46

In your files I now have listed three water use amounts for each permit. The amount of current water use under each permit is important to determine the justification of each permit. If you can shed some light on these discrepancies, I would appreciate it.

If you have any questions, please do not hesitate to call me.

Sincerely,

Brendalee S. Wilson  
Water Rights Division  
Oregon Water Resources Department  
503-378-8455/1-800-624-3199 ext 276  
Fax 503-378-6203  
brendalee.s.wilson@wrdd.state.or.us





Application 45826, Permit 34196  
Crystal Springs Water District

Please answer the following questions with the greatest attention to detail. Any supporting documentation you can provide will also be helpful and is recommended. If you need additional space, you may attach your answers on a separate sheet. Please return your responses to my attention by July 14, 2000.

1. Please set forth, for each of the following, the amount of use to date:

<u>Priority Date</u>	<u>Quantity Allowed</u>	<u>Status</u>	<u>Use to Date</u>
1930	1 cfs	Certified - 10115	1 cfs
1964	2.65 cfs	Extended - 29377	<u>34 cfs</u>
1969	3.5 cfs	Application - 34196	<u>46 cfs</u>

2. Please set forth the projected growth rate for Crystal Springs until the year 2075.

225% (3% per year) See attached

3. Please indicate the source of where this growth projection was obtained.

Crystal Springs Water District Water System Analysis Lee Engineering (1992)

4. Please indicate if the City of Crystal Springs has submitted an Oregon Health Planning Document, or any other long-term planning document. Yes If so, please provide us with your latest plan.

5. Please indicate how many service hookups that city has had per year for the following years.

1988	<u>26</u>
1989	<u>51</u>
1990	<u>28</u>
1991	<u>59</u>
1992	<u>47</u>
1993	<u>19</u>
1994	<u>33</u>
1995	<u>21</u>
1996	<u>43</u>
1997	<u>28</u>
1998	<u>30</u>
1999	<u>44</u>

1.8 cfs

1.8 cfs each year for 10 years?

6. Please provide a detailed plan of the growth and number of hookups projected for the use of water the City has either certified or under permit.

See attached

7. Please indicate if any alternative sources of water, including groundwater sources have been considered by the City. Yes

8. Please indicate any alternative sources of water available to the City including groundwater sources. None (no existing for future)



**Attachment To Crystal Springs Questionnaire  
(Questions 2, 3, and 6)**

The responses to questions no. 2 and 3 are based upon a projection of increase in the numbers of system customers made by Lee Engineering in 1992. The District has also consulted county population forecasts (e.g. Department of Economic Analysis forecast for Hood River County, updated 4-13-2000), but our historical experience is that the rate by which population increases in the county is significantly less than the rates of increased cfs water usage and numbers of new hook-ups to the system. The response to question no. 5 shows the widely varying numbers of new hook-ups from year to year. The general rate of increase in population does not accurately reflect the rate of either new construction or conversions in the District.

Rather, for purposes of question 6, and to project the time it will take to appropriate the water allowed by permit no. 34196, we have based our projection of growth on the rate of increased water use we have experienced over the past 10 years, which is +0.8 cfs.

The District has no control over the demand for new hookups, and can only service requests as they are made. We can only project the future based upon our experience in the recent past.



7. Please indicate if any alternative sources of water, including groundwater sources, have been considered by the City. Yes

8. Please indicate any alternative sources of water available to the City, including groundwater sources.

None. There are no existing facilities for alternative sources. The water system analysis questions whether development of groundwater facilities is possible, and concludes expense would be prohibitive even if possible. Alternative surface water sources would also be cost prohibitive, and there are no existing water rights.



**RECEIVED**

JUL 14 2000

Application 45826, Permit 34196  
Crystal Springs Water District

WATER RESOURCES DEPT.  
SALEM, OREGON

Please answer the following questions with the greatest attention to detail. Any supporting documentation you can provide will also be helpful and is recommended. If you need additional space, you may attach your answers on a separate sheet. Please return your responses to my attention by July 14, 2000.

1. Please set forth, for each of the following, the amount of use to date:

<u>Priority Date</u>	<u>Quantity Allowed</u>	<u>Status</u>	<u>Use to Date</u>
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**225% (3% per year) See attached**

3. Please indicate the source of where this growth projection was obtained.  
**Crystal Springs Water District Water System Analysis Lee Engineering (1992)**

4. Please indicate if the City of Crystal Springs has submitted an Oregon Health Planning Document, or any other long-term planning document. **Yes** If so, please provide us with your latest plan.

5. Please indicate how many service hookups that city has had per year for the following years.

1988	<u>26</u>
1989	<u>51</u>
1990	<u>28</u>
1991	<u>59</u>
1992	<u>47</u>
1993	<u>19</u>
1994	<u>33</u>
1995	<u>21</u>
1996	<u>43</u>
1997	<u>28</u>
1998	<u>30</u>
1999	<u>44</u>

Handwritten calculations on a blue sticky note:

$3.04 \text{ cfs left} \div 38 \text{ yrs}$   
 $2.31 \text{ cfs left} \div 28 \text{ yrs}$   
 $1360$   
 $5.35 \text{ cfs left} = 60 \text{ years}$   
 $1845 \text{ cfs}$   
 $1805 \div 400(10) = 45 \text{ years}$   
 Current

6. Please provide a detailed plan of the growth and number of hookups projected for the use of water the City has either certified or under permit.

**See attached**

7. Please indicate if any alternative sources of water, including groundwater sources have been considered by the City. **Yes**

8. Please indicate any alternative sources of water available to the City including groundwater sources. **None (no existing facilities)**



Attachment To Crystal Springs Questionnaire  
(Questions 2, 3, and 6)

The responses to questions no. 2 and 3 are based upon a projection of increase in the numbers of system customers made by Lee Engineering in 1992. The District has also consulted county population forecasts (e.g. Department of Economic Analysis forecast for Hood River County, updated 4-13-2000), but our historical experience is that the rate by which population increases in the county is significantly less than the rates of increased cfs water usage and numbers of new hook-ups to the system. The response to question no. 5 shows the widely varying numbers of new hook-ups from year to year. The general rate of increase in population does not accurately reflect the rate of either new construction or conversions in the District.

Rather, for purposes of question 6, and to project the time it will take to appropriate the water allowed by permit no. 34196, we have based our projection of growth on the rate of increased water use we have experienced over the past 10 years, which is +0.8 cfs.

The District has no control over the demand for new hookups, and can only service requests as they are made. We can only project the future based upon our experience in the recent past.

**RECEIVED**

JUL 14 2000

WATER RESOURCES DEPT.  
SALEM, OREGON



To: Dwight French  
From: Kerry Lefever <Kerry.A.LEFEVER@wrд.state.or.us>  
Subject: Protest to Permit Extensions - App 45826 Crystal Springs Water Dist  
Cc:  
Bcc:  
Attached:

Dwight,

Looking through a file for Crystal Springs Water District (CSWD), App 45826, Permit 34196, a protest for the permit extension was submitted on May 12, 2000 by WaterWatch and Oregon Trout.

-----  
Mark Womble, with CSWD, called on February 15, 2001 asking about the status of the Final Order for the permit extension. Brendalee sent a letter, dated October 16, 2000, requesting CSWD to submit a copy of their Oregon Health Planning Document. Brendalee stated in the letter that once she had a copy of this document, that she could complete her review and issue a final order. This document is not in the file.

Would you be available to discuss this file sometime this week, so that I may call Mark Womble with a prognosis?

Kerry



X-Sender: frenchdw@mailhub.wrd.state.or.us  
X-Mailer: QUALCOMM Windows Eudora Version 4.3.2  
Date: Tue, 20 Feb 2001 12:45:23 +0000  
To: Kerry Lefever <Kerry.A.LEFEVER@wrđ.state.or.us>  
From: Dwight W French <Dwight.W.FRENCH@wrđ.state.or.us>  
Subject: Re: Protest to Permit Extensions - App 45826 Crystal Springs  
Water Dist

sure: How about Thursday morning at 9:00 am.  
Dwight

At 11:43 AM 2/20/2001 -0800, you wrote:

Dwight,

Looking through a file for Crystal Springs Water District (CSWD), App 45826, Permit 34196, a **protest** for the permit extension was submitted on May 12, 2000 by WaterWatch and Oregon Trout.

---

Mark Womble, with CSWD, called on February 15, 2001 asking about the status of the Final Order for the permit extension. Brendalee sent a letter, dated October 16, 2000, requesting CSWD to submit a copy of their Oregon Health Planning Document. Brendalee stated in the letter that once she had a copy of this document, that she could complete her review and issue a final order. This document is not in the file.

Would you be available to discuss this file sometime this week, so that I may call Mark Womble with a prognosis?

Kerry

---

Dwight French  
Water Rights Section Manager, Water Rights Division  
Oregon Water Resources Department  
158 12th ST NE, Salem Oregon 97301-1724  
1 800 624-3199 ext. 268 or 503 378-8455 x268  
FAX: 503 378-6203





**TETRA TECH / KCM, Inc.**

7080 SW Fir Loop, Portland, OR 97223-8022  
(503) 684-9097 • FAX (503) 598-0583

October 25, 2000

Mr. Bob Duddles  
Superintendent  
Crystal Springs Water District  
P.O. Box 186  
Odell, OR 97044

**SUBJECT: Crystal Springs Flow Measurement**

Dear Mr. Duddles:

This letter is written to confirm the flow measurements that were taken this morning at Crystal Springs adjacent to State Highway 35 near milepost 77.

The water entering the transmission pipeline was measured at 1400 gallons per minute using the existing flow meter installed on the pipeline downstream of the chlorination building.

The excess flow not diverted into the transmission pipeline is released through several pipes near the spring box. The excess flow from the spring is collected in a single creek that crosses State Highway 35 in a 60-inch diameter culvert. Using a Swiffer propeller meter to measure water velocity in the pipe and a tape to measure the depth and chord width of flow, the amount of water in the culvert was calculated to be 6.0 cubic feet per second or 2693 gallons per minute. The total flow from Crystal Springs on this October 25, 2000 from the two measurements can be added and rounded to 4100 gallons per minute.

Please call me if you have any questions.

Sincerely,

**TETRA TECH/KCM, INC.**

Philip G. Reppo, P.E.  
Senior Civil Engineer

c: Central Files





# Oregon

John A. Kitzhaber, M.D., Governor

## Water Resources Department

Commerce Building  
158 12th Street NE  
Salem, OR 97301-4172  
(503) 378-3739  
FAX (503) 378-8130

October 16, 2000

Robert Duddles  
Superintendent  
Crystal Springs Water District  
P O Box 186  
3006 Chevron Drive  
Odell, OR 97044

RE: Application 34196, Permit 45826

Dear Mr. Duddles:

I am still awaiting a copy of Crystal Springs' Oregon Health Planning Document in order to finish processing your extension and the protest. If you could send me a copy, I will be able to complete my review and issue a final order.

If you have any questions, please give me a call at (503) 378-8455 or toll free within Oregon at 1 (800) 624-3199, extension 276.

Sincerely,

Brendalee S. Wilson  
Water Rights Division  
Oregon Water Resources Department  
503-378-8455/1-800-624-3199 ext: 276  
Fax: 503-378-6203







# Oregon

John A. Kitzhaber, M.D., Governor

## Water Resources Department

Commerce Building  
158 12th Street NE  
Salem, OR 97301-4172  
(503) 378-3739  
FAX (503) 378-8130

June 13, 2000

Robert Duddles  
Superintendent  
Crystal Springs Water District  
P O Box 186  
3006 Chevron Drive  
Odell, OR 97044

RE: Application 34196, Permit 45826

Dear Mr. Duddles:

As you know, the Proposed Final Order for your extension request has been protested.

Please find enclosed the questionnaire per our phone conversation. I ask that you fill out the questionnaire with as much detail as possible and return it to my attention by July 14, 2000.

If you have any questions, please give me a call at (503) 378-8455 or toll free within Oregon at 1 (800) 624-3199, extension 276.

Sincerely,

Brendalee S. Wilson, Esq.  
Water Rights Division  
Oregon Water Resources Department  
503-378-8455/1-800-624-3199 ext: 276  
Fax: 503-378-6203





# Abstract of Permit No. 34196

Application No. 45826

Certificate No.

Name

Crystal Springs Water District

Address

P. O. Box 35  
Hood River, Oregon 97031

Source of water supply

Crystal Springs

Use

Municipal

Point of diversion

500' S. & 320' E. from NW cor. Sec. 29, being within NW 1/4 NW 1/4, Sec. 29, T. 1 S., R. 10 E., W. M., county of Hood River

Number of acres

## DESCRIPTION OF LAND TO BE IRRIGATED OR PLACE OF USE

Twp.	Range	Sec.	NE 1/4				NW 1/4				SW 1/4				SE 1/4			
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4
1N	9E	24	x		x	x									x	x	x	x
		25	x			x												
1N	10E	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		3	x	x	x	x	x	x	x	x					x	x	x	x
		10	x	x	x	x									x	x	x	x
		11		x	x		x	x	x	x	x	x	x	x		x	x	
		15	x	x	x	x	x			x	x	x	x	x	x	x	x	x
		17										x	x	x			x	x

Priority date

March 3, 1969

Amount of water

3.5 c.f.s.

Time limit to begin construction

August 25, 1970

Time limit to complete construction

10-1-71 extended to

extended to

Time limit to completely apply water

10-1-72 extended to 10-1-78 extended to

Remarks:



# Abstract of Permit No. 34196

Application No. 45826

Certificate No.

## DESCRIPTION OF LAND TO BE IRRIGATED OR PLACE OF USE

Twp.	Range	Sec.	NE¼				NW¼				SW¼				SE¼			
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼
1N	10E	18							X	X	X	X	X	X	X	X	X	X
		19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		21			X	X			X	X	X	X	X	X	X	X	X	X
		22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		32	X			X		X										
		33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1N	11E	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2N	10E	1	X	X	X	X									X	X	X	X
		12	X	X	X	X	X			X	X	X	X	X	X	X	X	X
		13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		14	X	X	X	X	X			X	X	X	X	X	X	X	X	X
		15										X	X	X	X	X	X	X
		16														X	X	X
		21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2N	10E	28	X	X	X	X	X	X	X	X	X	X			X	X		



# Abstract of Permit No. 34196

Application No. 45826

Certificate No.

## DESCRIPTION OF LAND TO BE IRRIGATED OR PLACE OF USE

Twp.	Range	Sec.	NE¼				NW¼				SW¼				SE¼			
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼
2N	10E	34	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		35	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		36	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
2N	11E	6	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		7	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		18	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		19	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		30	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		31	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3N	10E	25																x
		36				x									x	x		
3N	11E	30											x	x				
		31					x	x	x	x	x	x	x	x				
1S	10E	4										x	x					
		5	x	x	x	x	x	x	x	x	x	x	x	x				
		6	x	x	x	x			x	x	x		x	x	x	x	x	x
		7	x	x	x	x	x			x	x		x	x	x	x	x	x
		8	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		9						x	x			x	x					
		16						x	x			x	x					
		17	x	x	x	x	x	x	x	x	x	x			x	x		x
		18	x	x		x	x	x							x			
		20	x			x												
		21						x	x									





# Oregon

John A. Kitzhaber, M.D., Governor

## Water Resources Department

Commerce Building  
158 12th Street NE  
Salem, OR 97310-0210  
(503) 378-3739  
FAX (503) 378-8130

January 13, 1999

CRYSTAL SPRINGS WATER DIST  
PO BOX 186  
ODELL OR 97044

REFERENCE: Files 45826 & 39422

According to the terms of your Permits 34196 and 29377, complete application of water was to have been made by **October 1, 1998**. To date we have not received notice that this has been accomplished.

Complete application of water means use of the water for the beneficial purpose described in the permit to the full extent intended. (In the case of irrigation, it means beneficial irrigation of the lands the permittee intends to cover.) This may be a smaller amount than the permit allowed. If the water has been used, you should promptly submit notice describing the extent of completion as set forth in the letter accompanying your permit.

ORS 537.260 provides that: "Whenever the time within which any appropriation under a permit should have been perfected has expired and the owner of the permit fails or refuses within three months thereafter to submit to the Water Resources Director proof of completion of the appropriation as required by ORS 537.230 and 537.250, the Water Resources Director may, after 60 days notice by registered mail, order the cancellation of the permit."

You are hereby notified that, unless proof of beneficial use is received by **MARCH 13, 1999** (within 60 days from the date of this letter) the permit may be canceled without further notice.

If the project was completed, you should promptly submit the notice of complete application of water. If you were unable to fully apply water within the time allowed, you may request an extension of time.

If you wish to apply for an extension of time, please fill out the enclosed form. Permit extension rules, adopted by the Water Resources Commission in October 1998, require that the Department consider this information when determining whether or not to approve an extension request. You should request to extend your permit for the amount of time necessary to fully apply water to beneficial use. Should the permit extension be approved, it is the Department's expectation that it will be the last extension granted. Copies of the new extension rules will be furnished upon request.

If you are no longer interested in the project described by the permit, we would appreciate being advised. If the property involved has been sold and any part of the project was completed, you should assign the permit to the new owner. An assignment form will be furnished upon request.

If additional information is needed, please contact me at extension 272 at 378-3739 or toll-free 1-800-624-3199.

Sincerely,

Dallas Miller  
Water Rights Specialist

DM:jh

cc: Larry Toll, Watermaster

CERTIFIED - RETURN RECEIPT REQUESTED



RECEIVED

690-10-116

File No. ....

WAT

ext appl 10/10/93

## APPLICATION FOR EXTENSION OF TIME

TO THE WATER RESOURCES DIRECTOR OF OREGON

Crystal Springs Water District  
 P.O. Box 186  
 Odell Oregon 97044-0186

record owner of water permit No. 34196, do hereby request  
 that the time in which to:

- X Complete the construction of works and / or purchase and installation of the equipment necessary to the use of water, which time now expires on October 1, 1993, be extended to October 1, 1998; and on the time in which to
- X Accomplish beneficial use of water to the full extent now intended under the terms of said permit, which time now expires on October 1, 1993, be extended to October 1, 1998.

I have accomplished the following described works and/or purchase and installation of equipment necessary to the use of water under said permit:

- (1) within the past year we installed approximately 14315 L.F. of 6", 4000 L.F. of 10", 2500 L.F. of 12", and 1000 L.F. of 4" Ductile Iron Pipe.
- (2) prior to this past year - Miscellaneous main line extensions and improvements adding service to approximately 30 additional homes per year.
- (3) and have accomplished beneficial use of water to the extent of (If for irrigation, State how many acres have been irrigated) Service to approximately 1800 service connections.

*Thomas A. Haettli* Title Supt.  
 Dated 6 December 1993

MAIL COMPLETED APPLICATION AND STATUTORY FEE  
 OF \$100.00 FOR EACH PERMIT TO:

Water Resources Department  
 3850 Portland Road N.E.  
 Salem, Oregon 97310

SEE FILE 39422  
 OK BC 101-98  
 JES





NEIL GOLDSCHMIDT  
GOVERNOR

## Water Resources Department

3850 PORTLAND ROAD NE, SALEM, OREGON 97310

PHONE

May 3, 1989

Crystal Springs Water District  
PO Box 186  
Odell, OR 97844

Reference Files: 39422 and 45826

Your applications for extension of the time limits to complete construction and make complete application of water under the terms of your Permits 29377 and 34196 were received. We also have your check for \$200.

The applications indicate reasonable diligence toward completion of the proposed projects; therefore, the time limits to complete construction and make complete application of water are extended to October 1, 1993 on both permits.

Sincerely,

Steven P. Applegate, Manager  
Survey/Mapping Section

29377, 34196  
order ext. 10/1/93



# Application for Extension of Time

TO THE WATER RESOURCES DIRECTOR OF OREGON

I, CRYSTAL SPRINGS WATER DISTRICT  
P.O. BOX 186  
ODELL, OREGON 97044  
(503) 354-1818

City

State

Zip

record owner of water permit No. 34196, do hereby request that the time in which to:

- ☐ complete the construction of works and/or purchase and installation of the equipment necessary to the use of water, which time now expires on October 1, 19\_\_, be extended to October 1, 19\_\_;  
 and/or the time in which to
- ☒ accomplish beneficial use of water to the full extent now intended under the terms of said permit, which time now expires on October 1, 19<sup>88</sup>, be extended to October 1, 19<sup>93</sup>.

I have accomplished the following described works and/or purchase and installation of equipment necessary to the use of water under said permit:

- (1) within the past year Crystal Springs Water District has installed 6300 feet of 4" pipeline and have installed 17 new service connections.
- (2) prior to this past year Since 1983 Crystal Springs Water District has installed 14590 feet of 6" pipeline, 18550 feet of 4" pipeline, 318 feet of 2" pipeline and have installed 66 service connections.
- (3) and have accomplished beneficial use of water to the extent of (IF FOR IRRIGATION, STATE HOW MANY ACRES HAVE BEEN IRRIGATED) \_\_\_\_\_

(If additional space is required, attach separate sheet)

Thomas A. Hachtel Supt.  
 (If signing for a corporation please identify your title)

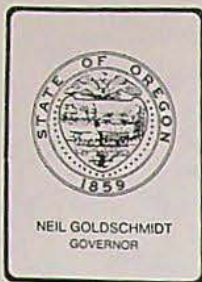
Dated April 27, 1989

MAIL COMPLETED APPLICATION AND STATUTORY FEE  
 OF \$100.00 FOR EACH PERMIT TO:

Water Resources Department  
 3850 Portland Road N.E.  
 Salem, Oregon 97310

OK BIC to  
 10-1-93  
 5/2/89





## Water Resources Department

3850 PORTLAND ROAD NE, SALEM, OREGON 97310

PHONE

378-3739

April 11, 1989

Crystal Springs Water District  
PO Box 186  
Odell, OR 97044

REFERENCE: File 45826 and 39422

Enclosed is an application for requesting an extension of the time limits imposed on Permit 34196 and 29377.

The Water Resources Director is permitted by law to extend the time for completion of a project only upon a showing of reasonable diligence by the permittee. Therefore, please complete this application in detail describing what has been accomplished.

The application must be received in this office with the statutory filing fee of \$100 for each permit.

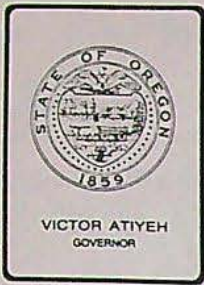
Sincerely,

Steven P. Applegate  
Field Crews Supervisor

SPA:cle

Enclosure





*Water Resources Department*  
MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-5000

January 24, 1984

Crystal Springs Water District  
PO Box 186  
Odell, OR 97044

REFERENCE: Files Numbered 45826 and 39422

Gentlemen:

Your application for an extension of the time limits in which to complete construction and make complete application of water under the terms of your Permits Numbered 34196 and 29377 were received. We also have your checks in the amount of \$40.

The applications indicate reasonable diligence has been exercised toward completion of the proposed projects; therefore, the time limits to complete construction and make complete application of water are being extended to October 1, 1988.

Sincerely,

Bruce A. Estes, Supervisor  
Survey/Certificate Section

BAE/jw

Enclosures

order ext. 10/1/88



## Application for Extension of Time

RECEIVED

OC

TO THE WATER RESOURCES DIRECTOR OF OREGON

WATER RESOURCES  
SALEM

I, CRYSTAL SPRINGS WATER DISTRICT

Name

PO BOX 186

Mailing Address

ODELL

City

OREGON

State

97044

Zip

record owner of water right permit No. 34196, do hereby request that the time in which to:

☒ complete the construction of works and/or purchase and installation of the equipment necessary to the use of water, which time now expires on October 1, 1983, be extended to October 1, 1988, and/or the time in which to

☒ accomplish beneficial use of water to the full extent now intended under the terms of said permit, which time now expires on October 1, 1983, be extended to October 1, 1988

I have accomplished the following described works and/or purchase and installation of equipment necessary to the use of water under said permit:

within the past year we have installed 100' of 8" main, 150' of 4" main, 700' of

2" main and 15 new service connections.

prior to this past year we have installed 2640' of 4" main, 1320' of 2" main and

107 new services since July 1979.

and have accomplished beneficial use of water to the extent of (IF FOR IRRIGATION, STATE HOW MANY ACRES HAVE BEEN IRRIGATED)

(If additional space is required, attach separate sheet)

Tom Hachtel, Superintendent

(If signing for a corporation please identify your title)

Dated October 13, 1983

MAIL COMPLETED APPLICATION AND STATUTORY FEE OF \$10.00 FOR EACH PERMIT TO:

\$20.

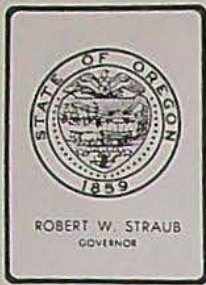
Water Resources Department  
Mill Creek Office Park  
555 13th Street, N.E.  
Salem, Oregon 97310

10-14-83  
\$ 20.00  
# 39374

B-C  
10-1-88  
BAC

ext app 10/14/83





## *Water Resources Department*

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE

November 22, 1978

Crystal Springs Water Dist.  
P.O. Box 186  
Odell, OR. 97044

Gentlemen:

Your application for an extension of the time limits in which to complete construction and make complete application of water under the terms of your permits numbered 29377 and 34196 has been received. We also have your check in the amount of \$20.00.

The application indicates reasonable diligence has been excersized toward completion of the proposed projects; therefore, the time limits to complete construction and make complete application of water are being extended to October 1, 1983.

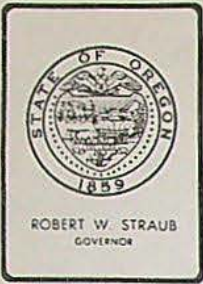
Sincerely,

BRUCE A. ESTES  
Supervisor  
Certificate/Survey Section

BAE:tld  
enc: Receipt No. 7456 and No. 7457

order ext. 12/1/83





*Water Resources Department*  
MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-8508

File 39422  
45826

November 9, 1978

Crystal Springs Water District  
P.O. Box 186  
Odell, OR 97044

Gentlemen,

We have your application for an extension of the time limits in which to complete construction and make complete application of water under the terms of your permits numbered 29377 and 34196.

Unfortunately, the application was submitted without the statutory filing fee in the amount of \$10.00 for each permit. Please submit the required \$20.00 and we will then be able to consider the extension.

Sincerely,

Bruce A. Estes, Supervisor  
Survey-Certificate Section

BAE:jt



PHONE 378-8508

October 23, 1978

• Crystal Springs Water Dist.  
P.O. Box 186  
Ode11, OR 97044

File No. 45826

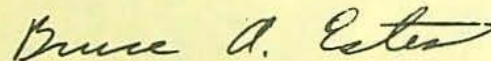
• Gentlemen,

I am enclosing a form for use in making application for an extension of time limits under permit number 34196

The Water Resources Director is permitted by law to extend the time for completion of a project only upon a showing of reasonable diligence by the permittee. Therefore, you should fill out this application carefully and completely describing what has been accomplished.

The application must be ~~executed before a notary public and~~ submitted to this office with the statutory filing fee in the amount of \$10.00 for each permit.

Sincerely,



Bruce A. Estes, Supervisor  
Certificate-Survey Section



378 3066

November 22, 1977

Ref.: 45826  
49732

Daniel H. Skerritt  
Lindsay, Nahstoll, Hart, Neil & Weigler  
Attorney at Law  
1331 S.W. Broadway  
Portland, OR 97201

Dear Mr. Skerritt:

Crystal Springs Water District holds permits No. 29377 and No. 34196 for use of water for group domestic purposes under permit No. 29377 and for municipal use under permit No. 34196. They may serve any user within the District for any use which would ordinarily be made under a municipal water system. I assume uses contemplated by Mt. Hood Meadows Development Corporation would be in this classification.

Part of the area of use contemplated by Mt. Hood Meadows Development Corporation's application No. 49732 is within the District boundary according to the information we have. If the District should annex contiguous areas prior to perfecting their right, I assume that area would be included. This has been our policy for municipal corporations.

Sincerely

Trevor Jones

TJ:vp

Purpose of permit



39422  
45826

January 17, 1974

Crystal Springs Water District  
P. O. Box 35  
Hood River, Oregon 97031

Gentlemen:

This will acknowledge your application for an extension of the time limits to complete construction under Permit No. 29377 and make complete application of water under Permit No. 34196 and your check in the amount of \$5.00 for which our receipt No. 37818 is enclosed.

The application indicates reasonable diligence has been exercised toward completion of the proposed project; therefore, the time limits to complete construction under Permit No. 29377 and make complete application of water under Permit No. 34196 are being extended to October 1, 1978.

Very truly yours,

Trevor Jones  
Assistant

TJ:whh

Enc: Receipt No. 37818

order ext. 01/17/74



July 25, 1973

39422  
45826

Crystal Springs Water District  
P.O.Box 35  
Hood River, OR 97031

Gentlemen:

The application submitted for extension of the time limits by Crystal Springs Water District lists permits 29377 and 34196 and was accompanied by a fee of \$5.00 for which our receipt number 35472 is enclosed. Two permits can be described in one application but each requires the statutory fee of \$5.00. If you will submit the \$5.00 fee for the second permit proper action on the application will be taken.

Very truly yours,

Trevor Jones  
Assistant

TJ:m

Encl:



May 17, 1973

39422  
45826

Crystal Springs Water District  
P. O. Box 35  
Hood River, OR 97031

ATTENTION: G. Wells, Chairman

Dear Mr. Wells:

On October 27, 1972, we acknowledged your notice of complete application of water in connection with permit numbered 34196 which is for the appropriation of 3.5 cubic feet per second of water from Crystal Springs for municipal use.

You also hold permit 29377 which describes the appropriation of 2.65 cubic feet per second of water from Crystal Springs for group domestic.

The appropriation of water in connection with these permits, according to our records, is now complete. If this is the case the water district could not make additional hookups nor provide delivery service to additional customers. I do not feel that this is the intention of the water district. If it is the district's intention to construct additional pipelines to additional users, it will be necessary that a valid permit be in force for the additional use.

The time limit to complete construction and to make use of the water in connection with permit 34196 could be extended to allow additional time if necessary to enable the district to expand on the present system. Enclosed is a form along with our normal cover letter for your use in requesting additional time. If we do not hear from you in regards to this extension, the normal final proof survey will be made during the 1974 survey season. It will also be necessary to submit an application for a new permit if additional use of water is contemplated and your application for extension of time is not received.

Very truly yours,

VESTAL R. GARNER  
Assistant

VRG:gkd  
Enclosure



**STATE  
ENGINEER**

**WATER RESOURCES DEPARTMENT**

1178 CHEMEKETA STREET N.E. • SALEM, OREGON • 97310 • Phone 378-3739  
October 27, 1972

Crystal Springs Water District  
P.O. Box 35  
Hood River, Oregon 97031

File No. 45826

Dear Sirs:

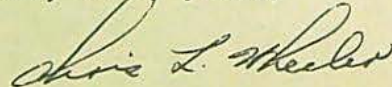
This will acknowledge receipt of your notice to the effect that complete application of water has been made under permit No. 34196.

Pursuant to your report and in line with the general practice of this office, a survey will be made at a later date.

After this survey, proof may be made and certificate issued covering the actual use of water as found by the engineer. In case of irrigation, any lands described in the permit that have not been irrigated will be automatically eliminated from the water right.

In the meantime, the permit which you hold will be valid evidence of the water right in question so long as you continue to use the water.

Very truly yours,



CHRIS L. WHEELER  
State Engineer



45826

October 9, 1969

Crystal Springs Water District  
P. O. Box 35  
Hood River, Oregon 97031

Gentlemen:

blueprint.

45926, permit No. 34196 with a



March 11, 1969

Crystal Springs Water District  
P. O. Box 35  
Hood River, Oregon 97031

Gentlemen:

This will acknowledge receipt of the additional recording fee of \$1.00 for your application No. 45826 for which our receipt No. 13462 is enclosed.

Your application is now in satisfactory form for approval by issuance of a permit.

Very truly yours,

CHRIS L. WHEELER  
State Engineer

By  
Larry W. Jebousek  
Assistant

LWJ:cdc  
Enclosure





STATE OF OREGON  
STATE ENGINEER  
WATER RESOURCES DEPARTMENT  
516 PUBLIC SERVICE BUILDING  
SALEM 97310

March 5, 1969

RECEIVED  
MAR 7 1969  
STATE ENGINEER  
SALEM, OREGON

REFER TO  
FILE NO. 45826

Crystal Springs Water District  
P. O. Box 35  
Hood River, Oregon 97031

Gentlemen:

This will acknowledge receipt of your application for permit to appropriate 3.5 cubic feet of water per second from Crystal Springs for domestic-municipal use, a print of the proposed improvements to Crystal Springs, and the fee of \$30.00 for which our receipt No. 13214 is enclosed.

Your application, which has been filed and numbered 45826, requires an additional \$1.00 recording fee.

Upon receipt of the additional fees, this application will be in satisfactory form for approval by issuance of a permit.

Very truly yours,

CHRIS L. WHEELER  
State Engineer

*Larry N. Jabousek*  
B. Larry N. Jabousek  
Assistant

LMJ:cdc  
Enclosure



March 5, 1969

Crystal Springs Water District  
P. O. Box 35  
Hood River, Oregon 97031

Gentlemen:

This will acknowledge receipt of your application for permit to appropriate 3.5 cubic feet of water per second from Crystal Springs for domestic-municipal use, a print of the proposed improvements to Crystal Springs, and the fee of \$30.00 for which our receipt No. 13214 is enclosed.

Your application, which has been filed and numbered 45826, requires an additional \$1.00 recording fee.

Upon receipt of the additional fees, this application will be in satisfactory form for approval by issuance of a permit.

Very truly yours,

CHRIS L. WHEELER  
State Engineer

By  
Larry W. Jebousek  
Assistant

LWJ:cdc  
Enclosure



# CRYSTAL SPRINGS WATER DISTRICT

## DOMESTIC WATER SYSTEM

Supplying East Side Hood River Valley  
and Parkdale Districts  
216 Cascade Street  
~~106 THIRD ST.~~

HOOD RIVER, OREGON

March 1, 1969

**RECEIVED**  
MAR 3 1969  
**STATE ENGINEER**  
SALEM, OREGON

State of Oregon  
Office of the State Engineer  
Salem, Oregon 97310

Gentlemen:

Enclosed please find Application for Permit, 'To  
Appropriate the Public Waters of the State of Oregon', with check  
in the amount of \$30.00 for examination fee and recording fee, for  
the Crystal Springs Water District.

Also please be advised with reference to Permit No. 29377,  
Application No. 39422 for construction of improvements and appropriation  
of water for 2.65 C.F.S., the construction of improvements has been  
completed, and appropriation of 2.65 C.F.S. water has occurred.

Please contact us if there should be any further question  
on the enclosed application.

Very truly yours

*Brooke E. Hull*  
Brooke E. Hull

Accountant

Crystal Springs Water District

BEH:m  
Enclosures.



STATE OF OREGON  
WATER RESOURCES DEPARTMENT

RECEIPT # 107969

3850 PORTLAND ROAD NE  
SALEM, OR 97310  
378-8455/378-8130 (FAX)

RECEIVED FROM: Crystal Springs  
BY: Water District

APPLICATION 45826  
PERMIT  
TRANSFER

CASH: ☐ CHECK: # 24201 OTHER: (IDENTIFY) ☐

TOTAL REC'D \$ 200.00

01-00-0 WRD MISC CASH ACCT

842.010 ADJUDICATIONS \$  
831.087 PUBLICATIONS/MAPS \$  
830.650 PARKING FEES Name/month \$  
OTHER: (IDENTIFY) \$

REDUCTION OF EXPENSE

CASH ACCT. \$  
VOUCHER #

COST CENTER AND OBJECT CLASS

03-00-0 WRD OPERATING ACCT

MISCELLANEOUS:

840.001 COPY FEES \$  
850.200 RESEARCH FEES \$  
880.109 MISC REVENUE: (IDENTIFY) extension \$ 700.00  
520.000 OTHER (P-6) (IDENTIFY) \$

WATER RIGHTS:

842.001 SURFACE WATER EXAM FEE \$ 842.002 RECORD FEE \$  
842.003 GROUND WATER EXAM FEE \$ 842.004 \$  
842.005 TRANSFER EXAM FEE \$ 842.006 \$

WELL CONSTRUCTION

842.022 WELL DRILL CONSTRUCTOR EXAM FEE \$ 842.023 LICENSE FEE \$  
LANDOWNER'S PERMIT 842.024 \$  
OTHER (IDENTIFY)

06-00-0 WELL CONST START FEE

842.013 WELL CONST START FEE \$ CARD #  
MONITORING WELLS \$ CARD #

45-00-0 LOTTERY PROCEEDS

864.000 LOTTERY PROCEEDS \$

07-00-0 HYDRO ACTIVITY

842.011 POWER LICENSE FEE(FW/WRD) LIC NUMBER \$  
842.115 HYDRO LICENSE FEE(FW/WRD) \$

HYDRO APPLICATION \$

RECEIPT # 107969

DATED: 12-10-93 BY: K. Jones

Distribution—White Copy-Customer, Yellow Copy-Fiscal, Blue Copy-File, Buff Copy-Fiscal

STATE OF OREGON  
WATER RESOURCES DEPARTMENT

RECEIPT # 107969

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SALEM, OR 97310  
378-8455/378-8130 (FAX)

RECEIVED FROM: Crystal Springs  
BY: Water District

APPLICATION 45826  
PERMIT  
TRANSFER

CASH: ☐ CHECK: # 24201 OTHER: (IDENTIFY) ☐

TOTAL REC'D \$ 200.00

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830.650 PARKING FEES Name/month \$  
OTHER: (IDENTIFY) \$

REDUCTION OF EXPENSE

CASH ACCT. \$  
VOUCHER #

COST CENTER AND OBJECT CLASS

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842.005 TRANSFER EXAM FEE \$ 842.006 \$

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LANDOWNER'S PERMIT 842.024 \$  
OTHER (IDENTIFY)

06-00-0 WELL CONST START FEE

842.013 WELL CONST START FEE \$ CARD #  
MONITORING WELLS \$ CARD #

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842.115 HYDRO LICENSE FEE(FW/WRD) \$

HYDRO APPLICATION \$

RECEIPT # 107969

DATED: 12-10-93 BY: K. Jones

Distribution—White Copy-Customer, Yellow Copy-Fiscal, Blue Copy-File, Buff Copy-Fiscal



5/1/99 DM  
3/3/69

Application No. 45826  
Permit No. 34196

Name Crystal Springs Water District

Address P. O. Box 35<sup>186</sup> Hood River, Oregon 97031  
ODELL

Assigned

Address

Beginning construction August 25, 1970

Completion of construction October 1, 1971

Extended to 10-1-83 10-1-88 10-1-93 10-1-98

Complete application of water October 1, 1972

Extended to 10-1-78, 10-1-83 10-1-88 10-1-93

10-1-98