APPENDIX "A"

Wells Logs

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310, within 30 days from the date of well completion.

RECEIVED MAR 13 1969 STATE ENGINEER SALEM OREGON

WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line)

HOOD State Well No. 2N/8-6da
352 State Permit No.

(1) OWNER:
Name CITY OF CASCADE LOCKS
Address CASCADE LOCKS, ORE.

(2) TYPE OF WORK (check):
New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:
Rotary [ ] Driven [ ]
Cable [X] Jetted [ ]
Dug [ ] Bored [ ]

(4) PROPOSED USE (check):
Domestic [ ] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [X] Other [ ]

CASING INSTALLED: Threaded [ ] Welded [X]
8" Diam. from 0 ft. to 104 ft. Gage .277
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

PERFORATIONS: Perforated? [X] Yes [ ] No.
Type of perforator used STAR
Size of perforations 3/8 in. by 1 1/4 in.
600 perforations from 75 ft. to 100 ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS: Well screen installed? [ ] Yes [X] No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.
Static level 61 ft. below land surface Date 1/29/69
Artesian pressure lbs. per square inch Date

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [X] Yes [ ] No If yes, by whom? STRASSER
Yield: 390 gal./min. with 1 ft. drawdown after 8 hrs.
" " "
" " " "
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water 43° Was a chemical analysis made? [ ] Yes [X] No

(10) CONSTRUCTION:
Well seal—Material used SAND AND CEMENT GROUT
Depth of seal 20 ft.
Diameter of well bore to bottom of seal 12 in.
Were any loose strata cemented off? [ ] Yes [X] No Depth
Was a drive shoe used? [X] Yes [ ] No
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? [ ] Yes [X] No Size of gravel:
Gravel placed from ft. to ft.

(11) LOCATION OF WELL:
County HOOD RIVER Driller's well number 4299
NE ¼ SE ¼ Section 6 T. 2N R. 8E W.M.
Bearing and distance from section or subdivision corner

(12) WELL LOG: Diameter of well below casing —
Depth drilled 104 ft. Depth of completed well 104 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

MATERIAL	From	To	SWL
SANDY SILT	0	2	
GRAVEL AND BOULDERS	2	7	
SAND, GRAVE, BOULDERS, AND SOME CLAY	7	26	
SAND AND GRAVEL	26	40	
LOOSE SAND AND GRAVEL	40	104	

Work started JAN 7 1969 Completed FEB 6 1969
Date well drilling machine moved off of well FEB 7 1969

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Dan W Johnson (Drilling Machine Operator) Date MARCH 1969
Drilling Machine Operator's License No. 57

Water Well Contractor's Certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME RJ STRASSER DRILLING CO (Person, firm or corporation) (Type or print)
Address 8110 SE SUNET LANE PORTLAND ORE
[Signed] Robert L. Strasser (Water Well Contractor)
Contractor's License No. 10 Date MAR 12, 1969

(USE ADDITIONAL SHEETS IF NECESSARY)

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

RECEIVED MAR 13 1969 STATE ENGINEER SALEM, OREGON

MULT 002057

WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line)

State Well No. 2N/8-6 da

State Permit No.

(1) OWNER:
Name CITY OF CASCADE LOCKS
Address CASCADE LOCKS, ORE.

(2) TYPE OF WORK (check):
New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:
Rotary ☐ Driven ☐
Cable ☒ Jetted ☐
Dug ☐ Bored ☐

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

CASING INSTALLED: Threaded ☐ Welded ☒
14" Diam. from +4 ft. to 110 ft. Gage .375
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

PERFORATIONS: Perforated? ☒ Yes ☐ No.
Type of perforator used STAR
Size of perforations 3/8 in. by 1 1/4 in.
1200 perforations from 80 ft. to 103 ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS: Well screen installed? ☐ Yes ☒ No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.
Static level 61 ft. below land surface Date 2/27/69
Artesian pressure lbs. per square inch Date

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☒ Yes ☐ No If yes, by whom? STRASSER
Yield: 1000 gal./min. with 2 ft. drawdown after 24 hrs.
" " " "
" " " "
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water 43 Was a chemical analysis made? ☐ Yes ☒ No

(10) CONSTRUCTION:
Well seal—Material used SAND AND CEMENT GROUT
Depth of seal 20 ft.
Diameter of well bore to bottom of seal 20 in.
Were any loose strata cemented off? ☐ Yes ☒ No Depth
Was a drive shoe used? ☒ Yes ☐ No
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? ☐ Yes ☒ No Size of gravel:
Gravel placed from ft. to ft.

(11) LOCATION OF WELL:
County MULT Driller's well number 4300
NE ¼ SE ¼ Section 6 T. 2N R. 8E W.M.
Bearing and distance from section or subdivision corner

(12) WELL LOG: Diameter of well below casing —
Depth drilled 110 ft. Depth of completed well 110 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

MATERIAL	From	To	SWL
TOP SOIL	0	2	
SAND, GRAVEL BOULDERS AND SOME CLAY	2	28	
SAND AND GRAVEL	28	61	
WATER BEARING GRAVEL	61	106	
CEMENTED GRAVEL	106	110	

Work started FEB 8 1969 Completed MAR 4 1969
Date well drilling machine moved off of well MAR 4 1969

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Don U Johnson (Drilling Machine Operator) Date MAR 12 1969
Drilling Machine Operator's License No. 57

Water Well Contractor's Certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME R.J. STRASSER DRILLING Co (Person, firm or corporation) (Type or print)
Address 8110 SE SUNSET LANE PORTLAND OR
[Signed] Robert L. Strasser (Water Well Contractor)
Contractor's License No. 70 Date MAR 12, 1969

(USE ADDITIONAL SHEETS IF NECESSARY)

APPENDIX "B"

Water Right Information

City of Cascade Locks Water Rights

Ground Water Rights

File	*Permit*	*Certificate*	*Priority Date*	*Source*	*Q*	*Q Not Subject to Any Extension Conditions*	*Q Subject to Extension Conditions*	*Q Subject to Fish Persistence Conditions*
G-4803	G-4528	41302	3/5/1696	Well #1	0.50 cfs	0.50 cfs	0	0
G-12526	G-12666	--	5/6/1991	Well #1	2.3 cfs	0.44 cfs	1.86 cfs	1.61 cfs
				Well #2	1.2 cfs	1.0 cfs	0.20 cfs	0.17 cfs

Surface Water Rights

File	*Permit*	*Certificate*	*Priority Date*	*Source*	*Q*			
S-16148	S-11938	12131	11/15/1935	Dry Creek	2.0 cfs	2.0 cfs	0	0
S-16758	S-12543	11816	1/22/1937	Spring	1.0 cfs	1.0 cfs	0	0
S-22996	S-18134	--	1/19/1948	Dry Creek	10.0 cfs	1.6 cfs	8.4 cfs	8.4 cfs

Permit A-1—500—3-38

STATE OF OREGON

COUNTY OF HOOD RIVER

CERTIFICATE OF WATER RIGHT

This Is to Certify, That THE TOWN OF CASCADE LOCKS of Cascade Locks, 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 Dry Creek a tributary of Columbia River for the purpose of municipal use under Permit No. 11938 of the State Engineer, and that said right to the use of said waters has been perfected in accordance with the laws of Oregon; that the priority of the right hereby confirmed dates from November 15, 1935;

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 2.0 c.f.s., measured at the point of diversion from the stream,

or its equivalent in case of rotation.

The point of diversion is located in the SE¼ SW¼, Section 7, Township 2 North, Range 8 East, W. M.

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

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

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

Lot 4, Section 6
W½NW¼, Section 7
Township 2 North, Range 8 East, W. M.
Lot 1, Section 13
NE¼NW¼, Section 13
SE¼SE¼, Section 1
Township 2 North, Range 7 East, W. M.
Section 12, Township 2 North, Range 7 East, W. M.

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

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.

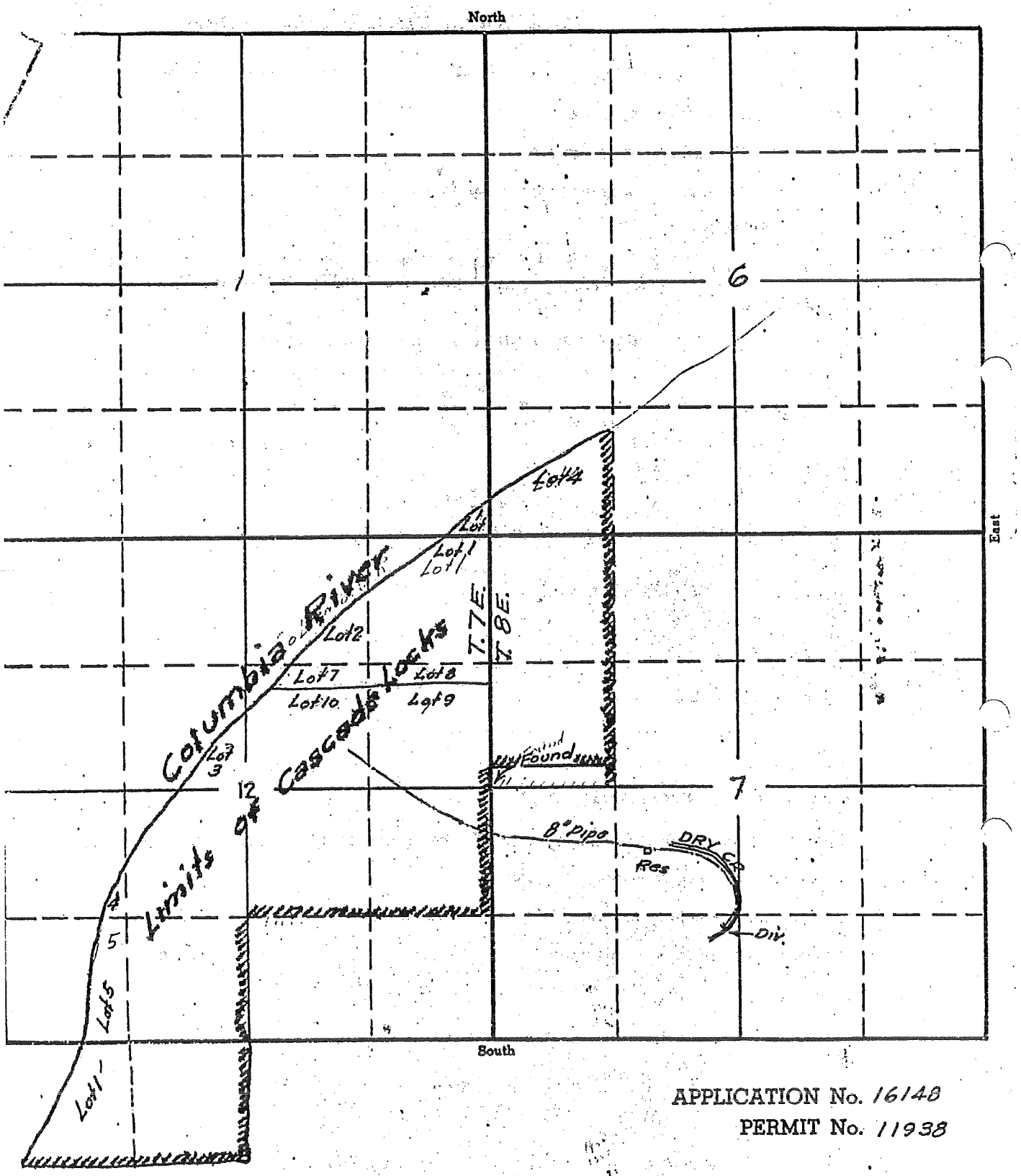
WITNESS the signature of the State Engineer, affixed this 31st day of January, 193 9.

CHAS. E. STRICKLIN
State Engineer

Recorded in State Record of Water Right Certificates, Volume 11, page 12151

11938

TOWNSHIP 2N, RANGE 7+8E, W. M.



APPLICATION No. 16148
PERMIT No. 11938

CERT 12131

Permit A-1—400—2-37

STATE OF OREGON

COUNTY OF HOOD RIVER

CERTIFICATE OF WATER RIGHT

This Is to Certify, *That* CITY OF CASCADE LOCKS

of Cascade Locks *, 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* Spring

a tributary of Columbia River *for the purpose of* Industrial, manufacturing and sprinkling

under Permit No. 12543 *of the State Engineer, and that said right to the use of said waters has been perfected in accordance with the laws of Oregon; that the priority of the right hereby confirmed dates from* January 22, 1937;

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 measured at the point of diversion,

or its equivalent in case of rotation.

The point of diversion is located in the SE¼SW¼, Section 12, Township 2 North, Range 7 East, W. M.

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

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

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

PLACE OF USE:

NE¼SW¼ and SE¼SW¼, Section 12,
Township 2 North, Range 7 East, W. M.

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

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 19th *day of* May *, 19*37 .

CHAS. E. STRICKLIN
State Engineer

Recorded in State Record of Water Right Certificates, Volume 11 *, page* 11816

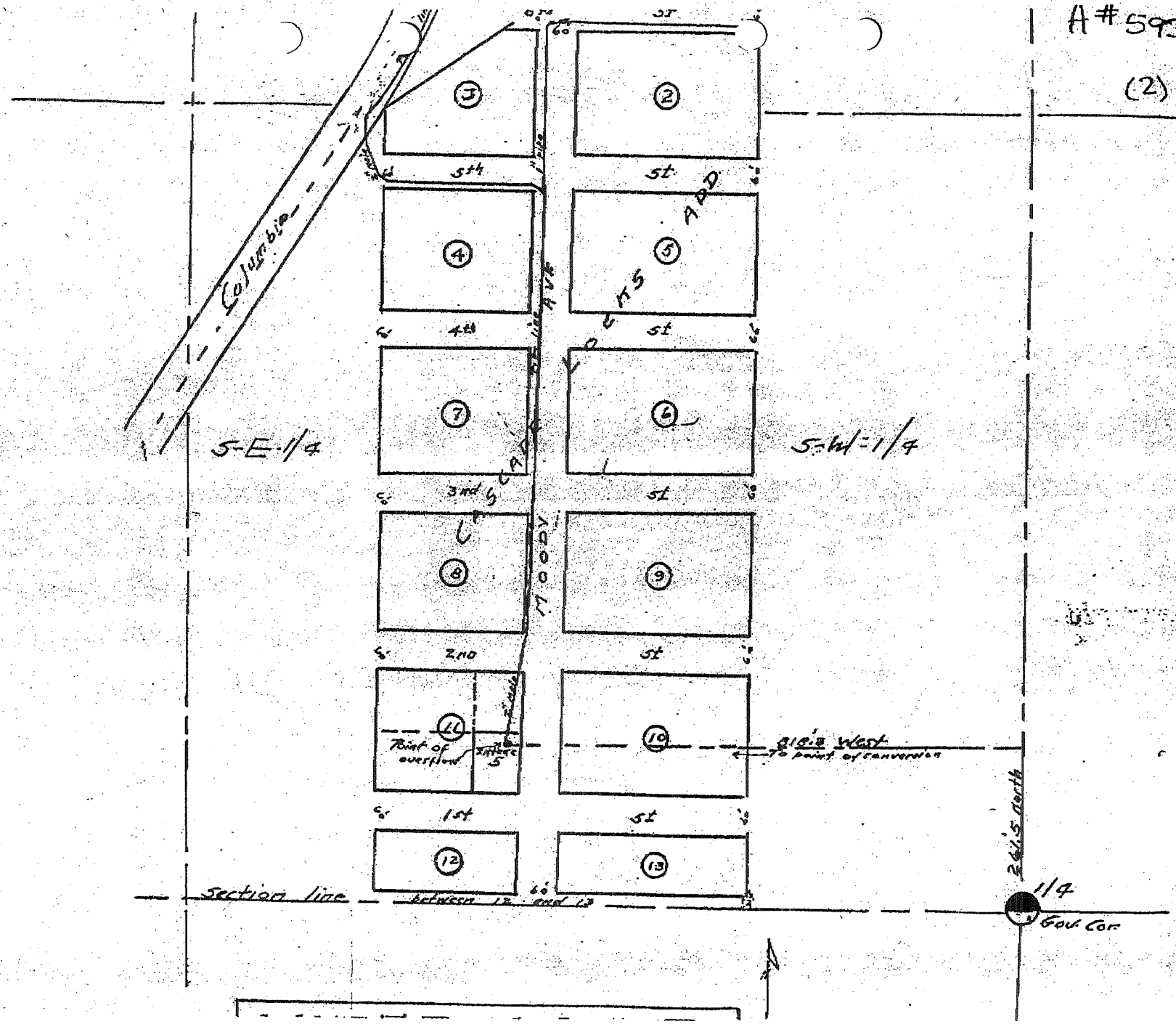
12543 (4)

A # 59338

CERT 11816

A #5938

(2)



FEB

12543 (4)

Cert 11816

(3)

-WATER-RIGHT-

Lot-5 Block-11- on Cascade Locks Addition in
SE-1/4 SW 1/4 Section -12-
Twp -2-North -Range 7 East W.M.
Oregon.
Scale 1"=200'

N

W E

S

Cert 11816

Certificate-of-Surveyor

I John F. Joyce of Cascades Locks Ore do hereby certify that the map was made from notes taken during an actual survey made by me Dec. 30th 1917 and it correctly represents the works described in the accompanying application

J F Joyce
Surveyor

Application No. 5938
Permit No. 3696

Transferred to
A- 15699
P- 11565
2/4/35

Application No. 16758
Permit No. 12543

This map does not show entire place of use - see application item "8"

12543 (3/3)

Permit—3M—4-49

Permit No. 18134

*** APPLICATION FOR PERMIT**

To Appropriate the Public Waters of the State of Oregon

I, Cascade Locks (Name of applicant)

of ....., (Mailing address) .....,

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

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

1. The source of the proposed appropriation is Dry Creek (Name of stream)

....., *a tributary of* Columbia River

2. The amount of water which the applicant intends to apply to beneficial use is 10.0

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* Municipal (Irrigation, power, mining, manufacturing, domestic supplies, etc.)

4. The point of diversion is located ..... *ft.* (N. or S.) *and* 915 *ft.* West (E. or W.) *from the* bowl

~~corner of~~ at Falls to a point in W. Sec. line of 18 and 1935.5 ft. South from N.W. (Section or subdivision)

Cor. of NW¼ of NE¼ Sec. 18, T. 2 N. 8 E. W.M. for upper intake.

780 ft. N. and 230 ft. W. from the S¼ cor. of Sec. 7, T. 2 N., R. 8 E. W.M.

approximately for lower intake. (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 SW¼ of NE¼ (Give smallest legal subdivision) *of Sec.* 18, *Tp.* 2 N. (N. or S.),

R. 8 E. (E. or W.), *W. M., in the county of* Hood River

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

in length, terminating in the ..... (Smallest legal subdivision) *of Sec.* ....., *Tp.* ..... (N. or S.),

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

DESCRIPTION OF WORKS

Diversion Works— No dam

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 ..... (Timber, concrete, etc., number and size of openings)

(c) If water is to be pumped give general description gravity (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 S-18134

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, ... *ft.; size at intake,* ..... *in.; size at* ..... *ft. from intake* ..... *in.; size at place of use* ..... *in.; difference in elevation between intake and place of use,* ..... *ft. Is grade uniform?* ..... *Estimated capacity,* ..... *sec. ft.*

8. *Location of area to be irrigated, or place of use* City of Cascade Locks

Township	Range	Section	Forty-acre Tract	Number Acres To Be Irrigated
2 N.	7 E.	12	SW¼ NE¼	
			SE¼ NE¼	
			NE¼ SW¼	
			SE¼ SW¼	

(If more space required, attach separate sheet)

(a) Character of soil .....

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

Power or Mining Purposes—

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

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

(c) Total fall to be utilized ..... *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 ..... (Legal Subdivision) *of Sec.* ....., *Tp.* ..... (No. N. or S.), *R.* ..... (No. E. or W.), *W. M.*

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

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

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

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

.....

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

.....

PERMIT S-18134

Municipal or Domestic Supply—

10. (a) *To supply the city of* Cascade Locks

Hood River (Name of) *County, having a present population of* 1000

and an estimated population of 10,000 *in 19* 52.

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

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

11. *Estimated cost of proposed works,* $ 2000.00

12. *Construction work will begin on or before* Has been commenced

13. *Construction work will be completed on or before* Large part of installation now in operation.

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

City of Cascade Locks
(Signature of applicant)

by (Sgd) Russel H. Nichols, Mayor

Remarks:

2800 ft. 8 in. Steel Pipe to Reservoir 226' Fall.

Reservoir 32' x 94' - 10' Walls - concrete.

1500' - ft. from Reservoir to City Intake.

Approximately 3000 ft. to Falls, 10" Pipe

Elevation from Reservior to Diversion Point 500 ft.

Pipe and installation according to contract

4000 ft. 8 in. O.D. 8 gage steel pipe

Reservoir elevation 360 ft.

City intake " 491 "

Distance from intake to reservoir 1750 ft. approx.

Elevation where pipe joins main line at Col. Hy. - 134 ft.

90 to 115 lbs. per square inch pressure in business district.

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

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

In order to retain its priority, this application must be returned to the State Engineer, with corrections on or before March 5, *194* 8.

WITNESS my hand this 5th *day of* February, *194* 8.

CHAS. E. STRICKLIN
STATE ENGINEER

By
Ed K. Humphrey, Assistant
mjo

PERMIT S-18134

Application No. 22996

Permit No. 18134

PERMIT

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF OREGON

Division No. ..... District No. .....

This instrument was first received in the office of the State Engineer at Salem, Oregon,

on the 19th *day of* January,

*194*8 *at* 8:00 *o'clock* A. *M.*

Returned to applicant:

.....

Corrected application received:

.....

Approved:

April 30, 1948

Recorded in book No. 44 *of*

Permits on page 18134

CHAS. E. STRICKLIN
STATE ENGINEER

Drainage Basin No. 4 *Page* 6 B

Fees Paid $38.00

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 10.0 *cubic feet per second measured at the point of diversion from the stream, or its equivalent in case of rotation with other water users, from* Dry Creek

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

If for irrigation, this appropriation shall be limited to - - - *of one cubic foot per second* .....

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 19, 1948

Actual construction work shall begin on or before April 30, 1949 *and shall thereafter be prosecuted with reasonable diligence and be completed on or before*

Extended to Oct. 1, 1951 Extended to Oct. 1, 1964 Extended to Oct. 1, 1968 Extended to Oct. 1 1980 Extended to Oct. 1985 Extended to October 1, 1990

October 1, 1950

Complete application of the water to the proposed use shall be made on or before

October 1, 1951 Extended to Oct. 1, 1954 Extended to Oct. 1, 1968 OC Ext to 10-1-74 Extended to Oct. 1 1980 Extended to Oct. 1985 Extended to October 1, 1990

WITNESS my hand this 30th *day of* April, *194*8.

CHAS. E. STRICKLIN
STATE ENGINEER

Permits for power development are subject to the payment of annual fees as provided in sections 1 and 2, chapter 74, Oregon Laws 1933.

Extended to 10-1-95, ext BC99

PERMIT S-18134

STATE OF OREGON

COUNTY OF HOOD RIVER

CERTIFICATE OF WATER RIGHT

This Is to Certify, *That* CITY OF CASCADE LOCKS

of Municipal Building, Cascade Locks 97014 *, 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* a well

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

under Permit No. G-4528 *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* March 5, 1969

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 0.50 cubic foot per second

or its equivalent in case of rotation, measured at the point of diversion from the stream. The point of diversion is located in the NE¼ SE¼, Section 6, T. 2 N., R. 8 E., W. M., 1815 feet North and 670 feet West from SE Corner, Section 6.

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

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

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

SE¼ SE¼
Section 1

NE¼
SE¼ NW¼
SW¼
N½ SE¼
Section 12

N½ NW¼
Section 13
T. 2 N., R. 7 E., W. M.

NE¼ SW¼
S½ SW¼
SE¼
Section 6

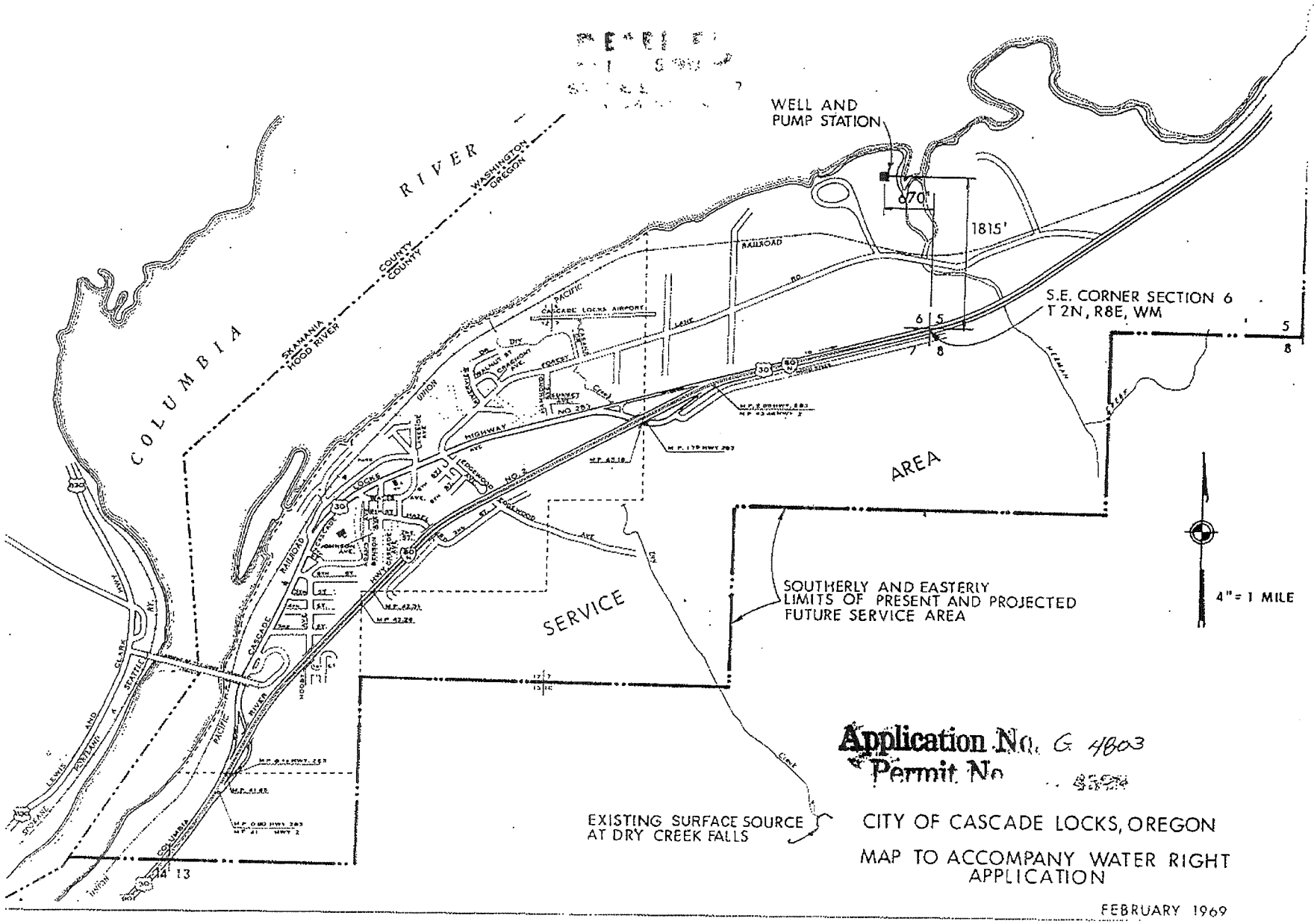
N½ NE¼
N½ NW¼
SW¼ NW¼
Section 7
T. 2 N., R. 8 E., W. M.

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

WITNESS the signature of the State Engineer, affixed this date. December 20, 1974

Chris L. Wheeler
State Engineer

Recorded in State Record of Water Right Certificates, Volume 33 *, page* 41302


WELL AND
PUMP STATION
670'
1815'
S.E. CORNER SECTION 6
T 2N, R8E, WM
COLUMBIA
RIVER
WASHINGTON
OREGON
SKAMANIA COUNTY
HOOD RIVER COUNTY
SERVICE
AREA
SOUTHERLY AND EASTERLY
LIMITS OF PRESENT AND PROJECTED
FUTURE SERVICE AREA
4" = 1 MILE
EXISTING SURFACE SOURCE
AT DRY CREEK FALLS
Application No. G 4803
Permit No.
CITY OF CASCADE LOCKS, OREGON
MAP TO ACCOMPANY WATER RIGHT
APPLICATION
FEBRUARY 1969

CERT. A13302

STATE OF OREGON

COUNTY OF HOOD RIVER

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

CITY OF CASCADE LOCKS
PO BOX 308 (541) 374-8484
CASCADE LOCKS, OREGON 97014

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

APPLICATION FILE NUMBER: G-12526

SOURCE OF WATER: TWO WELLS IN THE COLUMBIA RIVER BASIN

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 3.5 CUBIC FEET PER SECOND (CFS), BEING 2.3 CFS FROM WELL 1 AND 1.2 CFS FROM WELL 2

PERIOD OF USE: YEAR ROUND

DATE OF PRIORITY: MAY 6, 1991

POINT OF DIVERSION LOCATION: NE 1/4 SE 1/4, SECTION 6, T2N, R8E, W.M.; WELL 1 - 1815 FEET NORTH AND 670 FEET WEST; WELL 2 - 1735 FEET NORTH AND 670 FEET WEST, BOTH FROM THE SE CORNER OF SECTION 6

THE PLACE OF USE IS LOCATED AS FOLLOWS:

WITHIN THE CITY OF CASCADE LOCKS SERVICE AREA

Measurement, recording and reporting conditions:

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

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

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

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

STANDARD CONDITIONS

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

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

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

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

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

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

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

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

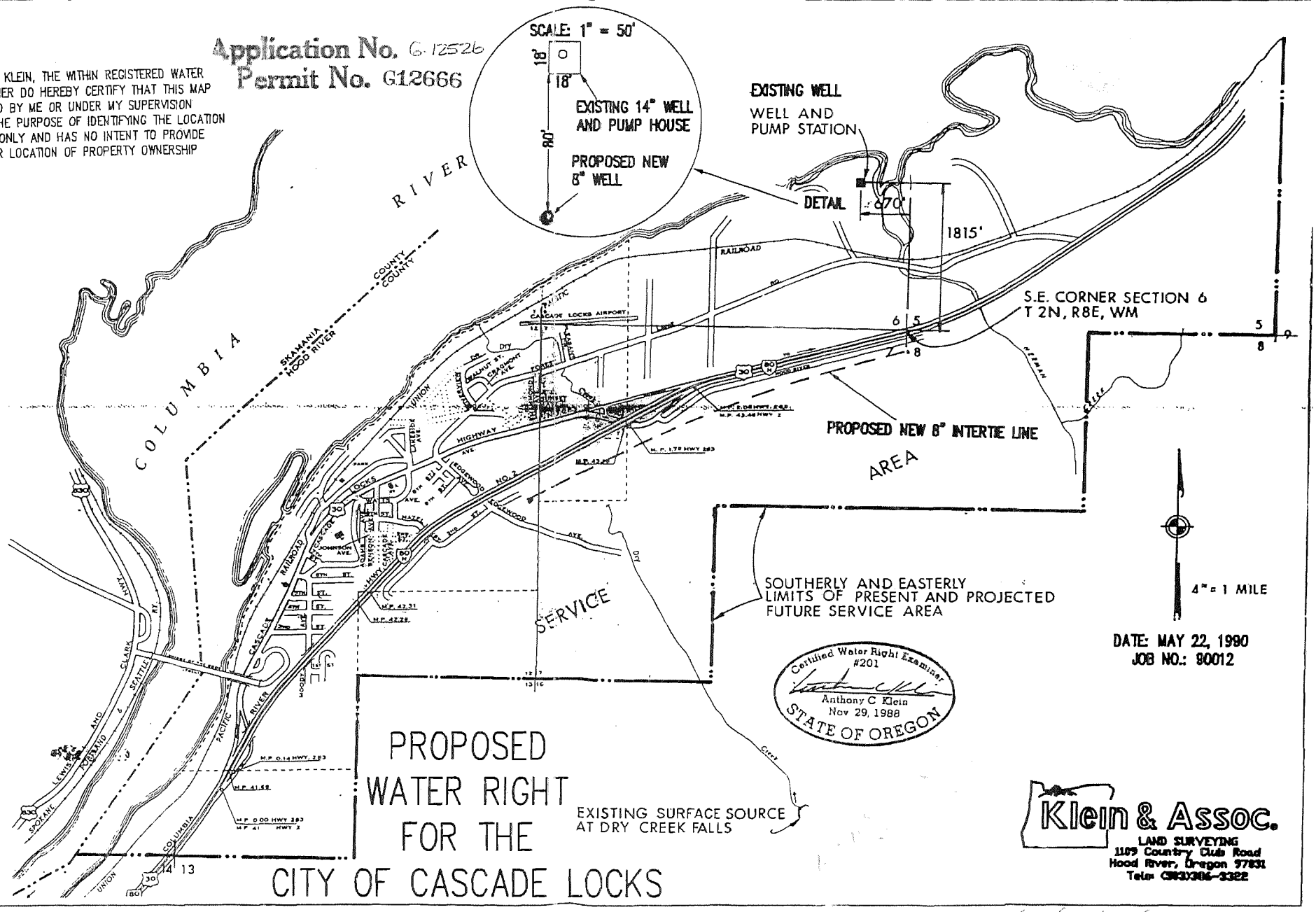
Actual construction of the well shall begin within one year from permit issuance, and shall be completed on or before October 1, 1998. Complete application of the water to the use shall be made on or before October 1, 1999.

Issued August 21, 1996

for Martha O. Pagel, Director
Water Resources Department

CERTIFICATE:
I, ANTHONY C. KLEIN, THE WITHIN REGISTERED WATER RIGHTS EXAMINER DO HEREBY CERTIFY THAT THIS MAP WAS PREPARED BY ME OR UNDER MY SUPERVISION AND IS FOR THE PURPOSE OF IDENTIFYING THE LOCATION OF THE WELL ONLY AND HAS NO INTENT TO PROVIDE DIMENSIONS OR LOCATION OF PROPERTY OWNERSHIP LINES.

Application No. G-12526
Permit No. G12666



PERMIT G-12666

2N 8E 6 NESE

APPENDIX "C"

Water System Design and Construction Standards

1. **General:**

    a. These standards shall govern all new construction and upgrading of public water distribution facilities in the City of Cascade Locks and all work within its service area. The purpose of these CLPW Standards is to:

        i. Be of adequate design to meet all expected domestic, commercial and industrial demands-including fire flows-within the anticipated design life of the system;

        ii. Be of materials strong enough to resist all expected loads-both internal and external-and be able to preserve the potability of the water;

        iii. Be economical and safe to build and maintain;

        iv. Meet all design requirements of the Oregon Health Division (OHD);

    b. Any substitutions or alternative materials will be considered by the City Engineer on a case-by-case basis;

    c. These standards cannot address all situations. They are intended to assist-but not take the place-for competent work by professional design engineers.

2. **Construction Drawings**

    a. Construction drawings shall conform to the requirements of Section 1 of these CLPW Standards

3. **Standard Details**

    a. Standard details for water distribution related construction are included in the Appendix of this section of the Design Standards and show the City's minimum requirements for the construction of water distribution related structures and facilities.

    b. As required under Section 1 of these CLPW Standards, all applicable standard details shall be included on the construction drawings.

4. **Specialized Work**

    a. The design of the following are considered "Specialized Work" and are not covered in these CLPW Standards:

        i. Water Distribution Pump Stations

ii. Reservoirs

iii. Wells

iv. Pressure Regulating Devices

v. Flow Measurement Devices

vi. Bridge, Stream or Creek Crossings

b. Review and approval of specialized work by the City Engineer shall be required. When requested by the city, design calculations shall be submitted for review prior to approval.

5. Other Jurisdictions

a. All major water system improvements must have the approval of the Oregon Health Division. Plans for individual subdivisions or other developments involving major water system improvements, shall be submitted by the Developer to the OHD-along with the required review fees-for approval. Such approval must be received and submitted to the City before any permits will be issued.

6. Definitions and Terms

a. **Abbreviations** - acceptable abbreviations for showing the types of existing and new pipe materials on the plans are:

i. **CI**--Cast Iron

ii. **DI**--Ductile Iron

iii. **PVC**--Polyvinyl Chloride

iv. **STL**--Steel

v. **AC**--Asbestos Cement

b. **Air Gap Separation**- a physical, vertical separation between the free-flowing discharge end of a water supply pipeline and the rim of an open, non-pressurized receiving vessel.

c. **Approved Back Flow Prevention Assembly**- an assembly that has been investigated and approved by the Oregon Health Division for preventing back flow.

d. **Back Flow**- the flow of water in a direction opposite to the normal flow.

(See Back-Siphonage.)

e. **Back-Siphonage**- the flowing back of used, contaminated, or polluted water from a plumbing fixture or vessel into a potable water supply pipe due to a negative or reduced pressure in such pipe.

f. **Building Supply**- the pipe carrying potable water from the water meter-or other source of water supply-to a building or other point of use or distribution on the lot. Building supply shall also mean a customer line.

g. **Cross Connection**- a any connection or arrangement-physical or otherwise- between a potable water supply system and any plumbing fixture or any tank, receptacle, equipment or device, through which it may be possible for non-potable, used, unclean, polluted or contaminated water or other substances, to enter into any part of such potable water system under any condition.

h. **Distribution System**- the distribution main pipelines, pumping stations, valves and hydrants and ancillary equipment used to transmit water from the supply source to the service line.

i. **Double Check Valve Assembly**- an assembly composed of two single, independently acting check valves, including tightly closing shut-off valves located at each end of the assembly and fitted with properly located test ports.

j. **Double Detector Check Valve Assembly**- a line-sized approved double check valve assembly with a parallel meter and meter-sized approved double check valve assembly. The purpose of this assembly is to provide double check valve protection for the distribution system and at the same time provide partial metering of the fire system showing any system leakage or unauthorized use of water up to 3.0 G.P.M. flow.

k. **Fire Hydrant Assembly**- to include the fire hydrant, hydrant lead, mainline hydrant valve, mainline tee and thrust restraint at the hydrant and mainline tee.

l. **Fire Protection Service**- a connection to the public water main intended only for the extinguishment of fires and flushing necessary for its proper maintenance. All fire services shall have a double detector check assembly.

m. **Fixture Unit Equivalents**- the unit flow or demand equivalent of plumbing fixture as tabulated in the uniform plumbing code.

n. **Hydrant Lead**- the line connecting the fire hydrant assembly to the City

main or private fire line with an auxiliary valve.

o. **Irrigation Service**- a metered connection intended for seasonal use and delivering water which is not discharged to the sanitary sewer.

p. **ISO**- Insurance Services Office.

q. **Potable Water**- water which is satisfactory for drinking, culinary and domestic purposes and meets the requirements of the health authority having jurisdiction.

r. **Service Line**- the line or pipe extending from the City water main to the water meter, Back Flow prevention device or private water system double check valve assembly.

s. **Uniform Plumbing Code**- The Uniform Plumbing Code adopted by the International Association of Plumbing and Mechanical Officials, current edition as revised by the State of Oregon, called the "Oregon State Plumbing Specialty Code".

t. **Water Main**- a water supply for public or community use.

u. **Water Supply System**- consists of the building supply pipe, the water-distributing pipes, and the necessary connecting pipes, fittings, control valves, and all appurtenances carrying or supplying potable water in or adjacent to the building premises.

7. General Design Considerations:

a. In general, water distribution systems should be designed to care for maximum development of the service area with the recognition of possible urban and industrial expansion.

b. As a condition of water service, all developments will be required to provide public water mains of sufficient size for fire protection to adjacent parcels. This shall include the extension of water mains in easements across the property to adjoining properties, and across the street frontage of the property to adjoining properties when the main is located in the street right-of-way.

c. The system shall have sufficient capacity to maintain 40 PSI at the building entrance for one and two family dwellings. For other development, provide minimum pressure of 35 PSI at the building side of the meter during periods of maximum use, and to provide sufficient volumes of water at adequate pressures to satisfy the expected daily consumption plus fire flows.

d. Normal working pressure in the distribution system is approximately 60 PSI with a range of 40 PSI to 70 PSI. A 20 PSI residual pressure under fire flow conditions shall be maintained at all points in the distribution system under new system design. Velocities in mains shall normally range from three to six feet per second for average demand to a maximum velocity of ten feet per second for combined average demand plus fire flow.

e. Head loss shall be determined by the Hazen-Williams equation as shown on **Table 4-1**.

Table 4-1

Hazen-Williams Coefficients

Pipe Diameter	C Value
8 Inches and Less	100
10 Inches to 12 Inches	110
Greater than 12 Inches	120

8. Water System Capacity

a. Design capacities shall be determined by consideration of the following factors and assumptions:

i. Area to be served, both immediate and adjacent

ii. Current and projected population within the area to be served

iii. Current and projected land use within the area to be served

iv. Commercial, industrial or institutional users to be served

v. Changes in any of the above which are likely to occur within a foreseeable time period

b. In the absence of consumption data or other reliable information, the following factors are to be used for assumed peak hour demands:

i. 0.75 g.p.m. per person for single family residential

ii. 0.25 g.p.m. per person for multiple family residential

iii. 5,000 gal/ac/day for commercial development

iv. 10,000 gal/ac/day for industrial development

c. Fire flows are to be as shown in **Table 4-2**:

Table 4-2

Fire Flow Requirements

Land Use	Fire Flows (G.P.M.)	Duration (Hr.)
Industrial	4,500	4
Downtown	4,000	4
Commercial	3,500	3
Multiple Family	3,000	2
Residential	1,000	2

R-1 R-2 R-3	1,500 2,000	2 2
All Others	1000	2

d. Demand for unique commercial installations, industrial users, PUD's, multiple, and institutional concerns will be calculated on an individual basis.

e. In all cases, all new fire hydrants shall be capable of delivering a minimum of 1,000 G.P.M. at 20 PSI residential system pressure.

9. Looping

a. The distribution system mains shall be looped at all possible locations. All water lines shall be looped and valved such that the removal of any single line segment from service will not result in more than one fire hydrant being taken out of service.

b. The installation of permanent dead-end mains upon which fire protection depends and areas of large demands on single mains will not be permitted.

10. Blow Offs

a. All dead end mains shall terminate with a blow off assembly or a fire hydrant.

b. Blow offs shall be sized to ensure that the water mains can be flushed at a minimum velocity of tow and one half feet per second in accordance with AWWA C-650. **Figure 4-3** shall be used as a minimum size guideline assuming 40 PSI minimum residual system pressure under flushing conditions.

Figure 4-3

Minimum Mainline Blow Off Sizes

Water Main Diameter	Minimum Blow Off Diameter
6 and 8 Inch:	2 inch
10 and 12 Inch	4 inch
Larger than 12 inch	As Required

c. Permanent dead ends shall have a permanent blow off assembly and thrust restraint system. A blow off in a cul-de-sac shall be located in front of the curb and within five feet from the curb face.

d. Mains which can conceivably be extended at some later date shall have a mainline valve in front of the blow off assembly, and a thrust restraint system which allows the mainline valve to be connected to without taking the line out of service.

e. Temporary blow offs where required for cleaning new water mains, shall be located at the lower end of the line to be flushed whenever possible. Temporary blow offs larger than two inches in diameter shall have a valve conforming to the requirements contained herein for mainline valves.

11. Minimum Cover Depth

a. The minimum cover depth over buried water mains within the street right-of-way or easements shall be 36 inches from the finished grade, except that a minimum of 40 inches cover shall be required for waterlines in fill slopes.

b. Finished grade shall normally be determined as shown in **Figure 4-4**:

Figure 4-4

Finished Grade

Mainline Location	Finished Grade
Water line under sidewalk in right-of-way	Top of Curb
Water line within paved area of right-of-way	Top of Curb
Water line in cut slope behind sidewalk	Top of Curb
Fill slopes	Perpendicular from pipe to surface
Easement	Finished grade at pipe centerline

12. Water Line Locations

a. Waterlines located in the public right-of-way shall be parallel to the public right-of-way and preferably on the south and west sides of the public right-of-way street. Exceptions to these requirements may be made in order to avoid conflicts with other existing underground facilities, and to permit sanitary sewers to be installed on the low sides of the streets.

b. Standard location for water mains within public right-of-way shall be

c. Water mains shall be separated from other parallel utilities by a minimum of five feet and from parallel sewer main lines by a minimum of ten feet.

d. Water mains shall not be installed in alleys or the back of lots. As nearly as practical, mains shall be installed with the same distance-as practical-from the curb line (or property lines where no curbs exist) of the street. On

curved streets, mains may be laid on a curve concentric with the street centerline, with deflections no greater than the manufacturer's specifications. Mains may be laid in straight lines along the tangent between selected angle points to avoid conflicts with other utilities. The angle point/tangent section shall not be less than three feet in front of curb face.

e. Where a water main crosses below or within 18 inches of vertical separation above a sanitary sewer main or lateral, one full length of ductile iron or C-900 shall be centered on the point of crossing.

13. Main Line Sizing

a. Minimum sizes for water mains shall be as shown in **Figure 4-5** :

Figure 4-5

Mainline Size Requirements

Minimum Diameter	Type of Mainline
6 inch	Private fire line supplying a single fire hydrant or a building fire suppression system. Looping of private fire lines which supply hydrants will be required.
8 inch	Minimum size water main for the public water system. Looping back into the distribution grid shall be at intervals as required by the City, but shall generally not exceed 600 feet.
8 inch	Public water distribution mains and permanently dead-end mains supplying fire hydrants with a required fire flow of 1,500 G.P.M. or less.
10 inch	As required for transmission mains, distribution mains in

and larger	industrial subdivisions and fire lines supplying more than 1,500 G.P.M.

14. Water Mains Within Easements

a. The installation of mains within easements across privately owned property is to be done only when absolutely necessary, such as the avoidance of dead-end conditions. Conditions of the easement shall be such that the easement shall not be used for any purpose which would interfere with the unrestricted use for water main purposes.

b. Under no circumstances shall a building or structure be placed over a water main or water main easement. This includes overhanging structures with footings located outside the easement.

c. Easement locations for public mains serving a PUD, apartment complex or commercial or industrial development shall be in parking lots, private drives or similar open areas which will permit an unobstructed vehicle access for maintenance by City Forces.

d. Easements, when required, shall be exclusive and be a minimum of ten feet in width except that the minimum width shall be 15 feet or more for transmission water mains ten inch and larger. Easement widths shall vary from the ten foot minimum by five foot increments.

e. Mains laid in easements along a property line or with the easement centered on a property line, shall be offset 18 inches from the property line.

f. Easements must be obtained from the property owner to the City of Cascade Locks prior to construction. Such easements shall be the responsibility of the developer to obtain and record, and shall be submitted to the City for review and approval prior to recording.

g. Common placement of water, sewer and storm drain in an easement may be allowed under certain conditions. However, separation of utilities must meet OHD requirements as set forth in OAR 333. Common easements will be reviewed on a case-by-case basis.

15. Surface Water and Stream Crossings

a. Surface water crossings of mains shall be in accordance with OAR 333.

b. Mains crossing streams or drainage channels shall be designed to cross

as nearly perpendicular to the channel as possible. The minimum cover from the bottom of the stream bed or drainage channel to the top of pipe shall be 36 inches.

c. Mains crossing streams or drainage channels for pipes of 12 inches or larger, and crossings requiring special approval from the Department of State Lands, shall be treated on a case-by-case basis.

d. A scour pad centered on the water line will be required for mains less than 12 inches when the cover from the top of pipe to the bottom of the stream bed or channel is 30 inches or less. The size and design of scour pads will be reviewed on a case-by-case basis by the City Engineer.

16. Water Valves

a. In general, valves shall be the same size as the mains in which they are installed. Valve types and materials shall conform to the Standard Construction Specifications. Reducers for re-connection to existing water lines less than eight inches in diameter shall be placed between the new valve and the existing line.

b. Distribution system valves shall be located at the tee or cross fitting as nearly as possible. There shall be a sufficient number of valves so located that not more than four and preferably three valves must be operated to affect any one particular shutdown. The spacing of valves shall be such that the length of any one shut down shall not exceed 500 feet.

c. Hazardous crossings, such as creek, railroad and freeway crossings, shall be valved on each side of the crossing.

d. All developments will be required to extend mains across existing or proposed streets for future extensions by the City or other developments. All terminations shall be planned and located such that new or existing pavement will not have to be cut in the future when the main is extended.

17. Fire Hydrants

a. Coverage: Preferred coverage shall result in maximum hydrant spacing of 500 feet in residential areas, 300 feet in high value districts and no further than 250 feet from the furthest point of any dwelling, building, garage, or building. Hydrant stubs will be required for installation in areas of currently minimum development.

b. No fire hydrant shall be installed on a main of less than eight inch inside diameter unless it is in a looped system of six inch mains. The hydrant lead shall be a minimum of six inch inside diameter.

c. No hydrant shall be installed less than five feet from an existing utility pole or guy wire nor shall a utility pole or guy wire be placed less than five feet from and existing hydrant...

d. Each hydrant shall have a hydrant valve and valve box at the main line tee. The hydrant valve shall have mechanical joint-flange joint ends. The valve shall be connected to the water main using a mechanical joint or flange joint tee.

e. Hydrant bury shall be sufficient to provide a minimum of 36" of cover over the hydrant lead.

f. The hydrant shall be set such that the center of the pumper port is a minimum of 16" or a maximum of 24" above the surrounding grade.

18. Service Lines

a. Each legal lot of record shall be connected by a separate water service line connected to the public or approved private water main. Combined water service lines will be permitted only when the property cannot legally be further divided; IE: a residential lot with a house and unattached garage or shop with plumbing fixtures.

b. Additional water service lines must be stubbed into the property lines sufficient to serve all residential parcels which can be further partitioned in the future where such future partition would require that the streets be cut to install such services.

c. Service lines one inch thru two inches shall be tapped to the mainline by the use of a tapping service saddle. Service lines larger than two inches shall use a mainline tee with a threaded or flanged valve.

19. Service Line Sizes

a. Only one metered service line per property will be allowed. It will be the property owner's responsibility to provide and read the additional installed meters if so desired by the developer in the case of multi-housing units.

b. Should more than one commercial water user be located on a property owned by one person, the City may allow an exception to the one service line per property requirement.

c. Standard service line sizes which may be used are 1", 1-1/2", 2", 4", 6" and 8". Service lines will be reviewed for effects on the distribution system and shall not be greater in size than the distribution system.

d. Service piping shall be equal to or greater than the meter size, however

three inch meters require a four inch tap and four inch minimum piping fittings.

e. Single Residential Service--1"; Duplex Residential Service--1"; Triplex Residential Service--1-1/2"; Commercial Service--1" minimum. The next larger service size may be required for residential lots large enough to be partitioned into additional lots without a water main extension.

f. For three inch and larger services, design drawings shall be submitted showing the vault and fitting requirements, including a lock-able bypass line, with the expected flow requirements and proposed usage.

20. Service Line and Meter Location

a. Meters shall be located at the termination of the City service line. One inch through two inch meters shall be located in the right-of-way in a location that allows for easy reading and maintenance, preferably to a point 6" behind the back of the sidewalk.

b. The meter stop and meter box shall be located such that the front of the meter box is 3 inches behind the sidewalk.

c. In general, individual service connections shall terminate in front of the property to be served and shall be located two feet each side of a common side property line.

d. The domestic service shall not be connected to a fire protection service.

e. A public utility and access easement (five foot clear around all sides) shall be provided to and around all meter boxes/vaults set on private property.

f. A backflow prevention assembly shall be placed on domestic service lines as required by Section 4.23.

21. Water Meters

a. All water meters scheduled for services inside the City of Cascade Locks will be furnished and installed by City forces at the request and expense of the customer. The service line, meter box and all piping within the meter box must be installed by the developer.

b. All meters shall read in gallons.

c. Water Meter Boxes and Vaults

d. Unless otherwise approved, all meter boxes shall be as shown in **Table 4.6**.

Table 4-6

Meter Box Size

Service Size	Meter Box
1"	Brooks Style #38
1-1/2"	Brooks Style #66
2"	Brooks Style #66
3" & larger	Vault to Conform to COS Standard Drawing #506

e. Three inch and larger meters shall be located on private property adjacent to the right-of-way to allow for reading and maintenance. It must be accessible for a crane truck to within ten feet of the installation with a ten foot vertical clearance.

f. The meter, vault and piping are to be protected from freezing, vandals and vehicles. The surrounding area must be graded such to prevent storm water from running over and into the vault.

g. All three inch and larger meters shall be provided with a remote readout head located such that it can be read without entering the meter vault.

h. The meter may be located in the same vault as the back flow preventor- with the approval of the City- provided a completed dimensioned design is submitted with the request.

22. Back Flow Prevention-General

a. The BFP assembly must meet the requirements as set forth from the current OHD approved list of assemblies.

b. An approved Back Flow prevention assembly with an approved metering system shall be required for use in each of the following instances:

   i. When a private line is looped between two or more City mains in order to obtain the required flow and the resultant loop will not benefit the City water line grid system.

   ii. On all private fire lines attached to the City's distribution system.

   iii. When an auxiliary water supply exists on the property being served.

c. Back Flow Prevention-Location

   i. The approved Back Flow prevention assembly shall be installed on the property being served in a place accessible for City inspection.

   ii. The Back Flow preventor shall be located before any branch, immediately downstream of the meter that would feed a non-potable system extension; or

   iii. If no meter, at the property line; or

   iv. If in a building, before the first branch or hazard being controlled or as determined by the City Cross-connection Control Inspector; or

   v. If installed outside a building being served, it shall be placed at the property line in an approved vault or structure. Double check assemblies up to two inches may be installed in standard meter boxes, Brook #66 or equal.

APPENDIX "D"

Coliform Monitoring Plan

Cascade Locks
2013 Coliform Monitoring Plan

Under the regulations of the Oregon State Department of Human Services, Division of Drinking Water, Cascade Locks is required to provide quality and safe potable water as required per Oregon Revised Statutes and Oregon Administrative Rules. Federal Safe Drinking Water Standards apply throughout the distribution system. As defined by these regulations; Cascade Locks is classified as a Group "A" Public Water System.

Cascade Locks utilizes 2 wells as its Groundwater Source and 2 reservoirs providing a total of 600,000 Gallons of Storage to provide Potable Water to its Service Area. Cascade Locks provides chlorination to its water supply via a liquid sodium hypochlorite solution and direct injection to the well supply as it is being pumped. Contact time is achieved in the distribution system and the 2 reservoirs. A chlorine residual between 0.2 and 1.0 ppm is sought to be maintained at all times.

COLIFORM MONITORING REQUIREMENTS:
Monitoring requirements shall be in accordance with Oregon Department of Human Services Annual Chemical Sampling Schedule.
Bacteriological samples are currently required to be collected at monthly intervals from at least 2 representative points within the distribution system.
In addition raw water samples have been collected at the sources for a period of One Year to determine if any bacteriological contamination exists in the groundwater supply. Both Herman Creek Well #1 (SRC-AA), and Well#2 (SRC-AB) have completed their required testing cycle with no contamination recorded. These sources shall continue to be tested annually or more frequently if a Distribution System violation occurs.

RECORD KEEPING:
Cascade Locks maintains adequate records and logs of water quality tests and inspection reports, including tests for Coliform bacteria, Nitrates, VOC's, SOC's, IOC's, Lead & Copper, THMM/HAA5 and all records of other pertinent water quality data. Cascade Locks tests 3 times weekly for Chlorine residual and same day when any disruption occurs within the distribution system or customer complaint is received.

KEY PERSONNEL:
The following are key personnel that would play an active role in any water quality violation at Cascade Locks.

Member	Position	Cell Phone
Sheldon Price	PW Field Supervisor	541-490-5610
David Griffin	Consulting PWD	509-250-3946
Gordon Zimmerman	City Administrator	541-374-8484
Darrin Eckman	Consulting Engineer	541-296-9177
_____	Utilities Tech	Vacant_____
Ian Stromquist	Hood River County Health	541-806-0710

PUBLIC NOTIFICATION:
As required by EPA and Oregon Revised Statutes, Cascade Locks shall notify the Hood River County Department of Human Services within 24 hours of failure to comply with any of the quality criteria or violation of any maximum contamination level.

SAMPLING LOCATIONS
The sampling locations for the monitoring of Coliform Bacteria and other water contaminants shall be at varied locations within the Distribution System on an alternating basis. Areas of higher population shall receive more frequent sampling.
Sampling Stations are located at the following addresses:
32 Venture Street
58 Ruckle Street
31 Lewis Street
These facilities offer direct sampling from the watermain through a quick coupler sampling tube. Prior to sampling the tube is disinfected by chlorination.
In Addition Samples will also be collected at:
140 Wanapum
Bear Creek Products
Char Burger Restaurant
Cascade Locks School
These sample sights shall be used in a combination that provides for a wide snapshot of system conditions and shall involve sound judgment for collection in areas that have a higher risk of Public Contact.

Procedures and Pertinent DHS Information:
Laboratories routinely test distribution samples for compliance with a presence/absence test. Satisfactory test results indicate the sample has no coliform bacteria present. If the sample does contain coliform bacteria, it is unsatisfactory and will be further tested for E. coli or fecal coliform bacteria presence. In the preferred testing method the sample may also be tested by the lab to immediately indicate Coliform/E.coli presence with the first 24 hr test. The presence of E. coli or fecal coliform indicates that disease causing organisms may be present and there is a greater public health concern.

Standards called maximum contaminant levels (MCL's) have been set for the presence of E. coli, fecal coliform, and total coliform bacteria. The MCL is the maximum permissible level of coliform in drinking water. A water system has a violation if it exceeds the standard. The two types of MCL violations that need to be dealt with by the System are acute and non-acute.

Procedures for an MCL violation at Cascade Locks:
If Cascade Locks had an MCL violation, Hood River County Dept. of Human Services or the Certified Testing Laboratory would contact the Water System Operator within 24 hrs. The Operator would immediately contact Public Works Superintendent and the Mayor with notice of the violation. Oregon DHS would also be notified as soon as possible and be available to aid Cascade Locks in public notification, follow-up requirements, and

proper steps to resolve the problem quickly.

Acute MCL Violation

The acute MCL is the standard for the presence of E. coli and fecal coliform bacteria in drinking water. E. coli and fecal coliform are indicators for recent contamination by sewage or animal waste.

A single sample with a coliform presence, an E. coli presence, or a fecal coliform presence does not result in an acute MCL violation.

An acute MCL violation is determined based on the results of both the routine sample and the related set of repeat samples collected as follow-up to the unsatisfactory routine sample.

For an acute MCL violation to occur, a sample and at least one related repeat sample must both have coliform bacteria present, and one of the samples must show the presence of E. coli or fecal coliform bacteria. If this occurs, contamination is confirmed in the water supply.

Acute MCL Violation- Steps to Be Taken

5- Repeat samples would be collected within 24 hrs at the following locations:

1) At the original sample point.
2) At the first service above the original sample point.
3) At the first service below the original sample point.
4) At the reservoir
5) At both wellheads prior to treatment

These samples would be hand carried to A Certified Testing Facility for immediate analysis.

Additional sampling may be required based on the results.

Increased Chlorination at a level of 1.0-2.0 ppm and a complete flushing of the water system should begin within 24 hrs of having a MCL violation. The amount of System flushing and number of additional samples collected for analysis will be, based on Oregon DHS recommendations.

To protect its consumers Cascade Locks would issue Public notification within 24 hours. Due to the public health risk, a mandatory "Do Not Drink the Water and Boil Water Advisory" will be issued in response to any acute MCL violation.

Non-Acute MCL Violation

The non-acute MCL is the standard for the presence of total coliform bacteria. The presence of total coliform bacteria in a water sample generally indicates contamination from the environment (such as soils and plants).

It is possible disease-causing organisms could be present as well.

Non-acute MCL violations are calculated on a monthly basis. As with acute MCL violations, a single sample with a coliform presence does not result in a violation. All routine and repeat samples collected for a specific month count towards determining compliance with the non-acute MCL.

For Cascade Locks which is a system that collects 2 routine distribution samples during the month. The system has a non-acute MCL violation if one or more routine and/or repeat samples are unsatisfactory with coliform present.

Non-acute MCL violation – Public notification is required to be completed as soon as practical, no later than 30 days after the system learns of the violation.
Notification forms are available from Oregon DHS.

Additional Chlorination at a level of 1.0-2.0 ppm and a complete flushing of the water system would begin within 24 hrs of having confirmed Coliform presence in the repeat samples. Following system flushing, additional samples will be collected for analysis, based on DHS recommendations.

Other Types of Coliform Violations
There are two other types of coliform violations that are related to monitoring requirements for the water system:

Major Repeat Violation
A system has a Major Repeat Violation if the system fails to collect repeat samples in response to an unsatisfactory routine sample(s). A Major Repeat Violation is considered a water quality violation since the routine sample showed the presence of bacteria. Public notification is required.

Major Monitoring Violation
This type of violation occurs if a system does not collect any samples during a month when one or more are required. Monitoring is important to assure that the water served to customers is free of coliform bacteria. Public notification is required.

Violations of any MCL may require immediate Public Notification, including Boil Water or Discontinue Use Notice. The Oregon State Department of Human Services Division of Drinking Water is available 24 hrs a day at 1-800-452-0311 (Oregon Emergency Response System) **to aid Cascade Locks in providing proper guidance for the safety and protection of its Consumers.**

APPENDIX "E"

Water System Sanitary Survey

Hood River County Health Department, Environmental Health Office
1109 June St., Hood River, OR, 97031
Office: 541-387-6885; Fax: 541-386-9181

Mike Matthews, REHS, EH Supervisor — mike.mattews@co.hood-river.or.us
Ian Stromquist, REHS, Environmental Health Response Coordinator — ian.stromquist@co.hood-river.or.us
Yolanda Mora, Administrative Assistant — yolanda.mora@co.hood-river.or.us

Thursday, May 24, 2012

To: Sheldon Price, Public Works
'Cascade Locks, City Of' PWS
P0 Box 308
Cascade Locks, OR, 97014

sprice@cascade-locks.or.us
541-374-8484

CC: David Griffin, Water System Operator
'Cascade Locks, City Of' PWS
308 Hayden Ln.
Goldendale, WA, 98620

rockranch@qnect.net
509-250-3946; 541-980-6756

- COPY -

RE: Water System Survey Report Letter – Site Visit: 5/21/12

Action Needed: The operator shall reply in writing within 30 days (Friday, June 29th, 2012). See requirements in the body of this letter below.

Mr. Price,

Thank you for your time and cooperation while we performed the water system survey at the 'Cascade Locks, City of' public water system on May 21st, 2012. I also wish to thank David Griffin (Contract Operator) and Paul Koch (Interim City Administrator) for their time as well. Attached you will find a copy of the forms we complete for the Oregon State Health Authority Drinking Water Program; please review them for any errors. For your convenience, all important information requiring your consideration has been summarized in this letter.

On page one of the standardized forms, you will find the 'Deficiency Summary' page. This list contains observations that must be corrected as per Oregon Administrative Rule. Within 30 days (Friday, June 29th, 2012), please submit a written narrative describing your intention to perform reasonable corrective actions (include specific dates) as per OAR: 333-061-0032(6):

> *"Requirements for groundwater systems with significant deficiencies or source water fecal or total coliform contamination...*
> *(d) Groundwater systems must consult with the Department regarding the appropriate corrective action **within 30 days** of receiving written notice from the Department of a significant deficiency....*
> *(e) **Within 120 days** (or earlier if directed by the Department) of receiving written notification from the Department of a significant deficiency... must either:*
> *(A) Have completed corrective action in accordance with applicable Department plan review processes or other Department guidance, including any Department-specified interim measures; or*
> *(B) Be in compliance with a Department-approved corrective action plan and schedule subject to the following conditions:*
> *(i) Any subsequent modifications to an approved corrective action plan and schedule must be approved by the Department; and*
> *(ii) If the Department specifies interim measures for protection of the public health pending Department approval of the corrective action plan and schedule, or pending completion of the corrective action plan, the system must comply with these interim measures as well as with any schedule specified by the Department."*

Significant Deficiencies:

For your convenience, all significant deficiencies are listed below in order of importance. Ensure that your pending written correspondence discusses each of the issues listed below:

1. **Protection of the Water Storage Sanitary Seal, OAR: 333-061-0050(6)(a):**
   a. It was observed that the drain pipe from the Dry Creek Reservoir does not have a flap-valve or screen cover that will preclude access to the pipe by animal pests.
   b. The Oxbow Reservoir is known to have a drain pipe; however, we were unable to locate it during the inspection. We presume that it is buried in the brush or soil near the tank. We were unable to determine whether it complied with this rule.

   In order to return to compliance, ensure that both reservoirs comply with the rule cited below:

   OAR: 333-061-0050(6)(a)(M):

   "A drain shall be provided at the lowest point in the bottom, and an overflow of sufficient diameter to handle the maximum flow into the tank shall be provided at or near the top of the sidewall. The outlet ends of the drain and overflow shall be fitted with angle-flap valves or equivalent protection and shall discharge with an airgap to a watercourse or storm drain capable of accommodating the flow..."

   c. The roof of the Dry Creek Reservoir has loose bolt/screws causing a potential entry for rain water (that may be contaminated with animal feces).
   d. The Styrofoam plugs that seal the openings of the steel roof material against entry of small animals was not properly packed into the holes. In some cases, it was hanging from the roof openings leaving large openings that could easily be accessed by a small rodent or bird. See pictures below:

These Dry Creek Reservoir pictures show the roof openings and the Styrofoam inserts meant to preclude access by pests. These pictures were taken by Ian Stromquist, REHS during the 2009 water system survey (9/2/09). The same condition was observed again during the 5/21/12 site visit.

This picture was taken by Ian Stromquist, REHS on 5/21/12. An example of a loose screw is circled.

   In order to return to compliance, ensure that the roof seal on the Dry Creek Reservoir comply with the rules cited below and precludes the entry of small mammals and birds:

   OAR: 333-061-0050(6)(a):

   (A) They shall be constructed of concrete, steel, wood or other durable material capable of withstanding external and internal forces which may act upon the structure...
   (I) Finished water storage facilities shall have watertight roofs...
   (L) Screened vents shall be provided above the highest water level to permit circulation of air above the water in finished water storage facilities...

2. **Protection from Sanitary Hazards, OAR: 333-061-0050(2)(a)(E):**
   a. Well #2 (SRC-AB) is located approximately 33 feet from an unapproved well. See page 12 of the standardized forms (attached). Oregon State rules state that no 'unapproved' well may be located within 100 feet of your well.

In order to return to compliance, 'Cascade Locks, City Of' public water system will have to demonstrate to the Oregon State Health Authority, Drinking Water Program that the well is constructed satisfactorily and poses no public health hazard or that the well is properly abandoned as per OAR: 690-220 (Oregon Water Resources Department). Submit information to: 'c/o James Nusrala, PE, Drinking Water Program; PO Box 14450; Portland, OR, 97293-0450; Phone: 971-673-0405; Fax: 971-673-0694'. Include your water system number (4100172) on all correspondence. The Code Says:

> ***OAR: 333-061-0050(2)(a)(E):***
>
> *"The following sanitary hazards are not allowed within 100 feet of a well which serves a public water system unless waived by the Department: ...unapproved well [and a] well that has not been properly abandoned or of unknown or suspect construction..."*

Further, we did not verify whether or not 'Cascade Locks, City Of' public water system has acquired an 100 foot easement surrounding the wells that ensures that no sanitary hazards are located within 100 feet of the installed source wells (since tax-lot boundaries are within 100 feet of the wells). Hood River County Health Department strongly recommends[1] that 'Cascade Locks, City Of' public water system complies with the following rule:

> ***OAR: 333-061-0050(2)(a)(B):***
>
> *"The area within 100 feet of the well shall be owned by the water supplier, or a perpetual restrictive easement shall be obtained by the water supplier for all land (with the exception of public rights-of-way) within 100 feet of the well. The easement shall be recorded with the county in which the well is located and with the recorded deed to the property. A certified true copy shall be filed with the Department..."*

3. **Preventing Microbiological Contamination – Chlorine Residual Maintenance, OAR: 333-061-0036(9)(a):**
   a. The operator reported that chlorine residual is only measured once per week in the distribution system. Oregon State rule requires that at least two (2) representative chlorine residual measurements and taken (and recorded) each week. The code says:

> ***OAR: 333-061-0036(9)(a):***
>
> *Public water systems that practice continuous disinfection or disinfectant residual maintenance... must maintain a detectable disinfectant residual throughout the distribution system and shall measure and record the residual:*
> *(A) At one or more representative points...*
> *(B) At a frequency that is sufficient to detect variations in chlorine demand and changes in water flow, but in no case less often than twice per week.*

[1] Recommended actions do not require timely corrections and are not considered to be 'Significant Deficiencies'.

In order to return to compliance, ensure compliance with OAR: 333-061-0036(9)(a). Retain your testing records in compliance with OAR: 333-061-0036(9)(d):

> *"The water supplier shall maintain a summary report of the residual disinfectant measurements and shall retain this summary report at a convenient location within or near the area served by the water system..."*

4. **Cross Connection Control, OAR: 333-061-0070:**
   a. The operator reported that not all backflow prevention devices in the system are tested annually. As well, testing records are not complete.
   b. The operator reported that the current Cross Connection Control Annual Summary Report has not been submitted nor prepared.

During the survey, we mistakenly stated that the water system was responsible for ensuring proper testing of back-flow devices located on the private premises of businesses and homes. In fact, you are only responsible for the back-flow prevention devices located in the system between the source and the final connection to the consumers property.

In order to return to compliance, include in your narrative, a statement clarifying that you either are or intend to comply with the following rule:

> ***OAR: 333-061-0070:***
>
> *"(1) Water suppliers shall undertake cross connection control programs to protect the public water systems from pollution and contamination.*
> *(2) The water supplier's responsibility for cross connection control shall begin at the water supply source, include all public treatment, storage, and distribution facilities under the water supplier's control, and end at the point of delivery to the water user's premise.*
> *(3) Water suppliers shall develop and implement cross connection control programs that meet the minimum requirements set forth in these rules...*
> *(9)(c) The water supplier shall prepare and submit a cross connection control Annual Summary Report to the Department, on forms provided by the Department, before the last working day of March each year. (d) In community water systems having 300 or more service connections, water suppliers shall ensure at least one person is certified as a Cross Connection Control Specialist, unless specifically exempted from this requirement by the Department..."*

5. **Water System Modification, 333-061-0050(1)(g):**
   a. The operator reported that since the last survey, water system distribution has been extended by 500 ft. (8" C-900 PVC pipe) to the 'Cascade Meadows' Sub-Division. This work was performed without first completing formal plan review with the Oregon Health Authority, Drinking Water Program.

Since 'Cascade Locks, City Of' public water system does not have a plan review exemption for waterline extensions, any waterline project that does not replace pipe of the same diameter in the same location, must be reviewed by the Oregon Health Authority, Drinking Water Program. Please either:

   i. Submit plans, specifications, and associated fees for any waterline extension projects performed by 'Cascade Locks, City Of' public water system recently to the Oregon Health Authority, Drinking Water Program for formal plan review; or

ii. Provide written verification from a 'Cascade Locks, City Of' public water system appointed engineer, that all waterline extension projects completed without competing plan review have been completed in conformance with all Oregon Health Authority, Drinking Water Program construction standards outlined in OAR 333-061-0050. The verification needs to include annual summaries for each calendar year that work was performed.

Information regarding plan review submission procedures may be found at: http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/PlanReview/Pages/index.aspx.

The Code Says:

OAR: 333-061-0050(1)(g):

Prior to construction of new facilities [and to major additions or modifications to existing public water systems[2]], the water supplier shall submit plans to the Department for approval as specified in OAR 333-061-0060(1)(a).

OAR: 333-061-0020(117):

"Major Additions or Modifications" means changes of considerable extent or complexity including, but not limited to, projects involving water sources, treatment facilities, facilities for continuous disinfection, finished water storage, pumping facilities, transmission mains, and distribution mains, except main replacements of the same length and diameter.

6. **Operator Certification & Written Protocols, OAR: 333-061-0225(5):**
   a. The operator reported that while the contract operator works closely with the City of Cascade Locks, Public Works Department, there are no written protocols drafted for times when the contract operator is not present.

The code says:

OAR: 333-061-0225(5):

"The water supplier may employ, contract with, or utilize other operators as needed on-site in addition to those required under (1) and (2) above. For operators certified at less than the Department-required level for treatment and/or distribution, the water supplier must establish a written protocol for each of these other operators that:
(a) Describes the operational decisions the operator is allowed to make;
(b) Describes the conditions under which the operator must consult with the certified operator in direct responsible charge, and when and how contact is made;
(c) Takes into account the certification level of the operator; their knowledge, skills, and abilities, and the range of expected operating conditions of the water system; and
(d) Is signed and dated by the operator in direct responsible charge and the other operator and is available for inspection by the Department."

In order to return to compliance, either ensure timely completion of your training (Sheldon Price) to become a certified water system operator; or direct your contract operator (David Griffin) to draft written protocols as required under the above cited rule.

[2] Additional text is from OAR: 333-061-0050(1)(a).

Recommendations:

The following comments are recommendations only. While they may also represent specific rule violations, Hood River County Health Department does not mandate their correction at this time. The recommendations are in no particular order.

- Hood River County Health Department strongly recommends that you improve security at both water storage reservoirs. Particularly, Dry Creek Reservoir is vulnerable to human-caused damage. The code says:

  OAR: 333-061-0050(6)(a)(P):

  "A fence or other method of vandal deterrence shall be provided around distribution reservoirs..."

- Consider the advantages of building a modern reservoir tank to replace the Dry Creek reservoir. This type of tank is very difficult to maintain for finished water storage. It is more appropriate for raw surface water storage (its original purpose). Tanks like this are usually followed by filtration and chlorination. The Dry Creek reservoir could remain available for valuable raw water storage for irrigation and/or fire fighting in the future.

- Both reservoir tanks have a single inlet and outlet pipe during normal operations. Typically, water does not overflow out of these reservoirs either. These circumstances likely create 'dead-zones' inside the reservoirs where little water circulation occurs. Particularly in the Dry Creek Reservoir (which is more vulnerable to contamination), this is likely to be a significant concern. The code says:

  OAR: 333-061-0050(6)(a)(O):

  "Where a single inlet/outlet pipe is installed and the reservoir floats on the system, provisions shall be made to insure an adequate exchange of water and to prevent degradation of the water quality and to assure OAR 333-061-0050(6) Page 293 of 375 Effective August 12, 2010 the disinfection levels required in subparagraph (5)(c)(D)(i) of this rule..."

- The 'Safe Drinking Water Revolving Loan Fund' (SDWRLF) can provide financial support for small water systems like the City of Cascade Locks. Projects may include: planning, designing, or constructing drinking water facilities. They aim to provide support for projects needed to maintain compliance with current and future standards, and those that further public health protection goals. Information can be found at: http://www.oregon.gov/DHS/ph/dwp/srlf.shtml.

- The Circuit Rider Technical Services Program provides free technical support for small water systems. It may be worthwhile to consult with this group regarding the Dry Creek Reservoir and other system design issues. Information can be found at: http://www.oregon.gov/DHS/ph/dwp/docs/circuitrider.shtml.

Conclusion:

While it is typical practice to only reference rule violations on these reports, Hood River County Health Department wishes to emphasis that there has been much improvement at the 'Cascade Locks, City Of' public water system since the last water system survey. We recognize that significant efforts have been made to ensure that regular maintenance of all facilities is occurring and that many of the cited 'significant deficiencies' in this report were already in the process of being corrected, without prompt by Hood River County, by the operator. In summary, we commend you efforts. Thank you.

If there are any mistakes or omission in this letter or the attached report, please contact Ian Stromquist, REHS so that corrections can be made. If you have any questions, or require technical assistance, please contact our office at: 541-387-6885 or directly to Ian Stromquist, REHS at: 541-387-7130. In addition to this report, regularly updated information regarding the 'Cascade Locks, City Of' public water system is available online at the following State web-site:

http://170.104.63.9/inventory.php?pwsno=00172

Hood River County Health Department strongly recommends that you regularly monitor this online database to ensure that accurate information is displayed. If any mistakes or omissions are observed, please contact our office. Thank you again for your time.

Regards,

Digital Signature – Ian Stromquist, REHS

Signature: Date:

Mike Matthews, REHS
Hood River County Health Department
mike.matthews@co.hood-river.or.us
541-387-7129

Signature: Date:

Ian Stromquist, REHS
Hood River County Health Department
ian.stromquist@co.hood-river.or.us
541-387-7130

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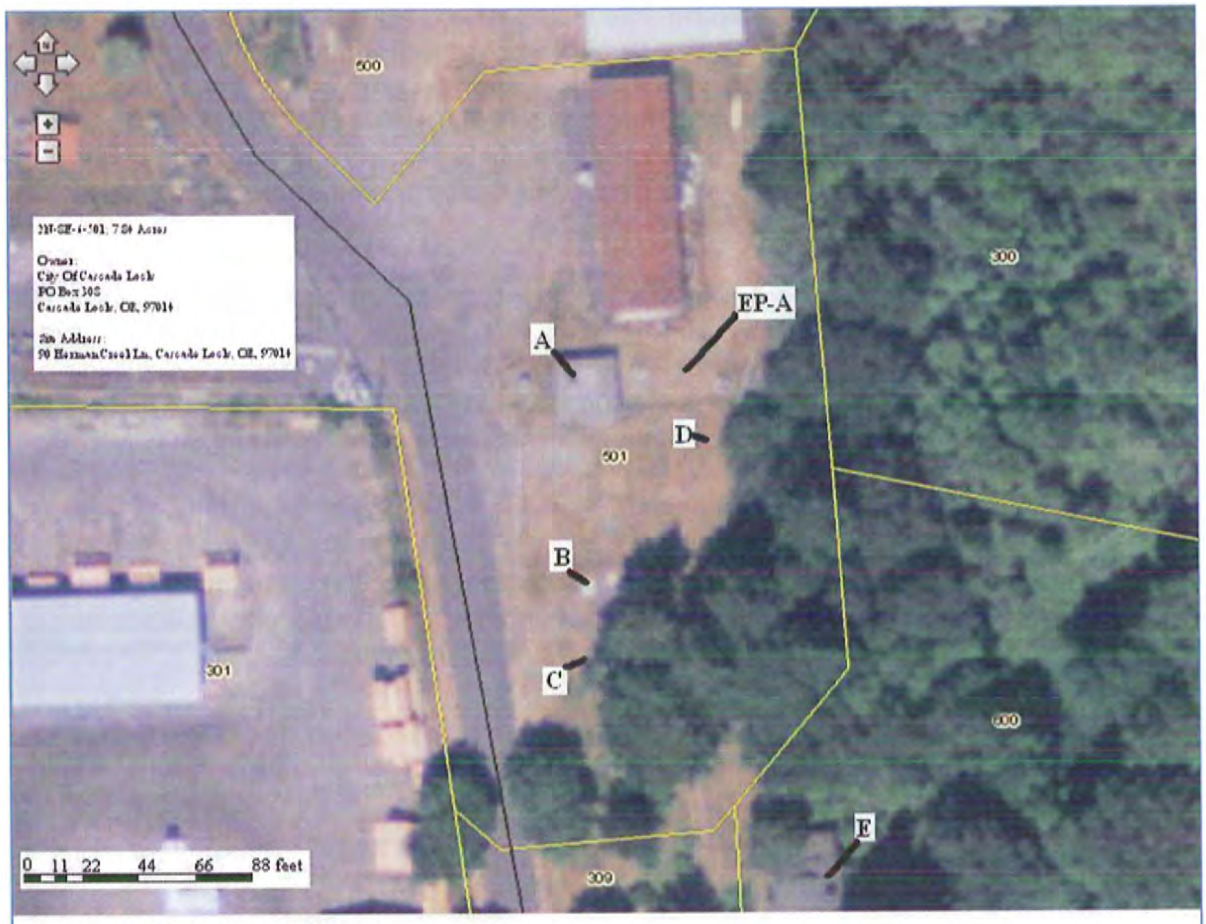
Appendix: Maps & Photos



Well #1 is located inside Structure labeled 'A'
Well #2 is located inside a (below ground) vault labeled 'B'
Nestle Well is located at site labeled 'C'
The inline pipe baffle (3' X 30') is located at site labeled 'D'
The first user is located at site labeled 'E'
Entry Point (EP) 'A' is located at site labeled 'EP-A'

Cascade Locks, City Of Water System Source Map, 5/24/12

Overflow Drain, Dry Creek

Baffle System, 3' X 30'

Nestle Well

Nestle Well – ? Seal

Deficiency Summary

Surveyor: Ian Stromquist, REHS

Date Corrective Action Plan is due: Friday, 6/29/12 **County:** Hood River

Yes	No	Significant Deficiencies and Rule Violations:	Date to be corrected	Date corrected
☒	☐	**Source:**		
		Well construction:		
		Well #2 does not meet set-backs from hazards (unapproved well), 0050(2)		
☒	☐	**Treatment:**		
		Disinfection:		
		Chlorine residual monitoring in the distribution system only performed 1/wk, 0036(9).		
☒	☐	**Finished Water Storage:**		
		No flap valve, screen, or equivalent on drain at Dry Creek Reservoir,		
		No flap valve, screen, or equivalent on drain verifiable at Oxbow Reservoir (drain likely buried)		
		Roof of Dry Creek Reservoir is not watertight (loose roof screws, roof plugs, etc.)		
☒	☐	**Distribution:**		
		Cross Connection Control - Annual Summary Report not issued, 0070		
		Cross Connection Control - Testing records not current, 0070		
☐	☒	**Monitoring:**		
☐	☒	**Management & Operations:**		
		Major modifications (pipeline extension) not approved (via formal plan review), 0050(1)(g)		
☒	☐	**Operator Certification:**		
		No protocol for under certified operator, 0225(5).		
☐	☐	**Other Rule Violations:**		

Comments:
As per OAR: 333-061-0032(6), the operator shall submit a written compliance schedule to the Hood River County Health Department (Environmental Health Office) within 30 days (by 5:00pm Friday, June 29th, 2012). The schedule shall detail their intent regarding the listed significant deficiencies. State rules require that all significant deficiencies be corrected (or on an approve compliance schedule) within 120 days (by 5:00pm Friday, August 24th, 2012).

☒ **Source Deficiencies:**

Well Construction Deficiencies (OAR 333-061-0076):

- ☐⊕ Sanitary seal and casing not watertight
- ☒⊕ Does not meet setbacks from hazards
- ☐⊕ Wellhead not protected from flooding
- ☐⊕ No raw water sample tap
- ☐⊕ No treated sample tap (if applicable)
- ☐⊕ No screen on existing well vent

Spring Source Deficiencies (OAR 333-061-0076):

- ☐⊕ Springbox not impervious durable material
- ☐⊕ No watertight access hatch/entry
- ☐⊕ No screened overflow
- ☐⊕ Does not meet setbacks from hazards
- ☐⊕ No raw water sample tap
- ☐⊕ No treated sample tap (if applicable)

☒ **Treatment Deficiencies/Violations:**

Surface Water Treatment Deficiencies:

- ☐+ Turbidity standards not met-0030(3)
- ☐+ Turbidimeters not calibrated per manufacturer or at least quarterly-0036(5)(b)(A)
- ☐⊕ Incorrect location for compliance turbidity monitoring
- ☐⊕ If serving > 3,300 people no alarm or auto plant shut off for low chlorine residual
- ☐⊕ For conventional or direct filtration: No alarm or plant shut off for high turbidity
- ☐⊕ For conventional filtration: Settled water not measured daily
- ☐⊕ For conventional or direct filtration: Turbidity profile not conducted on individual filters at least quarterly
- ☐⊕ For cartridge filtration: No pressure gauges before and after cartridge filter
- ☐⊕ For diatomaceous earth filtration: Body feed not added with influent flow
- ☐+ For membrane filtration: Turbidimeter not present on each unit-0050(4)(c)(G)
- ☐+ For membrane filtration: Direct integrity testing not done at least daily-0036(5)(b)(F)

Disinfection Deficiencies/Violations:

- ☐+ DPD or EPA approved method not used-0036(9)
- ☐+ Free chlorine residual not maintained-0032(3/5)
- ☒+ Chlorine not measured & recorded as required-0036(9)
- ☐+ Minimum CT requirement not met all times-0032(3/5)
- ☐⊕ No means to adequately determine flow rate on contact chamber effluent line
- ☐+ pH, Temperature, and chlorine residual not measured daily at first user-0036(5)(a/b)
- ☐⊕ Failure to calculate CT values correctly
- ☐⊕ No means to adequately determine disinfection contact time under peak flow and minimum storage conditions
- ☐+ Annual raw water sampling past due-0036(6)(w)

UV Disinfection Violations (OAR 333-0050(5)(k)):

- ☐+ Bypass around UV system
- ☐+ Lamp sleeve not cleaned
- ☐+ Lamp not replaced per manufacturer
- ☐+ No intensity sensor with alarm or shut-off
- ☐+ Annual raw water sampling past due-0036(6)(w)

Other Treatment Violations:

- ☐+ Non-NSF approved chemicals-0087(6)
- ☐+ Corrosion control parameters not met-0034

☐ **Distribution System Violations:**

- ☐+ System pressure < 20 psi. -0025(7)

Cross Connection (OAR 333-061-0070):

- ☐+ No ordinance or enabling authority (CWS)
- ☒+ Annual Summary Report not issued (CWS)
- ☒+ Testing records not current (CWS, NTNC, TNC)
- ☐+ No Cross Connection Control Specialist (CWS ≥ 300 connections)

☐ **Finished Water Storage Deficiencies:**

- ☐⊕ Hatch not locked or adequately secured
- ☒⊕ Roof and access hatch not watertight
- ☒⊕ No flap valve, screen, or equivalent on drain.
- ☐⊕ No screened vent

☐ **Monitoring Violations:**

- ☐+ Monitoring not current-0025(1)
- ☐+ MCL violations-0030
- ☐+ No Coliform Sampling Plan-0036(6)(b)(G)

☐ **Management & Operations Violations:**

- ☐+ No operations and maintenance manual. -0065(4)
- ☐+ Emergency response plan not completed. -0064(1)
- ☒+ Major modifications not approved (plan review). -0050
- ☐+ Master plan not current (≥ 300 con.)-0060(5)
- ☐+ Annual CCR not submitted (CWS)-0043(1)(a)
- ☐+ PNC or out of compliance with AO
- ☐+ Public notice not issued as required-0042

☐ **Operator Certification Violations:**

- ☐+ No certified operator at required level-0065(2).
- ☒+ No protocol for under certified operator-0225(5).

☐ **Other Rule Violations:** _____

⊕ Significant deficiency per OAR 333-061-0076
+ Significant rule violation per OAR 333-061-XXX

Inventory and Narrative

☐ **Outstanding Performer** **County:**

Type	Status	Size	Season
☒ Community (C)	Population:	1087	☒ All year ☐ Seasonal
☐ Non Transient Non-Community (NTNC)	Connections:	400	Begins: (mm/dd) /
	Service Chars:	MU	Ends: (mm/dd) /
☐ Transient Non-Community (TNC)	Ownership:	4	**Coliform Sampling**
☐ State Reg/Non EPA (NP)	**License**		**Period:** ☒ Monthly ☐ Quarterly
	☒ Not Lic ☐ HD ☐ Ag		Samples Required: 2
Operator Certification Required			**Responsible Agency**
WD 2 WT	FE ☐ Small WS ☐		☐ State ☒ County ☐ Dept of Agriculture

Primary Administrative Contact (Mailing Address):

Contact Name: Sheldon Price Phone: (541) 374-8484
Title: Public Works Supervisor Cell: (541) 490-5610
Street Address: P0 Box 308 / 140 SW WaNaPa Emergency #: ( ) use cell
City/State/Zip: Cascade Locks, OR 97014 Email: swprice@cascade-locks.or.us

Legal/Owner Address:

Contact Name: City of Cascade Locks, Oregon Phone: (541) 374-8484
Title: Paul Koch, Interim City Administrator Cell: (503) 309-1460
Street Address: P.O. Box 308 / 140 SW WaNaPa Emergency #: ( ) use cell
City/State/Zip: Cascade Locks, OR 97014 Email: pkoch@cascade-locks.or.us

System Physical Address:

Contact Name: Sheldon Price Phone: (541) 374-8484
Title: Public Works Supervisor Cell: (541) 490-5610
Street Address: 140 SW WaNaPa Emergency #: ( ) use cell
City/State/Zip: Cascade Locks, OR 97014 Email: swprice@cascade-locks.or.us

Emergency Systems Available:

Name: N/A **PWS ID#:** 41

Narrative:

The City of Cascade Locks public water system utilizes two wells as their sources. Both wells are located adjacent to each other at: 90 Herman Creek Ln. (Cascade Locks). Both wells access the same aquifer. During normal operations, the wells alternate which well pumps into the system at a single entry point; a simple electric switch alternates the pumps. Well #1 has a capacity of 450 gpm; Well #2 has a capacity of 500gpm. Prior to the entry point, chlorine is injected to maintain a residual. Post chlorination, water travels through a baffle chamber (1585 gallons of pipe) before entering the distribution system. A few homes access water immediately after the baffle chamber prior to water entering water storage reservoirs (Oxbow & Dry Creek). Both reservoirs have a single inlet/outlet pipe and they use a computer controlled system to control how water is distributed between them. Both reservoirs drain, via gravity, into two different portions of the remaining distribution system. A new (empty) housing development utilizes a booster pump (not currently in service).

Service area characteristic and owner type codes:

Service Area Characteristics		
Primary	**Secondary**	**CODE**
Residential	City or Town	MU
	Mobile Home Park	MP
	Subdivision	SU
	Rural	RA
	Other	OR
Transient	Recreation (parks, campground, beaches, ski areas, marinas)	PA
	Service Station	SS
	Summer Camp	SK
	Restaurant/Store	RS
	Highway Rest Area	HR
	Hotel/Motel, B&B	HM
	Other (visitor ctr, church)	OT
Non-Transient Non-Community	School	SC
	Institution	IN
	Medical Facility	MF
	Industrial/Agricultural	IA
	Day Care Center	DC
	Other	OA
Other	Interstate Carrier	IC
	Wholesaler (sells water)	WH
	Other Area	OT

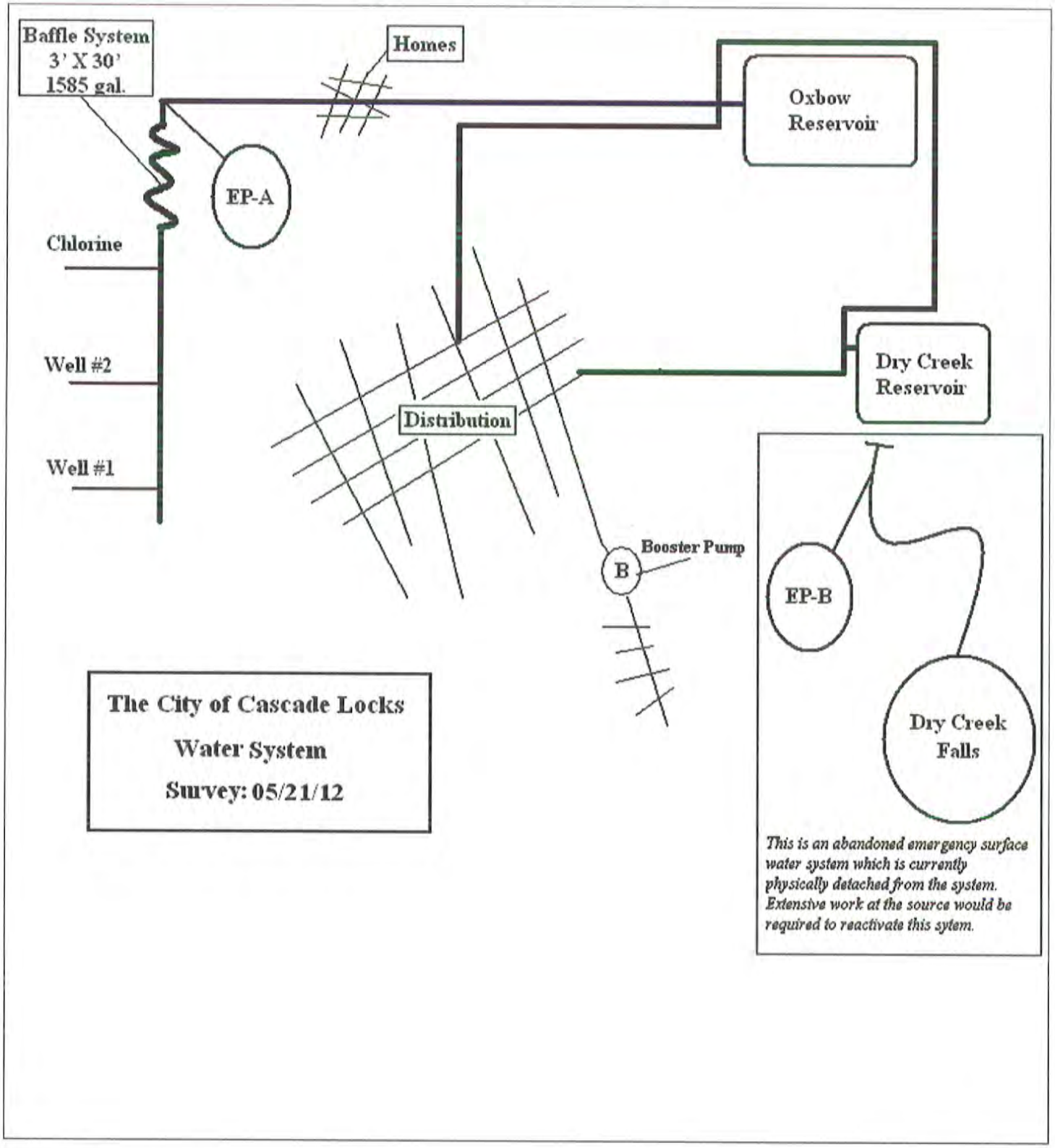
Determining System Type				
Population/ Daily Use	**Number of Connections**	**>25 Same Daily Users**	**≥25 Year Round Residents**	**System Type**
<10	<4	No	No	Not a System
10 – 24	4-14	_	_	State Reg/Non-EPA
25+	_	No	No	Transient Non-Community
25+	_	Yes	No	Non-Transient Non-Community
25+	15+	Yes	Yes	Community

Coliform Bacteria Sampling			
Community systems	Monthly samples based on population*		
Non-Transient, Transient, State-Regulated Systems	**Groundwater population served**		**Surface water**
	≤1000 1 per quarter	>1000 Monthly based on population*	Monthly sampling based on population*

Owner Type	Code
Federal Government	1
Private	2
State Government	3
Local Government	4
Mixed Public/Private	5

* Population	Samples per month
Up to 1,000	1
1,001 to 2,500	2
2,501 to 3,300	3
etc	See rules or call DWP

Water System Schematic



Source Information

ID	Entry Points	Source Type					Availability					Treatment	
ID	(Location where water enters distribution and is sampled) Name	Ground	Surface	GWUDI	Pur. ground	Pur. surface	Permanent	Seasonal	Begins	Ends	Emergency	None	Treatment Codes**
A	Herman Creek Wells	☒	☐	☐	☐	☐	☒	☐			☐	☐	X421
B	Dry Creek (disconnected)	☐	☒	☐	☐	☐	☐	☐			☒	☒	
		☐	☐	☐	☐	☐	☐	☐			☐	☐	
		☐	☐	☐	☐	☐	☐	☐			☐	☐	

ID	Individual Sources			Source Type					Availability					Treatment	
ID	(Contributing to Entry Point) Name	*Land Use	Capacity (GPM)	Ground	Surface	GWUDI	Pur. ground	Pur. surface	Permanent	Seasonal	Emergency	Abandoned	Disconnected	None	Treatment Codes**
AA	Well #1	G		☒	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	X421
AB	Well #2	G		☒	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	X421
BA	Dry Creek (disconnected)	K		☐	☒	☐	☐	☐	☐	☐	☐	☒	☒	☒	
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

*Land Use Codes: (A) **Pristine Forest** (B) **Irrigated Crops** (C) **Non-Irrigated Crops** (D) **Pasture** (E) **Light Industry** (F) **Heavy Industry** (G) **Urban-Sewered Area** (H) **Rural On-Site Sewage Disposal** (I) **Urban On-Site Sewage Disposal** (J) **Rangeland** (K) **Managed Forest** (L) **Commercial** (M) **Recreational Use**
**See "Treatment" page for treatment code descriptions.

List current operational patterns for all sources (e.g., Well 1 used continuously @ 100 gpm. Be as specific as possible)
Well #1 (450gpm) & Well #2 (500gpm) alternate flows/operation. The water is pumped often throught the day (24/7).

Yes No

☒ ☐ Does the water system have water rights for all sources? ☐ Not Required

☐ ☒ For GW systems, have there been any modifications to the existing well(s) or spring(s) (e.g. deepened, change in screened interval, springbox reconstruction, etc.)? Describe below:

☒ ☐ Has a Source Water Assessment been completed by ☒ DWP or ☐ DEQ? If yes, attach delineation map and review boundaries with operator. *A copy of the 'Source Water Assessment' was forwarded to the operator on 5/21/12 via e-mail.*

☐ ☒ Has system implemented source water protection strategies? If yes, describe below:

☐ ☒ Is the water system interested in source water protection? If yes, contact regional geologist at 541-726-2587.

Comments:

Treatment Codes:

Disinfection By-products Control
B121 Activated Carbon, Granular
B125 Activated Carbon, Powdered
B200 Chloramines
B220 Chlorine Dioxide
B240 Coagulation
B344 Filtration, Pressure Sand
B500 Lime-Soda Ash Addition
B600 Rapid Mix
B742 pH Adjustment, Pre
EP240 Enhanced Coagulation
ES240 Enhanced Softening

Disinfection
D200 Chloramines
D220 Chlorine Dioxide
D361 GWR 4-log Virus Compliance Mon
D401 Gaseous Chlorination, Post
D403 Gaseous Chlorination, Pre
D421 Hypochlorination, Post
D423 Hypochlorination, Pre
D541 Ozonation, Post
D543 Ozonation, Pre
D455 Iodine
D720 Ultraviolet Radiation
D800 Mixed Oxidants

Residual Maintenance
X200 Residual Maintenance, Chloramines
X401 Residual Maintenance, Gas Chlorination
X421 Residual Maintenance, Hypochlorination
X800 Residual Maintenance, Mixed Oxidants

Dechlorination
E121 Activated Carbon, Granular
E627 Reducing Agent, Sulfur Dioxide

Corrosion Control
C441 Inhibitor, Bimetallic Phosphate
C443 Inhibitor, Hexametaphosphate
C445 Inhibitor, Orthophosphate
C447 Inhibitor, OrthoPolyphosphate Blend
C449 Inhibitor, Silicate
C501 pH/Alkalinity Adjustment-Lime
C502 pH/Alkalinity Adjustment-Soda Ash
C503 pH/Alkalinity Adjustment-Caustic Soda
C504 pH/Alkalinity Adjustment-Sodium Bicarbonate
C505 pH/Alkalinity Adjustment-Calcite Contractor
C506 Calcium Carbonate Precipitation
C550 LCCA for L/C
C999 Blending

Inorganics Removal
I344 Filtration, Pressure Sand
I460 Ion Exchange
I640 Reverse Osmosis
I999 Blending

Arsenic Removal
A100 Activated Alumina
A240 Coagulation
A320 Electrodialysis
A347 Microfiltration
A348 Filtered
A460 Ion Exchange
A500 Lime Softening
A640 Reverse Osmosis
A900 Granular Ferric Hydroxide
A999 Blending

Iron Removal
F343 Filtration, Greensand
F344 Filtration, Pressure Sand
F345 Filtration, Rapid Sand
F403 Gaseous Chlorination, Pre
F423 Hypochlorination, Pre
F460 Ion Exchange
F543 Ozonation, Pre
F560 Permanganate
F640 Reverse Osmosis
F680 Sequestration
F740 pH Adjustment

Manganese Removal
M343 Filtration, Greensand
M423 Hypochlorination, Pre
M560 Permanganate
M680 Sequestration

Other
Z380 Fluoridation
Z551 Public Education for L/C
Z580 Peroxide
Z720 Ultraviolet Radiation

"Non-Treatment"
N000 No Treatment / Not Applicable
N349 Unfiltered, Avoiding Filtration
N350 Unfiltered, Must Install Filter
N996 Treatment Applied by Seller

Organics Removal
O121 Activated Carbon, Granular
O145 Aeration, Packed Tower
O160 Algae Control
O423 Hypochlorination, Pre
O560 Permanganate
O742 pH Adjustment, Pre
O999 Blending

Particulate Removal (SWTR)
P240 Coagulation
P341 Filtration,Cartridge
P342 Filtration, Diatomaceous Earth
P344 Filtration, Pressure Sand
P345 Filtration, Rapid Sand
P346 Filtration, Slow Sand
P347 Filtration, Membrane
P349 Natural Filtration
P360 Flocculation
P520 Microscreening
P600 Rapid Mix
P660 Sedimentation
P700 Sludge Treatment
P742 pH Adjustment, Pre

Softening (Hardness Removal)
S240 Coagulation
S344 Filtration, Pressure Sand
S360 Flocculation
S460 Ion Exchange
S500 Lime – Soda Ash Addition
S640 Reverse Osmosis
S680 Sequestration

Taste/Odor Control
T121 Activated Carbon, Granular
T125 Activated Carbon, Powdered
T141 Aeration, Cascade
T143 Aeration, Diffused
T149 Aeration, Spray
T160 Algae Control
T403 Gaseous Chlorination, Pre
T423 Hypochlorination, Pre
D541 Ozonation, Post
D543 Ozonation, Pre
T560 Permanganate
T720 Ultraviolet Radiation

Well Information

	Source ID#:	SRC-AA		SRC-AB									
	Source Name:	HERMAN CREEK WELL #1		HERMAN CREEK WELL #2									
	Well Tag ID (e.g. L12345): L	N/A		N/A									
	(if no well tag ID, enter WRD Well Log ID below)	Yes	No	Yes	No	Ye	No	Y	No	Y	No	Yes	No
	Well Log on File:	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	WRD Well Log ID (e.g. COLU123):	MULT_2057		HOOD_352									
Wellhead Construction	Well still active	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Depth of well (ft.)	110		104									
	Depth of grout seal (ft.)	20		20									
	Year of installation (yr.)	1969		1969									
	Casing diameter (in.)	14		8									
	• Sanitary seal & casing watertight	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	• If vented, properly screened	☒N/A		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	• Wellhead protected from flooding	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	• Well meets setbacks from hazards	☒	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐
	Nearest hazard (ft)	113		33									
	Water level device	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Concrete slab around casing	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Casing height ≥ 12-in. above slab/grade	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Pitless adapter	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐
	Constructed properly per SWA report	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐
Control Building	Protective housing	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Flowmeter	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Pressure gauge	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Pump to waste piping	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	• Raw sample tap	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	• Treated sample tap ☐N/A	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Heated	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Lighted	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Floor drain	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Well pump removal provision	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pump	Pump type*	VT		SU									
	Bearing lubrication (FG oil/water)	Water		?									
	Pumping capacity (gpm)	450		500									
	Amount of water pumped per year (gallons)	unknown		unknown									
	Percent of total well supply provided (%)**	50%		50%									
	Static water level (ft below ground surface)	61		61									
	Static water level date	2/27/69		1/29/69									

*** Pump Types:** (VT) Vertical Turbine (SU) Submersible (CE) Centrifugal (SJ) Shallow Jet (DJ) Deep Jet (OT) Other

** The sum of the % for all the wells should equal 100% (e.g. for 2 wells, if well #1 provides 80%, then well #2 must provide 20%).

Comments:

Both wells were installed in early 1969 by the same contractor (RJ Strasser Drilling Co.). Well #1 (45.681582°N, 121.863559°W) was immediately used for water production. Well #2 (45.681363°N, 121.863514°W) was considered a test well until in 1991 plans were drawn to convert it to a production well. It is not know whether any formal plan review was conducted by the Oregon State Drinking Water Program at that time; however documentation indicates that an Environmental Impact Assessment was conducted and Local Environmental

Health (Hood River County) was consulted during the process. In order to convert the test well (well #2) into a production well, a vault was installed around the well casing and new piping and a submerged pump were installed. Construction was reportedly completed in 1992. At that time, Dry Creek Falls Source (surface water) was abandoned by the operator.

Well #2 is within 33 feet of a new well that was installed in 2010 (see attached well logs on following pages) at 45.681303°N, 121.863522°W. The well is located on City of Cascade Locks Property by 'Hansen Drilling Co Inc'. It was reportedly installed by the 'Port of Cascade Locks' for the 'Nestlé Corporation' as a test well for their proposed water bottling operation. The nature and quality of the construction of the well is unknown by Hood River County Health Department. Due to the unknown qualities of the well and its proximity to Well #2, it is considered to be an 'Unapproved Well' and a significant deficiency requiring correction by Hood River County Health Department.

Potential Sanitary Hazards

(From OAR 333-061-0050(2)(a)(E))

The following sanitary hazards are not allowed within 100 feet of a well:

- Any existing or proposed pit privy
- Subsurface sewage disposal drain field
- Cesspool
- Solid Waste disposal site
- Pressure sewer line
- Buried fuel storage tank
- Animal yard, feedlot, or animal waste storage
- Untreated storm water or gray water disposal
- Chemical (including solvent, pesticides, and fertilizers)storage, usage, or application)
- Fuel transfer or storage
- Mineral resource extraction
- Vehicle or machinery maintenance or long term storage
- Junk / auto / scrap yard
- Cemetery
- Unapproved well
- Well that has not been properly abandoned or of unknown or suspect construction
- Source of pathogenic organisms
- Any other similar public health hazards

The following are not allowed within 50 feet of a well:

- Gravity sewer line
- Septic Tank

Exemptions to these setbacks must be listed and documented within the plan approval letter.

If a surface water source is located within 500 feet of a well or spring, please note the water body name and the distance to the well or spring. All groundwater sources within 500 feet to a surface water source should be considered for potential surface water influence. Check the file for correspondence. If a review has been done indicate results in comment section. If not, contact the Springfield office 541-726-2587.

Well #1

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON within 30 days from the date of well completion.

RECEIVED MAR 13 1969 STATE ENGINEER SALEM, OREGON

MULT 002057

WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line)

State Well No. 2N/8-6 da

State Permit No.

(1) OWNER:
Name CITY OF CASCADE LOCKS
Address CASCADE LOCKS, ORE.

(2) TYPE OF WORK (check):
New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:
Rotary [ ] Driven [ ]
Cable [X] Jetted [ ]
Dug [ ] Bored [ ]

(4) PROPOSED USE (check):
Domestic [ ] Industrial [ ] Municipal [X]
Irrigation [ ] Test Well [ ] Other [ ]

CASING INSTALLED: Threaded [ ] Welded [X]
14" Diam. from +4 ft. to 110 ft. Gage .375
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

PERFORATIONS: Perforated? [X] Yes [ ] No.
Type of perforator used STAR
Size of perforations 3/8 in. by 1 1/4 in.
1200 perforations from 80 ft. to 103 ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS: Well screen installed? [ ] Yes [X] No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.
Static level 61 ft. below land surface Date 2/27/69
Artesian pressure lbs. per square inch Date

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [X] Yes [ ] No If yes, by whom? STRASSER
Yield: 1000 gal./min. with 2 ft. drawdown after 24 hrs.
" " " "
" " " "
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water 43 Was a chemical analysis made? [ ] Yes [X] No

(10) CONSTRUCTION:
Well seal—Material used SAND AND CEMENT GROUT
Depth of seal 20 ft.
Diameter of well bore to bottom of seal 20 in.
Were any loose strata cemented off? [ ] Yes [X] No Depth
Was a drive shoe used? [X] Yes [ ] No
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? [ ] Yes [X] No Size of gravel:
Gravel placed from ft. to ft.

(11) LOCATION OF WELL:
County MULT Driller's well number 4300
NE ¼ SE ¼ Section 6 T. 2N R. 8E W.M.
Bearing and distance from section or subdivision corner

(12) WELL LOG: Diameter of well below casing —
Depth drilled 110 ft. Depth of completed well 110 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

MATERIAL	From	To	SWL
TOP SOIL	0	2	
SAND, GRAVEL BOULDERS AND SOME CLAY	2	28	
SAND AND GRAVEL	28	61	
WATER BEARING GRAVEL	61	106	
CEMENTED GRAVEL	106	110	

Work started FEB 8 1969 Completed MAR 4 1969
Date well drilling machine moved off of well MAR 4 1969

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Don U Graham (Drilling Machine Operator) Date MAR 17 1969
Drilling Machine Operator's License No. 57

Water Well Contractor's Certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME R J STRASSER DRILLING Co (Person, firm or corporation) (Type or print)
Address 8110 SE SUNSET LANE PORTLAND OR.
[Signed] Robert L. Strasser (Water Well Contractor)
Contractor's License No. 70 Date MAR 12 1969

(USE ADDITIONAL SHEETS IF NECESSARY)

Well #2

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

RECEIVED MAR 13 1969 STATE ENGINEER SALEM, OREGON

WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line)

HOOD State Well No. 2N/8-6 da
352 State Permit No.

(1) OWNER:
Name CITY OF CASCADE LOCKS
Address CASCADE LOCKS, ORE.

(2) TYPE OF WORK (check):
New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:
Rotary ☐ Driven ☐
Cable ☒ Jetted ☐
Dug ☐ Bored ☐

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☒ Other ☐

CASING INSTALLED: Threaded ☐ Welded ☒
8" Diam. from 0 ft. to 104 ft. Gage .277
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

PERFORATIONS: Perforated? ☒ Yes ☐ No.
Type of perforator used STAR
Size of perforations 3/8 in. by 1 1/4 in.
600 perforations from 75 ft. to 100 ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS: Well screen installed? ☐ Yes ☒ No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.
Static level 61 ft. below land surface Date 1/29/69
Artesian pressure lbs. per square inch Date

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☒ Yes ☐ No If yes, by whom? STRASSER
Yield: 390 gal./min. with 1 ft. drawdown after 8 hrs.
" " " "
" " " "
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water 43° Was a chemical analysis made? ☐ Yes ☒ No

(10) CONSTRUCTION:
Well seal—Material used SAND AND CEMENT GROUT
Depth of seal 20 ft.
Diameter of well bore to bottom of seal 12 in.
Were any loose strata cemented off? ☐ Yes ☒ No Depth
Was a drive shoe used? ☒ Yes ☐ No
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? ☐ Yes ☒ No Size of gravel:
Gravel placed from ft. to ft.

(11) LOCATION OF WELL:
County HOOD RIVER Driller's well number 4299
NE ¼ SE ¼ Section 6 T. 2N R. 8E W.M.
Bearing and distance from section or subdivision corner

(12) WELL LOG: Diameter of well below casing —
Depth drilled 104 ft. Depth of completed well 104 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

MATERIAL	From	To	SWL
SANDY SILT	0	2	
GRAVEL AND BOULDERS	2	7	
SAND, GRAVE, BOULDERS, AND SOME CLAY	7	26	
SAND AND GRAVEL	26	40	
LOOSE SAND AND GRAVEL	40	104	

Work started JAN 7 1969 Completed FEB 6 1969
Date well drilling machine moved off of well FEB 7 1969

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] [illegible] (Drilling Machine Operator) Date MAR 12, 1969
Drilling Machine Operator's License No. 57

Water Well Contractor's Certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME R.J. STRASSER DRILLING CO (Person, firm or corporation) (Type or print)
Address 8110 SE SUNET LANE PORTLAND ORE
[Signed] Robert L. Strasser (Water Well Contractor)
Contractor's License No. 10 Date MAR 12, 1969

USE ADDITIONAL SHEETS IF NECESSARY

Unapproved Well

HOOD 50735

HOOD 50735

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)
Instructions for completing this report are on the last page of this form.

Certificate No. 41302
WELL I.D. # L. ~~67396~~ 76767
START CARD # W 205106

(1) LAND OWNER Well Number
Name City of Cascade Locks C/O Pacific Groundwater Group
Address 2377 Eastlake Ave. E
City Seattle State WA Zip 98102

(2) TYPE OF WORK
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☒ Other Test

(5) BORE HOLE CONSTRUCTION:
Special Construction approval ☐ Yes ☒ No Depth of Completed Well 97 ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
12"	0	19	Bentonite chips	0	19	16 sks.

How was seal placed Method ☐A ☐B ☐C ☐D ☐E
☒ Other poured
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8"	+2'	84'6"	.250	☐	☐	☒	☐
riser	5"	80'6"	84'2"		☒	☐	☐	☐
tail	5"	84'2"	97		☒	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☐ Inside ☒ Outside ☐ None
Final location of shoe(s) 84'6" B.G.

(7) PERFORATIONS/SCREENS:
☐ Perforations Method
☒ Screens Type Telescopic Material Stainless ~~Steel~~

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
84'2"	89'2"	.025	1	5"		☐	☐
						☐	☐
6 x 5" Neoprene packer w/						☐	☐
6 x 5" concentric reducer						☐	☐
~~to 5" riser pipe~~						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
100 GPM		84' B.G.	1 hr

Temperature of water Depth Artesian Flow Found
Was a water analysis done? ☐ Yes By whom
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other
Depth of strata

(9) LOCATION OF WELL by legal description:
County Hood River Latitude Longitude
Township 2N N or S Range 8E E or W WM
Section 6 NE 1/4 SE 1/4
Tax Lot 510 Lot Block Subdivision
Street Address of Well (or nearest address) 90 Herman Creek Lane Cascade Locks, OR

(10) STATIC WATER LEVEL:
57 ft. below land surface Date 1/10/10
Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES:
Depth at which water was first found

From	To	Estimated Flow Rate	SWL
58'	98'	100 GPM	57'

(12) WELL LOG:
Ground Elevation

Material	From	To	SWL
Top soil	0	1	
Cobbles, boulders, silt	1	17	
Sand, gravel, little clay	17	22	
Sand & gravel, loose layers	22	97	57'
Brown sand	97	98	57'

RECEIVED
JAN 1 6 2010
WATER RESOURCES DEPT
SALEM, OREGON

Date started 1-4-10 Completed 1-6-10

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief. Timothy D. Jones
WWC Number 1446
Signed Timothy D. Jones Date 1-12-10

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
Ronald C. Aspaas WWC Number 1445
Signed Date 1-12-10

ORIGINAL – WATER RESOURCES DEPARTMENT FIRST COPY – CONSTRUCTOR SECOND COPY – CUSTOMER

Disinfection

No #	Disinfection Method*	Location	Disinfection Source Water	Residual Maintenance	Other Purpose	Proportional to Flow	Dosage Recorded
1	Sodium Hypochlorite	EP-A	☐	☒		☒	☒
			☐	☐		☐	☐
			☐	☐		☐	☐

*Chlorine Gas, Sodium Hypochlorite, On-site Generated Sodium Hypochlorite, Calcium Hypochlorite, Chloramines, Ozone, UV, Mixed-Oxidants, Other

Yes No
☒ ☐ • Is a DPD or other EPA approved method used?
☐ ☒ • Are residuals recorded as required?

Yes No
☐ ☐ • NSF 60/61 certified (or equivalent)?

Distribution: ☒ ≥ 2x weekly # samples: 1 ☒ w/Coliform Other: _____
EP (SWTR & GWR Comp. Mon.): ☐ ≥ 1x Daily # samples: _____ ☐ Continuous if > 3300 pop ☒ N/A
Range of chlorine residuals at first user: mg/l = _____

☒ ☐ • Are raw water samples taken as required (GWR assessment monitoring, etc.)? ☐ N/A
How often? Annually (1 for each well)

Yes No **Chlorine gas** ☒ N/A
☐ ☐ Separate room for gas storage and feeder
☐ ☐ Fan with on/off switch outside
☐ ☐ Vent located next to the floor
☐ ☐ Door with a window

Yes No
☐ ☐ Gas cylinders properly secured
☐ ☐ Door that opens out
☐ ☐ Self-contained breathing apparatus
☐ ☐ Air scrubber system

Yes No UV: ☒ N/A ☐ 4.0-log virus ☐ Total coliform + ☐ Other: _____
☐ ☐ • Plan Review approval
☐ ☐ • Does all water contact UV (no bypass)
☐ ☐ • Annual raw water sampling up to date ☐ N/A

Yes No
☐ ☐ • Is lamp sleeve cleaned
☐ ☐ • Is lamp replaced per manufacturer
☐ ☐ • Intensity sensor with alarm or shut-off

CT evaluation for disinfection ☒ N/A
Disinfection Requirement:
☐ (sw) 0.5 log inactivation Giardia
☐ (gw) 4.0 log inactivation viruses
☐ (gw) Minimum chlorine residual: _____ mg/l
☐ (sw) 1.0 log inactivation Giardia
☐ (sw) log inactivation Crypto: _____

Yes No
☐ ☐ • Does the contact chamber have effluent flow meter or adequate alternative?
If no, how is peak flow determined for CT calculations? _____
☐ ☐ • Has a tracer study been conducted or adequate alternative? Tracer Study Date: _____
Demand flow (gpm): _____ Baffling factor (%): _____
Volume used (gal): _____ Results (min): _____
☐ ☐ Adequate alternate method for contact time? Describe: _____

Peak hour demand flow over the past 12 months: ☒ N/A gpm = _____
Lowest operating volume over the past 12 months: ☒ N/A gallons = _____

Yes No ☒ N/A
☐ ☐ Are on-line chlorine analyzers verified weekly with DPD type or EPA approved test kit?
☐ ☐ • (SW only) Are pH, temp, and chlorine residual measured daily before or at the first user?
☐ ☐ • Are CT values being calculated correctly?
☐ ☐ • Are CT values met at all times?

Comments:
Only Residual Maintenance.

Storage and Pressure Tanks

Number	Name	Tank Type*	Tank Material	Year Built	Volume (gal.)
1	OXBOW RESERVOIR: 45.67333°N, 121.86208°W	E	STEEL	1969	350K
2	DRY CREEK RESERVOIR: 45.66693°N, 121.87477°W	G	CONCRETE	~1890	250K
3	HARMONY HEAVEN - PRESSURE TANK	P	STEEL	2010(ish)	102 gal
				Total Volume:	600,120 gal.

* (G) Ground (E) Elevated (P) Pressure

	Reservoir Number:	1		2							
	Reservoir Features	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Hatch	● Secured (e.g. locked, bolted, etc)	☒	☐	☒ N/A		☐	☐	☐	☐	☐	☐
	● Watertight	☒	☐			☐	☐	☐	☐	☐	☐
	Curbed lid (shoe box style)	☒	☐			☐	☐	☐	☐	☐	☐
Features	Drain to daylight	☐	☒	☒	☐	☐	☐	☐	☐	☐	☐
	Overflow	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐
	● Overflow/drain protected (screen/flap/valve)	unknown		☐	☒	☐	☐	☐	☐	☐	☐
	● Screened vent	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐
	Water level gauge	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐
	Bypass piping	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐
	Fence/gate	☒	☐	☐	☒	☐	☐	☐	☐	☐	☐
	Cathodic plates watertight ☒ N/A	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Alarm for high or low levels	☒	☐	☐	☒	☐	☐	☐	☐	☐	☐
Maintenance	Exterior in good condition	☒	☐	☐	☒	☐	☐	☐	☐	☐	☐
	Interior in good condition	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐
	Approved interior coating	☒	☐	☒	☐	☐	☐	☐	☐	☐	☐
	Inspection schedule	☒	☐	☐	☒	☐	☐	☐	☐	☐	☐
	Cleaning schedule	☒	☐	☐	☒	☐	☐	☐	☐	☐	☐
	Continuously disinfected (● post '81 redwood)	☒ N/A		☒ N/A		☐	☐	☐	☐	☐	☐
Plumbing Config.	Separate inlet/outlet	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐
	Baffling	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐
	Used for contact time	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐
	Pressure Tanks **Number:**	3									
Pressure Tanks	Used for contact time	☐	☒	☐	☐						
	Accessible for maintenance	☒	☐	☐	☐						
	Separate inlet/outlet	☐	☒	☐	☐						
	Bypass piping	☒	☐	☐	☐						
	Access port ☐ N/A	☒	☐	☐	☐						
	Drain	☐	☒	☐	☐						
	Pressure relief device	☒	☐	☐	☐						
	Air bladder/diaphragm	☒	☐	☐	☐						
	Valve for adding air	☒	☐	☐	☐						
	Water level sight glass ☐ N/A	☐	☒	☐	☐						

Comments

Pressure Tank #3 is located at: 45.663126°N, 121.894699°W along with the booster pump for the new (and empty) Harmony Heaven sub-division.

The Dry Creek Reservoir was built in the 1890s for the US Army to operate the Locks. It was deeded to the City in 1933.

Distribution System Information

Service Area and Facility Map

Yes ☒ No ☐ Does the system have a service area and facility map (indicate features on map):

- ☒ Booster pumps
- ☒ Pressure regulating valves
- ☐ Pressure zones ☒ N/A
- ☐ Sampling points
- ☒ Sources-wells & withdrawal points
- ☒ Storage facilities (reservoirs)
- ☐ Treatment facilities ☒ N/A – *Only Cl at EP-A*
- ☒ Water lines (including size and material)

Distribution Data

Yes	No		Comments
☒	☐	• System pressure >20 psi	
☒	☐	Are service connections metered? (what %)	100% of connections are metered.
☐	☒	Water system leakage <10%	Operator estimates ~ 30% water system leakage.
☒	☐	Waterline depth >30"	Operator reports that a few lines are installed at 2 ft.
☒	☐	Piping looped	There are also dead-end lines.
☒	☐	Hydrants or blowoffs on all dead ends	
☒	☐	Routine flushing (How often)	Routine flushing occurs annually.
☐	☒	Adequate valving	Operator reportedly does not feel there are adequate valves.
☐	☒	Routine valve turning (How often)	Operator reports that some valves are turned, however, there is no formal plan.
☐	☒	Asbestos cement (AC) pipe absent from system	Operator has observed asbestos pipes.

Comments:

Cross Connection Control (CWS, NTNC, and TNC)

Yes	No	N/A		Comments
☒	☐	☐	• Ordinance or enabling authority (CWS)	
☐	☒	☐	List of installed devices (CWS, NTNC, TNC)	
☐	☒	☐	• Devices tested annually (CWS, NTNC,	Operator reports that some devises are tested, however, the high-risk ones are not.
☐	☒	☐	• Annual Summary Report submitted (CWS)	Operator requested technical assistance submitting AS-Reprts.
☒	☐	☐	• Certified Cross Connection Control Specialist (CWS ≥ 300 connections)	

Comments:

Annual Report Forms and Instructions: The Annual Summary Report is due each year before the last business day of March for the previous year's reporting period of January 1st to December 31st. See web-page: http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/CrossConnection/Pages/reports.aspx for more information. You may also call: Mike Perry at the State Drinking Water Program at 971 673-1220.

Booster Pumps

Number	Name (location)	Deficiencies or Comments	HP	GPM	Aux. Power Yes	Aux. Power No
1	Harmony Heaven #1	Not in service (empty Sub-Division	40	1000	☒	☐
2	Harmony Heaven #2	Not in service (empty Sub-Division	7.5	80	☒	☐
3	Harmony Heaven #3	Not in service (empty Sub-Division	7.5	80	☒	☐

Comments:
Harmony Heaven Sub-Division is not currently experiencing any home construction. No people live in this sub-division.

Water Quality Monitoring

Contaminant	N/A	Frequency	Next Tests Due
Entry Point Sampling: *(Well #1 & Well #2 must be run at the same time during testing)*			
Nitrate	☐	Yearly	01/01/2012 - 12/31/2012
Arsenic	☐	Once every 9 years	01/01/2011 - 12/31/2019
Inorganic Chemicals (Including Nitrite) (sw)	☒		
Inorganic Chemicals (Including Nitrite) (gw)	☐	Once every 9 years	01/01/2011 - 12/31/2019
SOCs	☐	Once every 3 years	01/01/2011 - 12/31/2013
VOCs (sw)	☒		
VOCs (gw)	☐	Once every 3 years	01/01/2014 - 12/31/2016
Radionuclides (Community Water Systems Only):			
Gross Alpha	☐	Once every 9 years	01/01/2011 - 12/31/2019
Radium 226/228	☐	Once every 9 years	01/01/2011 - 12/31/2019
Uranium	☐	Once every 9 years	01/01/2011 - 12/31/2019
Distribution System Sampling:			
Coliform Bacteria	☐	Monthly - 2 samples	06/01/2012 - 12/31/2012
Asbestos (for AC pipe/asbestos geologic areas)	☐	Once every 9 years	01/01/2011 - 12/31/2019
TTHMs and HAA5s	☐	Once every 3 years	01/01/2011 - 12/31/2013 *Seasonal sampling period: 06/01 thru 09/30*
Lead and Copper, # sites: 10	☐	Once every 3 years	01/01/2012 - 12/31/2012 *Seasonal sampling period: 06/01 thru 09/30*
Other Sampling:			
TOC	☒		
Distribution System Chlorine Residual Monitoring	☐	Two Tests Weekley	Next Calendar Week
Source Water Coliform - Well #1	☐	Yearly	01/01/2012 - 12/31/2012
Source Water Coliform - Well #2	☐	Yearly	01/01/2012 - 12/31/2012

Yes ☒ No ☐ • Is all required monitoring current?

Yes ☒ No ☐ Has the system experienced chemical (last 5 years) or bacteriological (last 2 years) detections?
If yes, list what contaminant and when?

12/6/2011: COMBINED RADIUM (-226 & -228); 2/5/2009: COMBINED URANIUM; 12/29/2006, 12/12/2007, 2/5/2009, 12/27/2010, 4/20/2011: NITRATE; 6/5/2008: TOTAL HALOACETIC ACIDS (HAA5); 6/5/2008: TTHM

☐ ☐ • Have all MCL violations been addressed? ☒ N/A
☒ ☐ Does the system have any monitoring reductions granted? Explain:

ASBESTOS, DIST; IOC; NITRITE; HRCHD Recommends adding: Arsenic & Rads as well (see above)

☒ ☐ • Does the system have a written coliform sampling plan?
Does the plan include:

Yes	No		Yes	No	
☒	☐	Brief narrative	☒	☐	Rotation schedule
☐	☒	Distribution map	☒	☐	Repeat locations
☒	☐	Sample site locations	☒	☐	Source(s) ☐ N/A

☐ ☒ Are TTHM and HAA5 samples taken at correct location(s)? (☐ Not required)
Where in the system are the monitoring sites for TTHM and HAA5?

The operator reported that the TTHM & HAA5 sample locations are not documented in any written plan. They do, however, report that samples are collected at dead-end lines at the far end of the system (from chlorine injection).

Comments:
The operator reports that Chlorine Residual is only tested once per week in the distrabution system.

Management & Operations

O&M Manual and Emergency Response Plan

Yes No

☒ ☐ • Does system have an operation and maintenance manual? *(The operator feels that it could be improved).*

☒ ☐ • Does system have an emergency response plan?

Operator Certification

Requirements for system: WD: 1 WT: ____ ☐ FE required Small System: ☐

Name	Certification Number	WT Level	WD Level	FE	Small System
DRC:*David S. Griffin	D-08261		2	☐	☐
				☐	☐

*DRC= direct responsible charge. Attach additional sheets if necessary to list all certified personnel.

Yes No

☒ ☐ Is DRC identified?

☒ ☐ • Is DRC certified at appropriate level?

☐ ☒ • Does system have written protocols for under-certified operators? ☐ N/A *(The operator reports that they are in the process of drafting written protocols. As well, Sheldon is in the process of being certified at WD level #1)*

If DRC is a Contract Operator:

Yes No

☒ ☐ Does DWP have contract on file? ☐ N/A

How does contract operator work with system? ☐ N/A

Once per week - site visit; 24/7 consulting via phone; Emergency site visits as required.

Plan Review/Master Plan

Yes No

☐ ☒ • Have all major modifications (since 8/21/81) been approved by DWP? (See comment field below)

☐ ☒ Does system have a current plan review exemption for water main extensions?

☒ ☐ • Does the system have a current (<20 yr. old) master plan? (☐ Not required if < 300 connections)

What year was the plan completed? 1998 *(A 2003 Master Plan update was never adopted because circumstances changed)*

☐ ☒ Does the master plan include a water conservation plan?

Compliance Status

Yes No

☒ ☐ • Is water system in compliance (all orders resolved and not a priority non-complier)?

How many violations has the system had in the past two years? 1 *(Violation # 900592009)*

☐ ☐ • Does the system issue Public Notice for Violations as required? ☒ No violations requiring public notice recently

Other

☐ ☒ Has a capacity assessment been completed by DWP? If yes, list deficiencies noted:

☒ ☐ • Are consumer confidence reports sent to users each year and certified?

Comments:

The operator is working on a new master plan document.

Since the last survey, distribution has been extended by 500 ft. (8" C-900 PVC pipe) to the 'Cascade Meadows' Sub-Division

APPENDIX "F"

City Ordinances

Related to Water System

ORDINANCE NO. 330

AN ORDINANCE AUTHORIZING THE ADOPTION OF SYSTEM DEVELOPMENT CHARGES (SDC) FOR WATER, WASTEWATER, STREETS, DRAINAGE AND FLOOD CONTROL, AND PARKS.

THE CITY OF CASCADE LOCKS, HOOD RIVER COUNTY, OREGON, ORDAINS AS FOLLOWS:

Section 1. Purpose. The purpose of the system development charge is to impose a portion of the cost of capital improvements for water, wastewater, streets, drainage and flood control, and parks upon those developments that create the need for or increase the demands on capital improvements.

Section 2. Scope. The system development charge imposed by this Ordinance is separate from and in addition to any applicable tax, assessment, charge, or fee otherwise provided by law or imposed as a condition of development.

Section 3. Definitions. For purposes of this Ordinance, the following mean:

Capital improvements. Facilities or assets used for:

(1) Water supply, treatment, storage, and distribution;
(2) Waste water collection, transmission, treatment, and disposal;
(3) Drainage and flood control;
(4) Transportation; or
(5) Parks and recreation.

Development. Conducting a building or mining operation, making a physical change in the use or appearance of a structure or land, dividing land into two or more parcels (including partitions and subdivisions), and creating or terminating a right of access.

Improvement fee. A fee for costs associated with capital improvements to be constructed after the date the fee is adopted pursuant to section 4 of this Ordinance.

Land area. The area of a parcel of land as measured by projection of the parcel boundaries upon a horizontal plane with the exception of a portion of the parcel within a recorded right-of-way or easement subject to a servitude for a public street or scenic or preservation purpose.

Owner. The owner or owners of record title or the purchaser or purchasers under a recorded sales agreement, and other persons having an interest of record in the described real property.

Parcel of land. A lot, parcel, block or other tract of land that is occupied or may be occupied by a structure or structures or other use, and that includes the yards and other open spaces required under the zoning, subdivision, or other development ordinances.

Permittee means the person to whom a building permit, development permit, a permit or plan approval to connect to the sewer or water system, or right-of-way access permit is issued.

Qualified public improvements. A capital improvement that is:

(1) Required as a condition of residential development approval;

(2) Identified in the plan adopted pursuant to section 8 of this Ordinance; and either

(3) Not located on or contiguous to a parcel of land that is the subject of the development approval; or

(4) Located in whole or in part on or contiguous to property that is the subject of development approval and required to be built larger or with greater capacity than is necessary for the particular development project to which the improvement fee is related.

(5) For purposes of this definition, contiguous means in a public way which abuts the parcel.

Reimbursement fee. A fee for costs associated with capital improvements constructed or under construction on the date the fee is adopted pursuant to section 4 of this Ordinance.

System development charge. A reimbursement fee, an improvement fee or a combination thereof assessed or collected at the time of increased usage of a capital improvement, at the time of issuance of a development permit or building permit, or at the time of connection to the capital improvement. "System development charge" includes that portion of a sewer or water system connection charge that is greater than the amount necessary to reimburse the City for its average cost of inspecting and installing connections with water and sewer facilities. "System development charge" does not include fees assessed or collected as part of a local improvement district or a charge in lieu of a local improvement district assessment, or the cost of complying with requirements or conditions imposed by a land use decision.

Section 4. System Development Charge Established.

(1) System development charges shall be established and may be revised by resolution of the Council. The resolution shall set the amount of the charge, the type of permit to which the charge applies, and, if the charge applies to a geographic area smaller than the entire City, the geographic area subject to the charge.

(2) Unless otherwise exempted by the provisions of this Ordinance or other local or state law, a system development charge is hereby imposed upon all development within the City, upon the act of making a connection to the City water or sewer system within the City, and upon all development outside the boundary of the City that connects to or otherwise uses the sewer facilities, storm sewers, or water facilities of the City.

Section 5. Methodology.

(1) The methodology used to establish the reimbursement fee shall consider the cost of then-existing facilities, prior contributions by then-existing users, the value of unused capacity, rate-making principals employed to finance publicly owned capital improvements,

and other relevant factors identified by the Council. The methodology shall promote the objective that future systems users shall contribute no more than an equitable share of the cost of then-existing facilities.

(2) The methodology used to establish the improvement fee shall consider the cost of projected capital improvements needed to increase the capacity of the systems to which the fee is related.

(3) The methodology used to establish the improvement fee or the reimbursement fee, or both, shall be contained in a resolution adopted by the Council.

Section 6. Authorized Expenditures.

(1) Reimbursement fees shall be applied only to capital improvements associated with the systems for which the fees are assessed, including expenditures relating to repayment of indebtedness.

(2) (a) Improvement fees shall be spent only on capacity increasing capital improvements, including expenditures relating to repayment of debt for the improvements. An increase in system capacity occurs if a capital improvement increases the level of performance or service provided by existing facilities or provides new facilities. The portion of the capital improvements funded by improvement fees must be related to demands created by current or projected development.

(b) A capital improvement being funded wholly or in part from revenues derived from the improvement fee shall be included in the plan adopted by the City pursuant to section 8 of this Ordinance.

(3) Notwithstanding subsections (1) and (2) of this section, system development charge revenues may be expended on the direct costs of complying with the provisions of this Ordinance, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures.

Section 7. Expenditure Restrictions.

(1) System development charges shall not be expended for costs associated with the construction of administrative office facilities that are more than an incidental part of other capital improvements.

(2) System development charges shall not be expended for costs of the operation or routine maintenance of capital improvements.

Section 8. Improvement Plan. The Council shall adopt a plan that:

(1) Lists the capital improvements that may be funded with improvement fee revenues;

(2) Lists the estimated cost and time of construction of each improvement; and

(3) Describes the process for modifying the plan.

In adopting this plan, the Council may incorporate by reference all or a portion of any public facilities plan, master plan, capital improvements plan or similar plan that contains the information required by this section.

Section 9. Collection of Charge.

(1) The system development charge is payable upon issuance of:

(a) A building permit;

(b) A development permit;

(c) A development permit for development not requiring the issuance of a building permit;

(d) A permit or approval to connect to the water system;

(e) A permit or approval to connect to the sewer system; or

(f) A right-of-way access permit.

(2) If no building, development, or connection permit is required, the system development charge is payable at the time the usage of the capital improvement is increased.

(3) If development is commenced or connection is made to the water or sewer systems without an appropriate permit, the system development charge is immediately payable upon the earliest date that a permit was required.

(4) The City Administrator shall collect the applicable system development charge from the permittee when a permit that allows building or development of a parcel is issued or when a connection to the water or sewer system of the City is made.

(5) The City Administrator shall not issue such permit or allow such connection until the charge has been paid in full, or until provision for installment payments has been made pursuant to section 11 of this Ordinance, or unless an exemption is granted pursuant to section 12 of this Ordinance.

Section 10. Installment Payment.

(1) When a system development charge of $3,500 or more is due and collectible, the owner of the parcel of land subject to the development charge may apply for payment in 20 semi-annual installments, to include interest on the unpaid balance, in accordance with ORS 223.208.

(2) The City Finance Officer shall provide application forms for installment payments, which shall include a waiver of all rights to contest the validity of the lien, except for the correction of computational errors.

(3) An applicant for installment payments shall have the burden of demonstrating the applicant's authority to assent to the imposition of a lien on the parcel and that the interest of the applicant is adequate to secure payment of the lien.

(4) The City Finance Officer shall report to the City Administrator the amount of the system development charge, the dates on which the payments are due, the name of the owner, and the description of the parcel.

(5) The City Recorder shall docket the lien in the lien docket. From that time the City shall have a lien upon the described parcel for the amount of the system development charge, together with interest on the unpaid balance at the rate established by the Council. The lien shall be enforceable in the manner provided in ORS Chapter 223.

Section 11. Exemptions.

(1) Structures and uses established and existing on or before **(effective date of Ordinance)** are exempt from a system development charge, except water and sewer charges, to the extent of the structure or use then existing and to the extent of the parcel of land as it is constituted on that date. Structures and uses affected by this subsection shall pay the water or sewer charges pursuant to the terms of this Ordinance upon the receipt of a permit to connect to the water or sewer system.

(2) Additions to single-family dwellings that do not constitute the addition of a dwelling unit, as defined by the State Uniform Building Code, are exempt from all portions of the system development charge.

(3) An alteration, addition, replacement or change in use that does not increase the parcel's or structure's use of the public improvement facility are exempt from all portions of the system development charge.

Section 12. Credits.

(1) When development occurs that is subject to a system development charge, the system development charge for the existing use, if applicable, shall be calculated and it if is less than the system development charge for the use that will result from the development, the difference between the system development charge for the existing use and the system development charge for the proposed use shall be the system development charge. If the change in the use results in the system development charge for the proposed use being less than the system development charge for the existing use, no system development charge shall be required. No refund or credit shall be given unless provided for by another subsection of this Section.

(2) A credit shall be given to the permittee for the cost of a qualified public improvement upon acceptance by the City of the public improvement. The credit shall not exceed the improvement fee even if the cost of the capital improvement exceeds the applicable improvement fee and shall only be for the improvement fee charged for the type of improvement being constructed.

(3) If a qualified public improvement is located in whole or in part on or contiguous to the property that is the subject of development approval and is required to be built larger or

with greater capacity then is necessary for the particular development project, a credit shall be given for the cost of the portion of the improvement that exceeds the City's minimum standard facility size or capacity needed to serve the particular development project or property. The applicant shall have the burden of demonstrating that a particular improvement qualifies for credit under this subsection. The request for credit shall be filed in writing no later than 60 days after acceptance of the improvement by the City.

(4) When the construction of a qualified public improvement located in whole or in part or contiguous to the property that is the subject of development approval gives rise to a credit amount greater than the improvement fee that would otherwise be levied against the project, the credit in excess of the improvement fee for the original development project may be applied against improvement fees that accrue in subsequent phases of the original development project.

(5) Credits shall not be transferable from one development to another.

(6) Credits shall not be transferable from type of system development charge to another.

(7) Credits shall be used within 10 years from the date the credit is given.

Section 13. Notice.

(1) The City shall maintain a list of persons who have made a written request for notification prior to adoption or amendment of a methodology for any system development charge. Written notice shall be mailed to persons on the list at least 45 days prior to the first hearing to adopt or amend a system development charge. The methodology supporting the adoption or amendment shall be available at least 30 days prior to the first hearing to adopt or amend a system development charge. The failure of a person on the list to receive a notice that was mailed shall not invalidate the action of the City.

(2) The City may periodically delete names from the list, but at least 30 days prior to removing a name from the list, the City must notify the person whose name is to be deleted that a new written request for notification is required if the person wishes to remain on the notification list.

Section 14. Segregation and Use of Revenue.

(1) All funds derived from a particular type of system development charge are to be segregated by accounting practices from all other funds of the City. That portion of the system development charge calculated and collected on account of a specific facility system shall be used for no purpose other than those set forth in section 6 of this Ordinance.

(2) The appropriate City official shall provide the City Council with an annual accounting, based on the City's fiscal year, for system development charges showing the total amount of system development charge revenues collected for each type of facility and the projects funded from each account.

Section 15. Appeal Procedure.

(1) A person challenging the propriety of an expenditure of system development charge revenues may appeal the decision or the expenditure to the City Council by filing a written request with the City Recorder describing with particularity the decision of the City Administrator and the expenditure from which the person appeals. An appeal of an expenditure must be filed within two years of the date of the alleged improper expenditure.

(2) Appeals of any other decision required or permitted to be made by the City Administrator under this Ordinance must be filed within 10 days of the date of the decision.

(3) After providing notice to the appellant, the Council shall determine whether the City Administrator's decision or the expenditure is in accordance with this Ordinance and the provisions of ORS 223.297 to 223.314 and may affirm, modify, or overrule the decisions. If the Council determines that there has been an improper expenditure of system development charge revenues, the Council shall direct that a sum equal to the misspent amount shall be deposited within one year to the credit of the account or fund from which it was spent. The decision of the Council shall be reviewed only as provide in ORS 34.010 to 34.100, and not otherwise.

(4) A legal action challenging the methodology adopted by the Council pursuant to section 5 shall not be filed later than 60 days after the adoption. A person shall contest the methodology used for calculating a system development charge only as provided in ORS 34.010 to ORS 34.100, and not otherwise.

Section 16. Prohibited Connection. No person may connect to the water or sewer systems of the City unless the appropriate system development charge has been paid or the lien or installment payment method has been applied for and approved.

Section 17. Penalty. Violation of Section 16 of this Ordinance is punishable by a fine not to exceed $5000.00.

Section 18. Construction. The rules of statutory construction contained in ORS Chapter 174 are adopted and by this reference made a part of this Ordinance.

Section 19. Severability. The invalidity of a section or subsection of this Ordinance shall not affect the validity of the remaining sections or subsections.

Section 20. Classification.

The City Council determines that any fee, rates or charges imposed by this Ordinance are not a tax subject to the property tax limitations of Article XI, Section 11(b) of the Oregon Constitution.

Section 21. Effective Date. This Ordinance shall become effective 30 days after the approval and adoption by the City Council.

Passed by the City Council and approved by the Mayor January 20, 1998.

ORDINANCE NO. 371

AN ORDINANCE AUTHORIZING THE CITY COUNCIL TO ADOPT PUBLIC WORKS DESIGN AND CONSTRUCTION STANDARDS BY RESOLUTION, AND ESTABLISHING AUTHORITY TO ADMINISTRATE AND ENFORCE THE STANDARDS.

WHEREAS, the City of Cascade Locks has no adopted standards to guide the design and construction of public facilities to be owned, operated, and maintained by the City, and

WHEREAS, the City of Cascade Locks is facing a significant amount of growth over the next decade and needs to provide guidance to both public agencies and private parties in the design and development of public facilities; now, therefore,

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CASCADE LOCKS, OREGON, HEREBY ORDAINS AS FOLLOWS:

Section 1. Authority to Adopt Public Works Design and Construction Standards by Resolution. The City Council shall adopt by resolution, and may amend by resolution from time to time, design standards for the construction of public facilities and utilities. These standards shall guide the specific design of facilities, as well as establish a permit process for receiving, reviewing, and approving construction plans, and inspecting and approving the actual construction.

Section 2. Required Conformity to Specifications. All work done and materials used for public improvements shall conform to such standard specifications, unless otherwise provided for in the particular standard for work authorized by the city council.

Section 3. Authorization to Administrate and Enforce Public Works Design and Construction Standards. The City Administrator and Public Works Director are authorized to administrate and enforce the Public Works Design Standards as delineated within the Standards.

Section 4. Penalties. Violation of this ordinance shall be punishable by a fine not to exceed $500.00. Each day a violation occurs shall be considered a new violation.

Section 5. Emergency Clause. Inasmuch as it is deemed necessary for the public peace, health, safety and welfare of the citizens of the City of Cascade Locks that this Ordinance become effective by January 10, 2005, the City Council of the City of Cascade Locks, by its vote, declares an emergency to exist and this ordinance to be in full force and effect on January 10, 2005.

Adopted by the City Council and approved by the Mayor January 24, 2005.

ORDINANCE NO. 415

AN ORDINANCE REGULATING AND CONTROLLING OPERATION OF THE CITY'S WATER UTILITY SYSTEM AND PROVISION OF SERVICE TO ITS CUSTOMERS.

The City of Cascade Locks, Hood River County, Oregon, ordains as follows:

ARTICLE 1. DEFINITIONS

1) Applicant or Person. Any natural person, firm, partnership, association, social or fraternal organization, corporation, trust, estate, receiver, syndicate, brand of government or any group acting as a unit either by themselves, jointly, or through a servant, agent or employee.
2) City Administrator. The City Administrator of the City of Cascade Locks or his designee.
3) Premises. A building or group of buildings occupied by a family unit, or business entity and used by residential business or commercial purposes and/or any parcel of land.

ARTICLE 2. SERVICE AND OPERATION.

Section 2.010. Rates

1) Rates for the use or consumption of water or the provision of any service related thereto shall be set from time to time by resolution for the Council.
2) Fire Protection Service Lines.
   a) Services for fire protection must be fitted with such fixtures only as are needed for fire protection and entirely disconnected from those used for other purposes.
   b) It shall be unlawful to use any fire line for any other purpose than fire protection. Any unlawful use of a fire line shall subject the violator to the penalties prescribed in the Article 5 of this ordinance.
3) Special Construction. Whenever water is requested by an applicant for construction purposes the City may supply said water through the most convenient hydrant, measuring the amount used by the installation of a temporary hydrant meter. There shall be a refundable deposit in the amount of $700.00 to insure the value of said meter and an installation charge of $30.00 which is nonrefundable.
4) Inspection of Premises. The City Administrator shall have free access at all reasonable times to all parts of building or premises supplied by water from the City's mains, for the purpose of ascertaining the quantity of water used, shutting off or turning on the water through the service connection, checking for cross connections, checking compliance with codes and for any other reasonable cause and it shall be unlawful for any person to hinder, obstruct, or unnecessarily delay such actions.

5) Emergency Powers. Upon the declaration by the City Council that a water emergency situation exists, the City Administrator shall have the authority to take such steps as he shall deem necessary to preserve and protect the City water supply and system facilities. Any action taken by the City Administrator pursuant to powers granted him in this section shall be subject to the approval of the City Council.

ARTICLE 3. NEW CUSTOMER SERVICE.

The procedures and policies of this article shall be adhered to in all cases except when application of the rule would work a severe and unfair burden on a particular applicant that can be clearly demonstrated is peculiar to his particular situation. Such cases may be granted modification or waiver of a particular policy upon specific written approval of the City Administrator. The City is not obligated herein to undertake any project, or meet any time deadline or in any way obligate itself to providing service for any reason.

Section 3.010. Installation Location and Timing.

1) Location and Premises.
   a) All extension shall be within the Urban Growth Boundary as designated in the City's comprehensive plan.
   b) An applicant for new service shall own or control the land at the terminus of the main extension.
2) Main Installation and Location.
   a) City at its own discretion shall determine what party shall be responsible for installation of all mains and appurtenances. Generally, the City shall be the installer except in those instances where all land being served is under the ownership and/or control of the applicant. (i.e., new subdivision).
   b) Physical location of mains and all other appurtenances shall be the decision of the City Administrator.
3) Service Lines Installation. Generally service lines will be installed at the same time as the main only when a new connection or paving is imminent or if specifically requested by an applicant. In these cases, the regular connection fee may be appropriately charged a developer at the same time as the main charge.

Section 3.020. General Policies for Charges and Fees.

1) Main Charge and Connection Fee.
   a) Both these cost items are generally applicable to obtaining water service, but are determined separately and independent of one another. The main charge is based on the City's average construction cost of a 6" main including intersections, fire hydrants, engineering, inspection and other related expense.
      The connection fee is based on the City's cost of installing a service line and meter from the main to the curb line.
   b) When a main suitable for serving the applicant's premises is in place at the time of request for service, then the main charge shall be computed by multiplying the footage

of the parcel to be served where bypassed by the main by a factor of 50% the current average per foot construction cost of a 6" main. Tax lot divisions will be determinate as to the footage involved in computing main charges. Both the main charge and the connection fees shall be payable at the time application for service is made.
When a main must be extended to serve the applicant's premises, the main charge shall be computed by multiplying the "front" footage of all parcels of land bypassed by the main (not only the land served) by a factor of 50% the current averaged per foot construction cost of a 6" main (e.g., an extension from the intersection serving a house on lot "A" with 50' of frontage and a vacant lot "B" across the street would be assessed on 100 feet or 100% of the averaged cost for said extension.) Tax lot division will be determinate as to the footage involved in computing main charges. Both the main charge and connection fee shall be payable at the time application for service is made.

i) When such footage amounts to less than 50 feet, the main charge for that service will be computed as if there were 50 feet of frontage.
ii) When property has mains bypassing two or more sides the main charge shall be based on an average of the lot frontage so served.
iii) When a main serves property, but does not completely bypass the parcel, if in the City's judgment it is a reasonable expectation that the City will at some time be required to extend the main further, then the main charges for service to that property shall be assessable on the total linear footage, as if the main bypassed the entire parcel.
iv) When a main serves property, but does not completely bypass the parcel's frontage and it is the City's determination there is no reasonable expectation that the City will be required to extend the main further, then the main charge shall be based on the actual frontal footage of main installed (regardless of size) but in no case shall be less than a 50 foot assessment.
v) When a main crosses property other than through public right-of-way, main charges shall be computed the same as a typical in-street extension, i.e., the owner or applicant would pay main charges on 200' of frontage for a 100' line extension.

2) Conversion from Private Line to Standard Main. Customers converting over from a private line to a standard main shall pay regular main charges and connection fees when the main has been extended at their request; in other instances no charges or fees will be assessed. This privilege for changing over to a standard service at no cost applies only to the connections which exist at the time the main is extended. Any new connection or service, even if to the same parcel of land, will be assessed regular charges and fees.
3) Reimbursement Contract. A person having paid a main charge on property other than his own, may enter into a contract with the City to have main charges as collected by the City returned to him on a proportional basis when new services connect to the extension; collection and reimbursement is to be made at the rate current at the time of connection. The term of this contract shall be limited to 10 years when the amount of the contract is less than $45,000 and may when the contract is excess of that amount be extended, at the discretion of the Council, for a period up to 20 years. The person entering into such an

agreement with the City shall be responsible for any escrow or related fees incurred during the term of the contract.

4) City Contract Option. Though the City budget be sufficient, if the City is unable to undertake the project at a given point in time due to lack of cash on hand, manpower, equipment, commitment to other projects or for any other cause the City deems reasonable, then the City may at its discretion contract for the work to be done. In this instance the normal charges and fees would apply plus an additional fee may be imposed to cover any cost overage between the regular charges and fees and the actual cost of construction (inclusive of all related costs) of that specific job.
5) Main Charge Assessed Once. Any property having paid a main charge after the date of this ordinance shall not be so assessed again at a later date. In instances such as a new subdivision where the City would generally have had no financial involvement in serving the premises therein; the City would make no charge, but rather the cost of the water facilities installed would be reflected in the purchase price of a lot.
6) Dollar Assessment by Resolution. Actual dollar amounts for main charges and connection fees shall be set from time to time by resolution. A yearly review is required each January.
7) Other Financing Allowed. There is no intent by these regulations to preclude the L.I.D. (Local Improvement District) option or any private arrangement made between individuals.

Section 3.030. Other Charge Considerations

1) Systems Development Charge. A systems development charge may be imposed whenever requirements for water are evidenced by request of a metered service 2 inches in size or over. The City Administrator in consultation with the superintendent of public works and the developer shall make a determination on a case-by-case basis as to a reasonable amount to be approved by the Council.
2) Over Size Mains. When the need for an over-size main is principally attributable to a specific development, then the developer shall pay the actual cost of the difference between standard 6" and the main installed.
3) Excavating Existing Paved Surface. An applicant requesting any main or service line extension or installation which involves cutting, excavating and/or replacement of any paved surface shall be charged the actual cost of such cutting and repair in addition to other applicable charges and fees.
4) Special Situations. Financing extensions of mains which cross through or by land which has no reasonable expectation of being served by the extension or which is already served off another main or private lines, and installation of any additional facilities needed to develop particular areas of land are the responsibility of the developer. The developer may request in writing that the City participate in the financing of those portions of such projects through waiver of certain main charges or other appropriate methods. The City Council shall review any such requests in light of the availability of funds, the size of the project, overall system needs, and the extent of benefit to surrounding property policies as set forth in this ordinance and other pertinent factors. The Council may grant the request

as presented or for any lesser amount of assistance, but in no way shall be obligated to honor any such request.

Whether or not City funds are involved in the initial financing of any project, the City Council may, where appropriate, establish geographic areas of benefit and impose a utility service charge to be collected at the time of connection to the water system which would be over and above the normal main charge a connection fee as set herein. Such charges would serve to offset the initial cost making water available to certain areas of the City, and would be used under a reimbursement contract to repay proportionally the developer and/or City.

Section 3.040 Application for Service

1) Required Information and Format.
   a) Each applicant for water service shall sign an application form provided by the water department giving them the following information.
      i) Date of application
      ii) Location of premises to be served
      iii) Date service is to begin
      iv) Purpose for which services is to be used
      v) Address to which billing are to be mailed
      vi) Class and size of the meter service, where applicable
      vii) Such other information as the water department may reasonably require.
   b) The application shall contain a statement that all charges are assessable as liens against the premises for which said service is installed, and all accounts for such service and use of water shall be kept only in the name of the owner of the premises for which such service is installed. Upon such charges become delinquent and unpaid for a period of 30 days, the City may, at its discretion, cause the water to be shut off from such premises until such charges are paid. Statements of such charges may be mailed to any agent of the owner, including the occupant of the premises upon the written request of the owner, but any such mailing of the statement of the charges of the service and use of water to anyone other than the owner shall not release the property or premises for which such service is installed from any liability of such charges.
   c) The application shall also contain a signature line for the owner of the property if different from the applicant.
2) Contractual Obligations. The application provided for in item (1) above shall contain a contract on the part of the person making the application, to pay for the water applied for at the rate and in the manner specified in such contract. It shall reserve to the City the right to charge and collect the rates and enforce the penalties provided for in this ordinance, in the manner herein provided. The application shall also reserve to the City the right to change the rates at any time by resolution, to temporarily discontinue the serve with notice to the customer, and shall specify that said contract is subject to all the provisions of any ordinance or resolution of the City relation to this subject, and shall further provide that the City shall not be held responsible for any damage for water or other cause resulting from defective plumbing or appliance on the premises supplied with

water, by the owner or occupant of said premises, and that the fact that the agents of the City have inspected the plumbing and appliances shall not be pleaded as a basis of recovery in case of damage to the premises, and shall provide that in case the supply of water shall be interrupted or fail for reason of accident or any other cause whatsoever, the City shall not be liable for damages for such interruption or failure, nor shall failures for interruption if for any reasonable period of time be held or constitute a breach of contract on the part of the City or in any way relieve the customer from performing the obligations of this contract. All contracts shall take effect from the day they are signed and rates shall be charged from the day premises are connected with the City's water supply and turned on to such time as the City is notified that service is no longer desired and the water turned off.

ARTICLE 4. CONSTRUCTION AND CONTROL STANDARDS

Section 4.010 General Liability.
The City shall be responsible for the repair and maintenance of the water distribution system. Property owners shall be responsible for all installation, maintenance and repair of any system facilities between the meter or turn off valve and points of delivery.

Section 4.020 Service Line Regulations.

1) Technical Conformity.
   a) Water will not be furnished where there are defective or leaking faucets, closets, or other fixtures, or where there are water closets or urinals without self-closing valves, or tanks without self-acting float valves, and when such are discovered the supply may be withdrawn.
   b) The tap and ferrule and stopcock, at the curb, will be furnished by the City and remain the property of the City, and it shall be unlawful for any person to interfere therewith.
   c) Within the basement wall a stop and waste cock, protected from frost, must in all cases be placed, by means of which the service pipes in the building may be drained at night during the freezing weather. A tap and ferrule shall be provided on the customer's line to allow the customer on/off control of water to the premises.
   d) The service pipes from the mains to the walls of the building must be not less than two feet below the grade.
   e) All persons connecting to the City services shall be required to use only pipe which meets all applicable standards of the Oregon Plumbing Code.
2) Service Line Location.
   a) Service lines shall generally extend at right angles from the main to a point immediately inside the curb line, or where no curb exists to a point designated by the City Administrator in accordance with accepted standards on street width.
   b) A service line crossing private property other than that being served shall not be allowed unless special circumstances warrant and approval of the City Administrator is obtained.
   c) A valve or meter shall not be installed in a driveway area, nor shall a driveway be constructed over an existing valve or meter.

3) Storage adjacent to Valve or Meter. It shall be unlawful for any person to store, maintain, or keep any goods, merchandise, material, or refuse within a distance of six feet from any water valve or other appliance in use of any water connection of the City.
4) The service pipes shall be so arranged that the supply to each separate house or premises may be controlled by a separate stopcock, placed within and near the line of the street curb, and one person must pay for all the water used through said service, for his own use or for the use of others to whom it may be accessible.

ARTICLE 5. ENFORCEMENT AND ADOPTION.

Penalties. Any person who shall be found guilty of a violation of any of the provisions of this ordinance, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not exceeding one thousand dollars ($1,000.00), or by imprisonment in the county jail for a term not exceeding thirty (30) days, or by both such fine and imprisonment.

Repeal of Prior Ordinances. City of Cascade Locks, Ordinance No. 13 and 118, dated January 20, 1936, and October 18, 1961, are hereby repealed.

Separability. Should any section, subsection, paragraph, sentence, clause or phrase of this ordinance be declared invalid, such declaration shall not affect the validity of any other section, subsection, paragraph, sentence, clause or phrase; and if this ordinance, or any portion thereof, should be held to be invalid on one ground but valid on another, it shall be construed that the valid ground is the one upon which said ordinance, or such portion thereof, was enacted.

Emergency Clause. Inasmuch as it is necessary for the peace, health, safety, and welfare of the citizens of the City of Cascade Locks that this ordinance become effective with its adoption, the Council, by its vote, declares an emergency to exist, and this ordinance to be in full force and effect upon and after its passage by the Council and approval by the Mayor.

ADOPTED by the City Council this 12th day of March, 2012.

APPROVED by the Mayor this 12th day of March, 2012.

ORDINANCE NO. 387

AN ORDINANCE REGULATING WATER SERVICE AND PROHIBITING CROSS CONNECTIONS; AND REPEALING ORDINANCE NO. 288; AND DECLARING AN EMERGENCY.

WHEREAS, the City of Cascade Locks enacted ordinance No. 288 on August 12, 1991 to implement the City's backflow cross connection program; and

WHEREAS, the Cross Connection Specialist of the Department of Public Works, having completed training and obtaining certification, is recommending changes to the City's Cross Connection Control Ordinance No. 288 to improve the City of Cascade Locks cross connection program.

THE CITY OF CASCADE LOCKS, HOOD RIVER COUNTY, OREGON, ORDAINS AS FOLLOWS:

OPENING PARAGRAPH

Pursuant of Chapter 333-66-0070 of Oregon Administrative Rules, it is the responsibility the water purveyors for the City of Cascade Locks to protect it's drinking water by instituting and enforcing a cross connection program. Water suppliers shall undertake cross connection control programs to protect the public water system from pollution and contamination. The water supplier's responsibility for cross connection control shall begin at the water supply source, include all public treatment, storage, and distribution facilities under the water supplier's control, and end at the point of delivery to the water user's system.

SECTIONS

1 Definitions
2 Purpose
3 Application and Responsibilities
4 Cross Connections Regulated
5 Backflow Prevention Assembly Requirements
6 New Construction
7 Retrofitting
8 Lawn Irrigation
9 Thermal Expansion
10 Wholesale Customers
11 Mobile Units
12 Installation Requirements
13 Effects of Backflow Assembly Installation
14 Fire Systems
15 Plumbing Code
16 Access to Premises

17 Annual Testing and Repairs
18 Responsibilities of Backflow Prevention Assembly Testers
19 Cost of Compliance
20 Termination of Service
21 Notification of Water Treatment
22 Emergency Clause

SECTION 1. Definitions. For the purpose of this Chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning. If a word or term used in this Chapter is not contained in the following list, its definition, or other technical terms used, shall have the meanings or definitions listed in the most recent edition of the ***Manual of Cross Connection Control*** published by the Foundation for Cross Connection Control and Hydraulic Research, University of Southern California ("USC").

(1) "**APPROVED AIR GAP *(AG)***" means a physical separation between the free-flowing discharge end of a potable water supply pipeline and the overflow rim of an open or non-pressurized receiving vessel. An "Approved Air Gap" shall be at least twice the diameter of the supply pipe measured vertical above the overflow rim of the vessel and in no case less than 1 inch and in accord with Oregon Plumbing Specialty Code.

(2) "**APPROVED BACKFLOW PREVENTION ASSEMBLY**" or "**BACKFLOW ASSEMBLY" or "ASSEMBLY**" means an assembly to counteract backpressure and/or prevent back-siphonage, such as, a Reduced Pressure Principle_Backflow Assembly(***RPBA***), Reduced Pressure Principle-Detector Backflow Prevention Assembly(***RPDA***), Double Check Valve Backflow Prevention Assembly(***DCVA***), Double Check-Detector Backflow Assembly(***DCDA***), Pressure Vacuum Breaker Backsiphonage Prevention Assembly(***PVB***), or Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly(***SVB***), of a make, model, orientation, and size approved by the Oregon Department of Human Services.

(3) "**ATMOSPHERIC VACUUM BREAKER *(AVB)***" means a device consisting of an air inlet valve or float check, a check seat and an air inlet port(s). This device allows air to enter the water line when the line pressure is reduced to a gauge pressure of zero or below. This device is designed to protect against a non-health or a health hazard under a backsiphonage condition only.

(4) "**AUXILIARY WATER SUPPLY**" means any water source or system other than the City's water supply system that may actually or potentially become a cross connection.

(5) "**BACKFLOW**" means the flow in the direction opposite to the normal flow or the introduction of any foreign liquids, gases, or substances into the water system. Backflow occurs due to a differential pressure existing between two different points within a continuous fluid system and may occur due to either backsiphonage or backpressure.

(6) **"BACKPRESSURE"** means an elevation of pressure downstream of the distribution system that would cause, or tend to cause, water to flow in the opposite direction.

(7) **"BACKSIPHONAGE"** means a drop in distribution system pressure below atmospheric pressure (partial vacuum), that would cause, or tend to cause, water to flow in the opposite direction.

(8) **"CERTIFIED BACKFLOW CONNECTION SPECIALIST"** or **"SPECIALIST"** means a person who has successfully completed and maintains all requirements as established the Oregon Department of Human Services to be a Specialist in the state of Oregon.

(9) **"CERTIFIED BACKFLOW ASSEMBLY TESTER"** means a person who has successfully completed and maintains all requirements as established by the Oregon Department of Human Services to be a tester in the State of Oregon.

(10) **"CITY"** means the City of Cascade Locks.

(11) **"CITY WATER SYSTEM"** means the City of Cascade Locks Water System, which shall include, it's wells, pumping stations, reservoirs, supply trunk or feed lines, service lines, meters and all other appurtenances, device lines and things necessary to the operation of the system and to supply water service to individual property or premise and shall include the City's potable water with which the system is supplied.

(12) **"CONTAMINATION"** means the entry into or presence in a public water supply system of any substance which may be detrimental to health and/or quality of water.

(13) **"CROSS CONNECTION"** means any physical arrangement where a potable water supply is connected, directly or indirectly, with any other non-potable or unapproved water supply system or auxiliary system, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp coolers, or any other device which contains, or may contain, contaminated water, sewage, gases, or other liquids of an unknown or unsafe quality which may be capable of imparting contamination to the public water system as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or other temporary or permanent devices through which, or because of which, backflow could occur, are considered to be cross connections.

(14) **"DEGREE OF HAZARD"** means **HEALTH** (*high risk*) or **NON-HEALTH** *(low risk)* **HAZARD** classification that shall be attached to all actual or potential cross connections.

(15) **"DHS"** means Oregon Department of Human Services.

(16) **"DIRECTOR"** means the Public Works Superintendent or his/her designee.

(17) **"DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY** *(DCVA)*" means an assembly of two independently acting approved check valves,

including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks. This assembly is designed to protect against a non-health hazard.

(18) **"HEALTH HAZARD"** means an actual or potential threat of contamination of a physical, chemical, or biological nature to the public potable water system or the consumer's potable water system that would be a danger to health.

(19) **"NON-HEALTH HAZARD (POLLUTION)"** means an impairment of the quality the water to a degree that does not create a hazard to the public health, but does adversely affect the aesthetic qualities of such water for potable use.

(20) **"OAR"** means Oregon Administrative Rules.

(21) **"POINT OF USE ISOLATION"** means the appropriate backflow prevention within the consumer's water system at the point at which the actual or potential cross connection exists.

(22) **"POLLUTION HAZARD"** means an actual or potential threat to the physical properties of the water system or the potability of the public or the consumer's potable water system, but which would not constitute a health of system hazard, as defined. The maximum intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable or could cause minor damage to the system or its appurtenances.

(23) **"POTABLE WATER SUPPLY"** means any system of water supply intended or used for human consumption or other domestic use.

(24) **"PREMISE"** means any piece of property to which water is provided, including, but not limited to, all improvements, mobile structures and structures located on it.

(25) **"PREMISE ISOLATION"** means the appropriate backflow prevention at the service connection between the public water system and the premises.

(26) **"PRESSURE VACUM BREAKER BACKSIPHONAGE PREVENTION ASSEMBLY *(PVB)*"** means a device consisting of one of more spring loaded check valves and an independently operating air inlet valve installed as a unit between two tightly closing shut-off valves. The air inlet valve is internally loaded to the open position.

(27) **"REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY *(RP)*"** means an assembly containing two independently acting approved check valves, together with a hydraulically operating mechanically independent pressure differential relief valve, located between the check valves. and at the same time below the first check valve. The unit shall include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves at each end of the assembly. This assembly is designed to protect against a non-health hazard or health hazard.

(28) **"RESIDENT"** means a person or persons living within the territory served by the City or Cascade Locks.

(29) **"RETROFITTING"** means to furnish a service connection with parts or equipment made available after the time of construction or assembly installation.

(30) **"THERMAL EXPANSION"** means the pressure c related by the expansion of heated water.

SECTION 2. Purpose. The purpose of this Chapter is to protect the water supply of the City of Cascade Locks from contamination or pollution due to any existing or potential cross connections and to comply with OAR 333-061-0070, 0071, 0072, 0073, and 0074 as presently in effect or as hereafter amended.

SECTION 3. Application and Responsibilities. This Chapter applies throughout the City of Cascade Locks and to every premises and property served by the City of Cascade Locks Water System. It applies to any premise, public or private, regardless of date of connection to the City Water System. Every owner, occupant and person in control of any concerned premise is responsible for compliance with the terns and provisions contained herein.

SECTION 4. Cross Connection Regulated.

(1) No cross connection shall be created, installed, used or maintained within the territory served by the City, except in accordance with this Chapter.

(2) The Director shall carry out or cause inspections to be carried out to determine if any actual of potential cross connection exists. If found necessary, an assembly commensurate with the degree of hazard will be required to be installed at the service connection.

(3) The owner, occupant and person in control are responsible for all cross connection control within the premises.

(4) The use of any type of chemical spray attachment connected to the premise plumbing, including garden hose fertilizers and pesticide applicators, is prohibited within the City's water system without proper protection from the potential of backflow occurring.

(5) The use of any type of radiator flush kits attached to the premise plumbing is prohibited within the City's water system without proper protection from backflow occurring.

(6) All premises which appear on Table 1 of Chapter 33-061 of the OAR will be required to have a **RP** assembly at the service connection.

SECTION 5. Backflow Prevention Assembly Requirements. A Specialist employed by or under contract with the City shall determine the type of backflow assemblies to be installed within the City's water service area. All assemblies shall be installed at the service connection unless it is determined by the Specialist and approved by the Director that it should be installed at the point of use. An assembly shall be required in each of the following circumstances, but the Director is not limited to just these circumstances:

(1) When the nature and extent of any activity at a premise, or the materials used in connection with any activity at premises, or materials stored at premises, could contaminate or pollute the potable water supply.

(2) When a premises has one (1) or more cross connections as that term is defined I this Chapter.

(3) When internal cross connections are present that is not correctable.

(4) When intricate plumbing arrangements are present that make it impractical to ascertain whether cross connections exist.

(5) When the premises has a repeated history of cross connections being established or re-established.

(6) When entry to the premises is restricted so that inspections for cross connections cannot be made with sufficient frequency to assure that cross connections do not exist.

(7) When materials are being used such that, if backflow should occur, a health hazard could result.

(8) When an appropriate cross connection survey report form has not been filed with the Director.

(9) Any and all used water returns systems.

(10) If a point-of-use assembly that is protecting the City's distribution system has not been tested or repaired as required by this Chapter, the installation of a reduced pressure principle assembly will be required at the service connection at the premises owner expense.

(11) When there is upon the premises an auxiliary water supply that is or can be connected to the City's or supply system.

(12) All multi-story buildings and any building with a booster pump or elevated storage tank.

(13) There is piping or equipment for conveying liquids other than potable City water and that piping or other equipment is under pressure and installed and operated in a manner that could cause a cross connection.

(14) All services 2" or larger.

(15) When installation of an approved backflow prevention assembly is deemed by a Specialist to necessary to accomplish the purpose of these regulations.

(16) All presently installed backflow prevention assemblies or devices which do not meet the requirements of approved backflow prevention assemblies required by OAR 333-061-0070, but were approved assemblies or devices for the purpose described herein at the time of installation and which have been properly maintained, shall be allowed to remain in service, so long as they perform satisfactory and pass backflow test requirements. Whenever such existing device is moved from its present location, or the degree of hazard changes, or requires more than minimum maintenance, the device or assembly shall be replaced by a backflow prevention assembly that meets current requirements.

SECTION 6. New Construction.

(1) In all new nonresidential construction, an approved backflow assembly shall be installed at the service connection. The type of the assembly will be commensurate with the degree of hazard as determined by a Specialist.

(2) When a building is constructed on commercial premises, and the end use of the building is not determined of could change, a reduced pressure principle backflow prevention assembly shall be installed at the service connection to provide protection of the public water supply in the event of the most hazard use of the building.

(3) In all new construction where a backflow prevention assembly is required must be tested immediately upon installation.

SECTION 7. Retrofitting. Retrofitting shall be required on all service connections where an actual or potential cross connection exists, and wherever else the City deems retrofitting necessary.

SECTION 8. Lawn Irrigation. All lawn irrigation systems may be protected by an ATMOSPHERIC PRESSURE VACUUM BREAKER ***(AVB)*** or a PRESSURE VACUUM BREAKER BACKSIPHONAGE PREVENTION ASSEMBLY ***(PVB)*** when properly installed. These devices do not provide adequate protection if the are subject to flooding, back pressure, or it compressed air is used to winterize the system. In these situations, double check valve assemblies shall be used. In the event any system is equipped with an injector system or has submerged heads, a reduced pressure principle will be required.

SECTION 9. Thermal Expansion. It is the responsibility of the property owner, lessee, and person in control of the property to eliminate the possibility of damage from thermal expansion, if a closed system has been created by the installation of a backflow prevention assembly.

SECTION 10. Wholesale Customers. Any customer that has a contract for water services with the City must have an active, ongoing cross connection program. The cross connection program must be approved by the Director. The Director reserves the right to require a reduced pressure principle assembly at the interconnect.

SECTION 11. Mobile Units. Any mobile unit or apparatus which uses the City's water, or water from any premises within the City's system, shall first obtain written permission and pay all required fees. Water can only be obtained from the hydrant specified by the City. Fees will be set by Council Resolution.

SECTION 12. Installation Requirements. All backflow prevention assembly installations shall follow the requirements set forth in the Oregon Administrative Rules (OAR) 33-061-0070 and (OAR) 333-061-0071, or amended. The type of backflow prevention assembly required shall be commensurate with the degree of hazard that exists

and must, at all times, meet the standards of the DHS; all backflow prevention assemblies required under this section shall be of a type and model approved by the DHS.

SECTION 13. Effects of Backflow Assembly Installation. The City shall in no way be responsible of held liable for any decrease in water pressure or other negative effect cause by the installation of a backflow assembly.

SECTION 14. Fire System. An approved double check detector assembly shall be the minimum protection on fire sprinkler systems using piping material that is not approved for potable water use and does not provide for periodic flow through during each 24 hour period. A reduced pressure principle detector assembly ***(RPDA)*** must be installed if any solution other than the potable water can be introduced into the fire sprinkler system.

SECTION 15. Plumbing Code. As a condition of water service, customers shall install, maintain, and operate their piping and plumbing systems in accordance with the Oregon Specialty Plumbing Code, or as amended. If there is a conflict between this Chapter and the Plumbing Code, the more restrictive provision shall apply.

SECTION 16. Access To Premises. Authorized City personnel shall have access during reasonable ***business*** hours ***(Monday through Friday, excluding holidays, 8:00 AM to 6:00 PM)*** to all parts of a premise and within the structure to which water is supplied, to determine whether cross connections or other structural or sanitary hazards, including violation of these regulations, exist. ***Every effort will be made to schedule an appointment within ten (10) days to check such backflow systems unless it is deemed an immediate threat to the City water system.*** When such a condition becomes known, the Director of the utility shall deny or immediately discontinue the service to the premises by a physical break in service until the condition has been corrected. However, if any owner, occupant or person in control refuses authorized personnel access to a premise, or to the interior of a structure, during these hours for inspection, a reduced pressure principle assembly must be installed at the service connection to that premise at the owners expense.

SECTION 17. Annual Testing and Repairs. The owner of the premise served by the City assume all responsibility for testing, maintenance, and repair of the installed approved backflow prevention assembly, and shall have any and all assemblies tested immediately upon installation. All backflow assemblies are required to be tested by a Certified Backflow Prevention Assembly Tester annually (***1 time each year***) or more often in those instances where successive inspections indicate failure. All such assemblies found not functioning properly shall be promptly repaired or replaced immediately at the expense of the owner, occupant or person in control of the premise. In the event an assembly is moved, repaired or replaced it must be retested immediately. If an assembly is not promptly repaired or replaced, the Director may deny or discontinue water service to the premise.

SECTION 18. Responsibilities of Backflow Prevention Assembly Testers.

(1) All backflow assembly testers operating within The City of Cascade Locks shall be certified in accordance with all applicable regulations of the DHS.

(2) Persons certified as backflow prevention assembly testers shall agree to abide by all requirements of the United States Occupational Safety and Health Administration (OSHA) and have completed confined space entry training to enter any confined space within the City.

(3) No person shall operate as a backflow prevention assembly tester within The City of Cascade Locks without first being annually registered with the Director.

(4) At the time of registration, recertification, and/or upon the Director's request, each person certified as a backflow prevention assembly tester shall furnish evidence to show that he/she is insured and bonded to perform services, has a current valid DHS backflow assembly tester certification, and have proof of gauge accuracy verification within the past year.

(5) All test reports must be turned into the City within 10 working days following the completion of the test.

(6) Approved backflow assembly device testers may be required to notify the Director in advanced when the test is to be undertaken so that City representatives may witness any or all test to be performed.

SECTION 19. Costs of Compliance. All cost associated with purchase, installation, inspections, testing, replacement, maintenance, parts and repairs of the backflow prevention assembly are the financial responsibility of the property owner.

SECTION 20. Termination of Service.

(1) Failure on the part of any owner, occupant or person in control to install an approved backflow device, conduct an annual test on a backflow device, or to discontinue the use of all cross connections and to physically separate cross connections in accordance with this Chapter is sufficient cause for the immediate discontinuance of public water service to the premises.

SECTION 21. Notification of Water Treatment. Whenever any water user or the owner of the premises obtaining water from the City water system treats the water in any way or adds any chemical to the water before the water exits the premises plumbing, they shall notify the City in advance of doing so.

SECTION 22. Repeal of Prior Ordinances. City of Cascade Locks Ordinance No. 288 and amendments thereto are hereby repealed.

SECTION 23. Severability. Should any section, subsection, paragraph, sentence, clause or phrase of this ordinance be declared invalid, such declaration shall not affect the validity of any other section, subsection, paragraph, sentence, clause, or phrase; and if this ordinance, or any portion thereof, should be held to be invalid on one ground but valid on another, it shall be construed that the valid ground is the one upon which said ordinance, or such portion thereof, was enacted.

SECTION 24. Emergency Clause. In as much as this Ordinance is necessary for the immediate preservation of health, peace, and safety, an emergency is hereby declared to

exist, and this Ordinance shall be in full force and effect immediately upon its passage and approval by the Mayor.

SECTION 25. Effective Date. This ordinance shall become effective on **May 24, 2006.**

ADOPTED by the City Council this **12th** day of **June**, 2006.