Appendix A

Distribution Facilities Construction Standards

YAKIMA COUNTY, WASHINGTON

Special Provisions
For
Water Main Construction

The 2018 Standard Specifications for Road, Bridge, and Municipal Construction as prepared by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter, are adopted by the Board of County Commissioners of Yakima County as Standard Specifications. These Standard Specifications and the Amendments thereto shall apply to all work to be done under this project except as these Special Provisions expressly alter or modify them. In using said Standard Specifications and Amendments thereto, Secretary of Transportation, Engineer and like terms therein will be construed to mean Yakima County Engineer and where State or Thurston County is used it will mean Yakima County.

The Special Provisions hereinafter contained supersede any conflicting provisions of the 2018 Standard Specifications for Road, Bridge, and Municipal Construction and the Amendments thereto.

1-06 CONTROL OF MATERIAL

1-06.1 Approval of Materials Prior to Use

Section 1-06.1 of the Standard Specifications shall be supplemented with the following:

The Contractor shall submit to the County for review shop, catalog, and other appropriate drawings and descriptive information prior to fabrication or ordering of all materials specified. Information shall be submitted in sufficient time to allow the County not less than 10 regular working days for review. The minimum number of copies of such information to be submitted shall be four.

When the submittals have been reviewed by the County, two sets will be returned to the Contractor. If major changes or corrections are necessary, the submittals will be returned to the contractor with such changes or corrections indicated, and the Contractor shall correct and resubmit in the same manner and quantity as specified for the original submittals.

No manufactured items or materials shall be installed until the submittals have been approved and appropriately stamped by the County.

7-09 WATER MAINS

7-09.2 Materials

Section 7-09.2 of the Standard Specifications shall be supplemented with the following:

Bedding material shall meet the requirements of Section 9-03.12(3), except that crushed granular material used for bedding material shall be crushed surfacing top course meeting the requirements of Section 9-03.9(3).

Controlled density fill shall meet the requirements of Section 2-09.3(1)E.

The reference to Blow Off Assemblies in Section 7-09.2 of the Standard Specifications shall be revised to read as follows:

Blow Off Assemblies 9-30.5(7)

7-09.3(5) Grade and Alignment

The first sentence of the third paragraph in Section 7-09.3(5) of the Standard Specifications shall be replaced with the following:

The depth of trenching for water mains shall be such as to give a minimum cover of 48" over the top of the pipe unless otherwise shown in the Plans.

7-09.3(6) Existing Utilities

Section 7-09.3(6) of the Standard Specifications shall be supplemented with the following:

When the horizontal separation between a water line and a sewer line is less than 10-feet, then the water line shall be encased in controlled density fill (CDF). The dimensions of the CDF shall be greater than or equal to the dimensions of the trench bedding material.

When the water line crosses within 18 vertical inches of a sewer line, or when the water line crosses under a sewer line, then the water line shall be encased in CDF a minimum of 10-feet to either side of the crossing.

The special conditions described above apply to both main lines and side services.

7-09.3(9) Bedding the Pipe

Section 7-09.3(9) of the Standard Specifications shall be replaced with the following:

Pipe zone bedding shall be placed to the depths shown on Yakima County Standard Plan W-3.

Pipe bedding below the pipe shall be graded and compacted to form a continuous and uniform bearing for the pipe at every point between bell holes, except that the grade may be disturbed for the removal of lifting tackle. Pipe bedding below the pipe shall be compacted in a single lift to a minimum of 85 percent and a maximum of 95 percent of maximum density prior to laying the pipe.

Pipe bedding from the bottom of the pipe to 6-inches above the pipe shall be placed in even lifts on each side of the pipe and compacted to a minimum of 95 percent of maximum density by approved hand-held tools, so as to provide firm and uniform support for the full length of the pipe, valves, and fittings. Care shall be taken to prevent damage to the pipe or its protective coating. Limit compacted lift thickness to 6-inches.

When controlled density fill is used in place of bedding material, bolted connections shall be wrapped in an 8-mil polyethylene sheet to provide access to the connections.

7-09.3(10) Backfilling Trenches

Section 7-09.3(10) of the Standard Specifications shall be supplemented with the following:

Materials excavated from the trench may be used for trench backfill, except that organic material, frozen lumps, asphalt or concrete pavement, or rocks larger than eight inches in the greatest dimension shall not be used; and except that materials determined by the Engineer to be unsuitable for backfill at the time of excavation shall be removed and replaced with imported backfill material. Bedding Material shall be used for imported backfill material, except that Bank Run Gravel for Trench Backfill meeting the requirements of Section 9-03.19 may be used in untraveled areas.

7-09.3(11) Compaction of Backfill

The first paragraph of Section 7-09.3(11) of the Standard Specifications shall be replaced with the following:

Trench backfill shall be compacted to at least 85 percent of maximum density in trenches in untraveled areas, and to at least 95 percent of maximum density in trenches located in streets, roadway shoulders, driveways, or sidewalks, as specified in Section 2-03.3(14)D.

7-09.3(19)A Connections to Existing Mains

Section 7-09.3(19)A of the Standard Specifications shall be supplemented with the following:

Connections to existing mains shall be made with hot taps unless otherwise directed.

7-09.3(20) Detectable Marking Tape

The first sentence of Section 7-09.3(20) of the Standard Specifications shall be replaced with the following:

Detectable marking tape shall be installed over all water lines, including service lines.

7-09.3(24) Disinfection of Water Mains

Section 7-09.3(24) of the Standard Specifications shall be supplemented with the following:

New sections of water main must be separated from the existing system until satisfactory flushing, disinfection, and bacteriological sampling has been completed. Disinfection will not be permitted against a closed valve unless a temporary plate is installed between the valve and the new section of water main. Some new sections of water main will require a piece of connecting pipe to be installed between the new water main and the existing system after satisfactory bacteriological sample results are obtained. Before making any final connections, the interiors of all pipe and fittings used to make the final connection must be disinfected by swabbing or spraying with a chlorine solution.

Disinfection shall be in accordance with AWWA C651 and these Special Provisions. As a minimum, after final flushing and before the new water main is placed in service, two consecutive sets of acceptable samples shall be collected from the new main. Each set shall include as a minimum at least one sample from every 1200-feet of the new water main, plus one sample from the end of the line, and at least on sample from each branch. The first set of samples shall be collected at least 24-hours after flushing, and the second set of samples shall be collected at least 24-hours after the first set of samples.

When dry calcium hypochlorite is used for disinfection of the pipe, the contractor shall fill the pipe in such a manor as to prevent the calcium hypochlorite from being washed to the end of the pipe.

7-09.3(25) Tracer Wire (New Section)

The Contractor shall install a tracer wire, in addition to the detectable marking tape, over all water lines, including service lines. The tracer wire shall be 12 gauge copper wire with blue coded UF insulation. The tracer wire shall be attached to center of pipe at minimum 6' intervals and at bends with duct tape. Water tight connectors suitable for direct bury shall be used as connectors for splices. Bare wire contact points shall be provided at valve boxes, meter boxes, and air release and blow off assemblies.

7-12 VALVES FOR WATER MAINS

7-12.2 Materials

The first paragraph in Section 7-12.2 of the Standard Specifications shall be supplemented with the

following:

Valve Stem Extensions	9-30.3(6)
Debris Cap (New Section)	9-30.3(10)

7-15 SERVICE CONNECTIONS

7-15.3(1) Flushing and Disinfection

Section 7-15.3(1) of the Standard Specifications shall be supplemented with the following:

Service lines installed in conjunction with new water mains shall be flushed and disinfected with the water main in accordance with Section 7-09.3(24). Following chlorination, treated water shall be flushed from all service lines until the replacement water shows the absence of chlorine. In the event the supply water is chlorinated, the chlorine residual shall not be in excess of that carried in the water supply system.

7-15.3(2) Pressure Testing (New Section)

Service lines installed in conjunction with new water mains shall be pressure tested with the water main in accordance with Section 7-09.3(23).

9-30 WATER DISTRIBUTION MATERIALS

9-30.2(6) Restrained Joints

Section 9-30.2(6) of the Standard Specifications shall be supplemented with the following:

Joint restraint devices for PVC pipe shall meet the requirements of UNI-B-13-92. Joint restraint devices used on mechanical joints shall allow full joint deflection capabilities of the joint after installation, and shall be as manufactured by The Ford Meter Box Co., or equal.

9-30.3(1) Gate Valves (3-inches to 12-inches)

Section 9-30.3(1) of the Standard Specifications shall be supplemented with the following:

Gate valves shall be as manufactured by Clow Corporation, M&H Valve Co., Mueller, or equal.

Valves larger than 10 inches in size shall be butterfly valves.

9-30.3(3) Butterfly Valves

Section 9-30.3(3) of the Standard Specifications shall be supplemented with the following:

Butterfly valves shall be as manufactured by Pratt, Mueller, American Darling, M&H Valve Co., or approved equal.

9-30.3(4) Valve Boxes

Section 9-30.3(4) of the Standard Specifications shall be supplemented with the following:

Valve box top sections shall be 18-inches in height and shall be Rich Model 940-B, or equal.

9-30.3(10) Debris Cap (New Section)

Debris cap shall prevent dirt and debris from entering the top of valve box. Debris cap shall have blue locking handle and shall be Model DC625 as manufactured by SW Services, Inc. Phoenix, Arizona, or equal.

9-30.5 Hydrants

Section 9-30.5 of the Standard Specifications shall be supplemented with the following:

Fire hydrants shall be Mueller Super Centurion 250 Model A-423, M & H 929, Clow Medallion, or approved equal.

9-30.5(2) Hydrant Dimensions

Section 9-30.5(2) of the Standard Specifications shall be supplemented with the following:

Fire hydrants shall have a main valve opening size of 5-1/4 inches, a 1-1/4 inch pentagon operating nut, one 4-1/2 inch N.S.T. steamer port with storz coupling and two 2-1/2 inch N.S.T. hose connections. Fire hydrants shall be painted with one coat of high visibility yellow paint after installation.

9-30.5(7) Blow-Off Hydrants (New Section)

Blow-off hydrants shall be suitable for direct burial and shall be of a non-freezing, self draining type. Blow-off hydrants shall have a bronze 2-1/2 inch N.S.T. outlet. All working parts shall be of bronze-to bronze design, and shall be serviceable from above grade with no digging. Blow-off hydrants shall be as Manufactured by Kupferle Foundry Co., St. Louis, MO, or approved equal.

9-30.6 Water Service Connections (2 Inches and Smaller)

9-30.6(2) Corporation Stops

Section 9-30.6(2) of the Standard Specifications shall be supplemented with the following:

Corporation stops shall be Ballcorp Corporation Stops, as manufactured by the Ford Meter Box Co., Inc. or equal.

9-30.6(3) Service Pipes

Section 9-30.6(3) of the Standard Specifications shall be replaced with the following:

Service line pipe shall be polyethylene tubing meeting the requirements of AWWA C901. Tubing shall have a minimum diameter of 1 inch and shall be high molecular weight with a 200 psi rating. Tubing used for 1 inch service lines shall be SIDR 7 (iron pipe size, PE 3408 material). Tubing used for 1½ inch and 2 inch service lines shall be SDR 9 (copper tube size).

9-30.6(4) Service Fittings

Section 9-30.6(4) of the Standard Specifications shall be replaced with the following:

Service fittings shall be pack joint couplings as manufactured by the Ford Meter Box Co., Inc. or equal. Stainless steel stiffeners shall be used with pack joint couplings.

9-30.6(5) Meter Setters

Section 9-30.6(5) of the Standard Specifications shall be supplemented with the following:

Meter setters shall be copper with angle check valve, padlock wings on inlet ball valve (padlock in the off position) and pack joint-type compression fittings. Meter setters shall be as manufactured by the Ford Meter Box Co., Inc., or approved equal. Meter setter for 1-inch service lines and ¾-inch meters shall be Ford Copper Setter Model VBH72-18W-66-44, or equal.

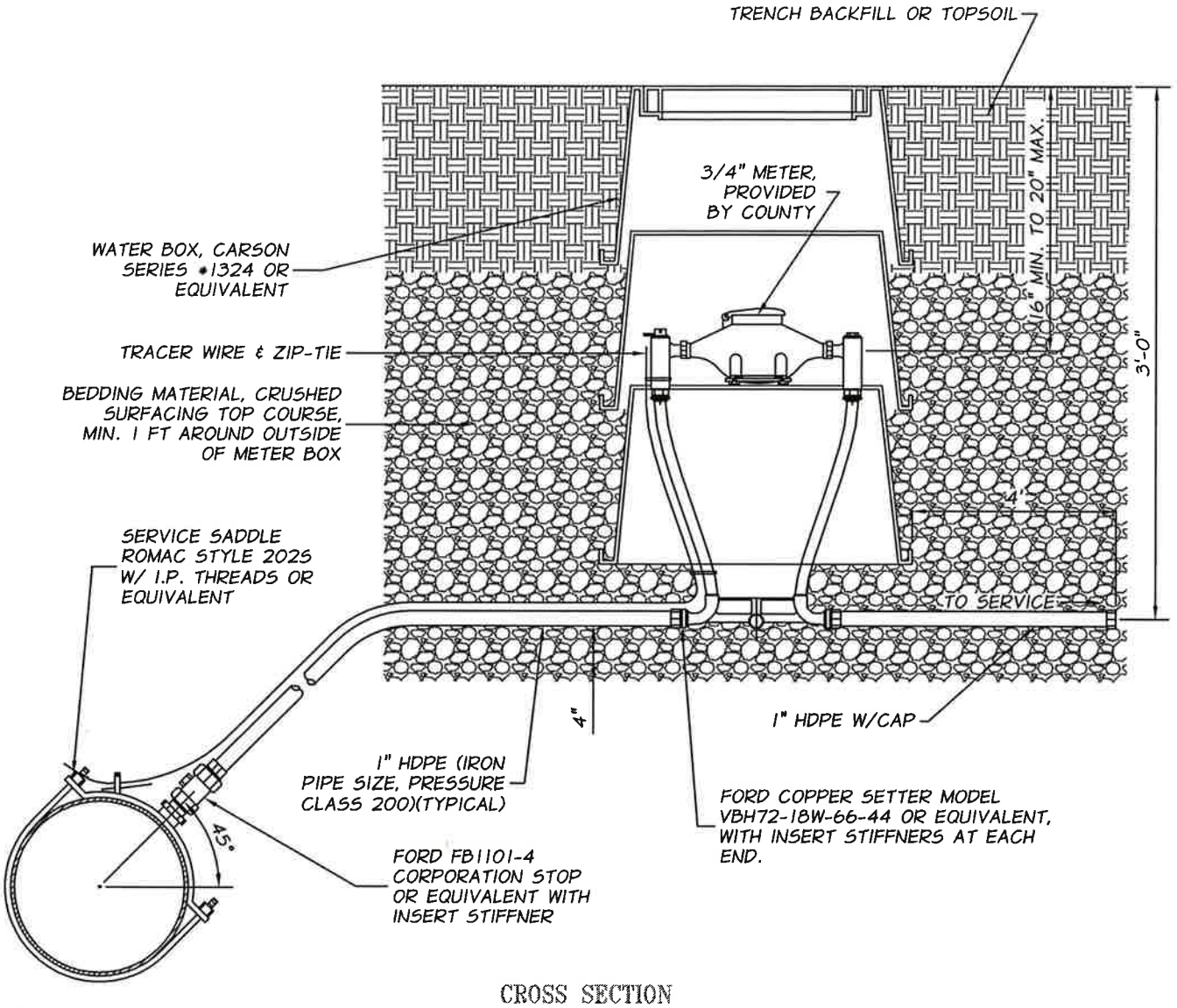
9-30.6(7) Meter Boxes

Section 9-30.6(7) of the Standard Specifications shall be supplemented with the following:

Meter boxes for ¾-inch service meters located in non-traffic areas shall be as manufactured by Carson Industries Series 1324, or equal.

Meter boxes for ¾-inch service meters located in driveways or parking areas shall be Old Castle 1118 H-Series with polymer concrete cover, Old Castle 1118 Synertech with duomold composite cover, or equal.

* PART NUMBER SHOWN ARE FOR 3/4" METER ASSEMBLY



CROSS SECTION
NTS

NOTES:

1) BOX SHALL BE LOCATED 2' TO 3' BEHIND CURB OR SIDEWALK.
2) CONNECT TRACER WIRE TO MAINLINE TRACER WIRE WITH WATER TIGHT CONNECTOR AND TO SETTER WITH NYLON ZIP-TIES. TAPE TO SERVICE LINE AT 6' INTERVALS.
3) SERVICE SADDLES INSTALLED ON PVC PIPE SHALL BE A MINIMUM OF 24" FROM BOTH THE BACK OF THE BELL AND THE SPIGOT INSERTION LINE. SERVICE SADDLES SHALL ALSO BE AT LEAST 18" APART WHEN SERVICES ARE ON OPPOSITE SIDES OF THE MAINLINE, AND 36" APART WHEN ON THE SAME SIDE OF THE MAINLINE. THESE RESTRICTIONS DO NOT APPLY TO SERVICES INSTALLED ON DUCTILE IRON PIPE.

WATER SERVICE DETAIL

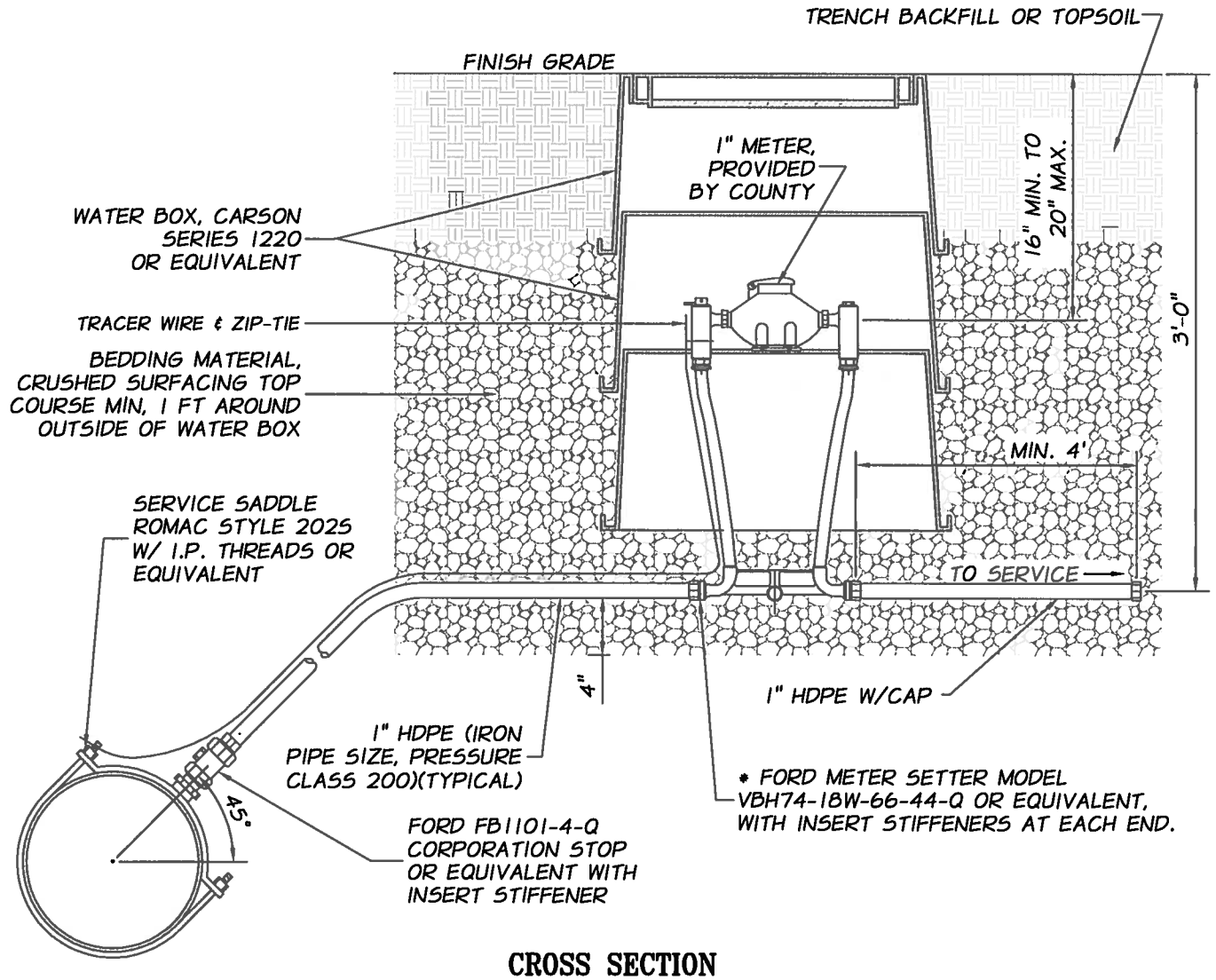
COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY: Joe Stung
Utilities Manager
DATE: 7/6/18

REVISION:	DESCRIPTION:	DATE:
K.P.	STANDARD REVIEW	02-28-03
J.M.	STANDARD REVIEW	06-09-09
J.M.	ADDED NOTES, AND MODIFIED DIMENSION	01-26-11
J.M.	ADDED TRACER WIRE AND ZIP-TIE INFO.	3-11-11
J.M.	REVISED NOTE: WATER TIGHT	12-12-14

STANDARD PLAN
W-1
SHEET 1 OF 1
FILE NAME: Q:\STANDARDS\WATER\W1.DWG

Q:\Standards\WATER\W1.dwg, Layout1, 6/29/2018 3:20:30 PM



CROSS SECTION

NTS

NOTES:

1) BOX SHALL BE LOCATED 2' TO 3' BEHIND CURB OR SIDEWALK.
2) CONNECT TRACER WIRE TO MAINLINE TRACER WIRE WITH SPLIT BOLT OR SIMILAR CONNECTOR AND TO SETTER WITH NYLON ZIP-TIES. TAPE TO SERVICE LINE AT 6' INTERVALS.
3) SERVICE SADDLES INSTALLED ON PVC PIPE SHALL BE A MINIMUM OF 24" FROM BOTH THE BACK OF THE BELL AND THE SPIGOT INSERTION LINE. SERVICE SADDLES SHALL ALSO BE AT LEAST 18" APART WHEN SERVICES ARE ON OPPOSITE SIDES OF THE MAINLINE, AND 36" APART WHEN ON THE SAME SIDE OF THE MAINLINE. THESE RESTRICTIONS DO NOT APPLY TO SERVICES INSTALLED ON DUCTILE IRON PIPE.

1" WATER SERVICE DETAIL

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Joe Stump
Utilities Manager
12/6/12
DATE:

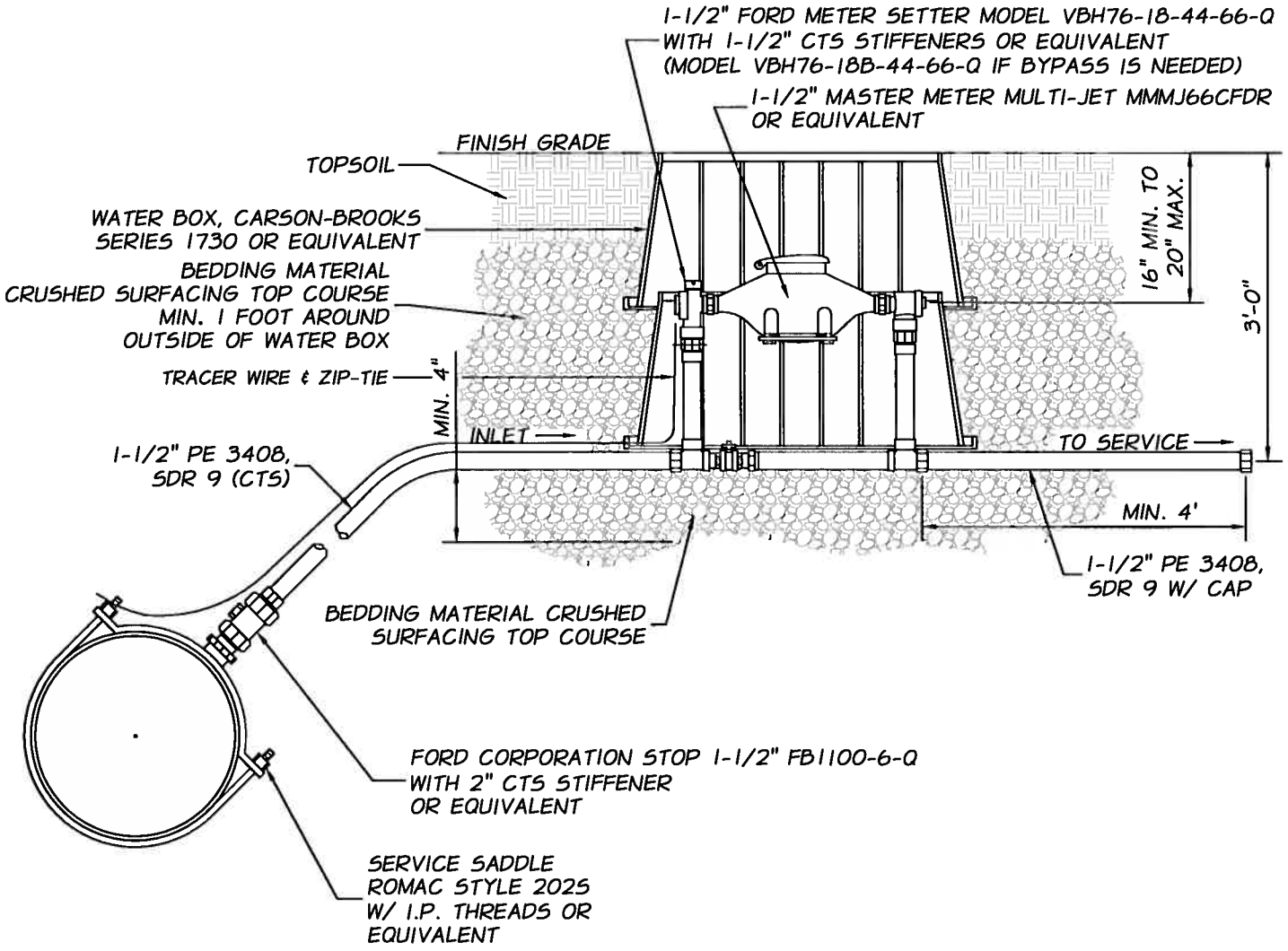
REVISION:	DESCRIPTION:	DATE:
J.M.	ADDED TRACER WIRE & ZIP-TIE INFO.	3-11-11
J.M.	REVISED LEADERS AND DIMENSION.	12-5-12

STANDARD PLAN

W-1b

SHEET 1 OF 1

FILE NAME: Q:\STANDARDS\WATER\W-1b.DWG



CROSS SECTION

NTS

NOTES:

1) BOX SHALL BE LOCATED 2' TO 3' BEHIND CURB OR SIDEWALK.
2) CONNECT TRACER WIRE TO MAINLINE TRACER WIRE WITH SPLIT BOLT OR SIMILAR CONNECTOR AND TO SETTER WITH NYLON ZIP-TIES. TAPE TO SERVICE LINE AT 6' INTERVALS.
3) SERVICE SADDLES INSTALLED ON PVC PIPE SHALL BE A MINIMUM OF 24" FROM BOTH THE BACK OF THE BELL AND THE SPIGOT INSERTION LINE. SERVICE SADDLES SHALL ALSO BE AT LEAST 18" APART WHEN SERVICES ARE ON OPPOSITE SIDES OF THE MAINLINE, AND 36" APART WHEN ON THE SAME SIDE OF THE MAINLINE. THESE RESTRICTIONS DO NOT APPLY TO SERVICES INSTALLED ON DUCTILE IRON PIPE.

1-1/2" WATER SERVICE DETAIL

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager
DATE: 12/6/12

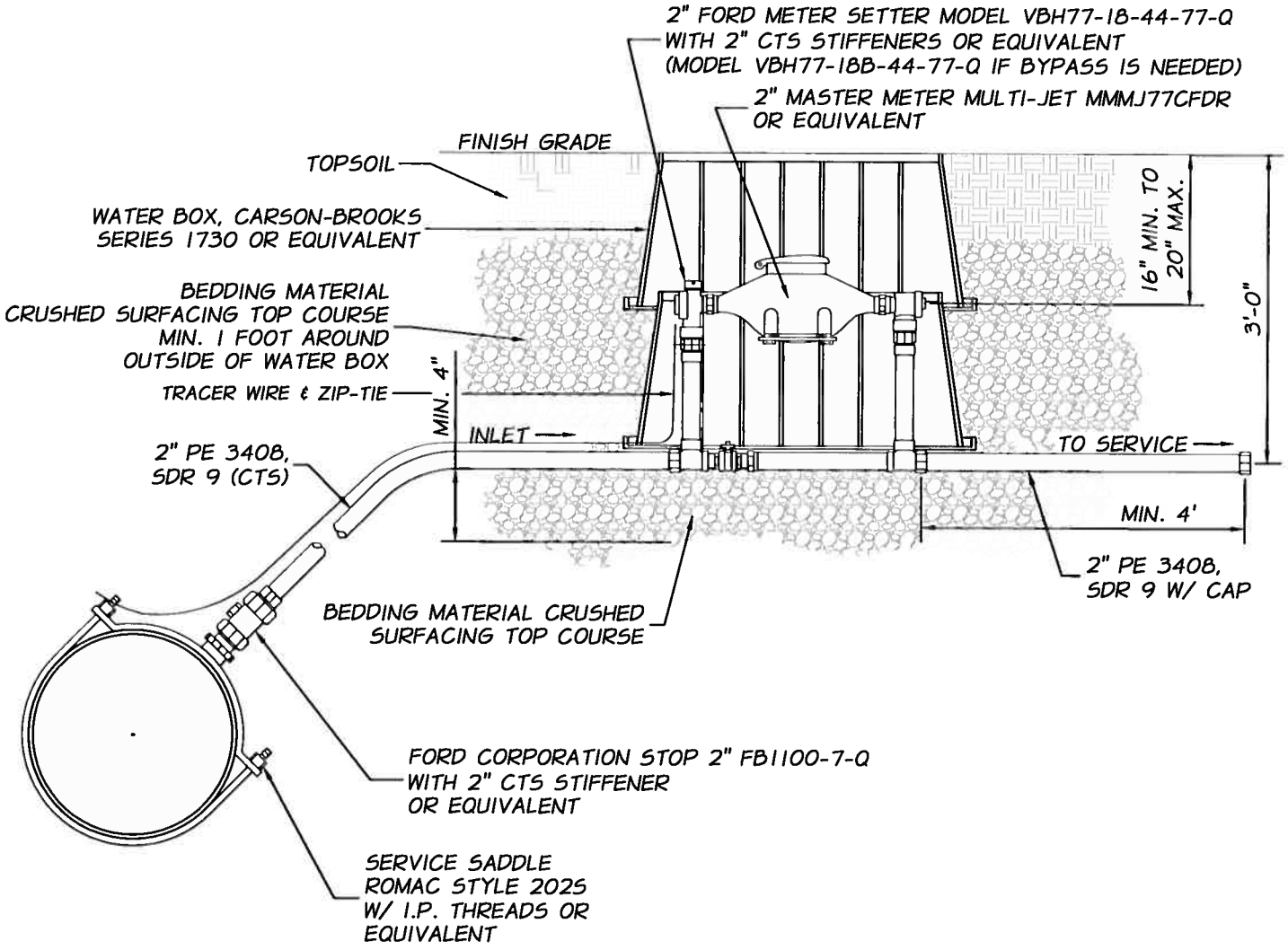
REVISION:	DESCRIPTION:	DATE:
J.M.	ADDED TRACER WIRE AND ZIP-TIE INFO.	3-11-11
J.M.	REVISED LEADERS.	12-5-12

STANDARD PLAN

W-1c

SHEET 1 OF 1

FILE NAME: Q:\STANDARDS\WATER\W1-c.dwg



CROSS SECTION
NTS

NOTES:

1) BOX SHALL BE LOCATED 2' TO 3' BEHIND CURB OR SIDEWALK.
2) CONNECT TRACER WIRE TO MAINLINE TRACER WIRE WITH WATER TIGHT CONNECTOR AND TO SETTER WITH NYLON ZIP-TIES. TAPE TO SERVICE LINE AT 6' INTERVALS.
3) SERVICE SADDLES INSTALLED ON PVC PIPE SHALL BE A MINIMUM OF 24" FROM BOTH THE BACK OF THE BELL AND THE SPIGOT INSERTION LINE. SERVICE SADDLES SHALL ALSO BE AT LEAST 18" APART WHEN SERVICES ARE ON OPPOSITE SIDES OF THE MAINLINE, AND 36" APART WHEN ON THE SAME SIDE OF THE MAINLINE. THESE RESTRICTIONS DO NOT APPLY TO SERVICES INSTALLED ON DUCTILE IRON PIPE.
4) WHEN LOW FLOWS ARE ANTICIPATED, METER SHALL BE MASTER METER OCTAVE METER OR EQUIVALENT.
5) 1-1/2" METER MAY BE INSTALLED BY USING TWO FORD METER ADAPTERS #A67 OR EQUAL.

1-1/2 OR 2" WATER SERVICE DETAIL

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:

Utilities Manager **DATE:**

REVISION:	DESCRIPTION:	DATE:
J.M.	ADDED TRACER WIRE AND ZIP-TIE INFO.	3-11-11
J.M.	REVISED LEADERS AND NOTES.	12-5-11
J.M.	REVISED NOTE: WATER TIGHT	12-12-14

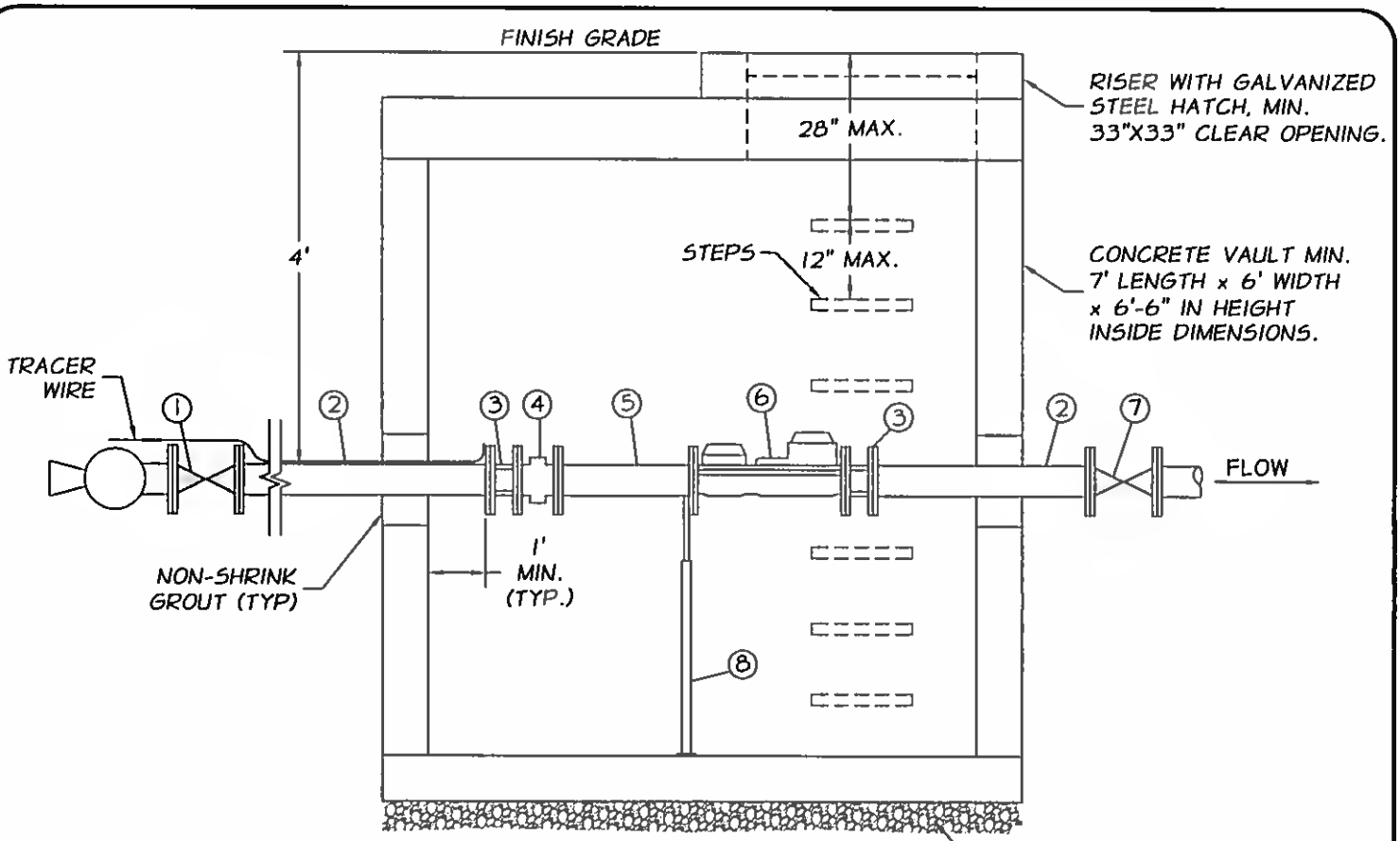
STANDARD PLAN

W-1d

SHEET 1 OF 1

FILE NAME: Q:\STANDARDS\WATER\W-1d.DWG

Q:\Standards\WATER\W1d.dwg, Layout1, 12/12/2014 7:55:52 AM



CROSS SECTION
NTS

FITTING SCHEDULE

① TEE WITH FLxMJ GATE VALVE (OR TAPPING SADDLE AND VALVE) WITH VALVE BOX AND THRUST BLOCK.
② DI PIPE.
③ RESTRAINED FLANGED COUPLING ADAPTER.
④ FLxFL PLATE STRAINER.
⑤ FLxFL DI SPOOL, MIN. LENGTH 5 PIPE DIAMETERS.
⑥ COMPOUND METER.
⑦ MJxMJ GATE VALVE, WITH VALVE BOX.
⑧ PIPE SUPPORT.

NOTES:

1) INSTALL WATER BOX, CARSON SERIES 1220 OR EQUIVALENT WITH METER TRANSMITTERS NEAR CONCRETE VAULT.
2) CONNECT TRACER WIRE TO MAINLINE TRACER WIRE WITH WATER TIGHT CONNECTOR AND TO FLANGED COUPLING ADAPTER WITH NYLON ZIP-TIES. TAPE TO SERVICE LINE AT 6' INTERVALS.
3) RESTRAIN ALL JOINTS UPSTREAM OF METER WITHIN 15' OF VAULT.
4) INSTALL SERVICE LINE 1'-6" OFF SIDEWALL OF VAULT.
5) DO NOT INSTALL COMPOUND METER AT HIGH POINT IN LINE.
6) PROVIDE MIN. STRAIGHT RUN OF 5 PIPE DIAMETERS UPSTREAM AND 2 PIPE DIAMETERS DOWNSTREAM OF METER.

4" WATER SERVICE DETAIL

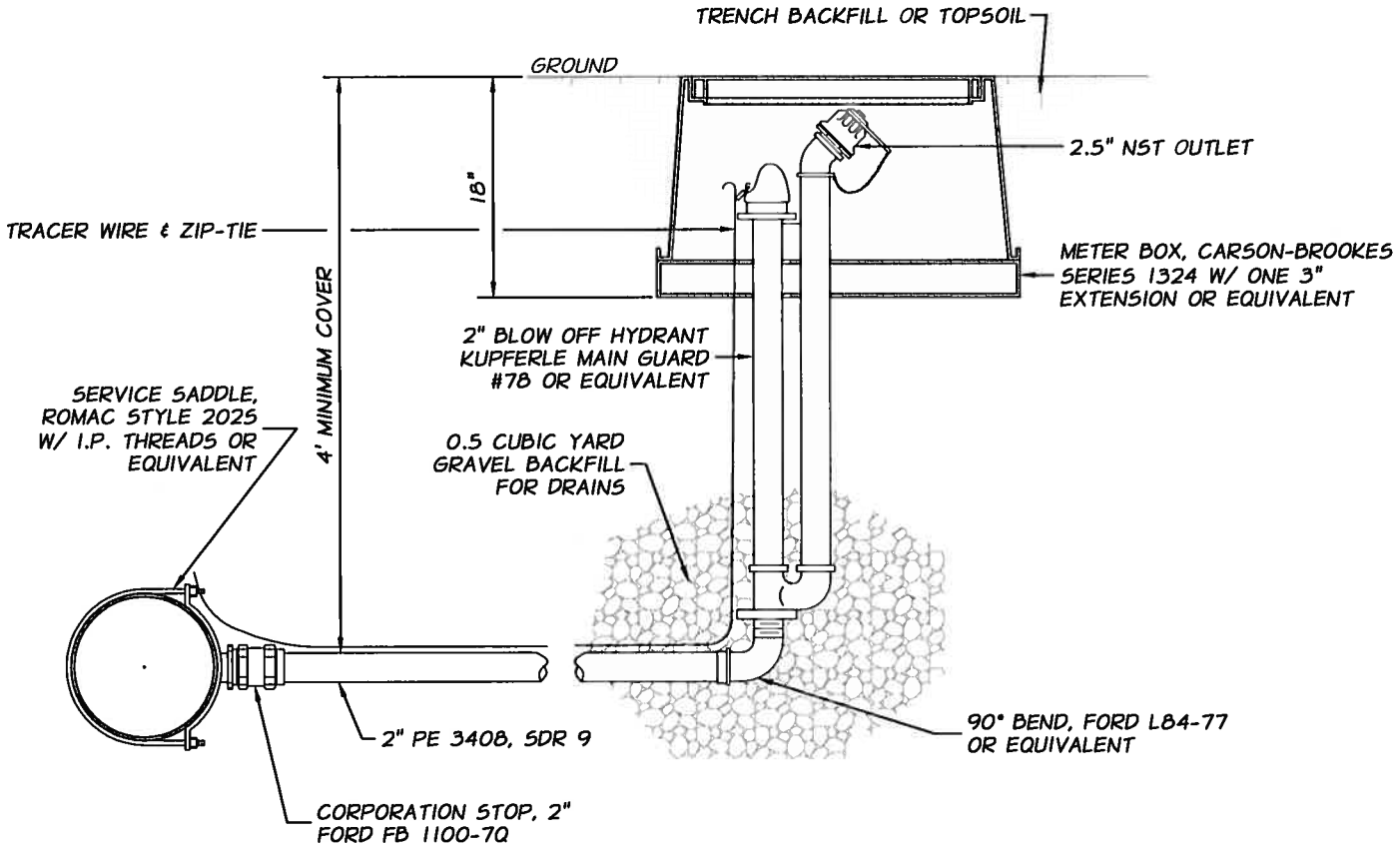
COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager
DATE: 3/31/16

REVISION:	DESCRIPTION:	DATE:

STANDARD PLAN
W-1e
SHEET 1 OF 1
FILE NAME: Q:\STANDARDS\WATER\W-1e.DWG

Q:\Standards\WATER\W1e.dwg, 3/31/2016 7:06:21 AM



CROSS SECTION
NTS

NOTES:

1) CONNECT TRACER WIRE TO MAINLINE TRACER WIRE WITH WATER TIGHT CONNECTOR AND TO BLOW OFF WITH NYLON ZIP-TIES. TAPE TO PE PIPE AT 6' INTERVALS.

BLOW OFF ASSEMBLY

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager: Joe Stanley DATE: 1/8/15

REVISION:	DESCRIPTION:	DATE:
K.P.	STANDARD REVIEW	02-28-03
J.M.	STANDARD REVIEW	06-09-09
J.M.	ADDED TRACER WIRE AND ZIP-TIE INFO.	3-11-11
J.M.	REVISED NOTE: WATER TIGHT	12-12-14

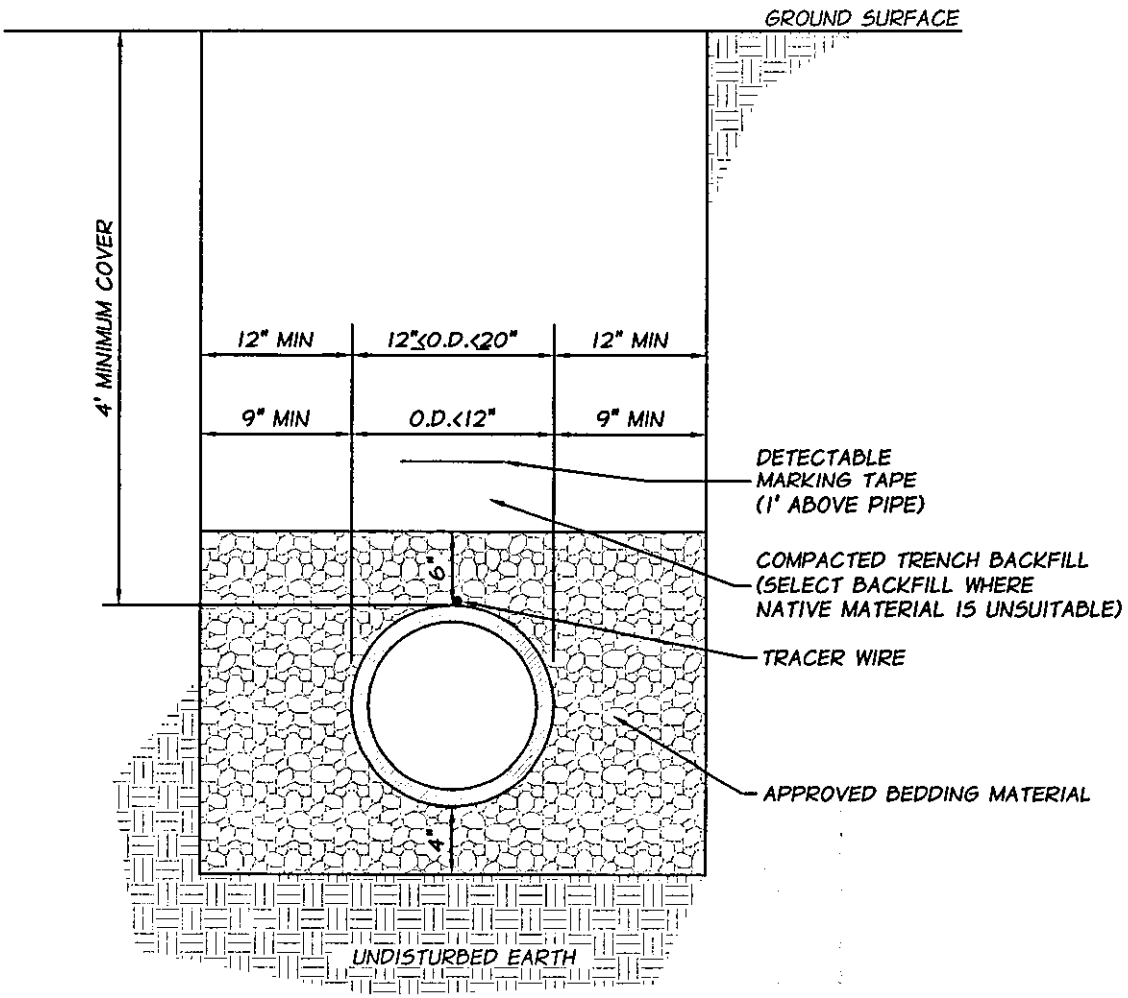
STANDARD PLAN

W-2

SHEET 1 OF 1

FILE NAME: Q:\STANDARDS\WATER\W2.DWG

Q:\Standards\WATER\W2.dwg, Layout1, 12/30/2014 1:09:06 PM



CROSS SECTION
NTS

NOTES:

1) MECHANICAL COMPACTION SHALL BE USED FOR ALL TRENCHES IN THE ROADWAY PRISM. WATER SETTLING MAY BE USED OUTSIDE THE ROADWAY PRISM.
2) ACTUAL SLOPE OF TRENCH SIDES TO BE DETERMINED BY THE CONTRACTOR TO FIT THE METHOD OF CONSTRUCTION AND ALL SAFETY REQUIREMENTS.

TYPICAL WATER MAIN TRENCH DETAIL

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager

4-21-10
DATE:

REVISION:	DESCRIPTION:	DATE:
K.P.	STANDARD REVIEW	02-28-03
J.M.	STANDARD REVIEW	06-09-09

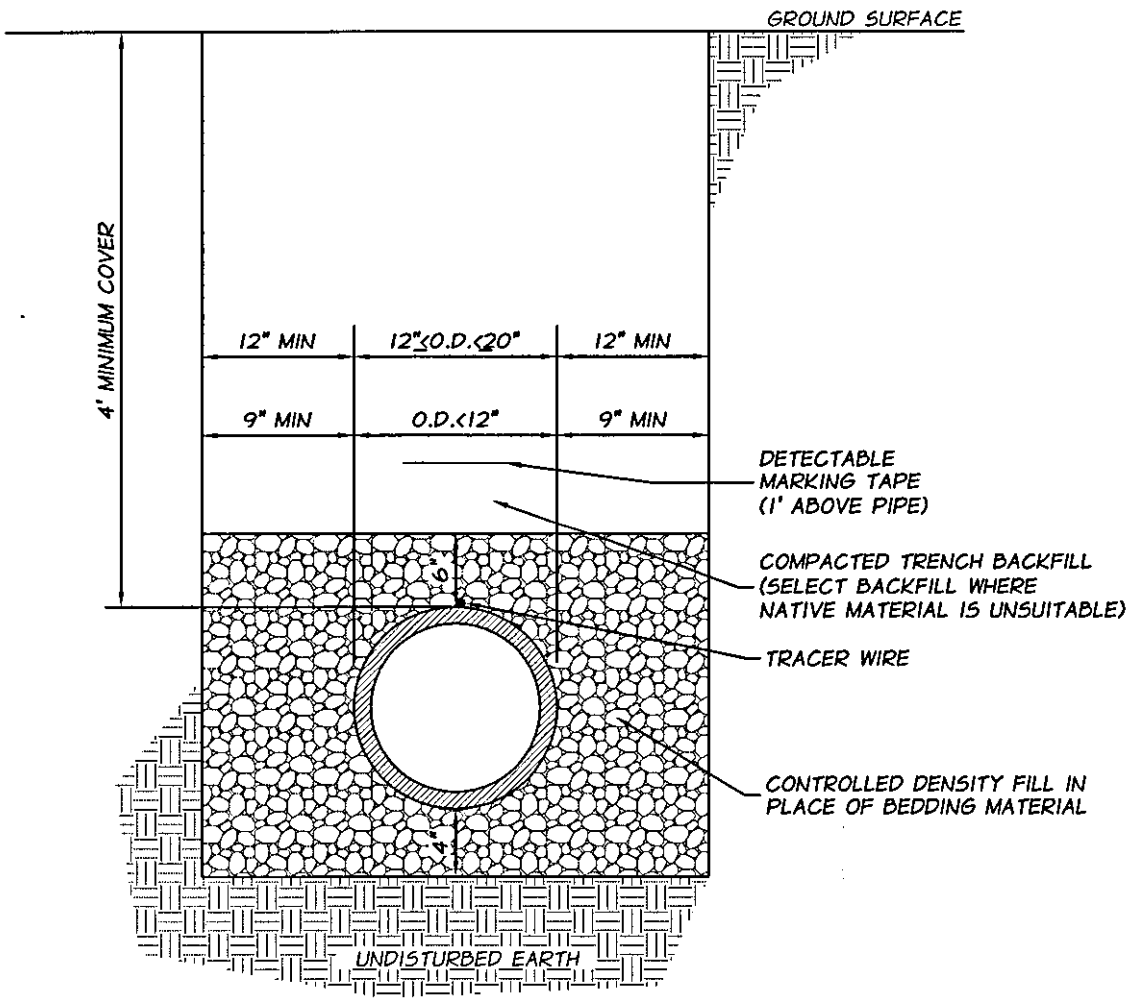
STANDARD PLAN

W-3

SHEET 1 OF 1

FILE NAME: Q:\STANDARDS\WATER\W3.DWG

Q:\Standards\WATER\W3.dwg, 4/21/2010 12:43:25 PM



CROSS SECTION
NTS

NOTES:

1) MECHANICAL COMPACTION SHALL BE USED FOR ALL TRENCHES IN THE ROADWAY PRISM. WATER SETTLING MAY BE USED OUTSIDE THE ROADWAY PRISM.
2) ACTUAL SLOPE OF TRENCH SIDES TO BE DETERMINED BY THE CONTRACTOR TO FIT THE METHOD OF CONSTRUCTION AND ALL SAFETY REQUIREMENTS.

CONTROLLED DENSITY FILL

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager: [signature]
DATE: 4/8/10

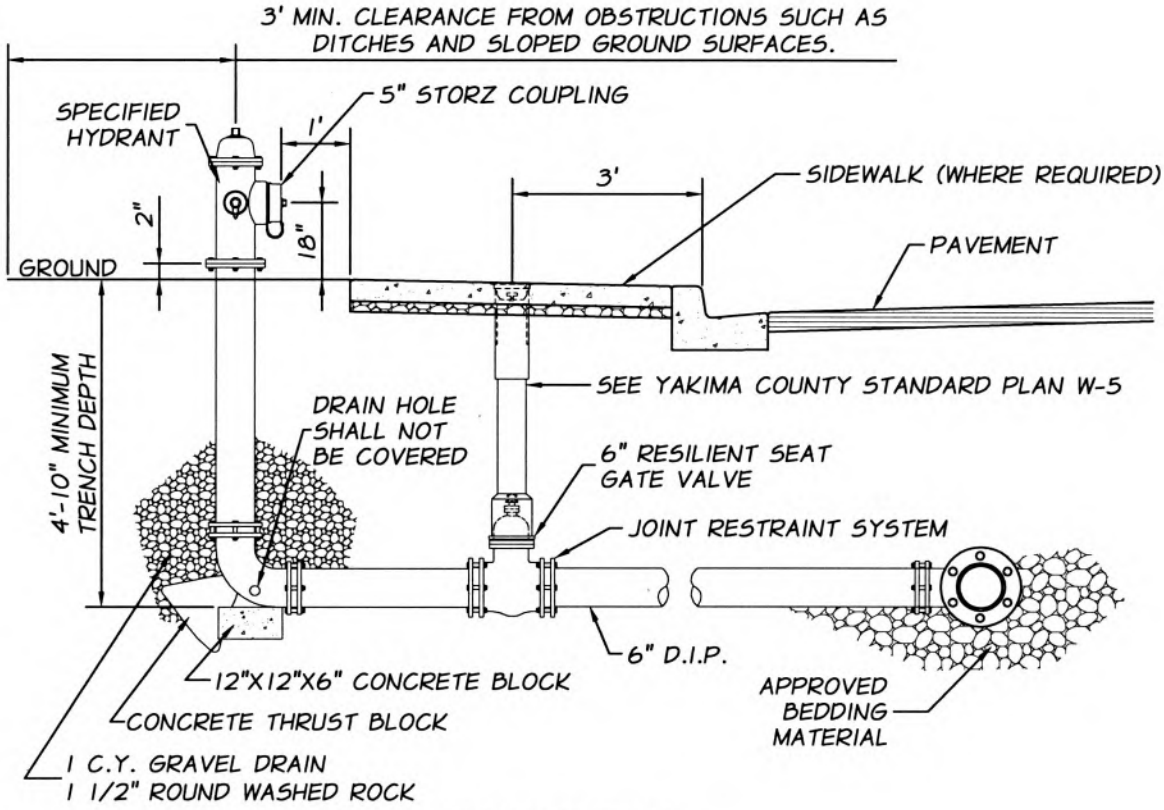
REVISION:	DESCRIPTION:	DATE:

STANDARD PLAN

W-3B

SHEET 1 OF 1

FILE NAME: G:\STANDARDS\WATER\W3B.DWG



CROSS SECTION
NTS

NOTES:

1) ALL MECHANICAL JOINTS SHALL BE RESTRAINED AS SPECIFIED IN SECTION 9-30.2(6) OF THE STANDARD SPECIFICATIONS.
2) MINIMUM TRENCH DEPTH IS 4'-10". MINIMUM DEPTH MAY INCREASE WHEN HYDRANTS ARE INSTALLED ON DISTRIBUTION MAINS LARGER THAN 8" IN DIAMETER, OR WHEN THE DISTRIBUTION MAIN HAS MORE THAN 4' OF COVER.
3) GRADELOK OR EQUIVALENTS SHALL BE USED WHEN NECESSARY TO MAINTAIN 2" BETWEEN THE SIDEWALK FLANGE AND THE FINISHED GRADE.
4) STORZ COUPLING SHALL BE 5" STORZ X 4.5" N.S.T., 1/4 TURN.

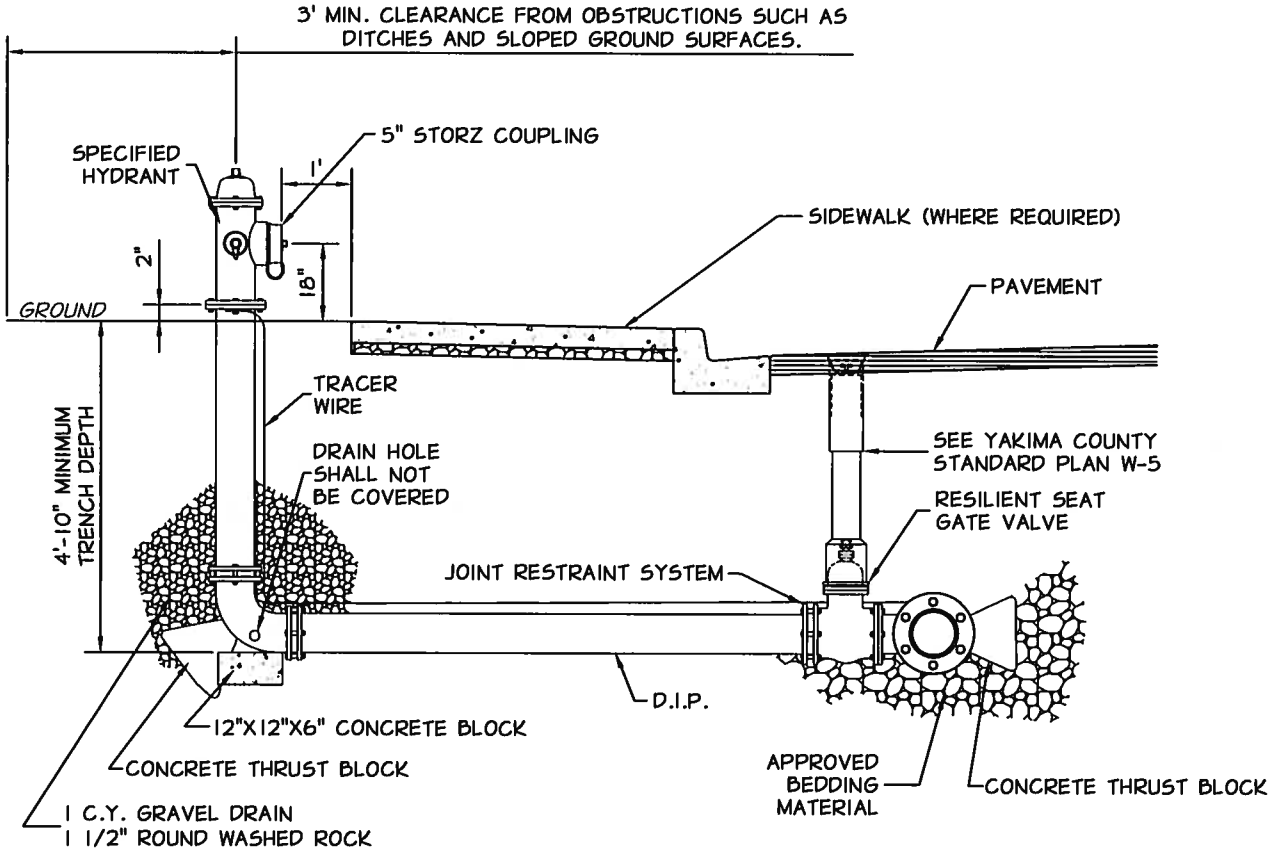
HYDRANT CONNECTIONS

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY: _____ County Engineer
DATE: 3/20/2003

REVISION:	DESCRIPTION:	DATE:
K.P.	STANDARD REVIEW	02-28-03

STANDARD PLAN
W-4
SHEET 1 OF 1
FILE NAME: G:\USERS\STANDARD\WATER\W4



CROSS SECTION
NTS

NOTES:

1) ALL MECHANICAL JOINTS SHALL BE RESTRAINED AS SPECIFIED IN SECTION 9-30.2(6) OF THE STANDARD SPECIFICATIONS.
2) MINIMUM TRENCH DEPTH IS 4'-10". MINIMUM DEPTH MAY INCREASE WHEN HYDRANTS ARE INSTALLED ON DISTRIBUTION MAINS LARGER THAN 8" IN DIAMETER, OR WHEN THE DISTRIBUTION MAIN HAS MORE THAN 4' OF COVER.
3) GRADELOK OR EQUIVALENTS SHALL BE USED WHEN NECESSARY TO MAINTAIN 2" BETWEEN THE SIDEWALK FLANGE AND THE FINISHED GRADE. GRADELOK PART# 6"X12"MJXPE OR EQUIVALENT.
4) STORZ COUPLING SHALL BE 5" STORZ X 4.5" N.S.T., 1/4 TURN OR EQUIVALENT.
5) ATTACH TRACER WIRE TO BOLT AT BREAK AWAY FLANGE WITH ADDITIONAL NUT AND TO MAINLINE TRACER WIRE WITH WATER TIGHT CONNECTOR.

HYDRANT CONNECTIONS

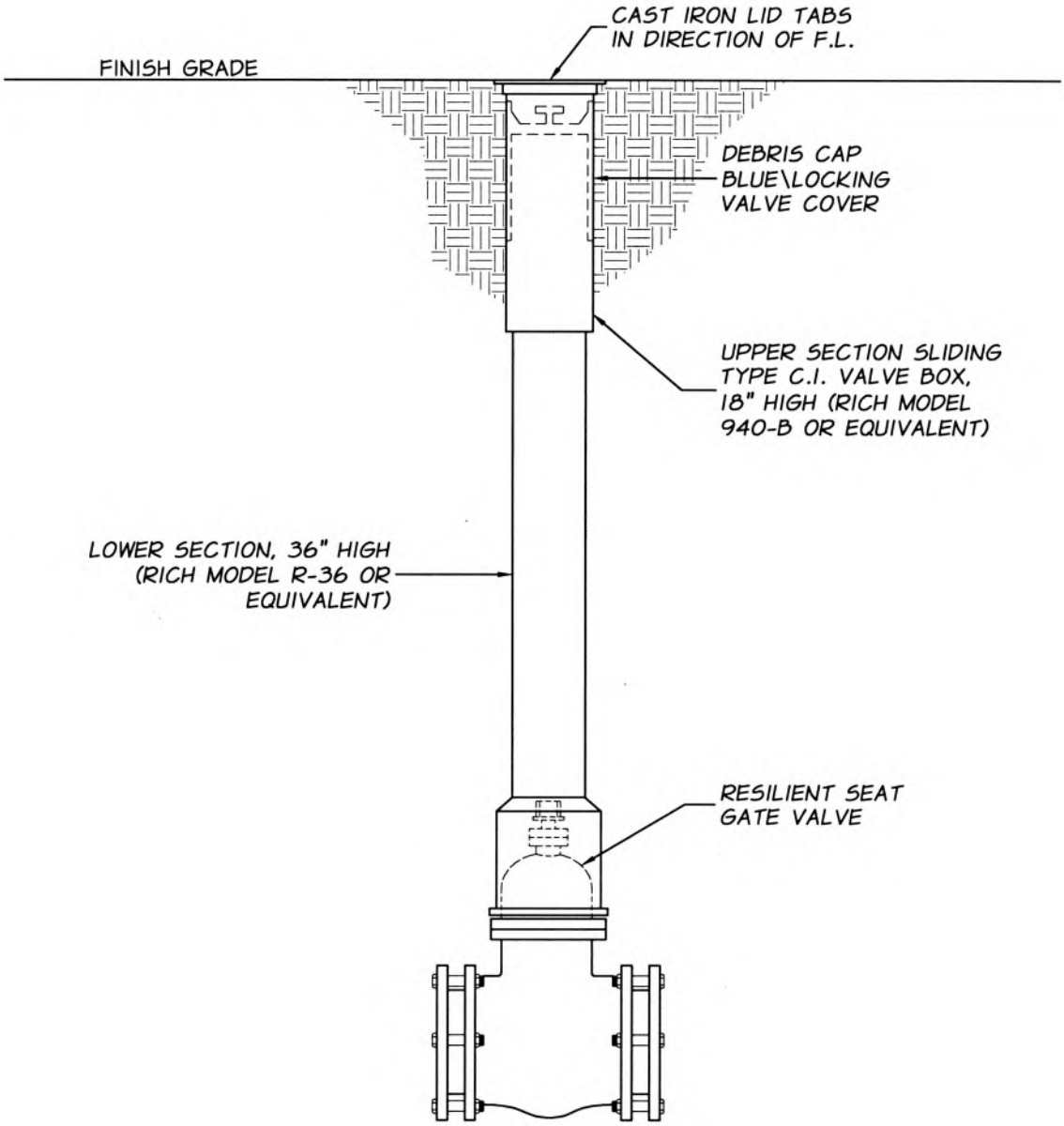
COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager: _____ DATE: 12/30/14

REVISION:	DESCRIPTION:	DATE:
J.M.	REVISED NOTE: WATER TIGHT	12-12-14

STANDARD PLAN
W-4B
SHEET 1 OF 1
FILE NAME: Q:\STANDARDS\WATER\W4B.DWG

Q:\Standards\WATER\W4B.dwg, Layout1, 12/12/2014 8:15:58 AM



CROSS SECTION
NTS

NOTES:

1) PROVIDE EXTENSION PIECE WHERE REQUIRED FOR VALVE BOX. (RICH MODEL 044, OR EQUIVALENT)
2) VALVE SIZE AND ENDS AS SPECIFIED OR INDICATED ON PLANS.

WATER VALVE BOX

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY: _____ 3/20/2003
County Engineer: DATE:

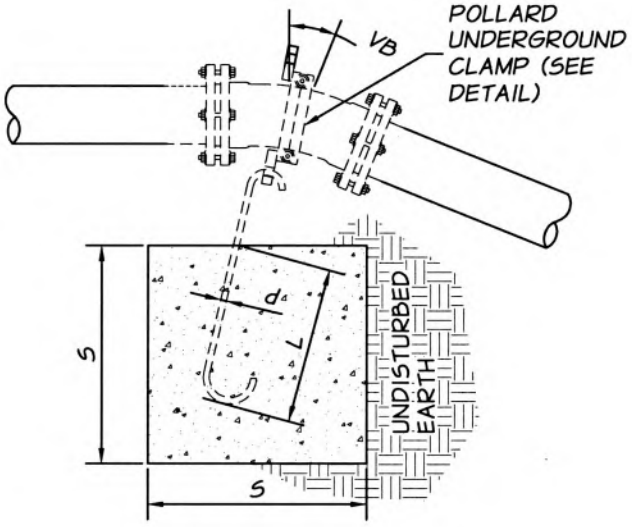
REVISION:	DESCRIPTION:	DATE:
K.P.	STANDARD REVIEW	02-28-03

STANDARD PLAN

W-5

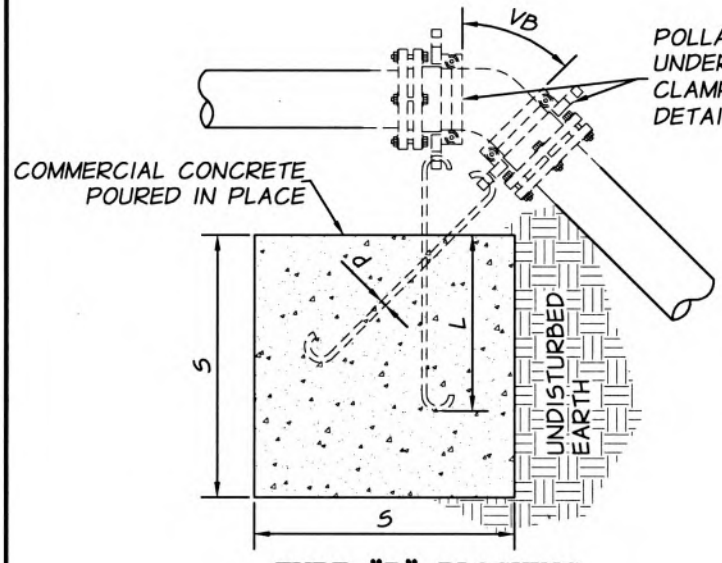
SHEET 1 OF 1

FILE NAME: G:\USERS\STANDARD\WATER\W5



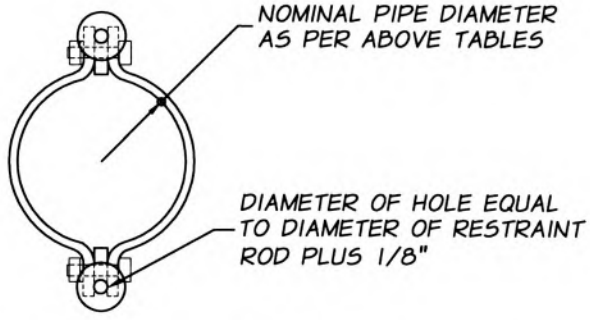
TYPE "A" BLOCKING
FOR VERTICAL BENDS OF 30° OR LESS
NTS

TYPE "A" BLOCKING				
DIA.	VB	S	d	L
6"	11 1/4°	2.2'	5/8"	2.0'
	22 1/2°	2.9'		
	30°	3.5'		
8"	11 1/4°	2.5'	5/8"	2.0'
	22 1/2°	3.6'		
	30°	4.1'	3/4"	2.5'
10"	11 1/4°	2.9'		
	22 1/2°	3.7'		
	30°	4.1'		
12"	11 1/4°	3.2'	5/8"	2.0'
	22 1/2°	4.5'	7/8"	3.0'
	30°	5.1'		
16"	11 1/4°	4.1'	7/8"	3.0'
	22 1/2°	5.7'	1 1/8"	4.0'
	30°	6.5'	1 1/4"	



TYPE "B" BLOCKING
FOR VERTICAL BENDS OF 45°
NTS

TYPE "B" BLOCKING				
DIA.	VB	S	d	L
6"	45°	4.1'	5/8"	2.0'
8"		5.0'		
10"		4.6'		
12"		6.1'	3/4"	2.5'
16"		7.8'	1 1/8"	4.0'



POLLARD UNDERGROUND CLAMP
NTS

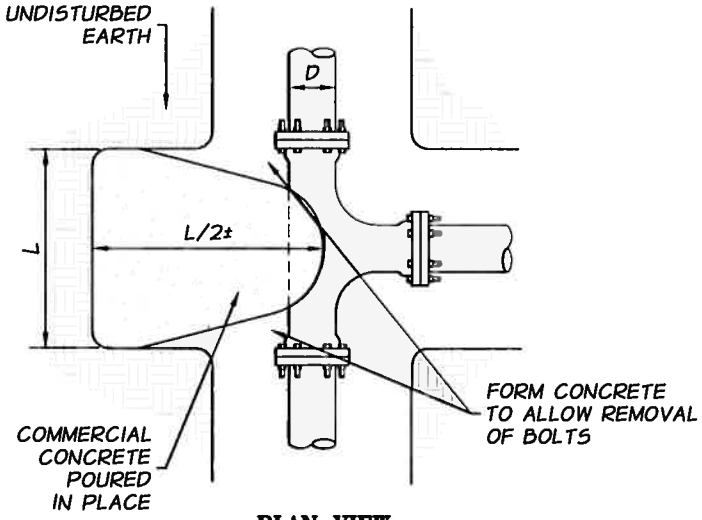
TYPICAL CONCRETE BLOCKING

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

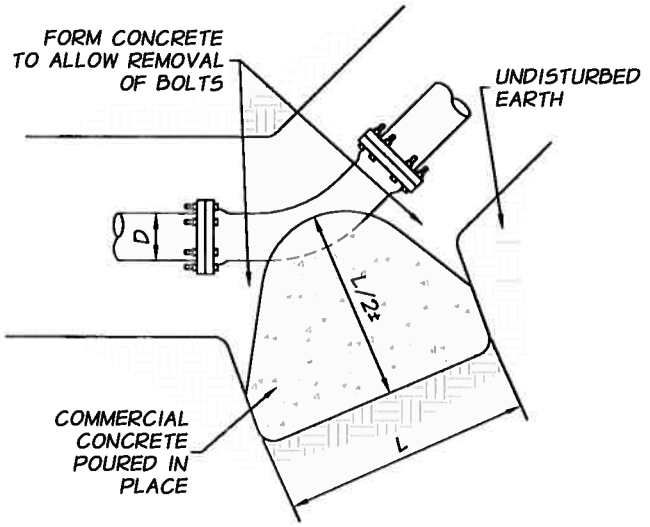
APPROVED BY:
County Engineer: 3/20/2003 DATE:

REVISION:	DESCRIPTION:	DATE:
K.P.	STANDARD REVIEW	02-28-03

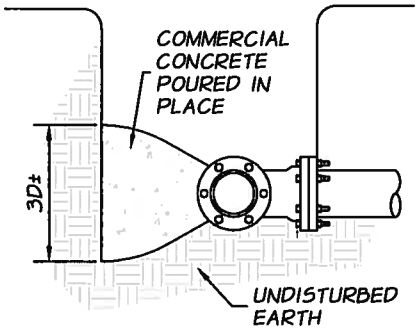
STANDARD PLAN
W-6
SHEET 1 OF 1
FILE NAME: G:\USERS\STANDARD\WATER\W6



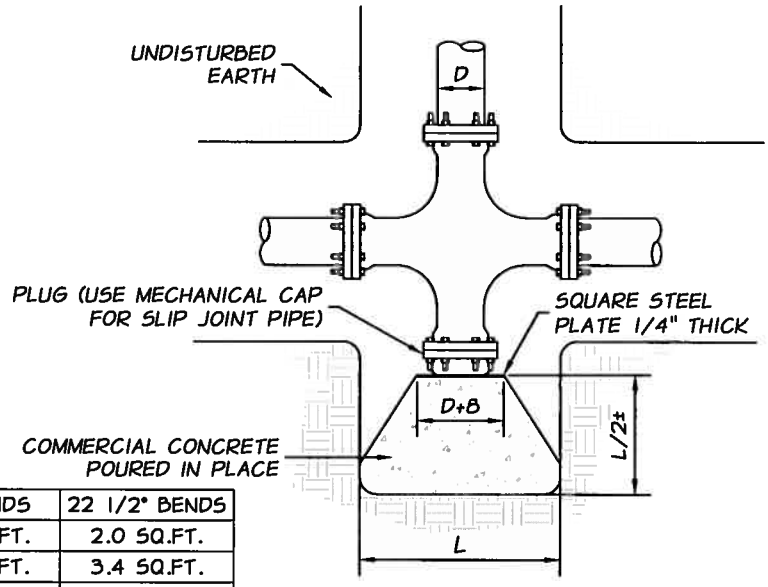
PLAN VIEW
TEES
NTS



PLAN VIEW
BENDS
NTS



SIDE VIEW
VIEW TYPICAL OF ALL BLOCKING
NTS



PLAN VIEW
PLUGS AND CAPS
NTS

MINIMUM END AREAS

PIPE SIZES (D)	TEES & PLUGS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	5.1 SQ.FT.	6.7 SQ.FT.	3.9 SQ.FT.	2.0 SQ.FT.
8"	8.8 SQ.FT.	11.8 SQ.FT.	6.7 SQ.FT.	3.4 SQ.FT.
10"	14.3 SQ.FT.	18.5 SQ.FT.	11.0 SQ.FT.	5.6 SQ.FT.
12"	20.4 SQ.FT.	26.7 SQ.FT.	15.7 SQ.FT.	7.9 SQ.FT.
14"	27.7 SQ.FT.	36.3 SQ.FT.	21.2 SQ.FT.	10.7 SQ.FT.
16"	35.8 SQ.FT.	47.4 SQ.FT.	27.5 SQ.FT.	13.9 SQ.FT.

NOTES:

1) D IS NOMINAL PIPE DIAMETER.
2) THE ABOVE END AREAS ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 P.S.F. THE ENGINEER SHALL DETERMINE THE REQUIRED END AREAS.
3) ALL FITTINGS AND/OR PIPE MAKING CONTACT WITH CONCRETE SHALL BE WRAPPED WITH 4 MIL POLYETHYLENE SHEETING PRIOR TO PLACEMENT OF CONCRETE.
4) BEARING SURFACE OF THRUST BLOCK SHALL BE NORMAL TO RESULTANT THRUST OF BEND.

TYPICAL CONCRETE BLOCKING

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager: Joel Sturup
DATE: 1/12/15

REVISION:	DESCRIPTION:	DATE:
K.P.	STANDARD REVIEW	02-28-03
J.M.	STANDARD REVIEW	06-09-09

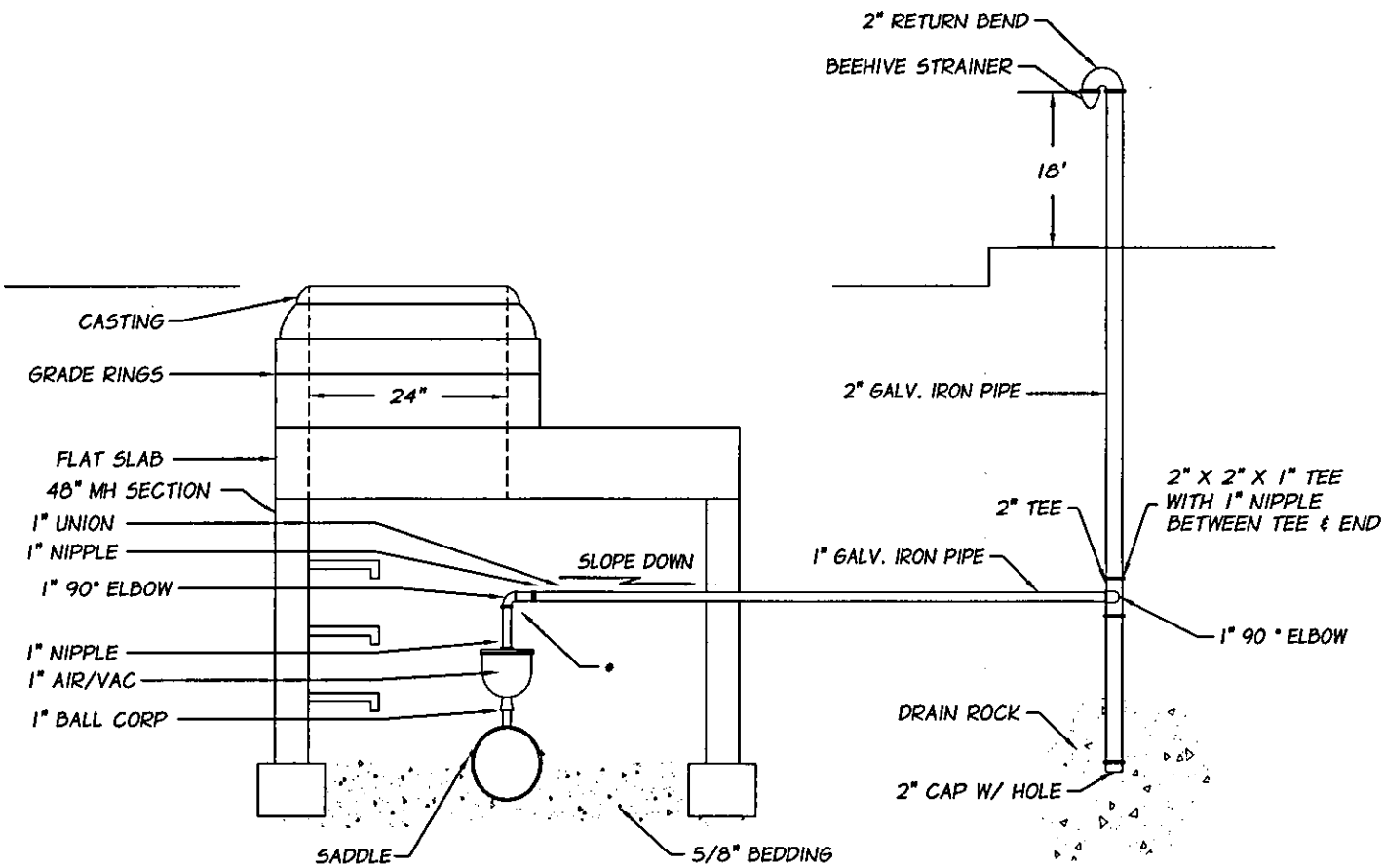
STANDARD PLAN

W-7

SHEET 1 OF 1

FILE NAME: Q:\STANDARDS\WATER\W7.DWG

Q:\Standards\WATER\W7.dwg, Layout1, 1/12/2015 8:51:41 AM



AIR VALVE ASSEMBLY

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager: _____ DATE: 4/8/10

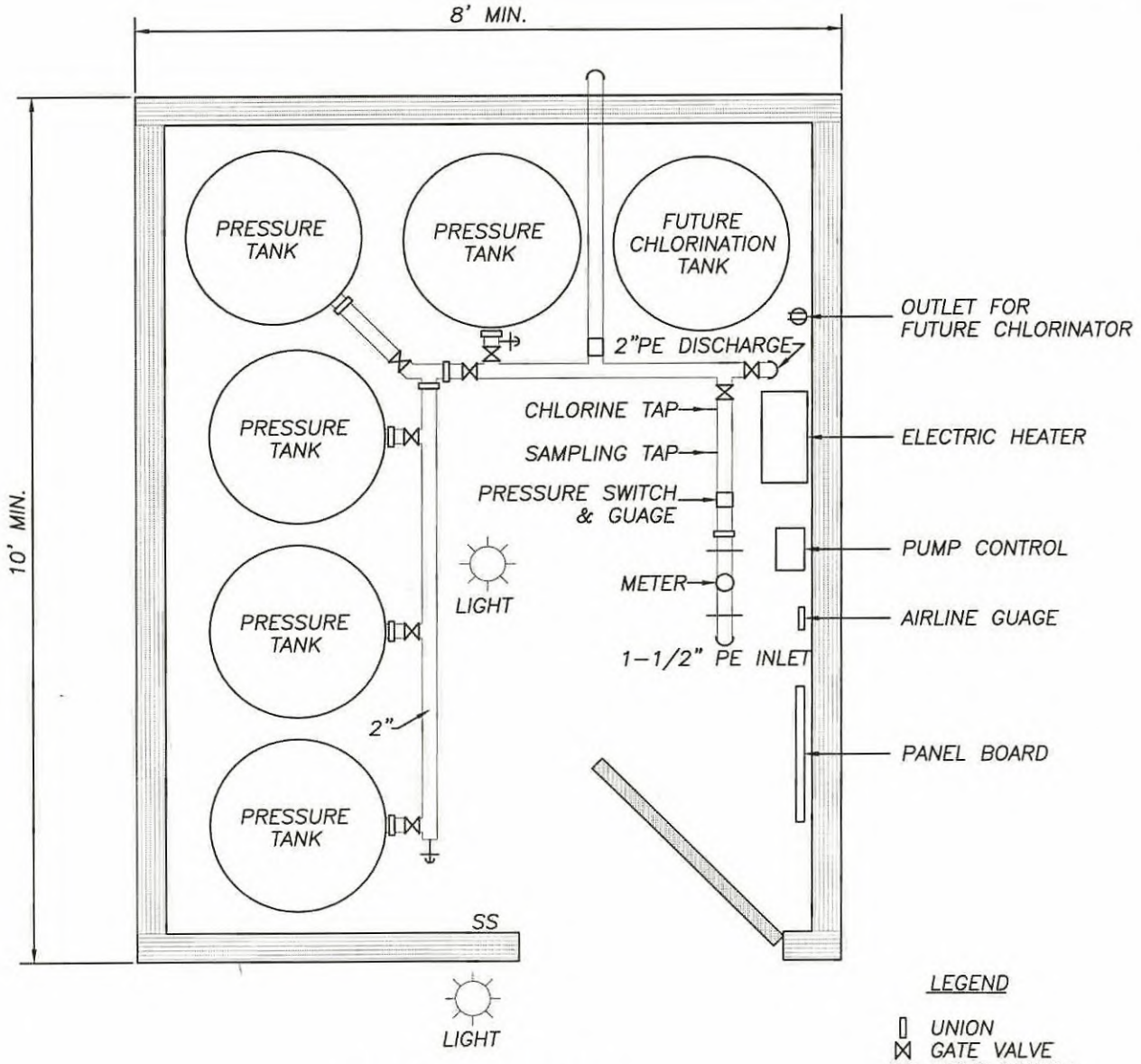
REVISION:	DESCRIPTION:	DATE:

STANDARD PLAN

W-9

SHEET 1 OF 1

FILE NAME: Q:\STANDARDS\WATER\W9.DWG



PIPING SCHEMATIC
NTS

NOTES:

1) NUMBER OF PRESSURE TANKS TO BE DETERMINED BY DEPARTMENT OF HEALTH GUIDELINES.
2) SUPPORT PIPING WITH TREATED WOOD BLOCKING.

SATELLETE WATER SYSTEM PUMP HOUSE

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY: Joe Sterry
Utility Manager

12-20-05
DATE:

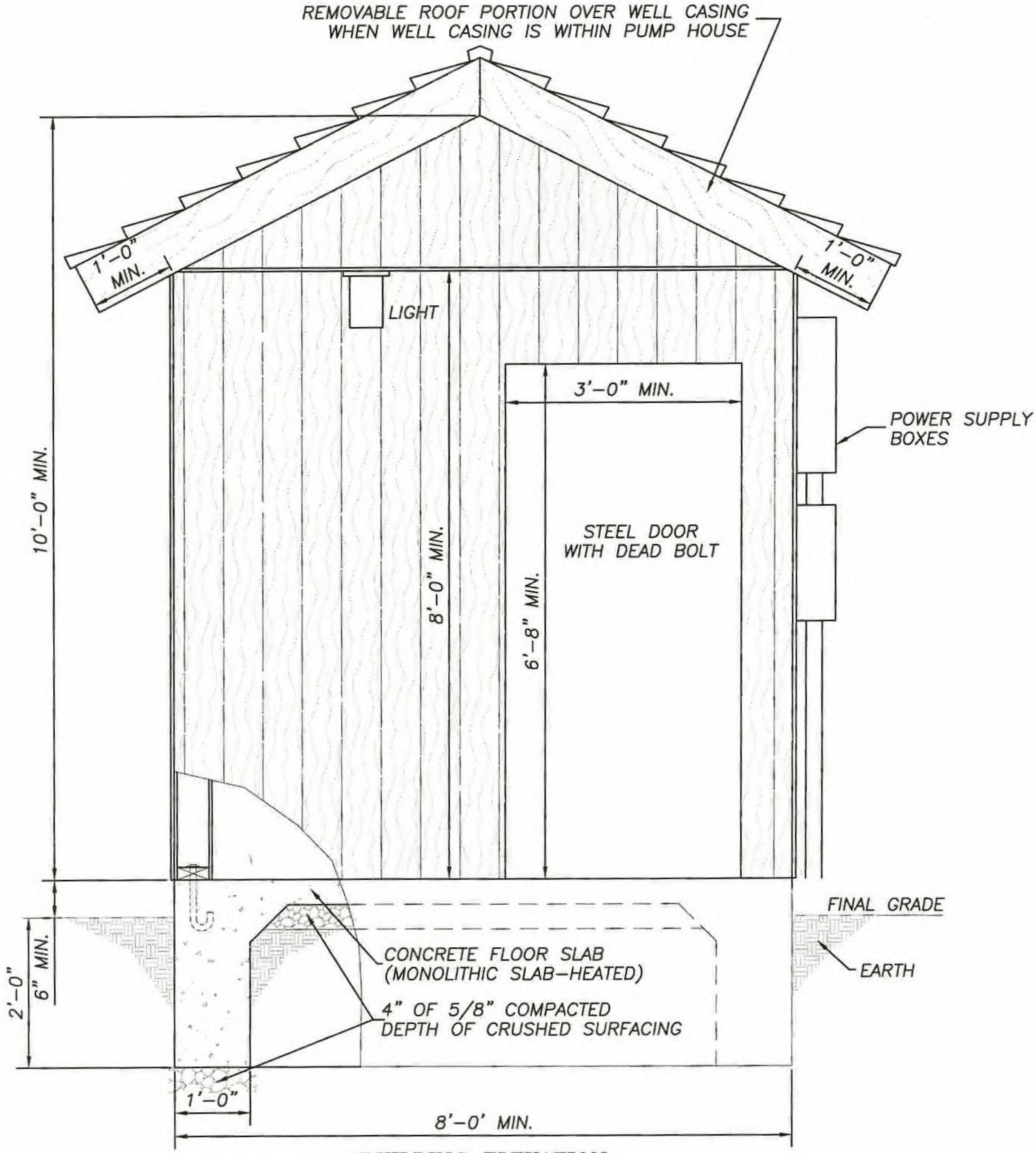
REVISION:	DESCRIPTION:	DATE:

STANDARD PLAN

W-11

SHEET 1 OF 1

FILE NAME:



BUILDING ELEVATION
NTS

SATELLETE WATER SYSTEM PUMP HOUSE

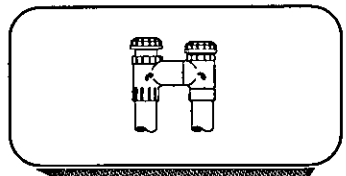
COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY:
Utility Manager: [signature]
DATE: 12-20-05

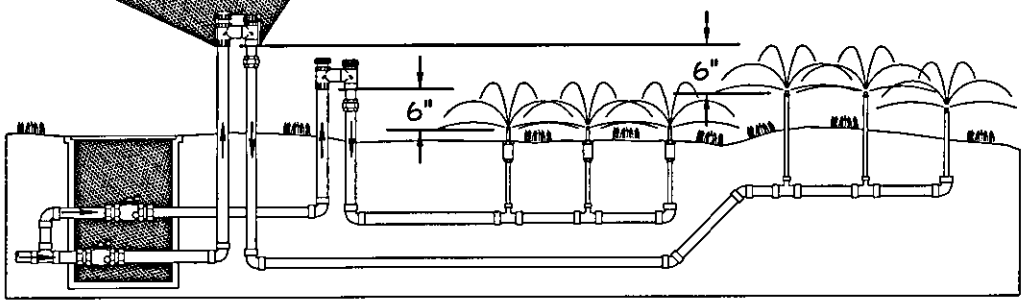
REVISION:	DESCRIPTION:	DATE:

STANDARD PLAN
W-12
SHEET 1 OF 1
FILE NAME:

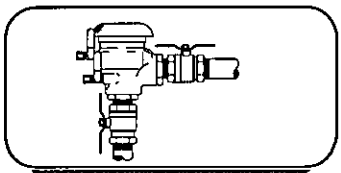
A V B... ATMOSPHERIC VACUUM BREAKER



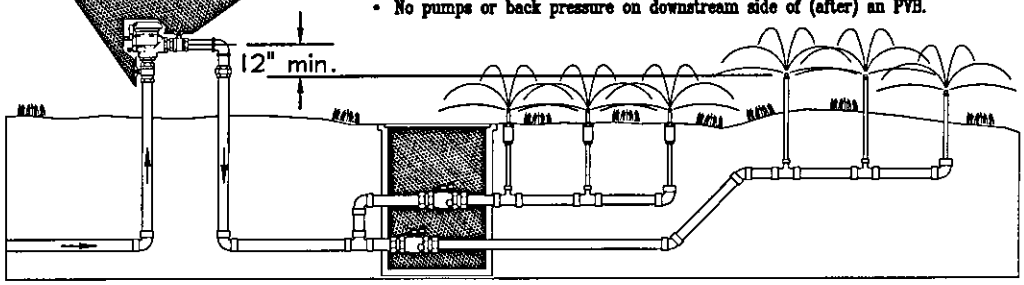
- One AVB required for each irrigation zone; no control valves (on/off valves) allowed downstream of (after) an AVB.
- Each AVB must be installed a minimum of six inches (6") above the highest point of water in the zone it serves.
- No chemical or fertilizer may be introduced into an irrigation system equipped with AVB's.
- No pumps or back pressure on downstream side of (after) an AVB.



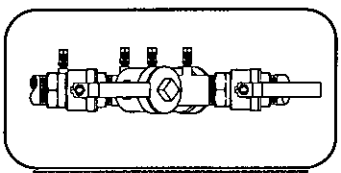
P V B... PRESSURE VACUUM BREAKER ASSEMBLY



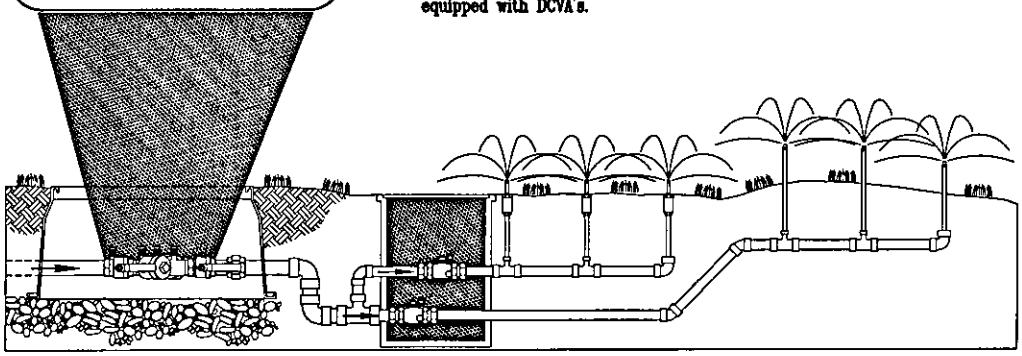
- Only one PVB required to serve the whole system; control valves can be located downstream of (after) the PVB.
- PVB's must be installed a minimum of one foot (12") above the highest point of water they serve.
- PVB's must be tested by a State-certified Backflow Assembly Tester...when installed ...annually ... when moved or repaired.
- No chemical or fertilizer may be introduced into an irrigation system equipped with PVB's.
- No pumps or back pressure on downstream side of (after) an PVB.



D C V A... DOUBLE CHECK VALVE ASSEMBLY



- Only one DCVA required to serve the whole system; control valves can be located downstream of the DCVA.
- DCVA must be tested by a State-certified Backflow Assembly Tester...when installed ...annually ... when moved or repaired.
- No chemical or fertilizer may be introduced into an irrigation system equipped with DCVA's.



TYPICAL BACKFLOW PREVENTERS FOR LAWN SPRINKLER SYSTEMS

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY: Joe Stanley
Utilities Manager
DATE: 11-30-05

REVISION:	DESCRIPTION:	DATE:

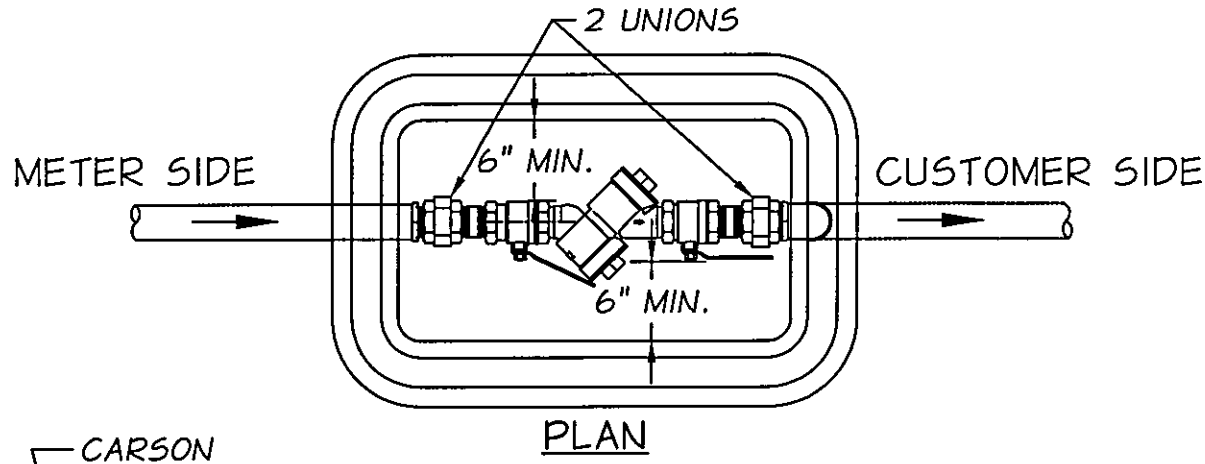
BACKFLOW PROTECTION DETAIL

W-13

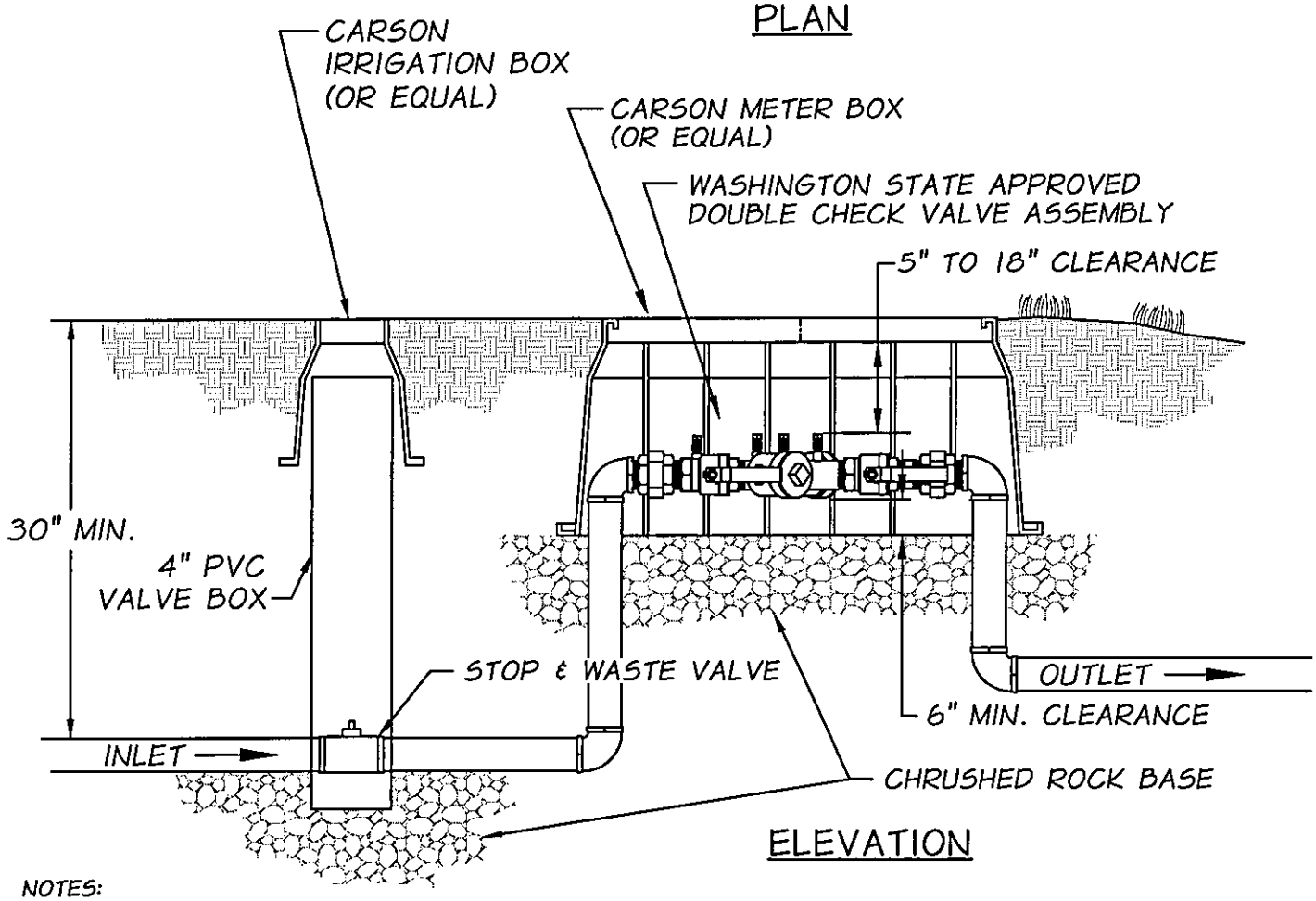
SHEET 1 OF 1

FILE NAME:

Q:\Standards\WATER\WATER SPECIAL\W-13.dwg, 11/30/2005 8:02:01 AM



PLAN



ELEVATION

NOTES:
1. IT IS ADVISABLE TO REMOVE YOUR ASSEMBLY EVERY WINTER AT UNIONS AND STORE IN A WARM PLACE TO PREVENT DAMAGE TO THE ASSEMBLY FROM FREEZING.
2. IF SPRINKLER SYSTEM IS BLOWN OUT THROUGH THE BACKFLOW ASSEMBLY DAMAGE CAN OCCUR TO THE DISK AND THE ASSEMBLY CAN FAIL ITS ANNUAL TEST.
3. ADEQUATE SPACE MUST BE PROVIDED FOR MAINTENANCE, REPAIR AND TESTING.
4. PLUGS TO BE INSTALLED IN TEST PORTS OF BELOW GROUND INSTALLATIONS.
5. NOTCH VALVE BOX AROUND INLET PIPE. DO NOT ALLOW VALVE BOX TO REST ON PIPE.

3/4", 1", 1-1/2" AND 2" DOUBLE CHECK VALVE INSTALLATION

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY:
Joe Stump
Utilities Manager
11-30-05
DATE:

REVISION:	DESCRIPTION:	DATE:

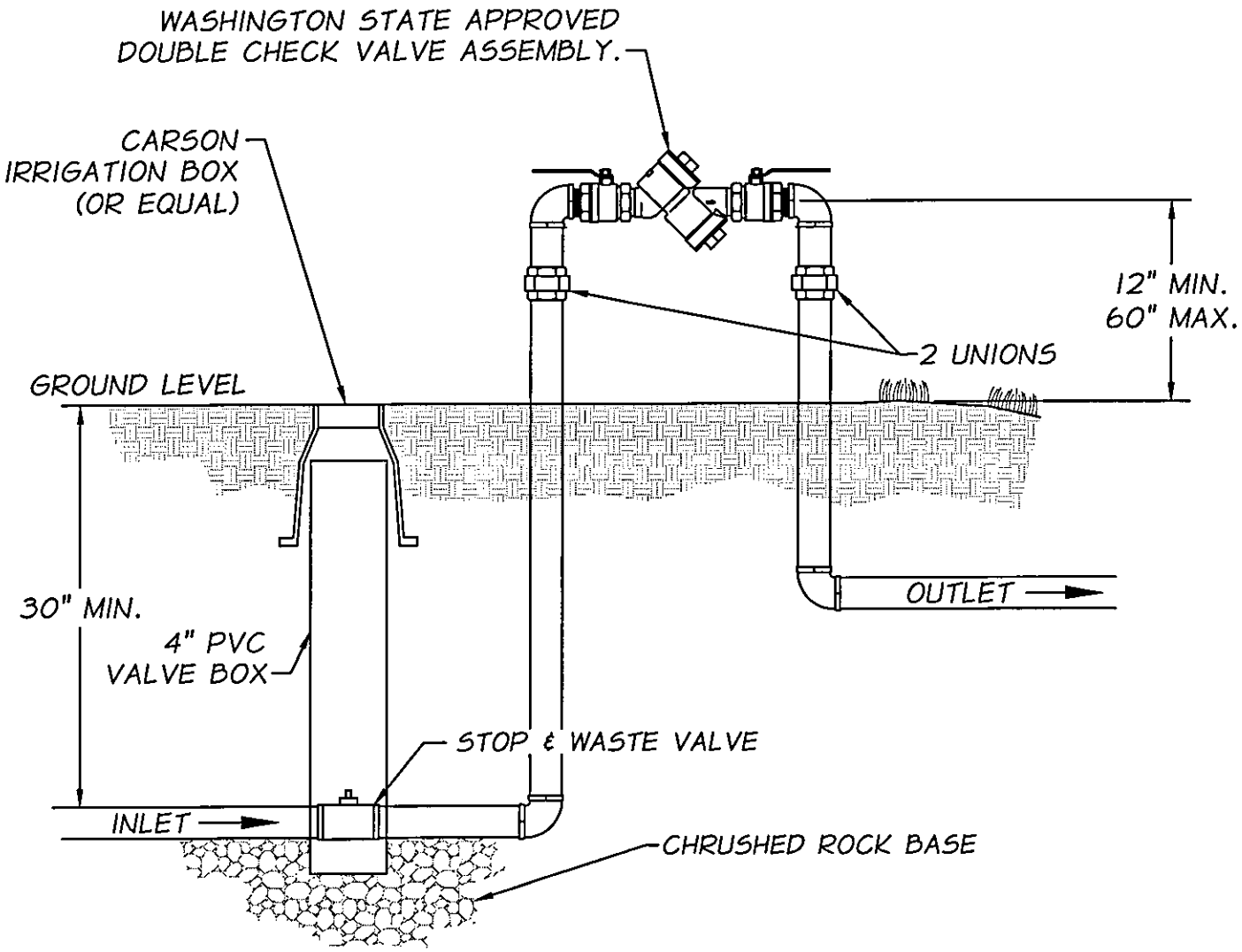
BACKFLOW PROTECTION DETAIL

W-14

SHEET 1 OF 1

FILE NAME:

Q:\Standards\WATER\WATER SPECIAL\W-14.dwg, 11/30/2005 8:13:57 AM



NOTES:

1. IT IS ADVISABLE TO REMOVE YOUR ASSEMBLY EVERY WINTER AT UNIONS AND STORE IN A WARM PLACE TO PREVENT DAMAGE TO THE ASSEMBLY FROM FREEZING.

2. IF SPRINKLER SYSTEM IS BLOWN OUT THROUGH THE BACKFLOW ASSEMBLY DAMAGE CAN OCCUR TO THE DISK AND THE ASSEMBLY CAN FAIL ITS ANNUAL TEST.

3. ADEQUATE SPACE MUST BE PROVIDED FOR MAINTENANCE, REPAIR AND TESTING.

4. NOTCH VALVE BOX AROUND INLET PIPE. DO NOT ALLOW VALVE BOX TO REST ON PIPE.

ABOVE GROUND INSTALLATION 3/4" AND 1" DOUBLE CHECK VALVE ASSEMBLY

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY:
Joe Stump
Utilities Manager
11-30-05
DATE:

REVISION:	DESCRIPTION:	DATE:

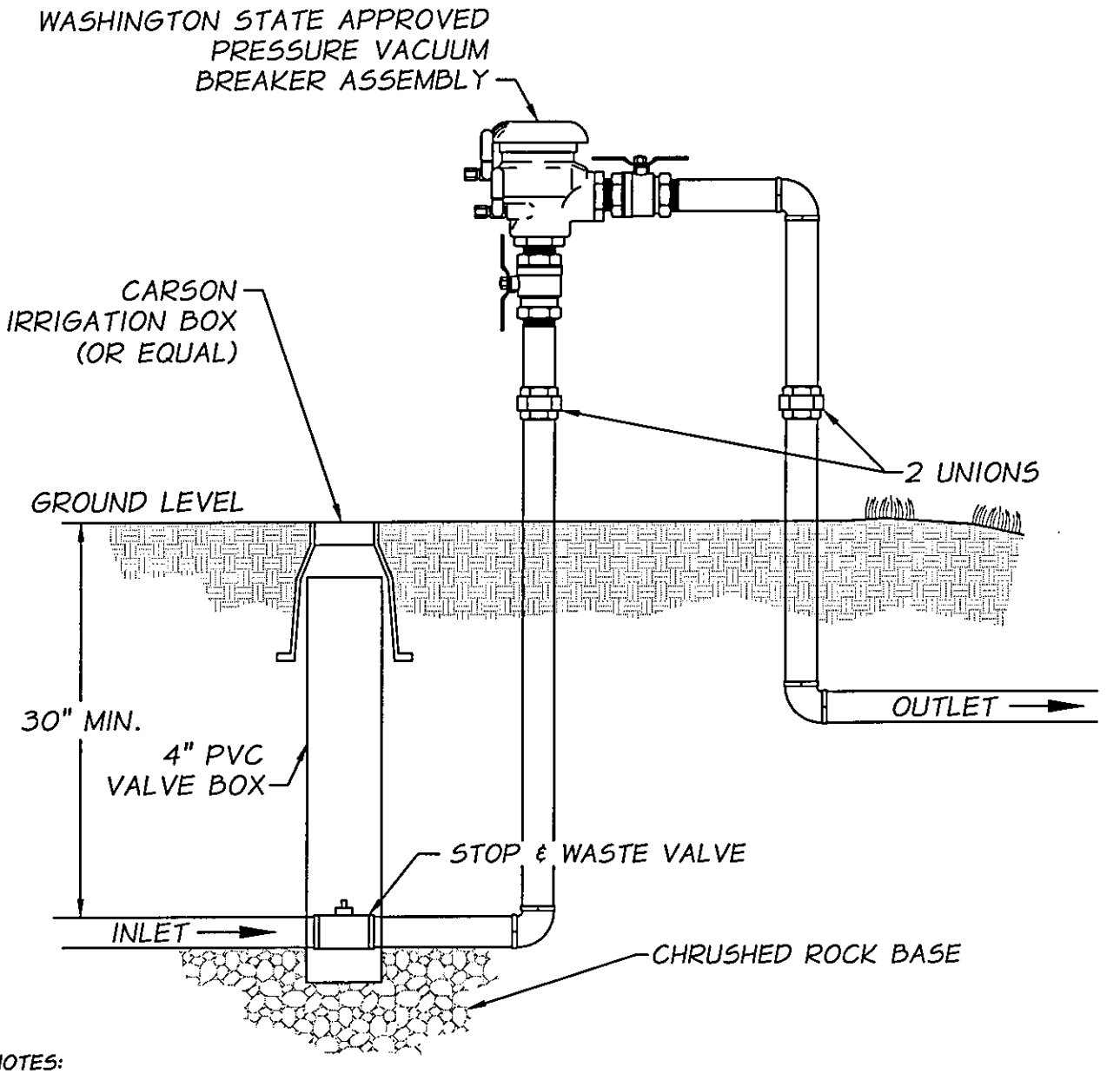
BACKFLOW PROTECTION DETAIL

W-15

SHEET 1 OF 1

FILE NAME:

Q:\Standards\WATER\WATER SPECIAL\W-15.dwg, 11/30/2005 8:18:30 AM



NOTES:

1. IT IS ADVISABLE TO REMOVE YOUR ASSEMBLY EVERY WINTER AT UNIONS AND STORE IN A WARM PLACE TO PREVENT DAMAGE TO THE ASSEMBLY FROM FREEZING.

2. IF SPRINKLER SYSTEM IS BLOWN OUT THROUGH THE BACKFLOW ASSEMBLY DAMAGE CAN OCCUR TO THE DISK AND THE ASSEMBLY CAN FAIL ITS ANNUAL TEST.

3. ADEQUATE SPACE MUST BE PROVIDED FOR MAINTENANCE, REPAIR AND TESTING.

4. THE PRESSURE VACUUM BREAKER MUST BE INSTALLED AT LEAST 12 INCHES ABOVE THE HIGHEST POINT IN THE IRRIGATION SYSTEM, AND NO HIGHER THAN 60" ABOVE GROUND.

5. NOTCH VALVE BOX AROUND INLET PIPE. DO NOT ALLOW VALVE BOX TO REST ON PIPE.

PRESSURE VACUUM BREAKER ASSEMBLY INSTALLATION

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY:
Joe Stump
Utilities Manager
11-30-05
DATE:

REVISION:	DESCRIPTION:	DATE:

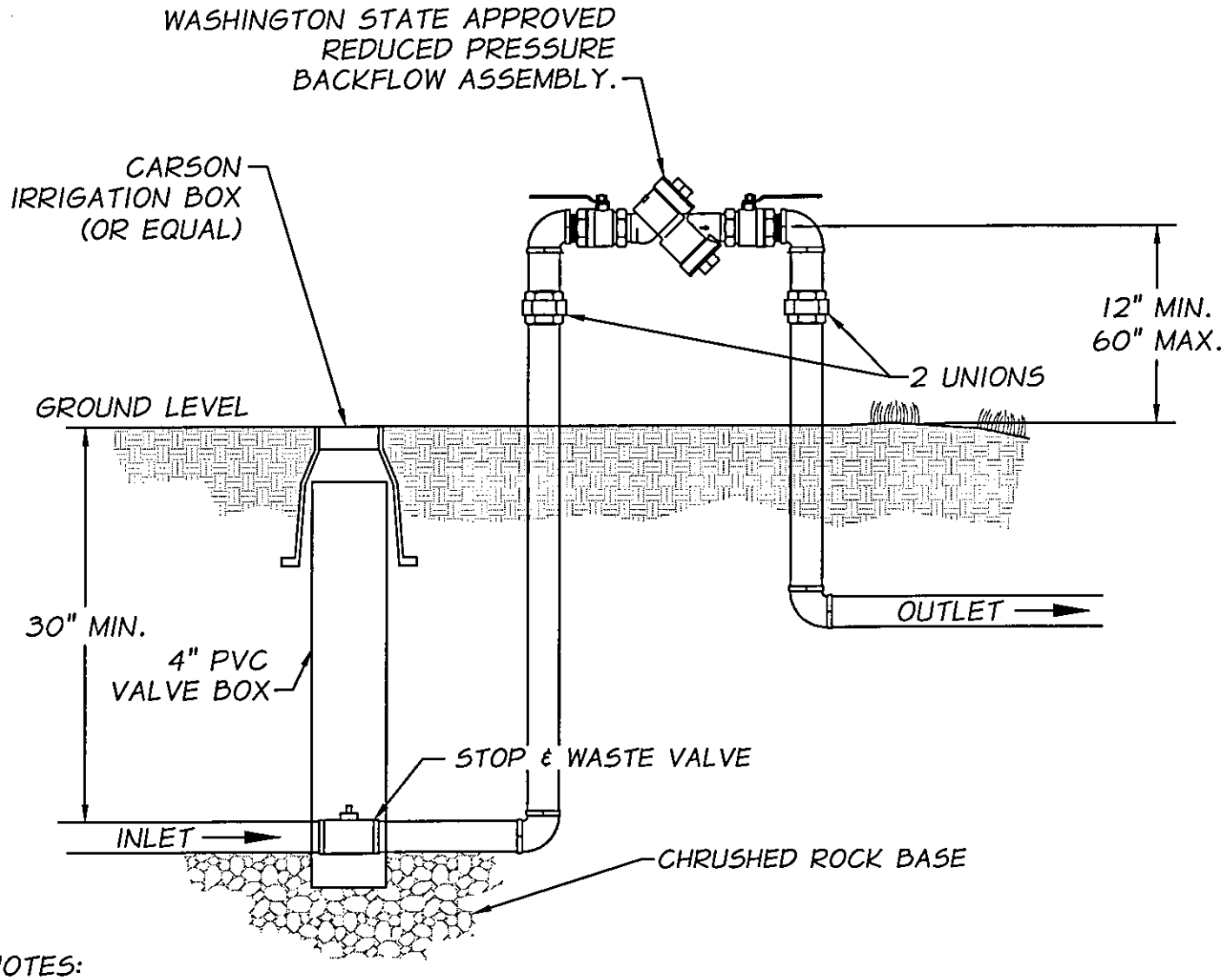
BACKFLOW PROTECTION DETAIL

W-16

SHEET 1 OF 1

FILE NAME:

Q:\Standards\WATER\WATER SPECIAL\W-16.dwg, 11/30/2005 8:20:58 AM



NOTES:

1. IT IS ADVISABLE TO REMOVE YOUR ASSEMBLY EVERY WINTER AT UNIONS AND STORE IN A WARM PLACE TO PREVENT DAMAGE TO THE ASSEMBLY FROM FREEZING.

2. IF SPRINKLER SYSTEM IS BLOWN OUT THROUGH THE BACKFLOW ASSEMBLY DAMAGE CAN OCCUR TO THE DISK AND THE ASSEMBLY CAN FAIL ITS ANNUAL TEST.

3. ADEQUATE SPACE MUST BE PROVIDED FOR MAINTENANCE, REPAIR AND TESTING.

4. NOTCH VALVE BOX AROUND INLET PIPE. DO NOT ALLOW VALVE BOX TO REST ON PIPE.

REDUCED PRESSURE BACKFLOW INSTALLATION

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY:
Joe Stump
Utilities Manager
11-30-05
DATE:

REVISION:	DESCRIPTION:	DATE:

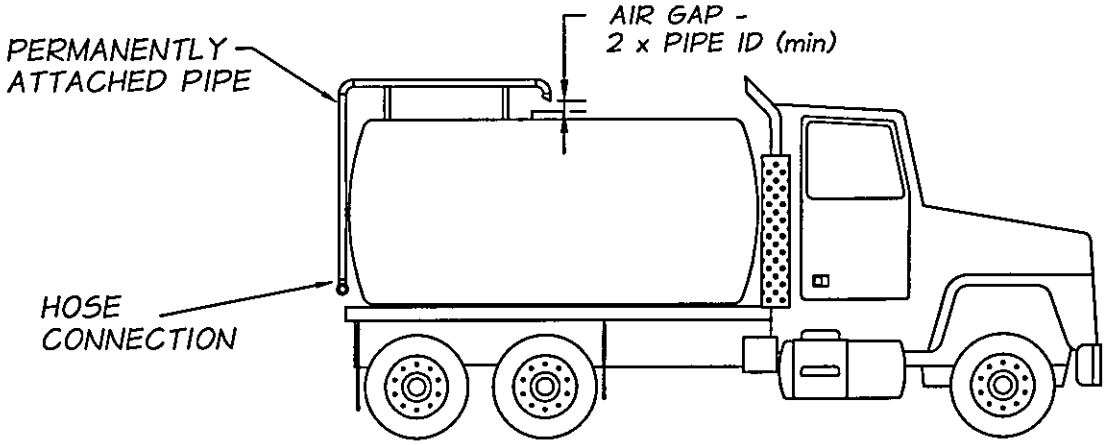
BACKFLOW PROTECTION DETAIL

W-17

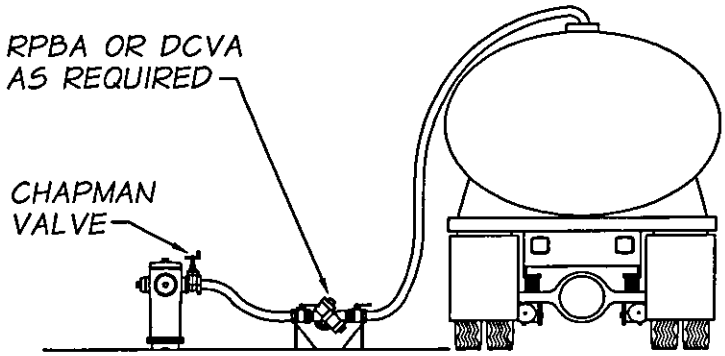
SHEET 1 OF 1

FILE NAME:

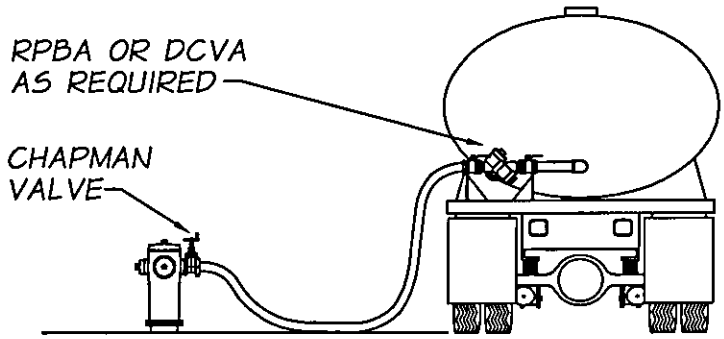
Q:\Standards\WATER\WATER SPECIAL\W-17.dwg, 11/30/2005 8:24:52 AM



WITH AIR GAP



WITH PORTABLE ASSEMBLY



WITH TRUCK MOUNTED ASSEMBLY

MINIMUM PROTECTION FOR FILLING TANKER TRUCKS

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY PUBLIC WORKS

APPROVED BY:
Utilities Manager
DATE: 11-30-05

REVISION:	DESCRIPTION:	DATE:

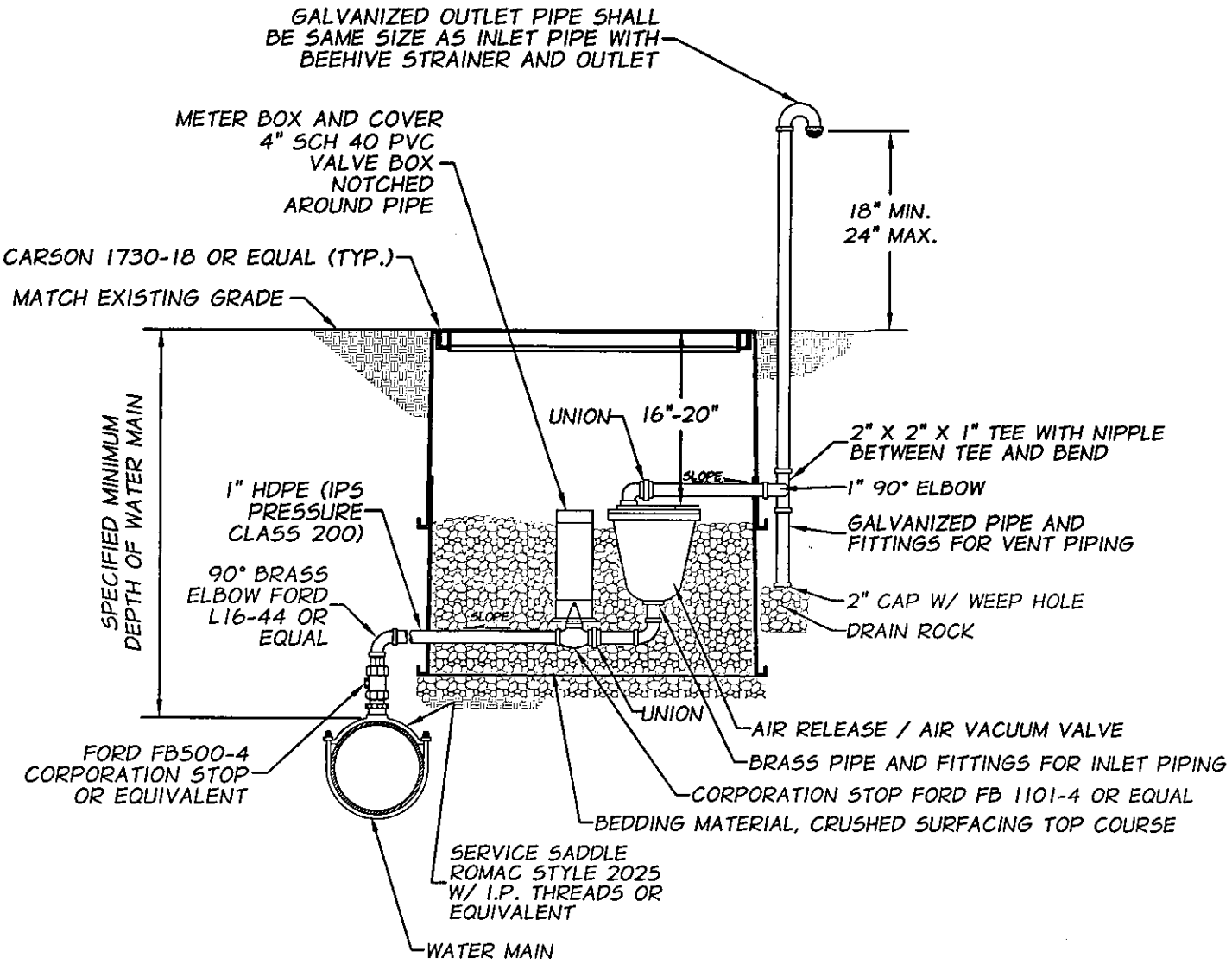
BACKFLOW PROTECTION DETAIL

W-18

SHEET 1 OF 1

FILE NAME:

Q:\Standards\WATER\WATER SPECIAL\W-18.dwg, 11/30/2005 8:26:43 AM



CROSS SECTION
NTS

NOTES:

1) THE PIPING AND VALVES SHALL BE THE SAME SIZE AS THE COMBINATION AIR RELEASE / AIR VACUUM VALVE.
2) LOCATE AT THE HIGH POINT OF THE MAIN, TAP TOP OF MAIN.
3) SLOPE 1" HDPE PIPE FROM MAIN UP TO AIR VALVE 1% MIN.
4) LOCATE 2' TO 3' BEHIND CURB OR SIDEWALK.

1" COMBINATION AIR & VACUUM VALVE ASSEMBLY

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager: _____ DATE: 4/10/07

REVISION:	DESCRIPTION:	DATE:

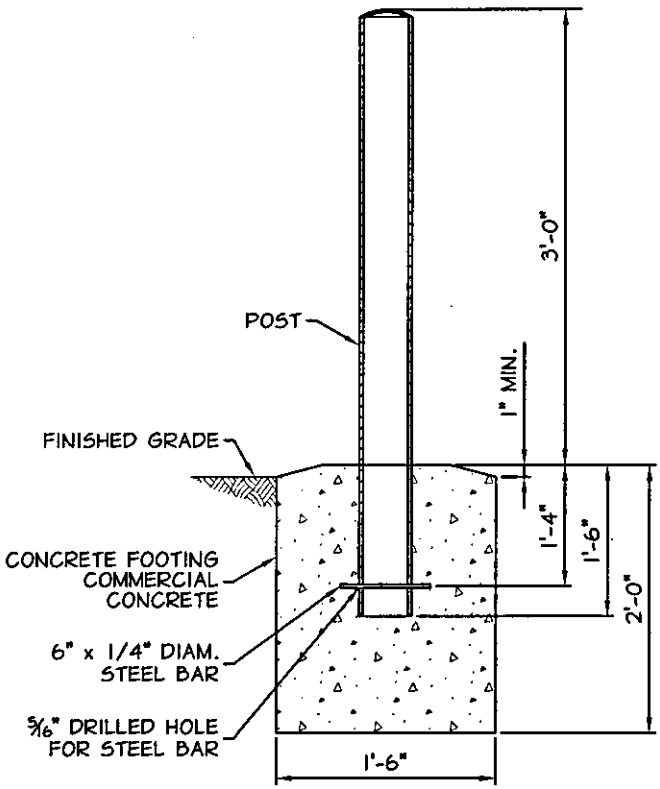
WATERLINE DETAIL

W-19

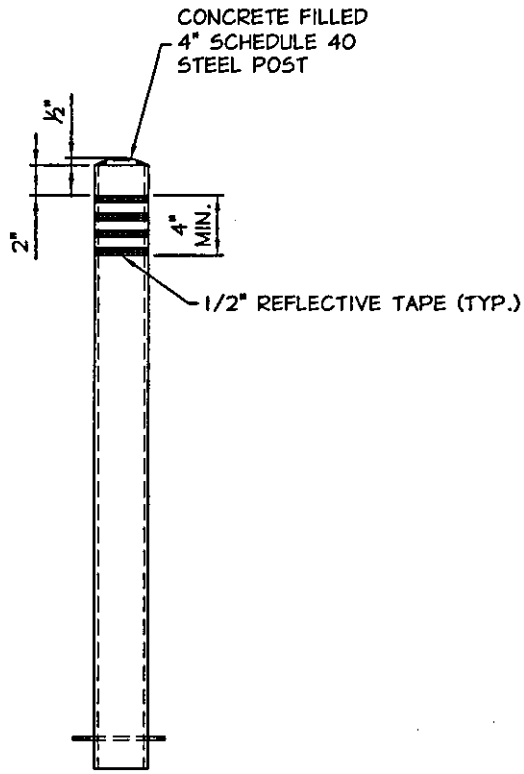
SHEET 1 OF 1

FILE NAME:

Q:\Standards\WATER\W19.dwg, 4/9/2007 2:55:05 PM



CROSS-SECTION
NTS



PAINT ASSEMBLY WITH A "HIGHLY VISIBLE" COLOR.
(SAFETY YELLOW IS ACCEPTABLE)

POST DETAIL
NTS

BOLLARD DETAIL

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

APPROVED BY:
Utilities Manager: Joe Stusser DATE: 4/9/10

REVISION:	DESCRIPTION:	DATE:

STANDARD PLAN

W-20

SHEET 1 OF 1

FILE NAME: G:\STANDARDS\WATER\W20.DWG

Appendix B

Example Agreements

YAKIMA COUNTY

WATER EXTENSION AGREEMENT

THIS AGREEMENT, by and between Yakima County, a municipal corporation, hereinafter referred to as "County", and _____, hereinafter referred to as "Developer":

WITNESSETH: That whereas the above-named Developer is requesting water service from the County's Terrace Heights Water System, and additions to the system are needed to serve said development;

WHEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Developer agrees to construct additions to the water system, and to maintain such additions until such time as they are accepted by the County, with the agreements conditioned as set forth below. The water system additions are intended to serve parcel _____, located in Terrace Heights between _____Road and _____Road.

2. The additions constructed by the Developer shall include _____ _____.

3. Developer agrees to construct the proposed water system additions so as to conform with the County's "Distribution Facilities Design and Construction Standards", and Department of Health standards.

4. The developer agrees that construction of the water system additions shall not commence until the following conditions have been fulfilled:

    a. The developer shall furnish the County with three (3) sets of detailed construction documents for the additions. Construction documents shall be prepared and stamped by a professional engineer, licensed in the State of Washington, at the Developer's expense.
    b. The above construction documents (Item 4.a) shall be approved by the County Engineer.
    c. After the construction documents have been approved and the Developer has selected a contractor, the Developer shall notify the County that they are ready for a preconstruction conference. The County will schedule a preconstruction conference with the Developer, the Developer's contractor, and other affected agencies.
    d. The Developer shall submit three (3) copies of submittals to the County for review and approval. Included in the submittals shall be the manufacturer, size, type, grade, and standards of all materials that will be used on the project. Submittals shall be provided in sufficient time to allow not less than ten (10) working days for review.
    e. The above submittals (Item 4.d) shall be approved by the County Engineer.
    f. The Developer shall notify the County at least seven calendar days in advance of construction.

5. Construction documents must contain sufficient information for the County to properly review the design. As a minimum, construction documents are to include the following information:

    a. A plan view showing the horizontal location of the proposed water lines, fittings, and appurtenances, along with property lines, right-of-way lines, easements, roads, utilities, and other features that may affect construction.
    b. A profile view showing the vertical location of the proposed water lines, existing and finished ground surfaces, sanitary sewer lines and storm drains. Sanitary sewers and storm drains shall be shown for verification of minimum separation requirements. The vertical datum for all plans must be the same as used by Yakima County. An assumed datum will not be accepted.
    c. Water system features including the following:
        i. Water main diameter, type, and pressure class.
        ii. Valves and fittings, including joint type.
        iii. Appurtenances including air valve assemblies, blowoff hydrants, fire hydrants, service connections, and pressure reducing valves or stations.
        iv. Thrust restraint.
    d. Detail sheets as required to clearly show how the water system additions are to be constructed, consistent with County standards.
    e. If the construction documents include more than three plan sheets, a cover sheet will be required. The cover sheet shall include a site map and sheet index.
    f. Specifications as required to clearly describe the work, consistent with County standard specifications.
    g. Approvals from all regulatory agencies.

6. Construction requirements in addition to the County's standard specifications and details for developer extensions, are as follows:

    a. All streets and/or roadways shall be graded to within six inches of final grade before installation of water lines. (n/a)
    b. All lots shall be fully staked to assist all parties involved in the proper location of water services. (n/a)
    c. All contractors shall be bonded and have a Washington State Contractors License.
    d. The Developer's water system additions shall not be connected to County's system until authorized by County, and such connection shall be done under the supervision and direction of the County and a Professional engineer.

7. The County, or a consultant hired by the County, will inspect the construction of the water system to assure that construction conforms to the above mentioned plans and specifications. The Developer shall reimburse the County for the County's actual construction inspection and administration costs, which are initially estimated to be approximately $_____. Actual costs will vary depending on the Developer's contractor and conditions encountered during construction. The County will provide a revised estimate of the inspection and administration costs if the actual costs are projected to exceed the original estimated costs.

8. Developer hereby agrees to hold harmless the County and its officials, employees and agents

from any liability, damage, cost, or expense of any type, including court costs and reasonable attorneys fees, in any manner relating to, caused by, or arising out of this project, specifically including but not limited to personal injury or death, property damage, or any damages resulting to the County's water facilities or users thereof. In the event the Developer damages any of the County's facilities, the County shall give the Developer such notice as is reasonable under the circumstances to make repairs or restoration. In such event that the County deems it necessary to make any repairs or restoration (emergency or otherwise), the County shall be reimbursed for all costs thereof. Notice to the Developer shall be given at the following address:

Name: _____

Address: _____

_____

Telephone: _____

9. The Developer shall include in their contract with their professional engineer a clause for their professional engineer to be available to resolve questions regarding the design that may develop during construction of the water system.

10. The Developer's water system additions shall not be accepted for service and use until the same have been fully inspected and approved, and the following requirements have been performed:

    a. Submit to the County the original tracings, with all changes from the original design corrected to reflect the as-built conditions based on red line drawings provided by the Contractor and the County.
    b. Payment of all permit fees and any other applicable County charges.
    c. Prepare, furnish for review, and then record the required easements in accordance with the County's standard form, and furnish the recorded document to the County.
    d. Furnish the County with an affidavit warranting there are no liens against the improvements constructed.
    e. Furnish the County with a cost breakdown showing the total construction cost of the water system additions.
    f. Furnish the County with a Bill of Sale conveying the water system to the County.

11. Upon performing all requirements, including those as set forth in Paragraph 10 above, the County shall accept the water system additions, and agree therewith to take on the operation and maintenance of said system additions.

DEVELOPER

_____
Name

Date: _____

BOARD OF YAKIMA
COUNTY COMMISSIONERS

_____
J. Rand Elliott, Chairman

_____
Ron Anderson, Commissioner

_____
Michael D. Leita, Commissioner
Constituting the Board of County Commissioners
For Yakima County, Washington

Attest:

_____ _____
Tiera L. Girard Date
Clerk of the Board

APPROVED AS TO FORM:

_____
Deputy Prosecuting Attorney

WATER UTILITY SYSTEM
REIMBURSEMENT AGREEMENT AND CONVEYANCE

THIS AGREEMENT is made and entered into this ____ day of _____, 20__, by and between Yakima County, a municipal corporation located in Yakima County, Washington, herein referred to as "County", and _____, herein referred to as "Developer."

WHEREAS, the Developer, in reliance on potential reimbursement pursuant to RCW 35.91.020, caused to be installed certain water lines and appurtenances thereto at, near, or within the below-described property and connected same to the County's water system so that such improvements constitute an integral part thereof; and,

WHEREAS, the Developer paid all the costs and expenses for the installation of said improvements; and,

WHEREAS, no other property owners or users were available to share in the cost and expense of construction of such improvements and the parties hereto having in mind the provisions and terms of RCW 35.91.020; and,

WHEREAS, the County and Developer agree the construction and installation of said improvements are in the public interest and in furtherance of public health;

NOW, THEREFORE, in consideration of the mutual covenants, promises, and agreements set forth herein, it is agreed by and between the County and the Developer as follows:

1. Property Owned by Developer. The Developer represents that it is the owner of the following described property:

Yakima County Assessor's Parcel Number _____
Legally described as _____
_____
_____

2. Water Utility System Improvements. The following described water utility system improvements were installed by the Developer in connection with the above-described property:

_____
_____

The Developer certifies that the total cost of said improvement construction is $_____.

3. Reimbursement for Improvements. The legal description of the property affected by this Agreement and a map outlining the land affected by such additional charges per the terms of

this Agreement are contained in Exhibit "A", which is attached and hereby incorporated into this Agreement. The total cost of said water utility system improvement shall be utilized to determine the pro-rata reimbursement to the Developer by any owner of real estate, who did not contribute to the original cost of said improvement, and who subsequently wishes to tap on or connect to said improvement, all subject to the laws and ordinances of Yakima County, the State of Washington, and the provisions of this Agreement. The pro-rata per acre is _____; provided that in no event shall the Developer be reimbursed for an amount greater than _____.

No person, firm, corporation, or other entity shall be granted a permit or be authorized to tap into the facility for water service during a period of fifteen (15) years from the date this Agreement is recorded pursuant to Section 5, without first paying to the County, in addition to any and all other costs, fees and charges made or assessed for each tap, or for the main facility constructed in connection therewith, the amount required by the provisions of this Agreement except such charges shall not apply to any extension of the main facility. All amounts so received by the County shall be paid to the Developer under the terms of this Agreement within thirty (30) days after receipt thereof. Upon expiration of the aforementioned fifteen (15) year term, the County shall be under no further obligation to collect or make any further payments to the Developer for said improvements. The Decision of the County Engineer or his authorized representative in determining or computing the amount due from any benefitted owner/party who wishes to hook up to said improvements, shall be final and conclusive in all respects.

4. Extension/Addition. The County reserves the right, without affecting the validity or terms of this Agreement, to make or cause to be made, extensions or additions to said improvements and to allow service connections to be made to said extensions or additions, without liability on the part of the County.

5. Recordation. This Agreement shall be recorded by the County Clerk with the Auditor of Yakima County, and shall remain in full force and effect for a period of fifteen (15) years after the date of such recording, or until the Developer, or its successors or assigns, is fully reimbursed as aforesaid, whichever event occurs earlier; provided, that in the event the improvements described herein shall, during the term of this Agreement, be rendered useless by the redesign or reconstruction of a portion of the County's water system facilities, such determination of uselessness to be in the absolute judgment of the County Engineer, then the County's collection obligation pursuant to this Agreement shall cease.

DATED this ____ day of _____, 20____.

YAKIMA COUNTY, WASHINGTON
Board of County Commissioners

_____
J. Rand Elliott, Chairman

_____
Ron Anderson, Commissioner

_____
Michael D. Leita, Commissioner
Constituting the Board of County Commissioners
For Yakima County, Washington

Attest:

_____ _____
Tiera L. Girard Date
Clerk of the Board

APPROVED AS TO FORM:

_____
Deputy Prosecuting Attorney

DEVELOPER

By: _____

Its: _____

STATE OF WASHINGTON)
) ss
County of Yakima)

On this _____day of _____before me personally appeared _____to me known to be the _____of the corporation that executed the foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that _____authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.

Given under my hand and official seal the day and year last above written.

_____
Notary Public in and for the State of Washington
Residing at_____
My commission expires: _____

AGREEMENT FOR DEVELOPMENT IMPROVEMENTS AND FUNDING

THIS AGREEMENT is entered into between _____, (hereinafter the "Developer") whose address is _____ and Yakima County, Washington, (hereinafter the "County") through its Public Services Department whose address is County Courthouse, 128 North 2nd Street, Fourth Floor Courthouse, Yakima, Washington, 98901.

1. RECITALS.

1.1 The Developer constructed a project known as _____ (hereinafter the "Development").

1.2 The Developer requested water service from the County's Terrace Heights Water System to serve the Development.

1.3 The Developer, in order to receive water service from the County, constructed a water main located as shown on Exhibit 'A'.

1.4 A minimum ____ inch (__") diameter water main was required to meet the needs of the Development.

1.5 The County requested a portion of the water main be oversized from ___ inches (__") to __ ___ inches (__") to serve properties outside the Development.

1.6 The water main will be owned and operated by the County as part of its Terrace Heights Water System.

NOW, THEREFORE IT IS HEREBY AGREED:

2. THE DEVELOPER SHALL

2.1 Dedicate the water main to the County.

3. THE COUNTY SHALL

3.1 Reimburse the Developer's cost to oversize the water main from _____ inches (___") to inches (__"). Reimbursement will be made in the amount of $_____ which constitutes the

difference between the actual cost of materials (pipe, valves, fittings, and bedding) to construct the section of_____ inch (__") water main and what would have cost to construct a _____ inch (__") water main.

DEVELOPER

_____
Signature

_____
Print or Type Name

_____
Title

_____
Date Signed

YAKIMA COUNTY PUBLIC SERVICES

_____
County Engineer

_____
Date Signed

Appendix C

Water Usage/Data Reporting

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2017

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	1,649,000		9,631,000		1,804,400	13,084,400
Feb	1,100,000		8,405,200		1,492,600	10,997,800
Mar	1,430,000		9,080,600		1,940,100	12,450,700
Apr	3,536,000		5,079,300		5,840,900	14,456,200
May	4,693,000		6,395,100	11,054,000	11,763,800	33,905,900
Jun	9,730,000	1,323,000	6,646,300	12,168,000	13,144,700	43,012,000
Jul	11,511,000	9,107,000	7,993,700	12,818,000	11,650,800	53,080,500
Aug	10,306,000	4,754,000	8,071,300	12,152,000	15,852,400	51,135,700
Sep						0
Oct						0
Nov						0
Dec						0
Total	43,955,000	15,184,000	61,302,500	48,192,000	63,489,700	***232,123,200***

Average Day Demand (gpd)	***635,954***
Peak Month Demand (gpd)	***1,712,274***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2016

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	1,645,000	0	3,061,600		5,380,500	10,087,100
Feb	3,522,000	0	2,770,200		4,890,700	11,182,900
Mar	3,032,000	0	4,235,100		4,243,500	11,510,600
Apr	6,527,000	0	8,582,000	788,000	9,173,700	25,070,700
May	5,799,000	0	8,165,400	13,294,000	8,187,000	35,445,400
Jun	6,608,000	4,651,000	7,726,400	12,249,000	9,214,300	40,448,700
Jul	6,945,000	7,716,000	7,504,100	11,648,000	9,685,600	43,498,700
Aug	7,841,000	10,150,000	8,637,100	13,064,000	10,971,800	50,663,900
Sep	4,111,000	5,009,000	7,496,700	12,922,000	5,617,900	35,156,600
Oct	1,385,000		6,002,100	8,866,000	3,452,000	19,705,100
Nov	1,011,000		7,937,600		2,110,600	11,059,200
Dec	934,000		8,941,600		1,866,500	11,742,100
Total	49,360,000	27,526,000	81,059,900	72,831,000	74,794,100	305,571,000

Average Day Demand (gpd)	***837,181***
Peak Month Demand (gpd)	***1,634,319***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2015

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	60,000	0	9,845,400	0	2,508,800	12,414,200
Feb	56,000	0	9,760,500	0	1,837,900	11,654,400
Mar	1,793,000	0	8,989,600	0	1,769,700	12,552,300
Apr	7,053,000	0	5,876,500	3,339,000	7,248,000	23,516,500
May	7,452,000	0	3,940,200	13,129,000	6,623,400	31,144,600
Jun	7,784,000	5,338,000	8,226,600	14,004,000	13,866,100	49,218,700
Jul	0	14,329,000	9,306,900	14,004,000	15,621,400	53,261,300
Aug	0	12,389,000	8,819,700	13,690,000	14,583,600	49,482,300
Sep	0	4,393,000	6,361,900	13,175,000	10,767,300	34,697,200
Oct	0	0	2,930,700	12,558,000	5,494,700	20,983,400
Nov	0	0	8,121,000	1,654,000	1,716,200	11,491,200
Dec	498,000	0	5,479,300	0	4,829,300	10,806,600
Total	24,696,000	36,449,000	87,658,300	85,553,000	86,866,400	***321,222,700***

Average Day Demand (gpd)	***880,062***
Peak Month Demand (gpd)	***1,718,106***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2014

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	0	0	5,561,600	0	7,374,500	12,936,100
Feb	0	0	4,563,900	0	7,135,100	11,699,000
Mar	0	0	5,209,600	0	8,148,500	13,358,100
Apr	6,178,000	0	7,277,200	909,000	11,286,700	25,650,900
May	4,562,000	1,419,000	5,668,900	14,018,000	9,733,500	35,401,400
Jun	0	6,677,000	9,828,900	13,994,000	14,065,300	44,565,200
Jul	1,881,000	10,129,000	11,470,700	13,681,000	14,814,200	51,975,900
Aug	2,972,000	9,712,000	10,263,200	13,699,000	13,273,900	49,920,100
Sep	5,961,000	1,619,000	6,930,800	13,379,000	9,333,900	37,223,700
Oct	3,004,000	28,000	3,636,000	12,834,000	4,529,000	24,031,000
Nov	961,000	0	10,223,500	0	1,076,600	12,261,100
Dec	0	0	11,151,300	0	2,536,100	13,687,400
Total	25,519,000	29,584,000	91,785,600	82,514,000	103,307,300	332,709,900

Average Day Demand (gpd)	***911,534***
Peak Month Demand (gpd)	***1,676,642***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2013

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	2,002,000	0	3,496,300	0	6,119,100	11,617,400
Feb	0	0	3,770,700	0	6,715,000	10,485,700
Mar	104,000	0	4,051,200	0	7,188,000	11,343,200
Apr	7,588,000	0	5,725,600	0	10,295,500	23,609,100
May	7,827,000	0	4,907,700	14,069,000	10,308,300	37,112,000
Jun	6,359,000	0	5,119,200	13,297,000	9,291,800	34,067,000
Jul	11,682,000	6,197,000	5,769,900	15,465,000	15,434,000	54,547,900
Aug	4,406,000	12,282,000	0	14,327,000	15,457,200	46,472,200
Sep	0	7,081,000	1,888,400	7,577,000	12,106,500	28,652,900
Oct	1,955,000	0	4,811,300	0	5,193,500	11,959,800
Nov	2,544,000	0	3,813,700	0	4,755,000	11,112,700
Dec	0	0	6,744,100	0	5,805,100	12,549,200
Total	44,467,000	25,560,000	50,098,100	64,735,000	108,669,000	***293,529,100***

Average Day Demand (gpd)	***804,189***
Peak Month Demand (gpd)	***1,759,610***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2012

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	2,461,000	0	3,687,200	0	6,516,100	12,664,300
Feb	0	0	4,008,500	0	7,265,100	11,273,600
Mar	0	0	4,247,500	0	7,411,200	11,658,700
Apr	2,932,000	0	5,327,900	0	9,335,700	17,595,600
May	8,002,000	0	5,233,500	10,234,000	10,385,900	33,855,400
Jun	5,963,000	829,000	3,641,200	14,223,000	7,713,500	32,369,700
Jul	9,328,000	3,513,000	6,242,800	15,477,000	13,323,200	47,884,000
Aug	9,654,000	3,775,000	5,945,400	14,985,000	12,767,700	47,127,100
Sep	6,393,000	559,000	4,065,100	13,565,000	8,634,200	33,216,300
Oct	5,213,000	0	3,556,200	6,803,000	6,873,200	22,445,400
Nov	3,770,000	0	2,712,900	0	4,846,600	11,329,500
Dec	3,802,000	0	2,771,100	0	4,900,100	11,473,200
Total	57,518,000	8,676,000	51,439,300	75,287,000	99,972,500	292,892,800

Average Day Demand (gpd)	***802,446***
Peak Month Demand (gpd)	***1,544,645***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2011

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	0	0	4,768,800	0	7,841,900	12,610,700
Feb	0	0	4,214,400	0	6,991,300	11,205,700
Mar	0	0	4,655,700	0	7,815,200	12,470,900
Apr	1,405,000	0	6,080,700	0	10,139,000	17,624,700
May	5,585,000	0	4,792,300	8,065,000	9,809,300	28,251,600
Jun	8,306,800	79,000	5,513,300	11,511,000	10,109,000	35,519,100
Jul	10,924,140	8,575,000	8,159,400	1,128,000	13,746,100	42,532,640
Aug	10,756,000	7,652,000	7,911,000	9,291,000	14,452,000	50,062,000
Sep	7,841,000	889,000	4,985,800	14,114,000	9,757,400	37,587,200
Oct	5,552,000	60,000	4,088,400	0	6,829,800	16,530,200
Nov	5,998,000	0	4,503,300	0	1,130,400	11,631,700
Dec	6,585,000	0	4,955,300	0	240,600	11,780,900
Total	62,952,940	17,255,000	64,628,400	44,109,000	98,862,000	***287,807,340***

Average Day Demand (gpd)	***788,513***
Peak Month Demand (gpd)	***1,614,903***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2010

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	0	0	3,327,800	0	8,099,300	11,427,100
Feb	0	0	3,087,700	0	7,545,500	10,633,200
Mar	0	0	2,887,200	0	6,631,000	9,518,200
Apr	6,117,000	0	4,153,200	0	9,632,400	19,902,600
May	8,783,000	0	5,221,400	0	6,212,300	20,216,700
Jun	8,532,000	0	4,681,700	7,807,000	4,892,200	25,912,900
Jul	8,959,000	715,000	6,376,400	15,953,000	12,019,100	44,022,500
Aug	12,377,000	4,150,000	6,869,400	14,375,000	12,693,855	50,465,255
Sep	11,940,000	4,174,000	3,809,400	14,479,000	7,193,800	41,596,200
Oct	6,877,000	0	3,038,300	14,078,000	5,554,900	29,548,200
Nov	5,249,000	0	3,538,600	6,353,000	5,852,800	20,993,400
Dec	4,208,000	0	4,586,700	0	7,588,100	16,382,800
Total	73,042,000	9,039,000	51,577,800	73,045,000	93,915,255	300,619,055

Average Day Demand (gpd)	***823,614***
Peak Month Demand (gpd)	***1,627,911***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2009

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	5,526,000	23,000	0	0	6,042,900	11,591,900
Feb	5,201,000	0	0	0	5,365,100	10,566,100
Mar	6,169,000	0	0	0	6,360,200	12,529,200
Apr	8,353,000	0	0	4,012,000	9,113,900	21,478,900
May	9,244,000	327,000	0	12,088,000	9,729,400	31,388,400
Jun	12,409,000	3,389,000	2,385,200	12,461,000	14,338,600	44,982,800
Jul	12,569,000	5,066,000	6,109,000	13,557,000	14,332,200	51,633,200
Aug	7,800,000	6,944,000	5,972,400	14,304,000	11,804,200	46,824,600
Sep	723,000	3,104,000	5,789,400	13,382,000	8,933,400	31,931,800
Oct	0	0	4,591,800	6,995,000	5,013,100	16,599,900
Nov	0	0	3,299,300	0	8,317,300	11,616,600
Dec	0	0	3,620,500	0	8,854,500	12,475,000
Total	67,994,000	18,853,000	31,767,600	76,799,000	108,204,800	***303,618,400***

Average Day Demand (gpd)	***831,831***
Peak Month Demand (gpd)	***1,665,587***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2008

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	4,942,000	0	0	0	7,828,200	12,770,200
Feb	4,923,000	0	0	0	7,015,300	11,938,300
Mar	5,205,000	0	0	0	7,486,700	12,691,700
Apr	5,679,000	60,000	0	9,102,000	6,958,300	21,799,300
May	2,947,000	2,888,000	0	14,948,000	10,580,900	31,363,900
Jun	6,927,000	5,601,000	0	15,085,000	12,535,300	40,148,300
Jul	13,517,000	6,752,000	0	15,310,000	13,994,640	49,573,640
Aug	9,831,000	5,302,000	0	14,195,000	10,282,300	39,610,300
Sep	8,357,000	2,850,000	0	15,655,000	8,715,300	35,577,300
Oct	3,838,000	107,000	0	10,656,000	3,870,400	18,471,400
Nov	4,629,000	35,000	0	0	4,769,200	9,433,200
Dec	5,958,000	64,000	0	0	6,738,800	12,760,800
Total	76,753,000	23,659,000	0	94,951,000	100,775,340	296,138,340

Average Day Demand (gpd)	***811,338***
Peak Month Demand (gpd)	***1,599,150***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2007

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	5,502,000	0	0	0	6,490,100	11,992,100
Feb	4,445,000	0	0	0	6,413,700	10,858,700
Mar	5,269,000	18,000	0	0	7,630,500	12,917,500
Apr	7,510,000	6,000	4,080,300	0	10,958,600	22,554,900
May	6,758,000	278,000	6,389,000	10,686,000	9,855,700	33,966,700
Jun	7,905,000	1,827,000	5,770,100	12,641,000	11,497,600	39,640,700
Jul	9,808,000	6,240,000	6,163,000	14,269,000	14,238,300	50,718,300
Aug	7,266,000	6,556,000	5,901,700	13,504,000	10,521,100	43,748,800
Sep	5,317,000	2,733,000	5,540,200	11,356,000	7,503,400	32,449,600
Oct	4,131,000	0	7,315,300	1,711,000	6,018,900	19,176,200
Nov	3,925,000	0	1,979,500	0	5,572,200	11,476,700
Dec	4,772,000	0	0	0	7,051,500	11,823,500
Total	72,608,000	17,658,000	43,139,100	64,167,000	103,751,600	***301,323,700***

Average Day Demand (gpd)	***825,544***
Peak Month Demand (gpd)	***1,636,074***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2006

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	5,578,000	0	0	0	7,120,800	12,698,800
Feb	3,956,000	0	0	0	7,368,700	11,324,700
Mar	5,406,000	0	0	0	7,704,200	13,110,200
Apr	3,993,000	4,000	0	3,906,000	8,336,300	16,239,300
May	0	2,065,000	0	16,424,000	13,612,700	32,101,700
Jun	7,152,000	33,000	133,200	14,894,000	11,647,400	33,859,600
Jul	10,333,000	6,376,000	5,881,800	14,552,000	14,544,300	51,687,100
Aug	8,923,000	2,415,000	5,926,100	15,542,000	12667000	45,473,100
Sep	7,626,000	86,000	5,988,800	7,056,000	10,963,000	31,719,800
Oct	5,947,000	0	6,740,400	0	8,464,200	21,151,600
Nov	4,718,000	0	0	0	6,362,000	11,080,000
Dec	4,527,000	0	0	0	7,097,200	11,624,200
Total	68,159,000	10,979,000	24,670,300	72,374,000	115,887,800	***292,070,100***

Average Day Demand (gpd)	***800,192***
Peak Month Demand (gpd)	***1,667,326***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2005

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	5,646,000	0	0	N/A	7,722,400	13,368,400
Feb	5,565,000	0	0	N/A	7,430,100	12,995,100
Mar	6,792,000	0	0	N/A	9,050,300	15,842,300
Apr	7,349,000	0	0	3,370,000	10,047,200	20,766,200
May	5,717,000	0	0	15,341,000	7,221,600	28,279,600
Jun	10,324,000	1,908,000	0	13,979,000	13,705,900	39,916,900
Jul	10,621,000	5,758,000	0	13,873,000	13,802,500	44,054,500
Aug	11,561,000	6,338,000	0	15,901,000	15,790,700	49,590,700
Sep	7,429,000	922,000	0	14,583,000	9,743,100	32,677,100
Oct	5,248,000	5,000	0	7,689,000	4,894,900	17,836,900
Nov	5,391,000	0	0	2,645,000	4,072,800	12,108,800
Dec	4,243,000	0	0	0	7,848,200	12,091,200
Total	85,886,000	14,931,000	0	87,381,000	111,329,700	***299,527,700***

Average Day Demand (gpd)	***820,624***
Peak Month Demand (gpd)	***1,599,700***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2004

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	4,196,000	0	0	N/A	8,423,300	12,619,300
Feb	5,239,000	0	0	N/A	6,884,800	12,123,800
Mar	7,304,000	0	0	N/A	10,115,400	17,419,400
Apr	10,373,000	1,132,000	0	N/A	14,501,600	26,006,600
May	5,748,000	31,000	0	14,772,000	7,921,000	28,472,000
Jun	9,150,000	1,946,000	0	14,313,000	12,643,600	38,052,600
Jul	10,711,000	5,482,000	0	13,882,000	14,891,200	44,966,200
Aug	10,554,000	8,371,000	0	15,038,000	14,253,600	48,216,600
Sep	8,868,000	1,284,000	0	6,421,000	13,191,700	29,764,700
Oct	8,230,000	658,000	0	N/A	11,105,300	19,993,300
Nov	5,557,000	6,000	0	N/A	7,853,200	13,416,200
Dec	4,817,000	0	0	584,000	6,767,400	12,168,400
Total	90,747,000	18,910,000	0	65,010,000	128,552,100	***303,219,100***

Average Day Demand (gpd)	***830,737***
Peak Month Demand (gpd)	***1,555,374***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2003

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	5,124,000	0	0	0	6,677,000	11,801,000
Feb	4,829,000	0	0	0	5,962,600	10,791,600
Mar	5,375,000	0	0	0	7,714,000	13,089,000
Apr	8,036,000	0	0	0	10,949,500	18,985,500
May	9,576,000	1,254,000	0	3,400,000	12,227,500	26,457,500
Jun	10,551,000	123,000	0	14,724,000	14,212,300	39,610,300
Jul	11,408,000	4,442,000	0	14,490,000	15,894,900	46,234,900
Aug	9,318,000	968,000	0	13,632,000	12,410,800	36,328,800
Sep	8,118,000	8,000	0	14,997,000	10,639,100	33,762,100
Oct	6,576,000	0	0	6,601,000	7,915,700	21,092,700
Nov	4,598,000	3,000	0	0	6,589,000	11,190,000
Dec	4,905,000	0	0	0	7,202,500	12,107,500
Total	88,414,000	6,798,000	0	67,844,000	118,394,900	***281,450,900***

Average Day Demand (gpd)	***771,098***
Peak Month Demand (gpd)	***1,491,448***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2002

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	4,614,000	0	0	0	6,244,600	10,858,600
Feb	4,799,000	0	0	0	5,442,500	10,241,500
Mar	4,661,000	0	0	0	6,221,600	10,882,600
Apr	8,340,000	0	0	0	13,017,600	21,357,600
May	7,878,000	295,000	0	5,291,000	11,611,500	25,075,500
Jun	6,765,000	95,000	0	13,395,000	9,329,200	29,584,200
Jul	10,972,000	1,898,000	0	15,616,000	14,743,100	43,229,100
Aug	10,038,000	544,000	0	13,822,000	13,567,900	37,971,900
Sep	6,577,000	500,000	0	14,614,000	8,999,900	30,690,900
Oct	4,654,000	0	0	8,048,000	5,907,300	18,609,300
Nov	4,828,000	0	0	0	6,221,500	11,049,500
Dec	4,938,000	0	0	0	7,068,700	12,006,700
Total	79,064,000	3,332,000	0	70,786,000	108,375,400	***261,557,400***

Average Day Demand (gpd)	***716,596***
Peak Month Demand (gpd)	***1,394,487***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2001

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	794,000	0	0	0	9,665,800	10,459,800
Feb	9,122,000	0	0	0	meter broke	9,122,000
Mar	4,765,000	0	0	0	6,219,300	10,984,300
Apr	2,202,000	0	0	0	14,052,700	16,254,700
May	10,132,000	2,753,000	0	316,000	16,576,000	29,777,000
Jun	8,920,000	200,000	0	13,818,000	5,462,000	28,400,000
Jul	12,127,000	0	0	15,149,000	11,690,100	38,966,100
Aug	5,774,000	0	0	14,387,000	14,881,200	35,042,200
Sep	1,916,000	196,000	0	13,228,000	11,587,800	26,927,800
Oct	6,374,000	0	0	0	13,243,600	19,617,600
Nov	4,446,000	0	0	0	5,716,200	10,162,200
Dec	4,656,000	0	0	0	6,225,800	10,881,800
Total	71,228,000	3,149,000	0	56,898,000	115,320,500	***246,595,500***

Average Day Demand (gpd)	***675,604***
Peak Month Demand (gpd)	***1,256,971***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2000

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	109,000		0		8,748,100	8,857,100
Feb	2,625,000		0		5,918,200	8,543,200
Mar	2,185,000	8,000	0		7,907,200	10,100,200
Apr	3,801,000		0		13,769,600	17,570,600
May	8,666,000		0		15,637,600	24,303,600
Jun	8,475,000	2,576,000	0	5,025,000	15,548,600	31,624,600
Jul	8,135,000	484,000	0	14,472,000	15,768,300	38,859,300
Aug	7,066,000	531,000	0	14,290,000	15,846,200	37,733,200
Sep	488,600	3,000	0	3,180,000	13,668,500	17,340,100
Oct	133,300	35,000	0	1,524,000	13,180,600	14,872,900
Nov	91,600	0	0	0	8,977,100	9,068,700
Dec	82,400	0	0	0	6,201.40	88,601
Total	41,857,900	3,637,000	0	38,491,000	134,976,201	***218,962,101***

Average Day Demand (gpd)	***599,896***
Peak Month Demand (gpd)	***1,253,526***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 1999

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	9,555,000	0	0	0	0	9,555,000
Feb	8,287,000	0	0	0	0	8,287,000
Mar	10,121,000	0	0	0	376,500	10,497,500
Apr	6,165,000	0	0	0	11,477,100	17,642,100
May	5,071,000	0	0	0	15,959,600	21,030,600
Jun	11,466,000	0	0	0	14,967,900	26,433,900
Jul	11,107,000	7,180,000	0	0	16,009,900	34,296,900
Aug	9,015,000	3,534,000	0	3,543,000	15,661,600	31,753,600
Sep	3,010,000	127,000	0	12,810,000	14,912,200	30,859,200
Oct	0	832,000	0	8,408,000	11,542,600	20,782,600
Nov	0	0	0	0	8,803,400	8,803,400
Dec	9,370,000	0	0	0	1,760,700	11,130,700
Total	83,167,000	11,673,000	0	24,761,000	111,471,500	***231,072,500***

Average Day Demand (gpd)	***633,075***
Peak Month Demand (gpd)	***1,106,352***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 1998

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	8,657,000	0	0	0	0	8,657,000
Feb	8,316,000	0	0	0	0	8,316,000
Mar	9,207,000	0	0	0	0	9,207,000
Apr	9,060,000	0	0	0	6,673,400	15,733,400
May	5,187,000	0	0	3,500	16,150,200	21,340,700
Jun	5,330,000	72,000	0	6,312,900	15,986,200	27,701,100
Jul	8,230,000	1,357,000	0	10,700,700	16,161,200	36,448,900
Aug	5,382,000	2,242,000	0	11,452,400	16,231,600	35,308,000
Sep	4,239,000	2,242,000	0	4,576,000	15,841,600	26,898,600
Oct	2,369,000	2,243,000	0	5,007,000	6,185,100	15,804,100
Nov	7,825,000	0	0	11,011,200	1,059,400	19,895,600
Dec	8,249,000	0	0	658,200	337,300.00	9,244,500
Total	82,051,000	8,156,000	0	49,721,900	94,626,000	***234,554,900***

Average Day Demand (gpd)	***642,616***
Peak Month Demand (gpd)	***1,175,771***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 1997

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	8,232,000	861,000	0	0	0	9,093,000
Feb	7,249,000	138,200	0	0	0	7,387,200
Mar	8,901,000	138,200	0	0	0	9,039,200
Apr	9,263,000	138,200	0	0	3,973,000	13,374,200
May	9,973,730	138,200	0	746,100	12,345,500	23,203,530
Jun	3,925,000	138,200	0	0	13,448,700	17,511,900
Jul	2,381,000	12,278,000	0	0	16,265,300	30,924,300
Aug	3,136,000	12,032,000	0	0	16,238,900	31,406,900
Sep	1,252,000	687,000	0	0	15,230,500	17,169,500
Oct	8,644,000	0	0	0	3,005,000	11,649,000
Nov	8,434,000	0	0	0	70,700	8,504,700
Dec	8,295,000	0	0	0	0	8,295,000
Total	79,685,730	26,549,000	0	746,100	80,577,600	***187,558,430***

Average Day Demand (gpd)	***513,859***
Peak Month Demand (gpd)	***1,013,126***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2017

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Industrial	Education	Government	System Total
Jan	449,460	385,068	212,413	103,841	22,131	19,957	1,366	1,194,236
Feb	417,319	354,105	209,537	91,812	29,471	24,364	673	1,127,281
Mar	407,011	396,406	213,858	100,607	9,391	21,342	1,152	1,149,767
Apr	549,926	378,345	313,544	160,981	2,051	28,228	1,712	1,434,787
May	1,580,953	652,209	437,495	308,995	6,629	151,378	60,646	3,198,305
Jun	3,132,534	780,306	557,506	677,794	12,685	306,402	100,605	5,567,832
Jul	3,400,023	1,125,216	660,228	592,997	36,399	25,196	92,549	5,932,608
Aug	3,272,772	1,099,896	669,557	641,708	114,047	25,288	101,912	5,925,180
Sep	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0
Total	13,209,998	5,171,551	3,274,138	2,678,735	232,804	602,155	360,615	25,529,996

Average Day Demand (cu-ft/day)	***69,945***
Average Day Demand (gpd)	***523,190***
Peak Month Demand (cu-ft/day)	***191,374***
Peak Month Demand (gpd)	***1,431,481***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2016

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Industrial	Education	Government	System Total
Jan	482,530	375,675	196,807	98,233	17,065	14,927	3,934	1,189,171
Feb	412,497	319,239	181,021	98,927	23,593	20,884	3,673	1,059,834
Mar	406,225	332,530	169,882	103,964	18,763	19,872	3,338	1,054,574
Apr	1,239,066	493,928	303,464	267,006	2,837	100,009	89,666	2,495,976
May	2,240,313	738,612	427,886	430,281	2,771	168,394	84,654	4,092,911
Jun	2,539,539	850,230	435,045	464,154	3,331	254,346	72,323	4,618,968
Jul	3,253,142	937,704	524,231	615,101	8,404	340,069	90,115	5,768,766
Aug	3,243,781	1,135,102	584,298	623,002	73,667	319,647	97,187	6,076,684
Sep	2,443,034	807,965	548,474	514,409	56,063	297,862	95,737	4,763,544
Oct	1,243,365	563,053	417,433	286,816	63,190	195,566	54,280	2,823,703
Nov	510,987	403,070	243,128	114,406	42,900	30,028	10,047	1,354,566
Dec	544,636	409,280	231,306	104,387	21,301	23,350	2,250	1,336,510
Total	18,559,115	7,366,388	4,262,975	3,720,686	333,885	1,784,954	607,204	36,635,207

Average Day Demand (cu-ft/day)	***100,370***
Average Day Demand (gpd)	***750,771***
Peak Month Demand (cu-ft/day)	***196,022***
Peak Month Demand (gpd)	***1,466,245***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2015

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Industrial	Education	Government	System Total
Jan	526,692	432,978	144,572	103,625	225	12,297	1,061	1,221,450
Feb	499,898	364,234	121,987	111,415	234	26,831	1,784	1,126,383
Mar	607,043	412,660	102,776	125,665	6,118	12,718	2,288	1,269,268
Apr	1,113,776	469,868	165,790	271,560	7,556	79,532	1,823	2,109,905
May	1,864,845	660,290	279,238	418,937	12,995	116,344	24,090	3,376,739
Jun	3,223,546	1,201,731	453,597	664,910	14,160	247,664	85,788	5,891,396
Jul	3,017,399	941,717	290,600	637,678	39,084	305,137	65,430	5,297,045
Aug	3,433,604	1,047,252	545,996	780,173	142,458	312,457	192,066	6,454,006
Sep	2,705,347	918,607	483,433	620,859	160,231	238,273	83,573	5,210,323
Oct	1,888,328	738,732	429,748	376,815	113,600	163,561	78,295	3,789,079
Nov	413,037	310,514	173,312	105,935	38,629	18,942	581,243	1,641,612
Dec	525,796	413,985	231,004	113,277	17,797	16,112	4,467	1,322,438
Total	19,819,311	7,912,568	3,422,053	4,330,849	553,087	1,549,868	1,121,908	***38,709,644***

Average Day Demand (cu-ft/day)	***106,054***
Average Day Demand (gpd)	***793,283***
Peak Month Demand (cu-ft/day)	***208,194***
Peak Month Demand (gpd)	***1,557,289***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2014

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Industrial	Education	Government	System Total
Jan	593,766	437,747	107,114	62,544	12,010	7,848	1,061	1,222,090
Feb	494,316	423,114	116,063	95,964	1,574	21,430	726	1,153,187
Mar	296,841	307,770	63,658	101,522	25,747	11,332	245	807,115
Apr	1,134,843	539,804	150,365	272,004	11,188	127,715	6,159	2,242,078
May	1,751,447	591,561	172,207	353,232	17,852	184,258	34,367	3,104,924
Jun	2,354,821	802,964	218,819	465,989	15,274	271,886	35,733	4,165,486
Jul	3,161,348	1,159,288	353,232	499,353	15,287	201,969	37,351	5,427,828
Aug	2,752,544	704,802	296,758	629,553	77,899	353,884	31,313	4,846,753
Sep	2,687,029	1,290,393	237,201	976,315	15,068	191,261	51,661	5,448,928
Oct	1,308,421	634,220	177,538	349,235	2,772	125,548	119,178	2,716,912
Nov	390,305	401,954	135,033	101,791	1,325	12,753	6,139	1,049,300
Dec	399,636	339,828	130,036	84,121	227	9,667	1,791	965,306
Total	17,325,317	7,633,445	2,158,024	3,991,623	196,223	1,519,551	325,724	***33,149,907***

Average Day Demand (cu-ft/day)	***90,822***
Average Day Demand (gpd)	***679,346***
Peak Month Demand (cu-ft/day)	***175,772***
Peak Month Demand (gpd)	***1,314,774***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2013

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Industrial	Education	Government	System Total
Jan	492,042	389,054	70,771	84,607	10	11,131	347	1,047,962
Feb	465,909	362,865	61,810	79,380	11	8,752	299	979,026
Mar	407,960	339,346	60,055	84,253	6	9,998	380	901,998
Apr	935,681	474,608	80,664	276,258	381	95,481	921	1,863,994
May	2,030,312	613,556	153,480	417,787	642	136,481	40,604	3,392,862
Jun	1,839,482	802,838	196,930	476,758	31,655	285,400	34,894	3,667,957
Jul	2,820,405	939,225	232,507	415,463	23,039	253,338	50,684	4,734,661
Aug	3,354,175	1,064,928	289,983	596,479	54,750	253,407	75,480	5,689,202
Sep	3,453,492	842,373	269,208	383,995	111,080	152,949	52,525	5,265,622
Oct	1,098,617	565,387	159,245	266,000	124,241	114,726	24,185	2,352,401
Nov	471,879	334,458	64,724	26,593	57,875	7,135	5,691	968,355
Dec	343,026	308,765	53,108	42,306	20,106	5,902	331	773,544
Total	17,712,980	7,037,403	1,692,485	3,149,879	423,796	1,334,700	286,341	***31,637,584***

Average Day Demand (cu-ft/day)	***86,678***
Average Day Demand (gpd)	***648,354***
Peak Month Demand (cu-ft/day)	***183,523***
Peak Month Demand (gpd)	***1,372,749***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2012

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Industrial	Education	Government	System Total
Jan	596,770	438,372	43,664	73,829	6	12,264	24,805	1,189,710
Feb	414,499	362,594	46,607	68,411	11	6,240	7,545	905,907
Mar	368,379	371,625	67,245	76,905	10	7,580	18,532	910,276
Apr	651,456	452,424	92,749	169,054	38	29,296	10,205	1,405,222
May	1,659,417	603,527	140,276	259,955	1,086	86,161	16,064	2,766,486
Jun	1,985,484	726,151	171,931	422,029	2,162	84,118	35,765	3,427,640
Jul	2,906,191	1,172,715	261,780	566,280	1,069	259,542	54,888	5,222,465
Aug	2,574,969	767,863	201,988	477,626	893	249,842	35,092	4,308,273
Sep	2,581,781	932,716	241,550	478,030	821	166,626	28,647	4,430,171
Oct	1,492,446	650,773	206,968	324,900	481	126,040	20,518	2,822,126
Nov	435,446	416,758	63,355	103,847	13	17,827	480	1,037,726
Dec	330,336	326,942	60,421	68,611	6	7,792	331	794,439
Total	15,997,174	7,222,460	1,598,534	3,089,477	6,596	1,053,328	252,872	***29,220,441***

Average Day Demand (cu-ft/day)	***80,056***
Average Day Demand (gpd)	***598,819***
Peak Month Demand (cu-ft/day)	***168,467***
Peak Month Demand (gpd)	***1,260,130***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2011

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Industrial	Education	Government	System Total
Jan	597,044	501,768	77,478	77,103	0	12,264	25,386	1,291,043
Feb	337,051	391,183	72,132	77,017	0	8,472	9,256	895,111
Mar	349,137	324,037	65,914	81,313	0	8,803	16,401	845,605
Apr	787,926	476,499	87,954	229,144	0	49,409	16,755	1,647,687
May	1,360,365	539,363	115,789	336,987	0	64,907	11,377	2,428,788
Jun	1,865,281	674,162	135,706	250,961	1	102,604	22,209	3,050,924
Jul	2,920,245	1,009,134	264,886	587,747	0	205,407	23,574	5,010,993
Aug	2,844,261	1,002,452	277,604	479,104	0	144,856	25,287	4,773,564
Sep	2,640,995	1,073,733	273,775	657,296	672	170,212	45,603	4,862,286
Oct	945,097	610,524	159,548	305,260	133	41,007	26,533	2,088,102
Nov	416,343	428,110	70,540	79,980	6	9,864	11,839	1,016,682
Dec	339,917	381,344	80,503	79,091	6	6,021	15,217	902,099
Total	15,403,662	7,412,309	1,681,829	3,241,003	818	823,826	249,437	***28,812,884***

Average Day Demand (cu-ft/day)	***78,939***
Average Day Demand (gpd)	***590,467***
Peak Month Demand (cu-ft/day)	***161,645***
Peak Month Demand (gpd)	***1,209,104***

Terrace Heights Water System
Water Consumption (Cu-ft)
Year: 2010

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Education	Government	System Total
Jan	527,424	501,289	62,628	138,060	5,640	20,350	1,255,391
Feb	341,006	319,994	66,052	83,586	8,401	12,428	831,467
Mar	373,606	457,597	92,690	102,242	6,832	20,577	1,053,544
Apr	1,212,281	584,339	123,679	261,190	26,732	22,457	2,230,678
May	1,515,850	635,760	159,537	337,323	64,907	13,141	2,726,518
Jun	1,350,902	631,822	141,303	362,823	84,881	15,937	2,587,668
Jul	2,919,883	990,690	248,019	581,092	263,442	12,502	5,015,628
Aug	3,431,498	1,227,828	319,540	608,350	182,796	17,085	5,787,097
Sep	1,722,750	785,105	222,948	456,677	78,981	15,978	3,282,439
Oct	1,134,622	658,162	201,869	289,456	57,219	19,807	2,361,135
Nov	319,398	373,132	63,577	79,407	6,751	9,812	852,077
Dec	314,054	369,783	82,670	97,253	6,148	15,217	885,125
Total	15,163,274	7,535,501	1,784,512	3,397,459	792,730	195,291	***28,868,767***

Average Day Demand (cu-ft/day)	***79,093***
Average Day Demand (gpd)	***591,612***
Peak Month Demand (cu-ft/day)	***186,681***
Peak Month Demand (gpd)	***1,396,371***

Terrace Heights Water System
Water Consumption (cu-ft)
Year: 2009

	Single-Family (TE)	Single-Family (CC)	Multi-Family	Commercial	Education	Government	System Total
Jan	551,841	510,511	154,711	147,439	6,239	15,141	1,385,882
Feb	503,617	455,346	109,908	150,007	6,239	2,421	1,227,538
Mar	314,179	401,294	118,978	99,442	9,788	11,686	955,367
Apr	880,672	532,280	160,953	130,150	4,970	7,762	1,716,787
May	1,931,981	789,581	172,241	460,614	146,745	20,604	3,521,766
Jun	1,965,777	771,848	186,540	450,889	144,997	12,713	3,532,764
Jul	3,184,384	1,183,089	342,866	530,169	143,365	23,651	5,407,524
Aug	3,479,688	1,200,090	421,767	647,160	203,327	16,676	5,968,708
Sep	2,125,841	896,070	292,026	452,626	107,616	11,305	3,885,484
Oct	1,046,187	732,128	159,718	305,340	29,577	17,751	2,290,701
Nov	375,272	365,181	70,427	86,612	6,491	10,951	914,934
Dec	341,370	345,468	128,642	107,475	7,408	9,641	940,004
Total	16,700,809	8,182,886	2,318,777	3,567,923	816,762	160,302	***31,747,459***

Average Day Demand (cu-ft/day)	***86,979***
Average Day Demand (gpd)	***650,605***
Peak Month Demand (cu-ft/day)	***192,539***
Peak Month Demand (gpd)	***1,440,191***

Appendix D

Calculations of Allowable Connections Based on Storage Capacity

Storage Analysis for Terrace Heights Reservoirs #1 & #4
Revised 1/4/19 (Reduced supply capacity for Well 5 from 300 to 270 gpm)

	Only Revise Highlighted Cells.							
	Scenarios							
	#1	#2	#3	#4	#5	#6	#7	#8
	Existing System (2017)	Existing System (2017)	Future	Future	Future	Future	Future	Future
System Capacity								
Storage								
Tank Diameter (ft)	90	90	90	90	90	90	90	90
Tank Volume per ft (gallons)	47,586	47,586	47,586	47,586	47,586	47,586	47,586	47,586
Number of Tanks	2	2	2	2	2	2	2	2
Tank Volume per ft (gallons)	95,172	95,172	95,172	95,172	95,172	95,172	95,172	95,172
Tank Height to Overflow (ft)	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6
Total Tank Volume (gallons)	3,007,424	3,007,424	3,007,424	3,007,424	3,007,424	3,007,424	3,007,424	3,007,424
Minimum Pump Start Set Point (ft)	23	23	23	23	23	23	23	23
Operational Storage (ft)	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Minimum Depth for 30 psi at highest service (ft)	5	5	5	5	5	5	5	5
Volume Available for 30 psi at highest service (ft)	2,531,565	2,531,565	2,531,565	2,531,565	2,531,565	2,531,565	2,531,565	2,531,565
Percent Available based on LOS Criteria	85%	100%	85%	85%	85%	85%	85%	85%
Fire Flow Included in Standby?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Supply Capacity to System								
Existing Supply Capacity (gpm)	2,780	2,780	2,780	2,780	2,780	2,780	2,780	2,780
Increase in Capacity gpm	0	0	0	0	0	560	0	560
Total Capacity (gpm)	2,780	2,780	2,780	2,780	2,780	3,340	2,780	3,340
Largest Supply Source (gpm)	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Capacity with Largest Source out of Production (gpm)	1,280	1,280	1,280	1,280	1,280	1,840	1,280	1,840
Supply Capacity to Reservoir 1 & 4								
Well 2 Supply Capacity (gpm)	270	270	270	270	270	270	270	270
Sycamore Booster Capacity with 2 pumps (gpm)	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450
Sycamore Booster Capacity with 3 pumps (gpm)	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950
Increase in Capacity gpm	0	0	0	0	0	0	750	750
Total with all Pumps (gpm)	2,220	2,220	2,220	2,220	2,220	2,220	2,970	2,970
Total with Largest Pump out of Service (gpm)	1,720	1,720	1,720	1,720	1,720	1,720	2,220	2,220
Existing Demands								
System Demands								
Existing Average Day Demand (gpm)	633	633	633	633	633	633	633	633
Existing Peak Day Demand (gpm)	1,440	1,440	1,440	1,440	1,440	1,440	1,440	1,440

Existing Peak Hour Demand (gpm)	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786
Zone 3 Demands								
Percentage of System Demand (gpm)	69.2	69.2	69.2	69.2	69.2	69.2	69.2	69.2
Existing Average Day Demand (gpm)	438	438	438	438	438	438	438	438
Existing Peak Day Demand (gpm)	996	996	996	996	996	996	996	996
Existing Peak Hour Demand (gpm)	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928
Future Demands								
Demands for Future ERU's								
Average Day Demand (gpd/ERU)	630	630	630	630	630	630	630	630
Peak Day Demand (gpd/ERU)	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Peak Hour Demand (gpm/ERU)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Future System Demands								
Future Average Day Demand (gpm)	633	1,179	1,092	1,092	1,088	1,276	1,092	1,333
Future Peak Day Demand (gpm)	1,440	2,913	2,678	2,678	2,667	3,175	2,678	3,330
Future Peak Hour Demand (gpm)	2,786	5,733	5,263	5,263	5,242	6,257	5,263	6,566
Future Zone 3 Demands								
Future Average Day Demand (gpm)	438	984	897	438	893	1,081	438	1,138
Future Peak Day Demand (gpm)	996	2,470	2,235	996	2,224	2,732	996	2,886
Future Peak Hour Demand (gpm)	1,928	4,875	4,405	1,928	4,383	5,399	1,928	5,708
Storage Required								
Operational Storage	818,476	818,476	818,476	818,476	818,476	818,476	818,476	818,476
Equalizing Storage (gallons)								
Minimum Depth (ft)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Minimum Volume (gallons)	142,757	142,757	142,757	142,757	142,757	142,757	142,757	142,757
Additional Based on System Capacity	900	442,900	372,421	372,421	369,233	437,525	372,421	483,921
Additional Based on Zone 3 Capacity	-43,813	398,187	327,708	-43,813	324,520	476,812	-156,313	410,708
Maximum Additional Volume	900	442,900	372,421	372,421	369,233	476,812	372,421	483,921
Total Equalizing Storage	143,657	585,657	515,178	515,178	511,991	619,569	515,178	626,678
Standby Storage (gallons)								
Minimum based on 200 gpd/ERU)	497,600	747,200	707,400	707,400	705,600	791,600	707,400	817,800
Based on System Capacity with Largest Pump out of Service	-20,132	1,552,348	1,301,608	1,301,608	1,290,268	1,025,668	1,301,608	1,190,728
Based on Zone 3 Capacity with Largest Pump out of Service	-653,732	918,748	668,008	668,008	656,668	1,198,468	-51,992	643,528
Max Standby Storage (gallons)	497,600	1,552,348	1,301,608	1,301,608	1,290,268	1,198,468	1,301,608	1,190,728
Fire Suppression Storage (gallons)	0	0	0	0	0	0	0	0

Dead Storage (gallons)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Total Storage Required By DOH Guidelines	1,509,733	3,006,481	2,685,262	2,685,262	2,670,735	2,686,513	2,685,262	2,685,882
Equalizing Storage Summary								
Storage Available for Equalizing	1,663,089	1,663,089	1,663,089	1,663,089	1,663,089	1,663,089	1,663,089	1,663,089
Storage Available for Equalizing Based on LOS Criteria	1,413,626	1,663,089	1,413,626	1,413,626	1,413,626	1,413,626	1,413,626	1,413,626
Storage Required for Equalizing	143,657	585,657	515,178	515,178	511,991	619,569	515,178	626,678
Equalizing Storage Requirements Satisfied?	yes	yes	yes	yes	yes	yes	yes	yes
Equalizing and Standby Storage Summary								
Storage Available for Equalizing and Standby	1,818,105	2,138,947	1,818,105	1,818,105	1,818,105	1,818,105	1,818,105	1,818,105
Storage Required for Equalizing and Standby	641,257	2,138,005	1,816,786	1,816,786	1,802,259	1,818,037	1,816,786	1,817,406
Equalizing and Standby Storage Requirements Satisfied?	yes	yes	yes	yes	yes	yes	yes	yes
ERUs								
Existing								
Existing Zone 1 ERUs (Includes Zones 1a & 1)	1240	1240	1240	1240	1240	1240	1240	1240
Existing Zone 3 ERUs (Includes Zones 2a, 2, 3, & 4)	1248	1248	1248	1248	1248	1248	1248	1248
Existing System ERUs (2016)	2488	2488	2488	2488	2488	2488	2488	2488
Future								
Additional Zone 1 ERUs	0	0	0	1049	0	0	1049	0
Additional Zone 3 ERUs	0	1248	1049	0	1040	1470	0	1601
Additional System ERUs	0	1248	1049	1049	1040	1470	1049	1601
Future System ERUs	2488	3736	3537	3537	3528	3958	3537	4089

Filename: G/users/joes/wpdata/water systems/water plans/terrace heights/2015 water plan/storage analysis2017.xls

Notes:

1 In the 2001 WSP, the level of service criteria was applied to the entire tank volume, thereby reducing the usable volume to 85% of 1,500,000. For this analysis, and the 2009 WSP, the level of service criteria is only applied to equalizing and standby storage.
2 The minimum standby storage volume is based on 200 gpd/ERU for 2009 and 2017, whereas in 2001 it was based on 200 gpd/connection.
3 Dead Storage is due to silt ring, which is 6" in height for Reservoir 4, and slightly less for Reservoir 1.
4 Zone 3 demands and ERUs include demands and ERUs for Zones 2, 2a, 3, and 4.
5 Fire Suppression Storage is nested with Standby Storage.

Scenerios:

1. Existing system with level of service criteria applied.
2. Existing system without level of service criteria applied.
3. Existing system with level of service criteria applied and maximum number of customers in Zone 3.
4. Existing system with level of service criteria applied and maximum number of customers in Zone 1.
5. Existing system with level of service criteria applied and 1040 new customers in Zone 3.
6. Existing system with level of service criteria applied, maximum number of customers in Zone 3, and Well 6 increased to 900 gpm.
7. Existing system with level of service criteria applied, maximum number of customers in Zone 3, and Well 5 booster made functional.
8. Existing system with level of service criteria applied, max number of customers in Zone 3, Well 6 increased to 900 gpm, and Well 5 booster functional.

Storage Analysis for Terrett Booster Pressure Zone
With Level of Service Criteria applied to Equalizing and Standby Storage
Revised 8/30/17

Only Revise Highlighted Cells.

	No Fire Flow			1000 gpm Fire Flow			1,500 gpm Fire Flow		
System Capacity									
Storage									
Number of Storage Tanks	1	2	3	1	2	3	1	2	3
Volume per tank (gallons)	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Total Storage Capacity (gallons)	30,000	60,000	90,000	30,000	60,000	90,000	30,000	60,000	90,000
Minimum Pump Start Set Point (ft)	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Operational Storage (ft)	8172	16344	24516	8172	16344	24516	8172	16344	24516
Percent Available based on LOS Criteria	85%	85%	85%	85%	85%	85%	85%	85%	85%
Fire Flow Included in Standby?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Booster Pumping Capacity									
Capacity of pump 1 (gpm)	43	43	43	43	43	43	43	43	43
Capacity of pump 2 (gpm)	43	43	43	43	43	43	43	43	43
Increase in Capacity gpm	-7	-7	-7	-7	-7	-7	-7	-7	-7
Total with all Pumps (gpm)	79	79	79	79	79	79	79	79	79
Total with Largest Pump out of Service (gpm)	36	36	36	36	36	36	36	36	36
Existing Demands									
Zone 4 Demands									
Existing Average Day Demand (gpm)	23	23	23	23	23	23	23	23	23
Existing Peak Day Demand (gpm)	50	50	50	50	50	50	50	50	50
Existing Peak Hour Demand (gpm)	100	100	100	100	100	100	100	100	100
Future Demands									
Demands for Future ERU's									
Average Day Demand (gpd/ERU)	630	630	630	630	630	630	630	630	630
Peak Day Demand (gpd/ERU)	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Peak Hour Demand (gpm/ERU)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Future System Demands									
Future Average Day Demand (gpm)	23	28	33	23	28	33	23	23	34
Future Peak Day Demand (gpm)	50	63	77	50	64	77	50	50	78
Future Peak Hour Demand (gpm)	100	126	155	100	129	155	100	100	158

Storage Required (gallons)									
Operational Storage	8,172	16,344	24,516	8,172	16,344	24,516	8,172	16,344	24,516
Equalizing Storage	3,150	7,110	11,430	3,150	7,470	11,430	3,150	3,150	11,790
Standby Storage									
Minimum based on 200 gpd/ERU	4,000	6,200	8,600	4,000	6,400	8,600	4,000	4,000	8,800
Based on Zone 4 Capacity with Largest Pump out of Service	14,560	28,420	43,540	14,560	29,680	43,540	14,560	14,560	44,800
Max Standby Storage	14,560	28,420	43,540	14,560	29,680	43,540	14,560	14,560	44,800
Fire Suppression Storage	0	0	0	30000	30000	30000	45000	45000	45000
Larger Volume between Standby and Fire Supression Storage	14,560	28,420	43,540	30,000	30,000	43,540	45,000	45,000	45,000
Dead Storage	0	0	0	0	0	0	0	0	0
Total Storage Required By DOH Guidelines	25,882	51,874	79,486	41,322	53,814	79,486	56,322	64,494	81,306
Effect of County Level of Service Criteria (gallons)									
Total Storage Volume	30,000	60,000	90,000	30,000	60,000	90,000	30,000	60,000	90,000
Operational Storage	8,172	16,344	24,516	8,172	16,344	24,516	8,172	16,344	24,516
Dead Storage	0	0	0	0	0	0	0	0	0
Standby Storage (if > Fire Suppression)	14,560	28,420	43,540	0	0	43,540	0	0	0
Fire Suppression Storage (if > Standby)	0	0	0	30,000	30,000	0	45,000	45,000	45,000
Storage Available for Equalizing and Standby	21,828	43,656	65,484	-8,172	13,656	65,484	-23,172	-1,344	20,484
85% of Storage Available for Equalizing and Standby	**18,554**	**37,108**	**55,661**	**-6,946**	**11,608**	**55,661**	**-19,696**	**-1,142**	**17,411**
Storage Required for Equalizing and Standby	**17,710**	**35,530**	**54,970**	**3,150**	**7,470**	**54,970**	**3,150**	**3,150**	**11,790**
Storage Available > Storage Required?	**yes**	**yes**	**yes**	**no**	**yes**	**yes**	**no**	**no**	**yes**
Storage Summary									
Operational Storage	8172	16344	24516	8172	16344	24516	8172	16344	24516
Equalizing Storage	3150	7110	11430	3150	7470	11430	3150	3150	11790
Standby	14,560	28,420	43,540	0	0	43,540	0	0	0
Fire Suppression	0	0	0	30,000	30,000	0	45,000	45,000	45,000
Dead Storage	0	0	0	0	0	0	0	0	0

Total Storage	25,882	51,874	79,486	41,322	53,814	79,486	56,322	64,494	81,306
ERUs									
Existing Zone 4 ERUs (2017)	20	20	20	20	20	20	20	20	20
Additional Zone 4 ERUs	0	11	23	0	12	23	0	0	24
Future Future System ERUs	20	31	43	20	32	43	20	20	44

Filename: G/users/joes/wpdata/water systems/water plans/terrace heights/2015 water plan/excel files/storage analysis2017.xls

Notes:

1 In the 2001 WSP, the level of service criteria was applied to the entire tank volume, thereby reducing the usable volume to 85% of 30,000/tank. For this analysis, the level of service criteria is only applied to equalizing and standby storage.

2 The minimum standby storage volume is based on 200 gpd/ERU for 2008 and 2017, whereas in 2001 it was based on 200 gpd/connection.

Appendix E

Water Rights

Ecology Correspondence
and
Well 4 Change Application

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

September 8, 2017

Yakima County Public Services
Attn: Joe Stump
128 N. 2nd St., 4th Floor Courthouse
Yakima, WA 98901-2639

RE: Water Right Change Application No. CG4-CV2P892(GWC886-A) (YAKI-17-02)

Dear Mr. Stump:

In accordance with RCW 90.80.080 the Department of Ecology (Ecology) has reviewed the Record of Decision (ROD), Report of Examination (ROE), and all comments, protests, objections and other relevant information submitted by the Yakima County Water Conservancy Board (the Board) for the above referenced application for change.

Ecology has **modified** the decision of the Board and the proposed change/transfer of water right is **approved** under the following conditions:

Summary of Ecology's Final Order:

MAXIMUM CFS	MAXIMUM GPM	MAXIMUM ACRE-FT/YR	TYPE OF USE, PERIOD OF USE
	1,500	1,210	Municipal water supply, continuous

SOURCE	TRIBUTARY OF (IF SURFACE WATER)
Three wells	

AT A POINT LOCATED: PARCEL NO.	¼	¼	SECTION	TOWNSHIP (N)	RANGE	WRIA	COUNTY
191322-12407 (No. 4)	NW	NE	22	13	19E	37	Yakima
191322-11421 (No. 5)	NE	NE	22	13	19E	37	Yakima
191316-44466 (No. 6)	SE	SE	16	13	19E	37	Yakima

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED AS APPROVED BY THE BOARD

The area served by the Yakima County Terrace Heights Water System as described in its most recent approved Water System Plan (WSP). If the criteria in RCW 90.03.386(2) are not met and a WSP was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria are not met and no WSP has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.

PARCEL NO.	¼	¼	SECTION	TOWNSHIP N.	RANGE
Numerous landowners and parcels			multiple	See map	

DEVELOPMENT SCHEDULE		
BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER TO PUT TO FULL USE BY THIS DATE:
December 13, 2017	December 13, 2019	October 1, 2028

Ecology has **MODIFIED** the decision of the Board as follows:

1. The following provisions are ADDED to the PROVISIONS section of the Board's decision:

   "All wells constructed in the state shall meet the "Minimum Standards for the Construction and Maintenance of Wells" (WAC 173-160) and "Water Well Construction" (RCW 18.104). In general, wells shall be located at least 100 feet from sources of contamination and at least 1,000 feet of the boundary of a solid waste landfill. Any well which is unusable, abandoned, or is an environmental, safety, or public health hazard shall be decommissioned."

   "All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number."

   "Required installation and maintenance of an access port as described in WAC 173-160-291(3)."

   "Any wells used under this authorization shall be constructed into the Ellensburg Formation."

   "Consistent with the development schedule given in this report (unless extended by Ecology), the water right holder must file a Notice of Proof of Appropriation (PA) of Water with Ecology. The PA documents the project is complete and all the water needed has been put to full beneficial use (perfected). In order to verify the extent of water use under this permit, an inspection of water use is typically required, known as a "proof exam."

   "If the criteria in RCW 90.03.386(2) are not met and a Water System Plan/Small Water System Management Program was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no Water System Plan/Small Water System Management Program has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization."

Special Remarks:

The certificate was incorrectly issued a certificate of change in 1966. A superseding certificate should have been issued.

Trevor Hutton, Section Manager
Water Resources Program
Central Regional Office

TH:TG:SS/170901
WRTS No. 6800492

Enclosures: Your Right to Be Heard

By Certified Mail: 91 7199 9991 7037 0277 8917

cc: Philip Rigdon, Director Natural Resources Division Yakama Nation
Sylvia Cervantes, Yakima County Conservancy Board (ecc)
Dave Brown, Yakima County Conservancy Board
Taylor Gustafson, Department of Ecology, Central Region Office (ecc)

YOUR RIGHT TO APPEAL

You have a right to appeal this decision to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this decision. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this decision:

- File your appeal and a copy of this decision with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this decision on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION	
Street Addresses	**Mailing Addresses**
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey WA 98503	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia WA 98504-7608
Pollution Control Hearings Board 1111 Israel Road SW, Ste 301 Tumwater WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia WA 98504-0903

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov
To find laws and agency rules visit the Washington State Legislature Website: http://www.leg.wa.gov/CodeReviser

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

July 24, 2017

Public Services (CS)

JUL 25 2017

Vern___Gary___Don___Lynn___
Harold___Lisa___Carmen___

Yakima County Public Services
Attn: Joe Stump, Utilities Manager
128 North 2nd Street, 4th Floor
Yakima, WA 98901

Re: Water Right Nos. G4-25728P, G4-25775P, G4-27699P, and G4-31494P—Yakima County Terrace Heights Water System

Dear Mr. Stump:

In response to your request, you are hereby granted an extension to put the water to full beneficial use for the reason(s) below:

> Additional time is required to fully build out the Terrace Heights Water System as originally envisioned in the Permit documents and Yakima County's current Water System Plan.

The new deadline to submit your *Proof of Appropriation of Water* is **October 1, 2028**, concurrent with your next Water System Plan update.

Additionally, Ecology makes the following clarifications to the following Yakima County Terrace Heights Water System water rights based on our review of your technical assistance letter dated May 15, 2017:

Authorized Place of Use

The place of use for the above-referenced water rights (G4-25728P, G4-25775P, G4-31494P, and G4-27699P) and Groundwater Right Nos. G4-25648C, GWC 891-D, and GWC 886-A are described as follows:

Area served by the Yakima County Terrace Heights Water System described in its most recent approved Water System Plan. If the criteria in RCW 90.03.386(2) are not met and a Water System Plan was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no Water System Plan has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.

Family Farm Act

Family Farm Act provisions for G4-25728P, G4-25775P, and G4-25648C and are inapplicable and are hereby removed.

Municipal Conformance

The purpose of use for G4-25728P, G4-25775P, G4-25648C, GWC 891-D, and GWC 886-A is municipal water supply purpose.

Ministerial Error Correction to ROE and Permit G4-27699P

The following provision associated with Permit G4-27699P is modified to correct an error in the Report of Examination and Permit:

"The total annual withdrawal under Certificate No. 891-D, No. 886-A and this right shall not exceed 1,372 acre-feet per year."

Nomenclature Clarification

The following table updates the terminology of previous water rights for the Terrace Heights Water System to reflect their additive/non-additive nature (rather than primary, supplemental and other terms of art) and updates the quantities to reflect the error correction to G4-27699P:

Table 6: Yakima County Water Rights (Additive (A), Non-Additive (NA))

Source	Water Rights Certificate Number	Priority Date	Maximum Instantaneous Withdrawal	Annual Withdrawal
Well 1	G4-25728P G4-25775P	11/9/77 3/14/78	800 gpm [A] 400 gpm [A]	741 acre-feet [A] 371 acre-feet [NA]
Well 2	G4-25648C	11/28/77	540 gpm [A]	448 acre-feet [A], [NA](1)
Well 3	G4-31494P	10/14/92	2250 gpm [A]	2,722 acre-feet [A]
Well 4	GWC 891-D	6/1/26	165 gpm [A]	162 acre-feet [A]
Well 4 & 5	GWC 886-A	6/21/46	1,500 gpm [A]	1,210 acre-feet [A]
Well 6	G4-27699P	9/21/81	500 gpm [A]	376 acre-feet [NA]
		Total	**6,155 gpm**	**5,020 acre-feet**

(1) G4-25648C is additive in the amount of 185 acre-feet and non-additive in the amount of 741 acre-feet, with an overall cap of 926 acre-feet for G4-25728P, G4-25775P, and G4-25648C.

YOUR RIGHT TO APPEAL

You have a right to appeal this Decision to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Decision. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Decision:

- File your appeal and a copy of this Decision with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Decision on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION	
Street Addresses	**Mailing Addresses**
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey WA 98503 **Pollution Control Hearings Board** 1111 Israel Road SW, Suite 301 Tumwater WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia WA 98504-0903

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov
To find laws and agency rules visit the Washington State Legislature Website: http://www.leg.wa.gov/CodeReviser

If you have any questions, please contact Water Resources Help Desk at 509-575-2597.

Sincerely,

Trevor Hutton

Trevor Hutton, Section Manager
Water Resources Program
Central Regional Office

TH:CLG:SS/170719
WRTS No. 2283097, 2283495, 2283524, & 2085437

Enclosures: Your Right to Be Heard
Proof of Appropriation of Water (4)
Water Measurement Requirements
Form 1 – Measuring Device Information (4)

By certified mail: 91 7199 9991 7037 0277 8818

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Yakima County
WATER CONSERVANCY BOARD
Application for Change/Transfer
OF A RIGHT TO THE BENEFICIAL USE OF THE PUBLIC WATERS OF THE STATE OF WASHINGTON

Report of Examination

☐ Surface Water ☒ Ground Water

DATE APPLICATION RECEIVED	WATER RIGHT DOCUMENT NUMBER	WATER RIGHT PRIORITY DATE	BOARD-ASSIGNED CHANGE APPLICATION NUMBER
June 8, 2017	G4-CV2P892 (GWC-886-A)	June 21, 1946	YAKI-17-02

NAME		PHONE	EMAIL
Yakima County Public Services (Joe Stump)		(509) 574-2300	joe.stump@co.yakima.wa.us
ADDRESS (STREET)	**(CITY)**	**(STATE)**	**(ZIP CODE)**
128 N. 2nd Street, 4th Floor Courthouse	Yakima	WA	98901

Changes Proposed: ☐ Change purpose ☐ Add purpose ☐ Add irrigated acres ☐ Change point of diversion/withdrawal
☒ Add point of diversion/withdrawal ☐ Change place of use ☐ Other (Temporary, Trust, Interties, etc.)_____

SEPA
The board has reviewed the provisions of the State Environmental Policy Act of 1971, Chapter 43.21C RCW and the SEPA rules, chapter 197-11 WAC and has determined the application is: ☒ Exempt ☐ Not exempt

BACKGROUND AND DECISION SUMMARY

Existing Right (Tentative Determination)

MAXIMUM CUB FT/ SECOND	MAXIMUM GAL/MINUTE	MAXIMUM ACRE-FT/YR	TYPE OF USE, PERIOD OF USE
	1,500	1,210	municipal water supply, continuous
SOURCE			TRIBUTARY OF (IF SURFACE WATER)
two wells			

AT A POINT LOCATED: PARCEL NO.	¼	¼	SECTION	TOWNSHIP N.	RANGE	WRIA	COUNTY
191322-12407 (No. 4)	NW	NE	22	13	19E	37	Yakima
191322-11421 (No. 5)	NE	NE	22	13	19E	37	Yakima

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED

PARCEL NO.	¼	¼	SECTION	TOWNSHIP N.	RANGE	WRIA	COUNTY
numerous landowners and parcels			14, 15, 16, 21, 22, 23	13	19E	37	Yakima

Proposed Use

MAXIMUM CUB FT/ SECOND	MAXIMUM GAL/MINUTE	MAXIMUM ACRE-FT/YR	TYPE OF USE, PERIOD OF USE
	1,500	1,210	municipal water supply, continuous
SOURCE			TRIBUTARY OF (IF SURFACE WATER)
three wells			

AT A POINT LOCATED: PARCEL NO.	¼	¼	SECTION	TOWNSHIP N.	RANGE	WRIA	COUNTY
191322-12407 (No. 4)	NW	NE	22	13	19E	37	Yakima
191322-11421 (No. 5)	NE	NE	22	13	19E	37	Yakima
191316-44466 (No. 6)	SE	SE	16	13	19E	37	Yakima

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The area served by the Yakima County Terrace Heights Water System as described in its most recent approved Water System Plan (WSP). If the criteria in RCW 90.03.386(2) are not met and a WSP was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria are not met and no WSP has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.

PARCEL NO.	¼	¼	SECTION	TOWNSHIP N.	RANGE	WRIA	COUNTY
numerous landowners and parcels			multiple	See map		37	Yakima

Board's Decision on the Application

MAXIMUM CUB FT/ SECOND	MAXIMUM GAL/MINUTE	MAXIMUM ACRE-FT/YR		TYPE OF USE, PERIOD OF USE			
	1,500	1,210		municipal water supply, continuous			
SOURCE				TRIBUTARY OF (IF SURFACE WATER)			
three wells							
AT A POINT LOCATED: PARCEL NO.	¼	¼	SECTION	TOWNSHIP N.	RANGE	WRIA	COUNTY
191322-12407 (No. 4)	NW	NE	22	13	19E	37	Yakima
191322-11421 (No. 5)	NE	NE	22	13	19E	37	Yakima
191316-44466 (No. 6)	SE	SE	16	13	19E	37	Yakima
LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED AS APPROVED BY THE BOARD							
The area served by the Yakima County Terrace Heights Water System as described in its most recent approved Water System Plan (WSP). If the criteria in RCW 90.03.386(2) are not met and a WSP was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria are not met and no WSP has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.							
PARCEL NO.	¼	¼	SECTION	TOWNSHIP N.	RANGE	WRIA	COUNTY
numerous landowners and parcels			multiple	See map		37	Yakima

DESCRIPTION OF PROPOSED WORKS

Description of water diversion/withdrawal, conveyance, and distribution system:

The existing points of withdrawal (Wells No. 4 and 5) withdraw groundwater from the Ellensburg Formation with submersible pumps. Treatment and inline flow metering occurs within each wellhouse.The discharge heads are connected to a booster station that sends water to the Terrace Heights reservoir for distribution. The proposed points of withdrawal (Wells Nos. 4, 5, and 6) have the same configuration. Well 6 will be retrofitted with a larger pump.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE:	COMPLETE CHANGE AND PUT WATER TO FULL USE BY THIS DATE:
December 31, 2017	December 31, 2019	October 1, 2028

The Board selected a 2 year construction development schedule to cover the upgrade to Well 6. Thereafter, the Board selected a Proof Date consistent with Ecology's July 24, 2017 technical assistance and permit extension letter. This will provide coordinated reporting for Yakima County's water rights aligned with their next water system plan. Additionally, the Board recognizes that Yakima County rotates use amongst their wells to meet system demand, so the year after completion of construction may not represent a peak year. However, one or more peak years is expected by 2028.

REPORT

BACKGROUND [See WAC 173-153-130(6)(a)]

On June 8, 2017 Yakima County Public Services of Yakima, WA filed an application for change to add a point of withdrawal, change the place of use, and purpose of use under G4-CV2P892 (GWC 886-A). The application was accepted at an open public meeting on June 8, 2017, and the Board assigned application number YAKI-17-02. The change application is included in Appendix A.

Attributes of the water right as currently documented

The following summarizes the attributes of the water right being changed. A copy of the certificate and certificate of change is provided in Appendix B. The authorized place of use is shown on Figure 2-1 from the County's Water System Plan.

Name on certificate, claim, permit: Country Club District Water Company

Water right document number: GWC 886-A

As modified by certificate of change number: G4-CV2P892

Priority date, first use: June 21, 1946

Water quantities: Qi: 1,500 gpm Qa: 1,210 afy

Source: two wells

Point of diversion/withdrawal: AEP542 (Well No. 4) is located 15-feet West and 790-feet South, and AEP543 (Well No. 5) is located 165-feet East and 500-feet South of the northwest corner of NE1/4 NE1/4 Section 22 T13N R19E

Purpose of use: municipal domestic and irrigation of lawns and garden

Period of use: continuous

Place of use: Sections 14, 15, 16, 21, 22, and 23, T13N, R19E

Existing provisions: two wells

Tentative determination of the water right

The tentative determination is provided on the front page of this report.

History of water use

The Country Club District Water Company applied for a groundwater right to withdrawal water from 2 wells in 1946; made proof of appropriation on March 17, 1949 (filed November 23, 1951); and was issued a certificate November 30, 1951 to provide water to suburban development in Terrace Heights. Yakima County acquired the Terrace Heights Water System from the Country Club Water Company. Metering data became available in 1997, 1998, and 2006 for Wells No 6, 5, and 4, respectively. The tables below summarize metering data from 2015 and 2016 based on County telemetry records.

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2015

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	60,000	0	9,845,400	0	2,508,800	12,414,200
Feb	56,000	0	9,760,500	0	1,837,900	11,654,400
Mar	1,793,000	0	8,989,600	0	1,769,700	12,552,300
Apr	7,053,000	0	5,876,500	3,339,000	7,248,000	23,516,500
May	7,452,000	0	3,940,200	13,129,000	6,623,400	31,144,600
Jun	7,784,000	5,338,000	8,226,600	14,004,000	13,866,100	49,218,700
Jul	0	14,329,000	9,306,900	14,004,000	15,621,400	53,261,300
Aug	0	12,389,000	8,819,700	13,690,000	14,583,600	49,482,300
Sep	0	4,393,000	6,361,900	13,175,000	10,767,300	34,697,200
Oct	0	0	2,930,700	12,558,000	5,494,700	20,983,400
Nov	0	0	8,121,000	1,654,000	1,716,200	11,491,200
Dec	498,000	0	5,479,300	0	4,829,300	10,806,600
Total	24,696,000	36,449,000	87,658,300	85,553,000	86,866,400	***321,222,700***
				Average Day Demand (gpd)		***880,062***
				Peak Month Demand (gpd)		***1,718,106***

Terrace Heights Water System
Supply Meter Readings (gallons)
Year: 2016

	Well 2	Well 3	Well 4	Well 5	Well 6	System Total
Jan	1,645,000	0	3,061,600		5,380,500	10,087,100
Feb	3,522,000	0	2,770,200		4,890,700	11,182,900
Mar	3,032,000	0	4,235,100		4,243,500	11,510,600
Apr	6,527,000	0	8,582,000	788,000	9,173,700	25,070,700
May	5,799,000	0	8,165,400	13,294,000	8,187,000	35,445,400
Jun	6,608,000	4,651,000	7,726,400	12,249,000	9,214,300	40,448,700
Jul	6,945,000	7,716,000	7,504,100	11,648,000	9,685,600	43,498,700
Aug	7,841,000	10,150,000	8,637,100	13,064,000	10,971,800	50,663,900
Sep	4,111,000	5,009,000	7,496,700	12,922,000	5,617,900	35,156,600
Oct	1,385,000		6,002,100	8,866,000	3,452,000	19,705,100
Nov	1,011,000		7,937,600		2,110,600	11,059,200
Dec	934,000		8,941,600		1,866,500	11,742,100

Total	49,360,000	27,526,000	81,059,900	72,831,000	74,794,100	305,571,000

Average Day Demand (gpd)	***837,181***
Peak Month Demand (gpd)	***1,634,319***

Terrace Heights Water System Supply Meter Readings All Wells		
Year	**Total Well Production (gallons)**	**Total Well Production (acre-feet)**
2000	218,962,101	672
2005	299,527,700	919
2010	300,619,055	923
2015	321,222,700	986

Water use in different Yakima County wells varies from year to year in response to system demand, well maintenance, and system rotation. GWC 886-A appears to be a pumps-and-pipes right based on historic metering information. Ecology has found it to be in good standing subject to the diligence evidence provided in support of Ecology's letter in Appendix C. Yakima County plans to fully and diligently develop these rights and their projected water use under their water right self-assessment provided in Appendix F.

Previous changes

A certificate of change to certificate GWC 886-A was issued on March 18, 1966 permitting the change in the purpose and place of use to "municipal domestic supply and for irrigation of lawns and garden" on lands situated in Yakima County, Washington "Sections 14, 15, 16, 21, 22 and 23, T13N, R19E".

In coordination with the Board, Yakima County Public Services requested technical assistance from Ecology in a letter dated May 15, 2017 on their water right portfolio, including this change. In response Ecology made the following clarification, relevant to YAKI-17-02, to the Yakima County Terrace Heights Water System water rights in a letter included in Appendix C:

Authorized Place of Use: Area served by the Yakima County Terrace Heights Water System described in its most recent approved Water System Plan. If the criteria in RCW 90.03.386(2) are not met and a Water System Plan was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no Water System Plan has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.

Municipal Conformance: The purpose of use is municipal water supply purpose.

Nomenclature Clarification: The terminology of previous water rights for the Terrace Heights Water System is updated to reflect their additive/non-additive nature (rather than primary, supplemental and other terms of art). The maximum instantaneous withdrawal (Qi) and annual withdrawal (Qa) under Groundwater Certificate 886-A are additive to existing rights.

SEPA

The board has reviewed the proposed project in its entirety. The application to add a point of withdrawal that is less than 2,250 gpm, and categorically exempt from SEPA (WAC 197-11-800(4)).

Other

No other pertinent information relative to the background of this water right was identified

The information or conclusions in this section were authored and/or developed by Yakima County Water Conservancy Board members David Brown, Mark Reynolds, and Dave England; Yakima County Public Services Utilities Manager Joe Stump and Yakima County Public Services consultants Dan Haller, and Jason Shira.

COMMENT AND PROTESTS [See WAC 173-153-130(6)(b)]

Public notice of the application was given in the Yakima Herald-Republic on June 12th and 19th, 2017. The protest period ended on July 19, 2017. The affidavit of publication is provided in Appendix D. Additionally, the Board provided email notices to its required list of consulting entities or those that have requested Board notices.

There were no protests received during the 30-day protest period. In addition, no oral and written comments were received at an open public meeting of the board or other means as designated by the board.

The information or conclusions in this section were authored and/or developed by Yakima County Water Conservancy Board members David Brown, Mark Reynolds, and Dave England; Yakima County Public Services Utilities Manager Joe Stump; and Yakima County Public Services consultants Dan Haller, and Jason Shira.

INVESTIGATION [See WAC 173-153-130(6)(c)]

The following information was obtained from a site inspection, technical reports, research of department records, aerial coverage, water right case law, and conversations with the applicant. The site inspection was conducted on May 15, 2017 by Yakima County Water Conservancy Board members David Brown and Mark Reynolds; Yakima County Public Services Utilities Manager Joe Stump; and Yakima County Public Services consultants Nancy Wetch and Jason Shira. A second site inspection was conducted on July 7, 2017 by Yakima County Water Conservancy Board members David Brown and Dave England; Yakima County Public Services Utilities Manager Joe Stump; and Yakima County Public Services consultant Jason Shira. Please refer to site visit notes in Appendix E.

Proposed project plans and specifications
Yakima County manages the Terrace Heights Water System to provide municipal water supply to 1610 total connections in 2016. The request to change Groundwater Certificate 886-A is necessary for Yakima County to have flexibility in their water system operations. Additionally, Well No. 6 is a higher capacity well than Wells No. 4 and 5, which will enable Yakima County to meet peak flow and access the authorized annual quantity to meet future demand. The proposed change will add Well No. 6 to Groundwater Certificate 886-A. Well No. 6 is authorized under water right G4-27699P to withdraw at maximum 500 gpm and annual limit of 376 afy nonadditive to the 1,372* afy authorized under GWC-886-A and GWC-891-D. The proposed change will result in an authorized instantaneous quantity of 2,000 gpm at Well No. 6, (1,500 gpm authorized by GWC-886-A and 500 gpm authorized by G4-27699P).

*The Department of Ecology corrected a ministerial error on the report of examination for G4-27699P that inadvertently implied Groundwater Certificates 886-A and 891-D were nonadditive in a letter dated July 24, 2017 to Yakima County Public Services. Groundwater Certificates 886-A and 891-D are additive. The correct annual limit is 1,372 afy. The July 24, 2017 letter is included in Appendix B.

Other water rights appurtenant to the property

Water Rights Certificate Number	Priority Date	Maximum Instantaneous Withdrawal	Annual Withdrawal
G4-25728P	11/9/77	800 gpm [A]	741 acre-feet [A]
G4-25775P	3/14/78	400 gpm [A]	371 acre-feet [NA]
G4-25648C	11/28/77	540 gpm [A]	448 acre-feet [A], [NA](1)
G4-31494P	10/14/92	2250 gpm [A]	2,722 acre-feet [A]
GWC 891-D	6/1/26	165 gpm [A]	162 acre-feet [A]
GWC 886-A	*6/21/46*	*1,500 gpm [A]*	*1,210 acre-feet [A]*
G4-27699P	9/21/81	500 gpm [A]	376 acre-feet [NA]
	Total	**6,155 gpm**	**5,020 acre-feet**

(1) G4-25648C is additive in the amount of 185 acre-feet and non-additive in the amount of 741 acre-feet, with an overall cap of 926 acre-feet for G4- 25728P, G4-25775P, and G4-25648C.
italicized - water right subject of this change
Additive [A]; Non-additive [NA]

Public Interest (groundwater only)
The proposed transfer is subject to RCW 90.44.100 and therefore, cannot be detrimental to the public interest, including impacts on any watershed planning activities. The Board received no comments, protests, or other indications that the proposed change would be detrimental to the public interest, and no impacts to watershed planning activities were identified. Providing a reliable public water supply is in the public interest. Providing greater well redundancy is in the public interest.

Tentative Determination
In order to make a water right change decision, the Board must make a tentative determination on the validity and extent of the right. The Board has made the tentative determination as displayed upon the first page of this report. There are several circumstances that can cause the board's tentative determination to differ from the stated extent of the water right within water right documentation. Water right documents attempt to define a maximum limitation to a water right, rather than the actual extent to which a water right has been developed and maintained through historic beneficial use. Additionally, except for a sufficient cause pursuant to RCW 90.14.140, water rights, in whole or in part, not put to a beneficial use for five consecutive years since 1967 may be subject to relinquishment under Chapter 90.14.130 through 90.14.180 RCW. Additionally, water rights may be lost through abandonment. The Board's tentative determination was based upon the following findings:

1. The Country Club Water District Water Company (Company) applied for the right and a water right certificate was issued on June 21, 1946 for 1,500 gpm, 1,210 afy for municipal use;
2. Under Chapter 90.14.140 water rights claimed for municipal purposes are not subject to relinquishment;
3. Metered water use shows use under the right and growth in the system; and
4. Ecology recently clarified Yakima County's portfolio and granted permit extensions for related rights.

Geologic, Hydrogeologic, or other scientific investigations (if applicable)
Yakima County Public Services submitted to the Board a technical report, included as Appendix G, describing hydrogeologic conditions near the existing and proposed points of withdrawal, evaluating the body of public groundwater each well accesses, and the potential for impairment of other water rights or water right permit exempt wells (Aspect Consulting, 2017). Information contained in that report is summarized below.

Impairment, Same Body of Groundwater, and Enlargement
The existing POWs (Well Nos. 4 and 5) authorized under No. G4-CV2P892 and the proposed POW (Well No. 6) are located within the Ahtanum-Moxee basin. The existing POWs withdraw water from the Ellensburg Formation aquifer. The proposed POW is completed in the Ellensburg Formation aquifer.
The proposed POW is hydraulically connected, receives recharge from the same catchment area, shares a common flow regime as the Ellensburg Formation aquifer, and no barriers (i.e. fault or folds) to groundwater are between the authorized points of withdrawal and the proposed point of withdrawal.

The closest non-County well (Well ID 329500) to the proposed POW is located 1,330 feet from the proposed POW. Well ID 329500 is associated with certificated water right G4-*00499CWRIS. The well is completed to a depth of 325-ft bgs, and is fully cased with perforations from 300 to 322-ft bgs.

Using the aquifer parameters above and average published storage coefficient of $1.4x10^{-4}$, the governing Theis equation was used to estimate the interference drawdown from continuously pumping the proposed POW. Based on this analysis, the interference drawdown from continuously pumping at 750 gpm (continuously pumping well to meet annual quantity) is estimated to be less than 43 feet at the end of 365 days of pumping. The existing wells (Wells Nos. 4 and 5) are located 3,210 and 3,250 feet further from Well ID 329500 than the proposed POW (Well No. 6). Moving the authorized withdrawal to Well No. 6 increases the calculated drawdown in Well ID 329500 by less than 12 feet, under a 750 gpm continuous pumping scenario. For comparison purposes, pumping at the increased maximum allowable quantity (1,500 gpm) for 24 hours results in less than 30 feet of drawdown in Well ID 329500, an increase of 21 feet of drawdown pumping Wells Nos. 4 and 5 under the same condition.

The increase in drawdown of 12 to 21 feet in Well ID 329500 represents 1 to 2 percent of the total aquifer thickness, respectively. This increase in drawdown is not expected to result in an unreasonable or unfeasible pumping lift.

Pumping interference effects are likely, no impairment of existing groundwater rights—either permit or permit-exempt—will occur in the Ellensburg Formation aquifer with full use of the requested quantity. In addition, the closest surface water body listed by Washington State Department of Fish and Wildlife (WDFW) database to have Endangered Species Act (ESA)-listed species is the Yakima River, located about 1.15 miles east of the property. The requested change to G4-CV2P892 does not change the period of use, nor a change in annual quantity; therefore, there is no impairment of local surface water or ESA-listed species.

RCW 90.44.100(2) outlines criteria for transfer of groundwater rights, which includes a requirement that "where an additional well or wells is constructed, the original well or wells may continue to be used, but the combined total withdrawal from the original and additional well or wells shall not enlarge the right conveyed by the original permit or certificate". Quantities will be metered to prevent any enlargement of the right.

The information or conclusions in this section were authored and/or developed by Yakima County Water Conservancy Board members David Brown, Mark Reynolds, and Dave England; Yakima County Public Services Utilities Manager Joe Stump; and Yakima County Public Services consultants Dan Haller, and Jason Shira.

CONCLUSIONS [See WAC 173-153-130(6)(d)]

Tentative determination (validity and extent of the right)

The Board finds that a valid water right exists for Qi of 1,500 gpm and a Qa of 1,210 afy

Relinquishment or abandonment concerns

The Board found no evidence of relinquishment or abandonment of the water right under consideration

Hydraulic analysis

The Board finds that the proposed points of withdrawal have the same source and access the same body of public groundwater.

Consideration of comments and protests

The Board did not receive any comments or protests.

Impairment

The Board found no indication that the proposed points of withdrawal will cause impairment of other groundwater uses.

Public Interest

The Board found no detriment to the public interest would occur as a result of this change.

DECISION [See WAC 173-153-130(6)(e)]

The Board's decision is to approve adding the proposed points of withdrawal to Groundwater Certificate 886-A based on the above investigation and conclusions.

The information or conclusions in this section were authored and/or developed by Yakima County Water Conservancy Board members David Brown, Mark Reynolds, and Dave England; Yakima County Public Services Director Joe Stump; and Yakima County Public Services consultants Dan Haller, and Jason Shira.

PROVISIONS [See WAC 173-153-130(6)(f)]

Conditions and limitations

1. All existing certificate provisions are retained.
2. This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.
3. An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.
4. Water use data shall be recorded weekly. The maximum rate of diversion/withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year. The following information shall be included with each submittal of water use data: (1) owner; (2) contact name if different; (3) mailing address; (4) daytime phone number; (5) WRIA; (6) Permit/Certificate No.; (7) source name; (8) annual quantity used including units of measurement; (9) maximum rate of diversion, including units of measurement, (10) weekly meter readings including units of measurement, (11) peak monthly flow including units of measurement, (12) purpose of use, and (13) well tag numbers. In the future, Ecology may require additional parameters to be reported or to be reported on a more frequent basis. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.
5. Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modification to some of the requirements. Installation, operation, and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".
6. Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

Construction Schedule

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE:	COMPLETE CHANGE AND PUT WATER TO FULL USE BY THIS DATE:
December 31, 2017	December 31, 2019	October 1, 2028

The Board selected a 2 year construction development schedule to cover the upgrade to Well 6. Thereafter, the Board selected a Proof Date consistent with Ecology's July 24, 2017 technical assistance and permit extension letter. This will provide coordinated reporting for Yakima County's water rights aligned with their next water system plan. Additionally, the Board recognizes that Yakima County rotates use amongst their wells to meet system demand, so the year after completion of construction may not represent a peak year. However, one or more peak years is expected by 2028.

The information or conclusions in this section were authored and/or developed by Yakima County Water Conservancy Board members David Brown, Mark Reynolds, and Dave England; Yakima County Public Services Director Joe Stump; and Yakima County Public Services consultants Dan Haller, and Jason Shira.

The undersigned board commissioner certifies that he/she understands the board is responsible "to ensure that all relevant issues identified during its evaluation of the application, or which are raised by any commenting party during the board's evaluation process, are thoroughly evaluated and discussed in the board's deliberations. These discussions must be fully documented in the report of

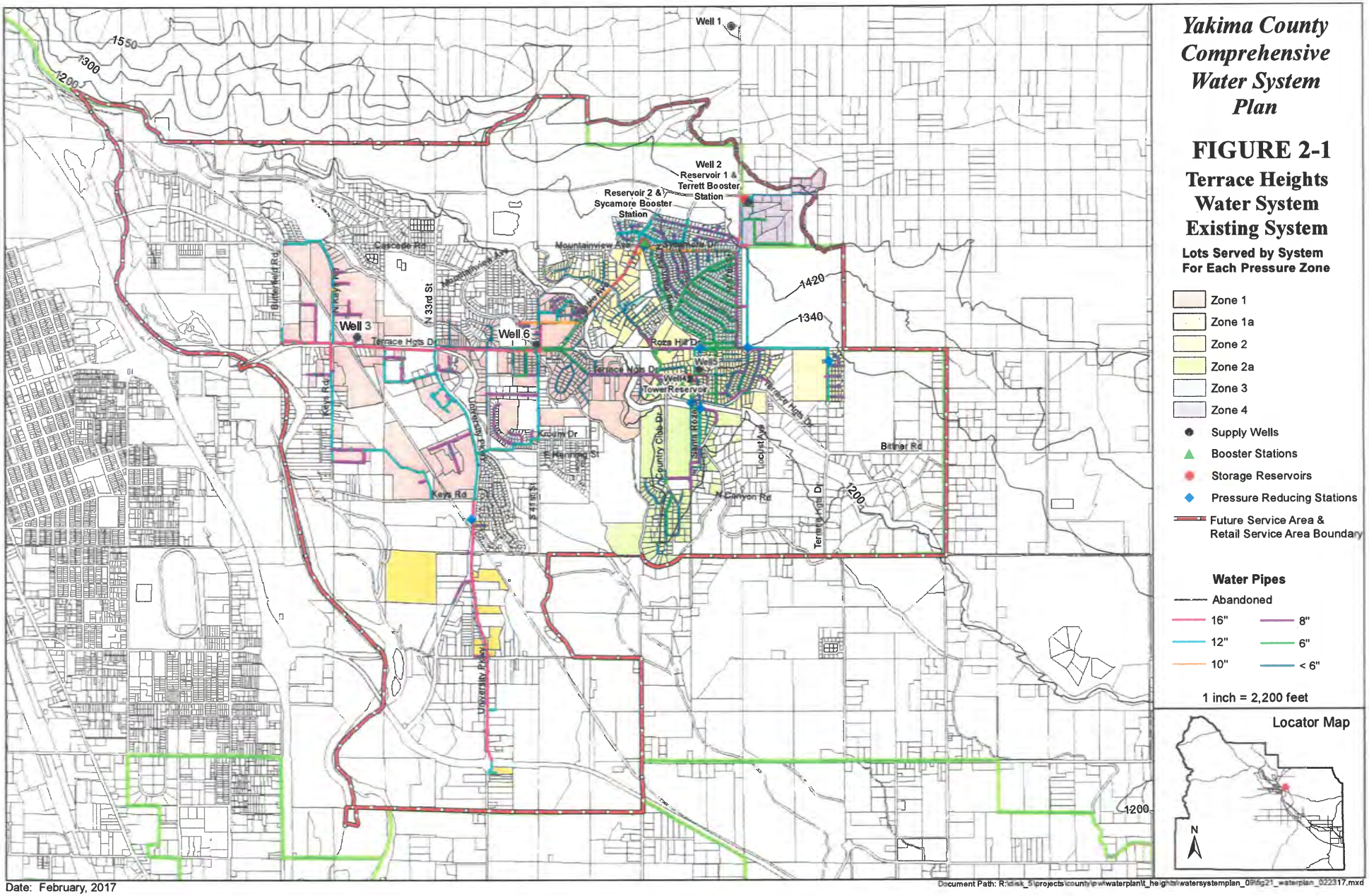
examination." [WAC 173-153-130(5)] The undersigned therefore, certifies that he/she, having reviewed the report of examination, knows and understands the content of this report and concurs with the report's conclusions.

Signed at Yakima, Washington
This 10th of August 2017

Jeff Stevens, Board Representative
Yakima County Water Conservancy Board

If you have special accommodation needs or require this form in alternate format, please contact 360-407-6607 (Voice) or 711 (TTY) or 1-800-833-6388 (TTY).

Ecology is an equal opportunity employer



Yakima County Comprehensive Water System Plan

FIGURE 2-1

Terrace Heights Water System Existing System

Lots Served by System For Each Pressure Zone

- Zone 1
- Zone 1a
- Zone 2
- Zone 2a
- Zone 3
- Zone 4
- Supply Wells
- Booster Stations
- Storage Reservoirs
- Pressure Reducing Stations
- Future Service Area & Retail Service Area Boundary

Water Pipes

- Abandoned
- 16"
- 12"
- 10"
- 8"
- 6"
- < 6"

1 inch = 2,200 feet

Locator Map

Date: February, 2017

Document Path: R:\disk_5\projects\county\pw\waterplan\t_heights\watersystemplan_0915fig21_waterplan_022317.mxd

APPENDIX A

G4-CV2P892 (GWC 886-A)
Change Application

DEPARTMENT OF ECOLOGY
State of Washington

For Ecology Use
(Date Stamp)

WATER RESOURCES
Application for Change/Transfer of a Water Right

You must include a $50.00 minimum filing fee with this application for:

(Check all that apply.)
- ■ Change purpose(s) of use
- ☐ Add purpose(s) of use
- ■ Change/transfer place of use
- ☐ Change point(s) of diversion/withdrawal
- ■ Add point(s) of diversion/withdrawal
- ☐ Other (i.e. consolidation, intertie, trust water)

Explain: Add Well No. 6 as a point of withdrawal to water right G4-CV2P892 (GWC 886-A)

No filing fee is required for applications for:
- ☐ Drought
- ☐ Cost Reimbursement
- ■ Water Conservancy Board

FOR OFFICIAL USE ONLY

DATE APPLICATION RECEIVED _____
CHECK NO. _____ FEE $ _____
DATE ACCEPTED _____ BY _____
CHANGE NO. _____
COUNTY _____ WRIA _____
SPECIAL AREA _____

SEPA: ☐ EXEMPT ☐ NOT EXEMPT

ECY CODING: 001-002-WR10285-000011

APP NO. _____ PERMIT NO. _____
CERT NO. _____ CERT OF CHG NO. _____

☐ **I have completed a pre-application consultation with Ecology.**

1. Applicant Information

APPLICANT/BUSINESS NAME	PHONE NO.	FAX NO.
Joe Stump/Yakima County	(509) 574-2425	(509) 574-2301
ADDRESS		
128 N. 2nd Street, 4th Floor Courthouse		
CITY	STATE	ZIP CODE
Yakima	WA	98901
EMAIL ADDRESS (IF AVAILABLE)		
joe.stump@co.yakima.wa.us		

CONTACT (IF DIFFERENT FROM ABOVE)	PHONE NO.	FAX NO.
ADDRESS		
CITY	STATE	ZIP CODE
EMAIL ADDRESS (IF AVAILABLE)		

LEGAL LAND OWNER or PART OWNER OF PROPOSED PLACE OF USE	PHONE NO.	FAX NO.
ADDRESS		
CITY	STATE	ZIP CODE
EMAIL ADDRESS (IF AVAILABLE)		

2. Water Right Information

WATER RIGHT OR CLAIM NUMBER	RECORDED NAME(S)
G4-CV2P892 (GWC 886-A)	Country Club District Water Company

DO YOU OWN THE RIGHT TO BE CHANGED? ■ YES ☐ NO

IF NO, PROVIDE OWNER(S) NAME and ADDRESS:

HAS THE WATER BEEN USED AS AUTHORIZED IN THE LAST FIVE (5) YEARS? ■ YES ☐ NO

- Attach copies of any documentation that shows the historical use of water that has occurred since the right was established.
- If you have a water system plan or conservation plan, please include a copy with your application.

3. Point(s) of Diversion/Withdrawal:

A. Existing

SOURCE	NO.	¼	¼	SEC.	TWP.	RGE.	PARCEL #	WELL TAG #
Well No. 4	4	NW	NE	22	13N	19E	191322-12407	AEP542
Well No. 5	5	NE	NE	22	13N	19E	191322-11421	AEP543

B. Proposed (if different from 3.A.)

SOURCE	NO.	¼	¼	SEC.	TWP.	RGE.	PARCEL #	WELL TAG #
(see attachment)								

C. DO YOU OWN THE EXISTING AND PROPOSED POINT(S) OF DIVERSION/WITHDRAWAL?

EXISTING: ■ YES ☐ NO PROPOSED: ■ YES ☐ NO – IF NO, PROVIDE OWNER NAME(S):

- Include copies of all associated water well reports.
- If you know the distances from the nearest section corner to the above point(s) of diversion/withdrawal, please include that information in Item No. 6 (remarks) or as an attachment.

4. Purpose of Use:

A. Existing

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE
municipal domestic supply and irrigation of lawns	1,500 gpm	1,210	continuous
and gardens			

B. Proposed (if different from 4.A.)

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE
Municipal Water Supply	1,500 gpm	1,210	continuous

5. Place of Use:

A. Existing

LEGAL DESCRIPTION OF LANDS WHERE WATER IS PRESENTLY USED:							
Sections 14, 15, 16, 21, 22, and 23, T13N, R19E							
¼	¼	SEC.	TWP.	RGE.	COUNTY	PARCEL #	# OF ACRES

DO YOU OWN ALL THE LANDS IN THE EXISTING PLACE OF USE? ☐ YES ■ NO

IF NO, PROVIDE OWNER NAME(S): numerous landowners and parcels

B. Proposed (if different than 5.A.)

LEGAL DESCRIPTION OF LANDS WHERE NEW USE IS PROPOSED:							
The area served by the Yakima County Terrace Heights Water System described in its most recent approved Water System Plan (WSP)							
If the criteria in RCW 90.03.386(2) are not met and a WSP was approved after September 9, 2003, the place of use of this water right							
reverts to the service area described in that document. If the criteria are not met and no WSP has been approved after September 9,							
2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.							
¼	¼	SEC.	TWP.	RGE.	COUNTY	PARCEL #	# OF ACRES

DO YOU OWN ALL THE LANDS IN THE PROPOSED PLACE OF USE? ☐ YES ■ NO numerous landowners and parcels

IF NO, PROVIDE OWNER NAME(S):

- Attach a detailed map of your proposed change/transfer. The map should show existing and proposed point(s) of diversion/withdrawal, place of use and any other features involved with this application.
- If platted property, please include a certified copy of the plat map.

C. Are there any additional water rights or claims related to the same property as the one proposed for change/transfer? G4-25728P, G4-25775P, G4-25648C, G4-31494P,

■ YES ☐ NO – IF YES, PROVIDE THE WATER RIGHT/CLAIM NUMBER(S): G4-27699P, GWC 891-D

6. Remarks and Other Relevant Information:

Yakima County has requested Ecology conform the purpose of use of this water right to municipal, and recognize an existing area served by designation in May 2017. This application request changes in purpose and place of use that may not be necessary if Ecology acts on this request before the Conservancy Board renders a decision on this application.

IF FOR SEASONAL OR TEMPORARY, START DATE ___/___/_____ END DATE ___/___/_____

Certain applications may incur a Real Estate Excise Tax liability for the seller of the water rights. The Department of Revenue has requested notification of potential taxable water right related actions and therefore may be provided with a copy of this request. For further information, contact:

Department of Revenue Phone (360) 570-3265
Real Estate Excise Tax
PO Box 47477
Olympia, WA 98504-7477

7. Signatures:

I certify that the information above is true and accurate to the best of my knowledge. I understand that in order to process my application, I hereby grant staff from the Department of Ecology or the County Conservancy Board access to the above site(s) for inspection and monitoring purposes. If assisted in preparing this above application, I understand that all responsibility for the accuracy of the information rests with me.

Joe Stump, Utilities Manager **Applicant Printed Name – Title**	**Applicant Signature**	5/30/2017 **(Date: MM/DD/YYYY)**
Yakima County (see below) **Water Right Holder Printed Name**	**Water Right Holder Signature**	**(Date: MM/DD/YYYY)**
Land Owner of Existing Place of Use Printed Name	**Land Owner of Existing Place of Use Signature**	**(Date: MM/DD/YYYY)**
Land Owner of Proposed Place of Use Printed Name	**Land Owner of Proposed Place of Use Signature**	**(Date: MM/DD/YYYY)**

***Submit your application to:** DEPARTMENT OF ECOLOGY CASHIERING SECTION PO BOX 47611 OLYMPIA, WA 98504-7611	☐ Central Regional Office 1250 W. Alder Street Union Gap, WA 98903-0009 (509) 575-2490	☐ Eastern Regional Office 4601 N. Monroe Street Spokane, WA 99205-1265 (509) 329-3400
	☐ Northwest Regional Office 3190 – 160th Avenue SE Bellevue, WA 98008-5452 (425) 649-7000	☐ Southwest Regional Office PO Box 47775 Olympia, WA 98504-7775 (360) 407-6300

Attest:

Tiera L. Girard, Clerk of the Board

BOARD OF YAKIMA COUNTY COMMISSIONERS STATE OF WASHINGTON SEAL OF THE

J. Rand Elliott, Chairman

Ron Anderson, Commissioner

BOCC132-2017
June 6, 2017

Approved as to form:

Deputy Prosecuting Attorney

Michael D. Leita, Commissioner
Constituting the Board of County Commissioners for Yakima County, Washington

ATTACHMENT FOR
Application for Change/Transfer of Water Right

Point(s) of Diversion/Withdrawal - ☐ Existing ▣ Proposed:

SOURCE	NO.	¼	¼	SEC.	TWP.	RGE.	PARCEL #	WELL TAG #
Well No. 4	4	NW	NE	22	13N	19E	191322-12407	AEP542
Well No. 5	5	NE	NE	22	13N	19E	191322-11421	AEP543
Well No. 6	6	SE	SE	16	13N	19E	191316-44466	AEP541

DO YOU OWN THE ABOVE POINT(S) OF DIVERSION/WITHDRAWAL? ☐ YES ☐ NO

IF NO, PROVIDE OWNER NAME(S):

Purpose(s) of Use - ☐ Existing ☐ Proposed:

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE

Place of Use - ☐ Existing ☐ Proposed:

LEGAL DESCRIPTION OF LANDS

¼	¼	SEC.	TWP.	RGE.	COUNTY	PARCEL #	# OF ACRES

DO YOU OWN ALL THE LANDS IN ABOVE PLACE OF USE? ☐ YES ☐ NO

IF NO, PROVIDE OWNER NAME(S):

APPENDIX B

Claim Amendments and Certificate

CERTIFICATE OF CHANGE OF PURPOSE AND PLACE OF USE OF GROUND WATER

In accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the regulations of the Supervisor of the Division of Water Resources.

THIS IS TO CERTIFY That the Country Club District Water Company of Yakima, Washington, has complied with all of the requirements of the Revised Code of Washington 90.44.100, and is hereby granted a permit to change the purpose and place of use of 1500 gallons per minute; 1210 acre-feet per year; of waters from two wells as granted in ground water Certificate No. 886-A.

That the water is used for domestic supply and for the irrigation of lawns and gardens on the following described land:

Terrace Heights Subdivision Nos. 1, 2 and 3; the $SE\frac{1}{4}SE\frac{1}{4}$ of Sec. 15; the $N\frac{1}{2}SE\frac{1}{4}$ of Sec. 15; $S\frac{1}{2}NW\frac{1}{4}$ of Sec.15; $S\frac{1}{2}NE\frac{1}{4}$ of Sec.16 and the $NE\frac{1}{4}NE\frac{1}{4}$ of Sec. 16, all within T. 13 N., R. 19 E.W.M. ALSO, all of $SE\frac{1}{4}$ of Sec. 16 lying south of Selah and Moxee Canal, also the $N\frac{1}{2}NE\frac{1}{4}$ of Sec. 21; and that part of the $NW\frac{1}{4}NW\frac{1}{4}$ of Sec. 22 lying south of the Selah and Moxee Canal; and that part of the $SE\frac{1}{4}NW\frac{1}{4}$ of Sec. 22 lying north and above the Selah and Moxee Canal. All of the above-described lands lying in T. 13 N., R. 19 E.W.M., Yakima County, Washington.

That the purpose of use is being changed to municipal domestic supply and irrigation of lawns and gardens on the following described lands situated in Yakima County, Washington:

Sections 14, 15, 16, 21,22 and 23, T. 13 N., R. 19 E.W.M., which includes the above-described lands.

WITNESS THE SEAL and SIGNATURE of the Supervisor of the Division of Water Resources of the State of Washington, affixed this 18th day of March, 1966.

M. G. WALKER, Supervisor
Division of Water Resources

RECORDED:
Vol. 2, Page 892 Records of Change of Purpose and Place of Use of Ground Water.

ENGINEERING DATA
O.K. RHR

S. F. No. 7361—3-51—3M. 27753.

CERTIFICATE RECORD NO. 2 PAGE NO. 386-A

STATE OF WASHINGTON, COUNTY OF Yakima

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.

THIS IS TO CERTIFY That COUNTRY CLUB DISTRICT WATER COMPANY, A CORPORATION, of Yakima, Washington, has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of two pump wells Well #1 / located within the NW¼ of NE¼ and Well #2 within the NE¼ of NE¼, both within Sec. 22, Twp. 13 N., Rge. 19 E.W.M.

for the purpose of irrigation of lawns and gardens and domestic supply, under and subject to provisions contained in Ground Water Permit N 920 issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is herby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 2 at page 386-A; that the right hereby confirmed dates from June 21, 1946; that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed 1500 gallons per minute; 1210 acre-feet per year.

A description of the lands to which such ground water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

Terrace Heights Subdivision Nos. 1, 2 and 3; the SE¼ of SE¼ of Sec. 15; the N½ of SE¼ of Sec. 15; S½ of NW¼ of Sec. 15; S½ of NE¼ of Sec. 16 and the NE¼ of NE¼ of Sec. 16, all within Twp. 13 N., Rge. 19 E.W.M.

Also, all of SE¼ of Sec. 16 lying South of Selah and Moxee Canal, also the N½ of NE¼ of Sec. 21; and that part of the NW¼ of NW¼ of Sec. 22 lying South of the Selah and Moxee Canal; and that part of the SE¼ of NW¼ of Sec. 22 lying North and above the Selah and Moxee Canal. All of the above described lands lying in Township 13 North, Range, 19 E.W.M.

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 30th day of November, 19 51.

State Supervisor of Water Resources

ENGINEERING DATA
O.K.

APPENDIX C

Ecology July 24, 2017 Letter

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

July 24, 2017

Public Services (cs)

JUL 25 2017

Vern___Gary___Don___Lynn___
Harold___Lisa___Carmen___

Yakima County Public Services
Attn: Joe Stump, Utilities Manager
128 North 2nd Street, 4th Floor
Yakima, WA 98901

Re: Water Right Nos. G4-25728P, G4-25775P, G4-27699P, and G4-31494P—Yakima County Terrace Heights Water System

Dear Mr. Stump:

In response to your request, you are hereby granted an extension to put the water to full beneficial use for the reason(s) below:

> Additional time is required to fully build out the Terrace Heights Water System as originally envisioned in the Permit documents and Yakima County's current Water System Plan.

The new deadline to submit your *Proof of Appropriation of Water* is **October 1, 2028**, concurrent with your next Water System Plan update.

Additionally, Ecology makes the following clarifications to the following Yakima County Terrace Heights Water System water rights based on our review of your technical assistance letter dated May 15, 2017:

Authorized Place of Use

The place of use for the above-referenced water rights (G4-25728P, G4-25775P, G4-31494P, and G4-27699P) and Groundwater Right Nos. G4-25648C, GWC 891-D, and GWC 886-A are described as follows:

Area served by the Yakima County Terrace Heights Water System described in its most recent approved Water System Plan. If the criteria in RCW 90.03.386(2) are not met and a Water System Plan was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no Water System Plan has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization.

Family Farm Act

Family Farm Act provisions for G4-25728P, G4-25775P, and G4-25648C and are inapplicable and are hereby removed.

Municipal Conformance

The purpose of use for G4-25728P, G4-25775P, G4-25648C, GWC 891-D, and GWC 886-A is municipal water supply purpose.

Ministerial Error Correction to ROE and Permit G4-27699P

The following provision associated with Permit G4-27699P is modified to correct an error in the Report of Examination and Permit:

"The total annual withdrawal under Certificate No. 891-D, No. 886-A and this right shall not exceed 1,372 acre-feet per year."

Nomenclature Clarification

The following table updates the terminology of previous water rights for the Terrace Heights Water System to reflect their additive/non-additive nature (rather than primary, supplemental and other terms of art) and updates the quantities to reflect the error correction to G4-27699P:

Table 6: Yakima County Water Rights (Additive (A), Non-Additive (NA))

Source	Water Rights Certificate Number	Priority Date	Maximum Instantaneous Withdrawal	Annual Withdrawal
Well 1	G4-25728P G4-25775P	11/9/77 3/14/78	800 gpm [A] 400 gpm [A]	741 acre-feet [A] 371 acre-feet [NA]
Well 2	G4-25648C	11/28/77	540 gpm [A]	448 acre-feet [A], [NA](1)
Well 3	G4-31494P	10/14/92	2250 gpm [A]	2,722 acre-feet [A]
Well 4	GWC 891-D	6/1/26	165 gpm [A]	162 acre-feet [A]
Well 4 & 5	GWC 886-A	6/21/46	1,500 gpm [A]	1,210 acre-feet [A]
Well 6	G4-27699P	9/21/81	500 gpm [A]	376 acre-feet [NA]
		Total	**6,155 gpm**	**5,020 acre-feet**

(1) G4-25648C is additive in the amount of 185 acre-feet and non-additive in the amount of 741 acre-feet, with an overall cap of 926 acre-feet for G4-25728P, G4-25775P, and G4-25648C.

YOUR RIGHT TO APPEAL

You have a right to appeal this Decision to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Decision. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Decision:

- File your appeal and a copy of this Decision with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Decision on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION	
Street Addresses	**Mailing Addresses**
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey WA 98503 **Pollution Control Hearings Board** 1111 Israel Road SW, Suite 301 Tumwater WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia WA 98504-0903

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov
To find laws and agency rules visit the Washington State Legislature Website: http://www.leg.wa.gov/CodeReviser

If you have any questions, please contact Water Resources Help Desk at 509-575-2597.

Sincerely,

Trevor Hutton

Trevor Hutton, Section Manager
Water Resources Program
Central Regional Office

TH:CLG:SS/170719
WRTS No. 2283097, 2283495, 2283524, & 2085437

Enclosures: Your Right to Be Heard
Proof of Appropriation of Water (4)
Water Measurement Requirements
Form 1 – Measuring Device Information (4)

By certified mail: 91 7199 9991 7037 0277 8818

APPENDIX D

Affidavit of Publication

YAKIMA HERALD-REPUBLIC

Affidavit of Publication

STATE OF WASHINGTON,)
)
COUNTY OF YAKIMA)

Danielle Rogers, being first duly sworn on oath deposes and says that she/he is the Accounting clerk of Yakima Herald-Republic, Inc., a daily newspaper. Said newspaper is a legal newspaper approved by the Superior Court of the State of Washington for Yakima County under an order made and entered on the 13th day of February, 1968, and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a daily newspaper in Yakima, Yakima County, Washington. Said newspaper is now and has been during all of said time printed in an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of a:
BEFORE THE YAKIMA COUNTY WATER CONSE

it was published in regular issues (and not in supplement form) of said newspaper once each day and for a period of 2 times, the first insertion being on 06/12/2017 and the last insertion being on 06/19/2017

Yakima Herald-Republic 06/12/17
Yakima Herald-Republic 06/19/17

and the such newspaper was regularly distributed to its subscribers during all of the said period. That the full amount of the fee charged for the foregoing publication is the sum of $369.77

Danielle Rogers

Accounting Clerk

RENE CONNATSER NOTARY PUBLIC STATE OF WASHINGTON My Comm. Expires August 15, 2019

Sworn to before me this 19 day of, June 2017

Notary Public in and for the
State of Washington,
residing at Yakima

BEFORE THE YAKIMA COUNTY WATER CONSERVANCY BOARD
YAKIMA COUNTY, WASHINGTON

Notice of Application to change purpose of use, change place of use, and add a point of withdrawal under Water Right Certificate No. G4-CV2P892.

TAKE NOTICE: That on June 8, 2017, Yakima County of Yakima, WA filed application number (YAKI-17-02) with the Yakima County Water Conservancy Board to change purpose of use, change place of use, and add withdrawal points under Water Right Certificate No. G4-CV2P892.

That said right, under priority date of June 21, 1946, authorizes the withdrawal of 1,500 gallons per minute and 1,210 acre-feet per year from two wells located within the NW ¼ NE ¼ and NE ¼ NE ¼ of Section 22, T13N-R19EWM. That said right authorizes water to be used for continuous municipal domestic supply and irrigation of lawns and gardens, within Sections 14, 15, 16, 21, 22, and 23, all in T13N-R19EWM.

That the applicant proposes to add an existing well located in the SE ¼ SE ¼ of Section 16, T13N-R19EWM with a proposed change in use to continuous municipal water supply and change in place of use to the area served by the Yakima County Terrace Heights Water System in its most recent approved Water System Plan.

Any protests or objections to the approval of this application may be filed with the Department of Ecology and must include a detailed statement of the basis for objections; protests must be accompanied by a fifty dollar ($50) recording fee and filed with the Department of Ecology Cashiering Unit, P.O. Box 47611, Olympia, WA 98504-7611 within thirty (30) days from June 19, 2017.

Any interested party may submit comments, objections, and other information to the board regarding this application. The comments and information may be submitted in writing or verbally at any public meeting of the board held to discuss or decide on the application. This application will be on the board agenda during its regular meeting on June 8, 2017 *(NOTE: this notice does not constitute notice of a meeting for the purposes of the Open Public Meetings Act, RCW 42.30)* and at subsequent scheduled meetings thereafter until the Board renders a decision on the application.

Additionally, the Water Conservancy Board, may receive written comments or information through July 19, 2017 at its offices located at 2301 Fruitvale Blvd., Yakima, Washington 98902.

(739623) June 12 and 19, 2017

APPENDIX E

Yakima County Water Conservancy Board May 15 and July 11, 2017 Site Visit

Yakima County Water Conservancy Board

2301 Fruitvale Blvd.
Yakima, Washington 98902
(509) 454-5315

SITE VISIT REPORT

Date of Inspection: May 15, 2017
Applicant Name: Yakima County
DOE No:
YCWCB No.: YAKI-17-01
Inspector(s): David Brown Mark Reynolds
Applicant(s) Present: Joe Stump, Gray and Osborne, Aspect

Existing Right:	**Comment**
Verified Point of Diversion/Withdrawal	☒ Yes ☐ No ☐ NA
Headgate or Pump Type:	Submersible, not in use
Type of Metering:	Propeller
Verified Place of Use:	☒ Yes ☐ No ☐ NA
Type:	Urban
Obtained Water Use Data:	☐ Yes ☒ No ☐ NA
Describe:	Municipal

Proposed Change:	**Comment**
Verified Point of Diversion/Withdrawal	☒ Yes ☐ No ☐ NA
Headgate or Pump Type:	Submersible
Type of Metering:	Propeller
Verified Place of Use:	☒ Yes ☐ No ☐ NA
Type:	Urban

Discussions with Applicant

Well #1 will continue to not be used, may try to sell. Asked what value without water right

Right form well 1 Point of Withdrawal to be moved to Well #6. Place of use to be same

Checking on well #6 alignment to determine if line shaft will work. A new larger pump and motor will be placed in well 6

Field Observations

Other Comments/Recommendations

Be sure to attach annotated photos, other field notes and any data from the applicant.

Yakima County Water Conservancy Board

2301 Fruitvale Blvd.
Yakima, Washington 98902
(509) 575-2885

SITE VISIT REPORT

Date of Inspection: July 11, 2017
Applicant Name: Joe Stump / Yakima County
DOE No: G4-CV2P892 (GWC-886-A)
YCWCB No.: YAKI-17-01 and YAKI-17-02
Inspector(s): Mark Reynolds, David Brown and Dave England, two separate site visits
Applicant(s) Present: Joe Stump and Jason Shira (Aspect Consulting)

Existing Right:	**Comment**
Verified Point of Diversion/Withdrawal	☒ Yes ☐ No ☐ NA
Headgate or Pump Type:	Wells 2, 4,5 & 6 Submersible, Well 3 Line Shaft Turbine
Type of Metering:	Propeller
Verified Place of Use:	☒ Yes ☐ No ☐ NA
Crop Type:	Municipal
Irrigation Equipment:	N/A
Obtained Water Use Data:	☐ Yes ☒ No ☐ NA
Describe:	Will come in report

Proposed Change:	**Comment**
Verified Point of Diversion/Withdrawal	☒ Yes ☐ No ☐ NA
Headgate or Pump Type:	
Type of Metering:	Propeller
Verified Place of Use:	☒ Yes ☐ No ☐ NA
Crop Type:	Municipal
Irrigation Equipment:	N/A

Discussions with Applicant

Talked about future well improvements

Field Observations

Looked at wells and observed the place of use in the community. Verified water meters and the working order

Other Comments/Recommendations

More info will follow during presentations and review of report and ROE

Be sure to attach annotated photos, other field notes and any data from the applicant.

Yakima County Water Conservancy Board

2301 Fruitvale Blvd
Yakima, Washington 98902
(509) 575-2885

SITE VISIT REPORT

For

Location: Yakima County – Terrace Heights **Date:** 7/11/17

Well No. 4

Well No. 4 Flow Meter

Well No. 5

Well No. 5 Flow Meter

	
Well No. 5 Booster to Upper Zone	Well No. 2
	
Well No. 2 Flow Meter	Well No. 2 Flow Meter
	
Well No. 3	Well No. 3 Flow Meter

	
Well No. 6	Well No. 6 Flow Meter

APPENDIX F

Yakima County Terrace Heights Water System 20-year Water Right Self-Assessment

Table 6-3
Forcasted Twenty Year Water Right(s) Status

Permit Certificate or Claim #	Name of Rightholder or Claimant	Priority Date	Source Name/ Number	Primary or Supplemental	Existing Water Rights		Forcasted Water Use From Sources (20 Year Demand)		Forcasted Water Right Status (Excess/Deficiency - 20 Yr Demand In Water Right)	
					Maximum Instantaneous Flow Rate (Qi) (gpm)	Maximum Annual Volume (Qa) (acre-ft)	Maximum Instantaneous Flow Rate (Qi) (gpm)	Maximum Annual Volume (Qa) (acre-ft)	Maximum Instantaneous Flow Rate (Qi) (gpm)	Maximum Annual Volume (Qa) (acre-ft)
Permits/ Certificates										
1. G4-25728P	Yakima County	11/9/1977	Well #1	Primary	800	741	0	0	800	741
2. G4-25775P	Yakima County	3/14/1978	Well #1	Alternate	400	371	0	0	400	371
3. G4-25648C	J.E. Bittner	11/28/1977	Well #2	Primary	540	448	330	200	210	248
4. G4-31494P	Yakima County	10/14/1992	Well #3	Primary	2,250	2,722	1,500	300	750	2,422
4. G4-27699P	District Water	9/21/1981	Well 6	Alternate	500	376	1,200	400	-700	-24
Claims										
1. GWC 891-D	District Water	6/1/1926	Well 4	Primary	165	162	GWC 886-A	GWC 886-A	165	162
2. GWC 886-A	District Water	6/21/1946	Wells 4 & 5	Primary	1,500	1,210	720	600	780	610
TOTAL	*****	*****	*****	*****	6,155	4,858	3,750	1,500	2,405	3,358

Intertie Name/Identifier	Name of Purveyor Providing Water	Existing Limits on Intertie Water Use		Existing Consumption Through Intertie		Current Intertie Supply Status (Excess/Deficiency)	
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
1. N/A							

Pending Water Right Application	Name on Permit	Date Submitted	Primary or Supplemental	Pending Water Rights	
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa)
1. N/A					

Notes:

1. G4-25775P is considered an alternative source for G4-25648C and a Standby/Reserve supply to G4-25728P according to Ecology. The total withdrawal from G4-25775P, G4-25648C and G4-25728P shall not exceed 926 acre-ft per year, or 1,740 gpm.

2. G4-27699P is an alternate source to GWC 891-D and GWC 886-A. According to Ecology, the permit for G4-27699 limits the total withdrawal from G4-27699P, GWC 891-D and GWC 886-A to 1,210 acre-ft per year, or 2,165 gpm. It is noted that the Report of Findings for GWC 886-A and the Report of Exam for G4-27699 show that the maximum withdrawal is not to exceed 1,372 acre-ft per year. For the purpose of this water plan, 1,210 acre-ft per year will be used.

3. Authorized withdrawal for Well 6 will need to be increased by including Well 6 as an additional point of withdrawal for Wells 4 and 5.

APPENDIX G

Hydrogeologic Memorandum

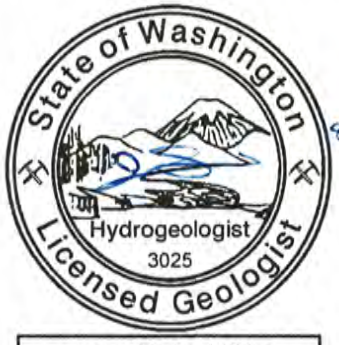
Aspect CONSULTING

MEMORANDUM

Project No.: 170142-02

August 9, 2017

To: Joe Stump P.E, Public Services Utilities Manager, Yakima County



8/9/17

From: Jason M. Shira, LHG, Project Hydrogeologist
Carl M. Einberger, LHG, Associate Hydrogeologist

Re: **Hydrogeologic Investigation**
Yakima County Change Application No. YAKI-17-02

This memorandum presents the findings of Aspect Consulting, LLC's (Aspect) hydrogeologic investigation completed in support of Yakima County Public Service's (County) water right (G4-CV2P892) change application, YAKI-17-02, with the Yakima County Water Conservancy Board (Board). The purpose of change application YAKI-17-02 is to permit the County flexibility to use an existing well (Well No. 6) as an additional point of withdrawal authorized under water right G4-CV2P892. The objective of this investigation is to determine if the County's existing two wells authorized under water right G4-CV2P892 (Well Nos. 4 and 5) and the proposed new point of withdraw (Well No. 6) are located in the same source of water, and to assess the potential for impairment of senior water rights.

Summary of Findings

Based on our review of existing documentation and the site-specific conceptual model presented below, we find that:

- Water right G4-CV2P892 authorizes withdrawal of water from two wells (Wells No. 4 and 5) completed in the Ellensburg Formation for continuous municipal water supply with a maximum instantaneous quantity (Qi) of 1,500 gallons per minute (gpm) and annual volume (Qa) of 1,210 acre-feet per year (ac-ft/yr).
- The proposed point of withdrawal is completed in the Ellensburg Formation.

- No geologic structures are mapped between the existing points of withdrawal and the proposed point of withdrawal that would potentially behave as a barrier to groundwater flow within the Ellensburg Formation.
- The withdrawal of groundwater from the proposed point of withdrawal will not impair nearby water rights. The closest non-proponent well (Well ID 329500) completed in the Ellensburg Formation is located 1,330 feet north, 3,250-feet closer than the existing Well No. 5. An analysis of potential increases in drawdown at this well resulted in a calculated 12 feet increase of drawdown at the end of 1-year pumping at 750 gpm, and increase of 21 feet of pumping interference at the end of 24-hours pumping at 1,500 gpm.

We conclude the proposed point of withdrawal (POW) is completed in the same source of public groundwater and no impairment of either permit or permit-exempt senior water rights will occur with the proposed change. The supporting analysis for these findings is presented in the sections below.

Project Background

Country Club District Water Company filed an application for a permit to appropriate public groundwater on June 21, 1946. A permit to appropriate public groundwater from two wells was issued for 1,500 gpm and 1,210 ac-ft/yr on March 17, 1949. A proof of appropriation was filed in November 1951, and a certificate (GWC 886-A) was issued November 30, 1951.

On March 18, 1966, a certificate of change (G4-CV2P892) was issued to change the purpose and place of use. The issuance of a certificate of change is inconsistent with modern records management, and Washington Department of Ecology (Ecology) will issue a superseding certificate (G4-GWC-886-A) upon completion of this change.

The County acquired the Terrace Heights Water System from the Country Club District Water Company in 1994. Following acquisition of the water system the County continued to make improvements to the system (new reservoirs, flow meters, etc.). On May 15, 2017, the County submitted a technical assistance request to the Ecology to correct names, a ministerial error, authorized place of use, municipal conformance, and nomenclature on all water rights associated with the Terrace Height Water System. On July 24, 2017 Ecology responded to the County that the following changes relevant to GWC 886-A were made: 1) the authorized place of use is defined by the water system plan; 2) the purpose of use is municipal water supply; and 3) nomenclature has been updated to clarify their additive/non-additive nature.

Hydrogeologic Investigation

Key elements of the structural setting and geologic history in the area of Terrace Heights provides the basis for our interpretation of site hydrogeology. The hydraulic continuity between the existing authorized POWs and the proposed POW was evaluated, as well as the potential for impairment of other water users. A description of the geologic setting and stratigraphic units of the area are discussed below.

Site Location

County Wells No. 4 and 5 (Well Tag # AEP542 and AEP543, respectively) are located 4 miles east of Yakima in the unincorporated area of Terrace Heights in Yakima County in the northeast quarter of Section 22 in Township 13 North, Range 19 East Willamette Meridian (E.W.M). The proposed

POW is located within the southeast quarter of the southeast quarter of Section 16, Township 13 North, Range 19 East (Figure 1).

Proposed Point of Withdrawal

The proposed POW (Well No. 6, Well Tag # AEP541) was constructed under water right G4-27699 as a non-additive source to groundwater certificates GWC 886C and GWC 891D. The water right authorizes an additive Qi of 500 gpm and non-additive Qa of 376 ac-ft/yr. Well No. 6 was drilled and constructed during the summer of 1983 using a rotary drilling method. The well was completed to a depth of 1,495 feet below ground surface (bgs). The well is cased to the bottom of the hole with well screen from 440 to 450, 490 to 500, 520 to 530, 580 to 590, and 750 to 770-feet bgs. The well has a cement seal from land surface to 405-ft bgs.

The County installed and maintains a flow meter (McCrometer E7000) on Well No. 6.

Regional Geology

The County's Terrace Heights Water System is located within the Ahtanum-Moxee subbasin of the Yakima River Basin. The Ahtanum-Moxee subbasin is an east-west trending basin bounded to the north by the Yakima Ridge, on the south by the Ahtanum Ridge, and is bisected by the Ahtanum-Moxee Syncline.

Regional bedrock is dominated by the Columbia River Basalt Group (CRBG), a series of stacked basalt flows and sedimentary interbeds that were deposited between 17 and 6 million years ago. The CRBG is underlain, intercalated, and overlain by volcanoclastic sedimentary deposit (Ellensburg Formation) derived from ancestral Cascade volcanoes. Although sedimentary interbeds are present in all CRBG formations, the Saddle Mountain Basalt generally contains the most and the thickest sedimentary interbeds (Vaccaro et al., 2009). Folding, faulting, and uplift of CRBG formations within the Yakima Fold Belt began concurrent with placement of CRBG formations and have continued to the present.

Site Hydrostratigraphic Units

Geologic unit and structural data from the Washington State Department of Natural Resources (DNR, 2017), and water well log data from the Washington Department of Ecology (Ecology) on-line water well database (included as Attachment 1) were used to develop the subsurface interpretation. Surficial geology is shown in Figure 2. Local data indicate that there are two principal geologic units underlying the project area. The characteristics and distribution of each unit is described as follows:

- **Ellensburg Formation -** The Ellensburg Formation is largely the result of deposition of volcanoclastic sediment from nearby domal volcanoes. The deposits are composed of intercalated conglomerates, sandstones, and siltstones. These sediments often occur as stratigraphic sequences alternating between laterally extensive depositional sheets of hyperconcentrated flood flow deposits to reworked sediments that are moderately sorted, bedded, and crossbedded (Waitt, 1979).

  The sedimentary aquifer consists mostly of semiconsolidated clay, silt, and sand with some gravel and conglomerate. Thickness of individual beds within the aquifer range from a few feet to more than 100 feet. Strata of clay, silt, and fine sand usually are somewhat thicker than strata of the coarser materials. Total thickness in the vicinity of project wells ranges from

1,200 to 1,600 feet (Jones, 2006). The Ellensburg Formation is commonly used for water supply with relative high yields.

Well Nos. 4, 5, and 6 are completed in the Ellensburg Formation.

- **Columbia River Basalt Group** – The CRBG is the basement unit in the area. Where present is defined by the Pomona Member of the Saddle Mountain Basalt Formation; otherwise, defined by the Priest Rapids, Roza, and Frenchman Springs Member of the Wanapum Basalt Formation. The Grande Ronde Basalt Formation is exposed at the surface on the Yakima Ridge.

Aquifer parameters of the Ellensburg Formation aquifer were estimated using flow rates from specific capacity tests conducted on Well No. 6 and Driscoll's empirical equation (Driscoll, 1986). The horizontal hydraulic conductivity within the Ellensburg Formation aquifer was estimated at 2.6 x 10^{-3} cm/s, and a transmissivity of 2400 feet^2/day assuming an average aquifer thickness based on the combined screen interval of the well of 330 feet. The derived horizontal hydraulic conductivity is within the range of horizontal hydraulic conductivities presented by Vaccaro et al., 2009 in their review of existing reports (3.5 x 10^{-5} cm/s to 2.5 x 10^{-2} cm/s, respectively).

Same Source and Same Body of Public Groundwater

Ecology Policy 2010, *Defining and Delineation of Water Sources*, provides guidance for determining the source of water (including same body of public groundwater) for water resources permitting decisions. In evaluating changes to groundwater rights, the policy describes the intent of the same body of public groundwater test as preserving the priority system among rights within the same source of water and ensuring reliability of water supply during times of shortage.

The *Technical Considerations* section of Ecology Policy 2010 defines a source of water as a body or bodies of water which:

- Are hydraulically connected;
- Share a common recharge (catchment) area;
- Share a common flow regime; and
- Are isolated from other sources by the presence of effective barriers to hydraulic flow.

The existing POWs authorized under No. G4-CV2P892 and the proposed POW are located within the Ahtanum-Moxee basin. The existing POWs withdraw water from the Ellensburg Formation aquifer. The proposed POW is completed in the Ellensburg Formation aquifer.

The proposed POW (Well No. 6) is hydraulically connected to the Ellensburg Formation, as are the two existing authorized POWs (Well Nos. 4 and 5). The proposed POW receives recharge from the same catchment area, shares a common flow regime within the Ellensburg Formation aquifer, and no barriers (i.e. fault or folds) to groundwater have been identified are between the authorized points of withdrawal and the proposed point of withdrawal.

Impairment Analysis

Revised Code of Washington (RCW) 90.03.290 and RCW 90.44.060 require a determination that a water right change will not impair existing rights. The closest non-County well (Well ID 329500) to

the proposed POW is located 1,330 feet from the proposed POW, as identified on Figures 1 and 2. Well ID 329500 is associated with certificated water right G4-*00499CWRIS. The well is completed to a depth of 325-ft bgs, and is fully cased with perforations from 300 to 322-ft bgs.

Using the aquifer parameters above and average published storage coefficient of $1.4x10^{-4}$ (Vaccaro, 2009), the governing Theis equation (Theis, 1935) was used to estimate the interference drawdown from continuously pumping the proposed POW. Based on this analysis, the interference drawdown from continuously pumping at 750 gpm (continuously pumping well to meet annual quantity) is estimated to be less than 43 feet at the end of 365 days of pumping. The existing wells (Well Nos. 4 and 5) are located 3,210 and 3,250 feet further from Well ID 329500 than the proposed POW (Well No. 6). Moving the authorized withdrawal to Well No. 6 results in an estimated increase in the calculated drawdown in Well ID 329500 of less than 12 feet, under a 750 gpm continuous pumping scenario. For comparison purposes, pumping at the additive maximum allowable quantity (1,500 gpm) for 24 hours results in less than 30 feet of drawdown in Well ID 329500, an increase of 21 feet of drawdown from pumping Well Nos. 4 and 5 under the same condition.

The increase in drawdown of 12 to 21 feet in Well ID 329500 represents 8 to 13 percent of the available drawdown, respectively; and 1 to 2 percent of the total aquifer thickness, respectively. Well ID 329500 would likely not be considered a qualifying withdrawal facility by Ecology, as defined by WAC 173-150-030, since a withdrawal facility must have a depth of aquifer penetration that allows the withdrawal of water from a reasonable or feasible pumping lift. Well ID 329500's depth of 325-ft bgs only partially penetrates the 1,200 to 1,400 thick aquifer in the vicinity of the project site, whereas the proposed POW nearly fully penetrates the vertical extent of the aquifer. Regardless of the partially penetrating nature of Well ID 3295000, this estimated increase in drawdown is not expected to result in a need for significant modification to Well ID 329500, nor create an unreasonable or unfeasible pumping lift.

We conclude that although pumping interference effects are likely, no impairment of existing permit or permit-exempt groundwater rights will occur in the Ellensburg Formation aquifer with full use of the requested quantity.

In addition, the closest surface water body listed by Washington State Department of Fish and Wildlife (WDFW) database to have Endangered Species Act (ESA)-listed species is the Yakima River, located about 1.15 miles east of the property. The requested change to G4-CV2P892 does not change the period of use, nor a change in annual quantity; therefore, there is no impairment of local surface water or ESA-listed species.

References

Department of Natural Resources, 2017. Geologic Information Portal, Washington Interactive Geologic Map. http://www.dnr.wa.gov/programs-and-services/geology/publications-and-data/geologic-information-portal.

Driscoll, F.G., 1986, Groundwater and Wells, Johnson Division, St. Paul, Minnesota.

Jones, M.A., Vaccaro, J.J., and Watkins, A.M., 2006, Hydrogeologic framework of sedimentary deposits in six structural basins, Yakima River Basin, Washington: U.S. Geological Survey Scientific Investigations Report 2006-5116, 24 p.

Theis, C.V., 1935, The lowering of the piezometer surface and the rate and discharge of a well using ground-water storage, Transactions, American Geophysical Union, 16:519-24.

Vaccaro, J.J., Jones, M.A., Ely, D.M., Keys, M.E., Olsen, T.D., Welch, W.B., and Cox, S.E., 2009, Hydrogeologic framework of the Yakima River basin aquifer system, Washington: U.S. Geological Survey Scientific Investigations Report 2009–5152, 106 p.

Wait, Richard B, Jr., 1979, Late Cenozoic Deposits, Landforms, Stratigraphy, and Tectonism in Kittitas Valley, Washington. Geological Survey Professional Paper 1127.

Limitations

Work for this project was performed for the Yakima County Public Services (Client), and this memorandum was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This memorandum does not represent a legal opinion. No other warranty, expressed or implied, is made. All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Attachments

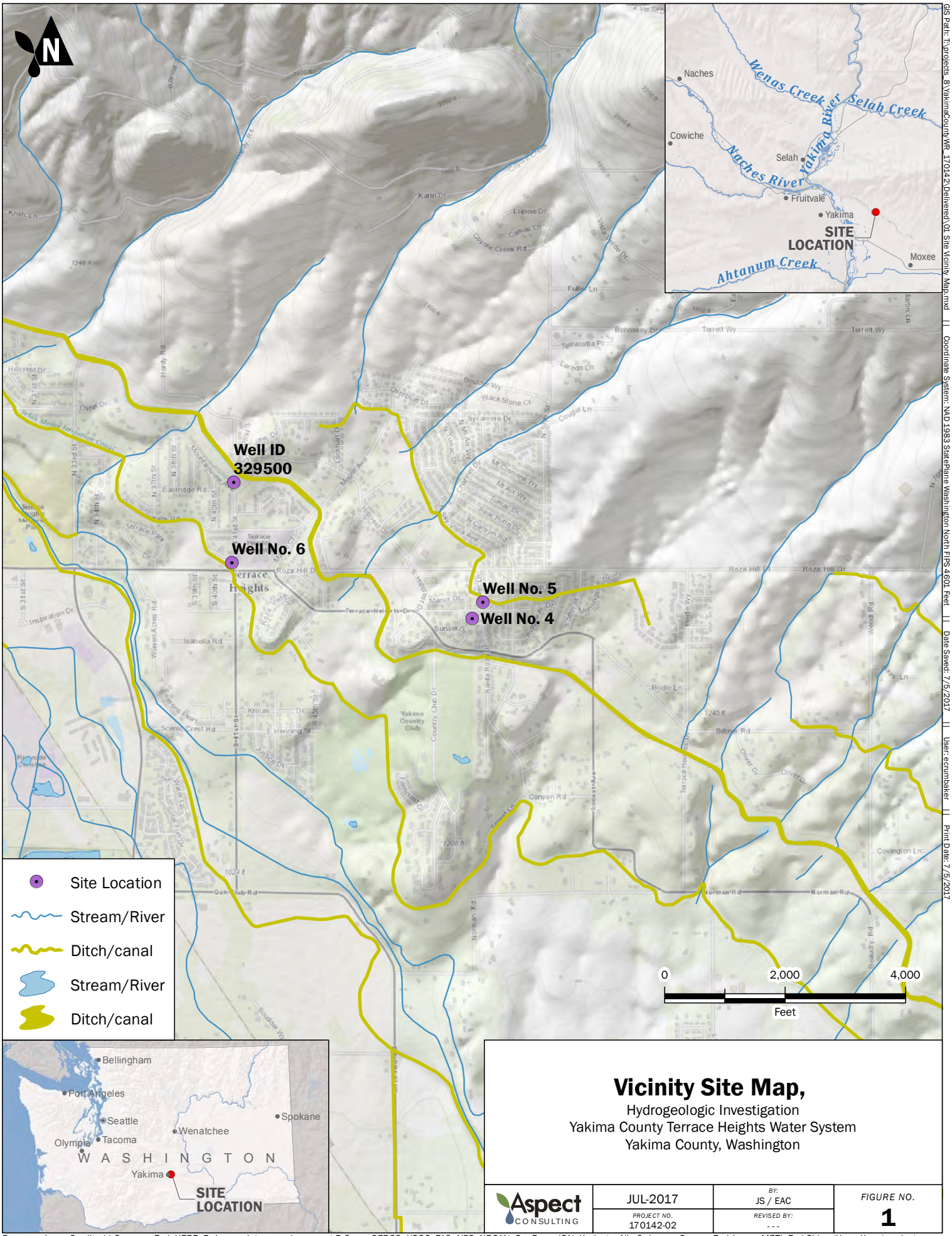
Figure 1 – Existing and Proposed Withdrawal Locations

Figure 2 – Surficial Geology

Attachment 1 – Well Logs

V:\170142 Yakima County Water Right Technical Assistance\Deliverables\Hydrogeologic Invest\Yakima County TH HG Memo 080917.docx

FIGURES

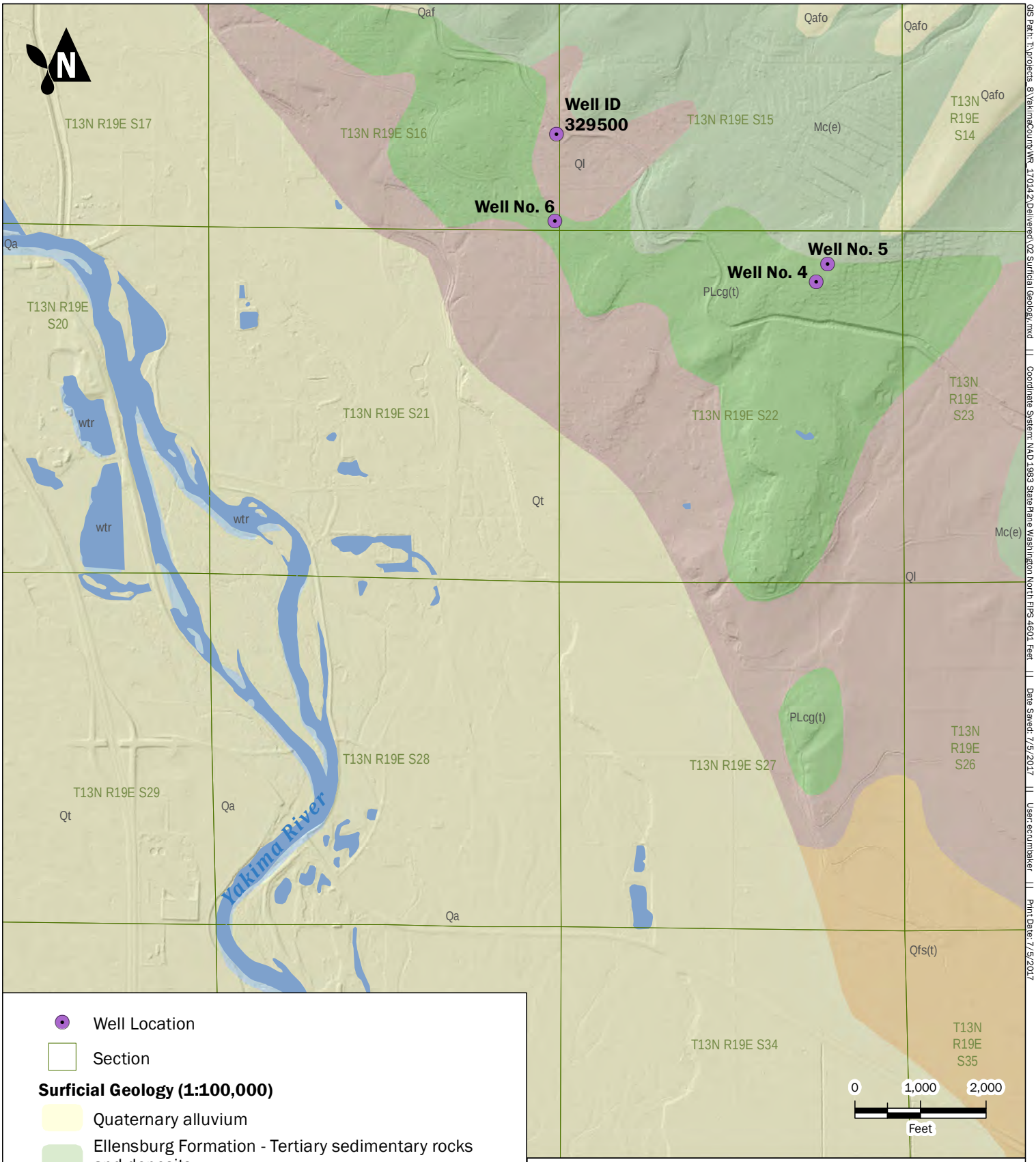


Vicinity Site Map,

Hydrogeologic Investigation
Yakima County Terrace Heights Water System
Yakima County, Washington

Aspect CONSULTING	JUL-2017	BY: JS / EAC	FIGURE NO. 1
	PROJECT NO. 170142-02	REVISED BY: ---	

GIS Path: T:\projects_8\YakimaCountyWR_170142\Delivered\01 Site Vicinity Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 7/5/2017 || User: egrumbaker || Print Date: 7/5/2017



Well Location

Section

Surficial Geology (1:100,000)

- Quaternary alluvium
- Ellensburg Formation - Tertiary sedimentary rocks and deposits
- Thorp Gravel - Tertiary sedimentary rocks and deposits
- Palouse Formation - Quaternary eolian deposits, loess
- Touchet Beds, glacial Lake Missoula - Pleistocene outburst flood deposits
- Water

Surficial Geology

Hydrogeologic Investigation
Yakima County Terrace Heights Water System
Yakima County, Washington

Aspect CONSULTING	JUL-2017	BY: JS / EAC	FIGURE NO. 2
	PROJECT NO. 170142-02	REVISED BY: ---	

GIS Path: T:\projects_8\YakimaCountyWR_170142\Delivered\02 Surficial Geology.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 7/5/2017 || User: ecrumbaker || Print Date: 7/5/2017

ATTACHMENT 1

Well Logs

Well ID 329500

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL LOG

No Appli. #499
Cert. #577A

Date June 4, 1947

Record by G. W. Ludwig

Source Driller record

Location State of WASHINGTON

County Yakima

Area

Map E½ of SE¼ of NE ¼SE ¼ sec 16 T 13 N, R 19 E W.

DIAGRAM OF SECTION

Drilling Co G. W. Ludwig

Address 505 Ahtanum Rd.; Yakima

Method of Drilling Date June 6 1947

Owner Robert E. Neal

Address 102 N. Walnut Drive, Yakima, Wn.

Land surface, datum ft above / below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses If material water-bearing so state and record static level if reported Give depths in feet below land-surface datum unless otherwise indicated Correlate with stratigraphic column, if feasible Following log of materials, list all casings perforations, screens etc)		
	Top soil	18	18
	Cement gravel	4	22
	Sandy shale	43	65
	Soft sand	10	75
	Light gray shale	50	125
	Sandy shale	35	160
	Red sandy clay	30	190
	Dark, soft sand (some wa.)	30	220
	Sandy shale	60	280
	Shale & gravel	15	295
	Light red clay	11	306
	Water gravel	19	325
	Pump test:		
	Dim: 325' x 8"		
	(over)		

Turn up

Sheet of sheets

WELL LOG —Continued No. AP 499

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Robert E Neal Depth forward	———	
	SWL: 131'		
	D.D. 17'		
	Yield 144 g.p.m.		
	Casing: 8" dia. from 0 to 322'		
	Perforations: Cut with cutting torch about ¼" wide, 6" long - 4 cuts per foot from 300 to 322'.		

S F 7449-46 REMINGTON INC - 20 20 745-2

Well No. 4

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL LOG

No Decla. #238
Cert. #891-D

Date June 1, 1926

Record by Geo. W. McLaughlin

Source G. W. Decla. Claim

Location State of WASHINGTON

County Yakima

Area

Map

SE¼NW¼ NE¼ sec 22 T 13 N, R 19 E W

DIAGRAM OF SECTION

Drilling Co

Address

Method of Drilling drilled Date Nov. 1945

Owner Country Club Dist. Water Co.

Address Yakima, Wash.

Land surface, datum ft above / below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Gravel & hard pan	76	76
	Hard yellow	189	265
	Quick sand, water bearing	15	280
	Clay	120	400
	Sand & gravel	20	420
Pump	Test:		
	Dim: 420' x 10"		
	SWL: 200'		
	Dd: 10'		
	Yield: 165 g.p.m.		
	Casing: 10" dia. standard pipe from 0' to 265'; 8" dia. standard pipe from 265' to 400'; 8" dia. screen from 400' to 420'.		
	Depth of water bearing material is 20'.		
	Well screen was attached to forward		

(Transcribe driller's terminology literally but paraphrase as necessary in parentheses If material water-bearing so state and record static level if reported Give depths in feet below land-surface datum unless otherwise indicated Correlate with stratigraphic column if feasible Following log of materials list all casings perforations screens, etc)

Turn up (Over) Sheet of sheets

13N/19E-22Q2

WELL LOG —Continued No. D 238

CORRELATION	Country Club Dist Water Co MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Depth forward		
	end of 8" pipe & driven down with i		
	There is an 8" drive shoe at end of		
	well screen. Well screen is milled		
	out of a length of eight inch		
	standard pipe.		
	Perfor: 20 feet 8" pipe, 840 $\frac{1}{4}$ x [illegible]		
	slots from 400' to 420'.		
	Pump: Peerless deep well, turbine		
	6" discharge.		
	Motor: 15 hp, werticle		

S F 7449-46 REMINGTON J INC 20 20 745-0

Well No. 5

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL LOG Well #2 No Appli. #282

Date Summer, 19~~45~~/46-47 Cert. 886-A

Record by

Source Data in file

Location State of WASHINGTON

County Yakima

Area

Map

NE ¼ NE ¼ sec 22 T 13 N, R 19 E W

DIAGRAM OF SECTION

Drilling Co

Address

Method of Drilling Date 19

Owner Country Club Dist. Water Co.

Address Box 795; Yakima

Land surface, datum ft above below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Gray sandstone	15	15
	Gravel	5	20
	Clay	20	40
	Gravel	1	41
	Clay	7	48
	Cement gravel	11	59
	Clay	44	103
	Cement gravel	2	105
	Clay	65	170
	Clay with sand streaks	52	222
	Caving clay	2	224
	Sticky clay	32	256
	Caving clay & gravel	14	270
	Caving clay with sand streaks	20	290
	Sandy clay	87	377
	Hard sandstone	11	388

(Transcribe driller's terminology literally but paraphrase as necessary in parentheses If material water-bearing so state and record static level if reported Give depths in feet below land-surface datum unless otherwise indicated Correlate with stratigraphic column, if feasible Following log of materials, list all casings perforations screens, etc)

Turn up (over) Sheet of sheets

WELL LOG —Continued No. 4282

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Country Club Dist Water Co Depth forward	——	
	Clay, gravel streaks, little water	15	403
	Sandy shale	40	443
	Shale hard streaks	50	493
	Clay with mudy sand streaks	22	515
	Clay	5	520
	Fine sand	3	523
	Clay	8	531
	Large boulders	21	552
	Blue clay	2	554
	Sand & gravel streaks, water	14	568
	Sandy shale	22	590
	Pump Test:		
	Dim: 590' x 12"		
	SWL: 234'		
	DD: 20' @ 165 g.p.m.		
	Yield: Permit issued for 1500 g.p.m.		
	Casing: 527' of 12" pipe & 91' of 10" liner		

S F 7449-46 REMINGTON INC - 20 20 745-2

PART (1)

Well No. 6

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

19 1983

WATER WELL REPORT

STATE OF WASHINGTON

Application No. G4-27699

Permit No. G4-27699 P

(1) OWNER: Name DEPARTMENT OF E... Country Club District Water Co. Address PO Box 795 Yakima WA 98907

(2) LOCATION OF WELL: County Yakima SE¼ SE¼ SE ¼ Sec. 16 T. 13 N., R. 19 E W.M.

Bearing and distance from section or subdivision corner 153 FT N and 54' W Frm SE corner of Sec 16

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☑ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 12 X 10 inches.
Drilled 1495 ft. Depth of completed well 1495 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 12" Diam. from 0 ft. to 405 ft.
Threaded ☐ 10" Diam. from 380 ft. to 1495 ft.
Welded ☑ ......" Diam. from ...... ft. to ...... ft.

Perforations: Yes ☐ No ☑
Type of perforator used ......
SIZE of perforations ...... in. by ...... in.
...... perforations from ...... ft. to ...... ft.
...... perforations from ...... ft. to ...... ft.
...... perforations from ...... ft. to ...... ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type ...... Model No. ......
Diam. 10 Slot size 016 from 440 ft. to 450 ft.
Diam. 10 Slot size 020 from 490 ft. to 500 ft.
10 016 520 530
10 030 580 590
10 040 750 770

Gravel packed: Yes ☐ No ☑ Size of gravel: ......
Gravel placed from ...... ft. to ...... ft.

Surface seal: Yes ☑ No ☐ To what depth? 405 ft.
Material used in seal Cement
Did any strata contain unusable water? Yes ☑ No ☐
Type of water? ? Depth of strata ?
Method of sealing strata off Casing - Cement

(7) PUMP: Manufacturer's Name N.A.
Type: ...... H.P. ......

(8) WATER LEVELS: Land-surface elevation above mean sea level 1120 ft.
Static level 90.6 ft. below top of well Date 8-18-83
Artesian pressure ...... lbs. per square inch Date ......
Artesian water is controlled by ...... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☑ No ☐ If yes, by whom? Akland
Yield: 450 gal./min. with 33 ft. drawdown after 8 hrs.
" 1260 " 120 " 5 "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
4:15:30	124.3	4:18	96.11	4:20	96
4:16:30	97.6	4:18:30	96.6	4:21	95.10
4:17:30	90.0	4:19	96.4	4:22	95.8

Date of test 8-18-83
Bailer test ...... gal./min. with ...... ft. drawdown after ...... hrs.
Artesian flow ...... g.p.m. Date ......
Temperature of water ...... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil + Bolders	0	3
Hard Pan w/ Large Bolders	3	32
Clay Sand Stone Bolders	32	50
Shale Sand Stone + Bolders	50	70
Sand Stone Clay Gravel Bolders	70	145
Clay + Bolders	145	295
Sand Stone w/ST of Clay	295	315
Clay Sand Stone Gravel Bolders	315	405
Sand Stone w/ST of Clay + Shale	405	455
Stickey Clay Sandy	455	465
Sand Stone w/ST of Shale	465	510
Sticky Clay	510	520
Sand Stone Gravel w/ST of Clay	520	540
Clay + Shale	540	570
Layers of Sand Stone Clay Gravel	570	600
Hard Sand Stone w/ST of Clay	600	650
Sand Stone Shale Sticky Clay	650	670
Blue Clay w/ ST of Sand	670	701
Sand Stone Gravel	701	702
Blue Clay w/ST of Sand	702	710
Sand Sand Stone w/ST of Clay	710	740
Brown + Blue Sand Stone w/ Clay	740	810
Cemeted Gravel Sand Stone Clay	810	830
Sand Stone Gravel Clay Bolders	830	895
Cement Gravel	895	908
Clay	908	912
Layers of Clay Gravel Bolders	912	935
Decomposed rock Gravel w/ST Shale	935	963
Gravel Bolders Basalt w/ Clay Shale	963	982
Decomposed rock Black Brown	982	
Green and Gray Shale		990
Decomposed rock	990	997
Blue Shale w/ST of Gravel	997	1040
Soft Gray Clay w/ST of Sand	1040	1055
Shale Gravel & Bolders	1055	1068
Bolders Rock + Shale	1068	1072

Work started 4-6 1983. Completed 8-19 1983

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Riebe Well Drilling (Person, firm, or corporation) (Type or print)

Address 1503 Est Nob Hill

[Signed] Bob Britton (Well Driller)

License No. 421 Date 9-7, 1983

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

PART (2)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. G4-27699

Permit No G4-27699P

(1) OWNER: Name Country Club District Water Co Address

(2) LOCATION OF WELL: County SE ¼ SE ¼ SE ¼ Sec. 16 T. 13 N., R 19 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....

New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well ..... inches.
Drilled.....ft. Depth of completed well.....ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ....." Diam. from ..... ft. to ..... ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☐ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☐
Type of perforator used.....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☐
Manufacturer's Name.....
Type..... Model No.....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☐ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☐ No ☐ To what depth? ..... ft.
Material used in seal.....
Did any strata contain unusable water? Yes ☐ No ☐
Type of water?..... Depth of strata.....
Method of sealing strata off.....

(7) PUMP: Manufacturer's Name.....
Type: ..... H.P.....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... 1120 ft.
Static level .....ft. below top of well Date.....
Artesian pressure .....lbs. per square inch Date.....
Artesian water is controlled by.....
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?.....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test.....gal./min. with.....ft. drawdown after.....hrs.
Artesian flow.....g.p.m. Date.....
Temperature of water..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Blue Clay and Shale	1072	1103
Layers of Blue Clay & Sand	1103	1150
Blue Shale	1150	1172
Blue Shale w/ st of Sand	1172	1205
Green Blue Shale	1205	1225
Blue Shale w/ st of Sand	1225	1250
Blue Green Shale	1250	1282
Hard Gravel and Shale	1282	1283
Blue Shale	1283	1285
Layers of Gray Clay and Sand	1285	1325
Soft Gray Clay	1325	1337
Sandy Gray Clay	1337	1345
Gray & Blue Sandy Clay	1345	1365
Layers of Blue Clay & Sand	1365	1403
Hard Sand Gravel & Shale	1403	1406
Layers of Clay Sand & Shale	1406	1433
Thin Layers of Clay & Sand	1433	1465
Layers Shale & Sand Stone	1465	1495

Work started....., 19..... Completed....., 19.....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME.....
(Person, firm, or corporation) (Type or print)

Address.....

[Signed].....
(Well Driller)

License No..... Date....., 19.....

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

Well 1

Water Rights

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 9, 1977	G4-25728	G4-25728P	

NAME ~~YAKIMA SHEET CO.~~ TERRACED ESTATES WATER CO.

ADDRESS (STREET) ~~P. O. Box 1512~~ 55 W. Washington (CITY) Yakima, (STATE) Washington (ZIP CODE) ~~98907~~ 98903

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
A well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	800	~~741~~ 393 ~~424~~ 348

QUANTITY, TYPE OF USE, PERIOD OF USE

~~393~~ 348 acre-feet per year, to be used from April 1 to October 31, for the irrigation of ~~131~~ 92 acres; 348 acre-feet per year, to be used continuously for a community domestic supply.

PER HERB'S MEMO OF 6-8-82 EP 10/28/86

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL

525 feet north and 250 feet ~~east~~ west of the southeast quarter of Section 10.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE¼ NE¼	10	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

N½ SE¼ and SE¼ SE¼ of Section 15, T. 13 N., R. 19 E.W.M. and a portion of Lot 178, Terrace Heights Subdivision No. 1, Less a 30 foot right of way for Rosa Hill Drive and a 20 foot right of way for the Terrace Heights Pump Lateral.

DESCRIPTION OF PROPOSED WORKS

Diameter of well is 10 inches to a depth of 340 feet.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Begun	October 1, 1979.)	October 1, 1980 & 5

PROVISIONS

"The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final certificate of water right. The applicant may, for his own convenience, wish to install an airline and gage in addition to the access port."

Any well constructed under authority of this permit shall meet the minimum standards for construction and maintenance as provided under Chapter 18.104 RCW (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

"This authorization to use public waters of the state is classified as a Family Farm Permit in accordance with Initiative Measure No. 59. This means the land being irrigated under this authorization shall comply with the following definition: Family Farm -- a geographic area including not more than two thousand acres of irrigated agricultural lands, whether contiguous or noncontiguous, the controlling interest in which is held by a person having a controlling interest in no more than two thousand acres of irrigated agricultural lands in the State of Washington which are irrigated under rights acquired after December 8, 1977. Furthermore, the land being irrigated under this authorization must continue to conform to the definition of a family farm."

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Yakima, *Washington, this* 19th *day of* May, *19* 78.

Department of Ecology

by Russell K. Taylor

Russell K. Taylor, Regional Manager

ENGINEERING DATA

OK

sh

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 9, 1977	G4-25728		

NAME
YAKIMA SHEEP CO.

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
P. O. Box 1512	Yakima,	Washington	98907

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
A well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	800	741

QUANTITY, TYPE OF USE, PERIOD OF USE
393 acre-feet per year, to be used from April 1 to October 31, for the irrigation of 131 acres; 348 acre-feet per year, to be used continuously for a community domestic supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
525 feet north and 250 feet east of the ~~southeast~~ quarter of Section 10.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W. W.M.	W.R.I.A.	COUNTY
SE¼ NE¼	10	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

N½ SE¼ and SE¼ SE¼ of Section 15, T. 13 N., R. 19 E.W.M. and a portion of Lot 178, Terrace Heights Subdivision No. 1, Less a 30 foot right of way for Rose Hill Drive and a 20 foot right of way for the Terrace Heights Pump Lateral.

DESCRIPTION OF PROPOSED WORKS

Diameter of well is 10 inches to a depth of 340 feet.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Begun	October 1, 1979	October 1, 1980

PROVISIONS

The field examination of your application was performed on April 25, 1978, by Mike Connell of the Central Washington Region.

The following quantities and provisions are recommended for approval:

The requested instantaneous quantity of 800 gallons per minute is recommended for approval for the purposes of irrigation during irrigation season and continuous community domestic supply.

The total annual quantity is recommended for approval as follows:

The water requirement for irrigation of lawn & garden in this area is 3.0 feet per acre (which includes a 30 percent efficiency loss) from April 1 to October 31 or 393 acre-feet per year for the irrigation of 131 acres. An additional 348 acre-feet per year is recommended for continuous community domestic supply.

This application is in conjunction with Application No. G4-25775 which has a secondary right from the same point of withdrawal. This well is a backup well for Application No. G4-25648.

Use of the waters to be appropriated under this application will be for a public water supply. State Board of Health rules require every owner of a public water supply to obtain written approval from the Assistant Secretary, Division of Health, prior to any new construction or alterations of a public water supply. The applicant is advised to contact the Washington State Division of Health, Public Health Building No. 4, Thurston Airdustrial Center, Olympia, with the regard to the need for compliance.

"The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final certificate of water right. The applicant may, for his own convenience, wish to install an airline and gage in addition to the access port."

Owing to the proximity of neighboring wells, the applicant is reminded of his responsibility toward same and advised that he may be required to regulate his withdrawal and pumping rate if existing rights are injuriously affected.

Signed at Yakima, Washington
this 8th day of May, 1978.

Mike Connell

MIKE J. CONNELL
Resource Management Division
Department of Ecology

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
March 14, 1978	G4-25775	G4-25775P	

NAME ~~YAKIMA-SUNSET CO.~~ TERRACED Estates WATER Co.

ADDRESS (STREET) ~~P. O. Box 1512~~ 55 W. WASHINGTON #20 (STATE) ~~Washington~~ (ZIP CODE) ~~98907~~

~~Yakima~~, YAKIMA WA 9890399907

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
A well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	400	371

QUANTITY, TYPE OF USE, PERIOD OF USE
23 acre-feet per year, to be used from April 1 to October 31, for the irrigation of 131 acres; 348 acre-feet per year, to be used continuously for a community domestic supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
525 feet north and 250 feet ~~east~~ WEST of the ~~southeast~~ quarter of Section 10.

THIS WELL IS BACKUP T. G4-25648 & SUPPLEMENTAL TO G4-25728 PER ROE EXAM 8P 1/12/83

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE¼ NE¼	10	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

N½ SE¼ and SE¼ SE¼, Section 15, T. 13 N., R. 19 E.W.M. and a portion of Lot 178, Terrace Heights Subdivision No. 1, Less 30 feet right of way for Roza Hill Drive and 20 feet right of way for Terrace Heights Pump Lateral.

DESCRIPTION OF PROPOSED WORKS

Diameter of well is 10 inches to a depth of 340 feet.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS OATE	COMPLETE PROJECT BY THIS OATE	WATER PUT TO FULL USE BY THIS OATE
Begun	October 1, 1979	October 1, 1980

PROVISIONS

"The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final certificate of water right. The applicant may, for his own convenience, wish to install an airline and gage in addition to the access port."

Any well constructed under authority of this permit shall meet the minimum standards for construction and maintenance as provided under Chapter 18.104 RCW (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

"This authorization to use public waters of the state is classified as a Family Farm Permit in accordance with Initiative Measure No. 59. This means the land being irrigated under this authorization shall comply with the following definition: Family Farm — a geographic area including not more than two thousand acres of irrigated agricultural lands, whether contiguous or noncontiguous, the controlling interest in which is held by a person having a controlling interest in no more than two thousand acres of irrigated agricultural lands in the State of Washington which are irrigated under rights acquired after December 8, 1977. Furthermore, the land being irrigated under this authorization must continue to conform to the definition of a family farm."

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Yakima, *Washington, this* 19th *day of* May *19* 78

Department of Ecology

ENGINEERING DATA
OK ...
sh

by Russell K. Taylor

Russell K. Taylor, Regional Manager

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
March 14, 1978	G4-25775		

NAME
YAKIMA SHEEP CO.

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
P. O. Box 1512	Yakima,	Washington	98907

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
A well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	400	371

QUANTITY, TYPE OF USE, PERIOD OF USE
23 acre-feet per year, to be used from April 1 to October 31, for the irrigation of 131 acres; 348 acre-feet per year, to be used continuously for a community domestic supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
525 feet north and 250 feet east of the southeast quarter of Section 10.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE¼ NE¼	10	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

N½ SE¼ and SE¼ SE¼, Section 15, T. 13 N., R. 19 E.W.M. and a portion of Lot 178, Terrace Heights Subdivision No. 1, Less 30 feet right of way for Roza Hill Drive and 20 feet right of way for Terrace Heights Pump Lateral.

DESCRIPTION OF PROPOSED WORKS

Diameter of well is 10 inches to a depth of 340 feet.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Begun	October 1, 1979	October 1, 1980

PROVISIONS

The field examination of your application was performed on April 25, 1978, by Mike Connell of the Central Washington Region.

The following quantities and provisions are recommended for approval:

The requested instantaneous quantity of 400 gallons per minute is recommended for approval for the purposes of irrigation during irrigation season and continuous community domestic supply.

The total annual quantity is recommended for approval as follows:

The water requirement for irrigation of lawn in this area is 0.18 feet per acre (which includes a 30 percent efficiency loss) from April 1 to October 31 or 23 acre-feet per year for the irrigation of 131 acres. An additional 348 acre-feet per year is recommended for continuous community domestic supply.

This well is a backup well for Application No. G4-25648 and is a supplemental supply to Application No. G4-25728.

The total withdrawal from this well shall not exceed 371 acre-feet per year.

Use of the waters to be appropriated under this application will be for a public water supply. State Board of Health rules require every owner of a public water supply to obtain written approval from the Assistant Secretary, Division of Health, prior to any new construction or alterations of a public water supply. The applicant is advised to contact the Washington State Division of Health, Public Health Building No. 4, Thurston Airdustrial Center, Olympia, with the regard to the need for compliance.

"The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final certificate of water right. The applicant may, for his own convenience, wish to install an airline and gage in addition to the access port."

Owing to the proximity of neighboring wells, the applicant is reminded of his responsibility toward same and advised that he may be required to regulate his withdrawal and pumping rate if existing rights are injuriously affected.

Signed at Yakima, Washington
this 8th day of May, 1978.

Mike Connell

MIKE J. CONNELL
Resource Management Division
Department of Ecology

jvw

Well 2

Water Rights

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 28, 1977	G4- 25648	G4-25648P	G4-25648C

NAME
J. E. BITTNER

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
33 Crest Circle	Yakima,	Washington	98901

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
A well
TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	540	448

QUANTITY, TYPE OF USE, PERIOD OF USE
448 acre-feet per year, to be used continuously for a community domestic supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
200 feet east and 1300 feet north of the west quarter corner of Section 14.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W. W.M.	W.R.I.A.	COUNTY
SW¼ NW¼	14	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

N½ SE¼ and SE¼ SE¼ of Section 15, T. 13 N., R. 19 E.W.M. and a portion of Lot 178, Terrace Heights Subdivision, No. 1, Less 30 feet right of way for Roza Hill Drive and 20 feet right of way for Terrace Heights Pump Lateral.

(SEE REVERSE SIDE)

PROVISIONS

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Yakima, *Washington, this* 21st *day of* May, 19 81

Department of Ecology

ENGINEERING DATA

OK.....

sgr

by Russell K. Taylor

RUSSELL K. TAYLOR, Regional Manager

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendatory thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 28, 1977	G4-25648	G4-25648P	

NAME
J. E. BITTNER

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
33 Crest Circle	Yakima,	Washington	98901

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
A well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	1000	926

QUANTITY, TYPE OF USE, PERIOD OF USE
478 acre-feet per year, to be used from April 1 to October 31, for the irrigation of 131 acres; 448 acre-feet per year, to be used continuously for a community domestic supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
200 feet east and 1300 feet north of the west quarter corner of Section 14.

LOCATED WITH N (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W. W.M.	W.R.I.A.	COUNTY
SW¼ NW¼	14	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

N½ SE¼ and S2¼ SE¼ of Section 13, T. 13 N., R. 19 E.W.M, and a portion of Lot 178, Terrace Heights Subdivision, No. 1, Less 30 feet right of way for Rora Hill Drive and 20 feet right of way for Terrace Heights Pump Lateral.

DESCRIPTION OF PROPOSED WORKS

Diameter of well is 12 inches and depth is 1042 feet: cased 800 feet.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Begun	October 1, 1979	October 1, 1980

PROVISIONS

"The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final certificate of water right. The applicant may, for his own convenience, wish to install an airline and gage in addition to the access port."

Any well constructed under authority of this permit shall meet the minimum standards for construction and maintenance as provided under Chapter 18.104 RCW (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

"This authorization to use public waters of the state is classified as a Family Farm Permit in accordance with Initiative Measure No. 59. This means the land being irrigated under this authorization shall comply with the following definition: Family Farm — a geographic area including not more than two thousand acres of irrigated agricultural lands, whether contiguous or noncontiguous, the controlling interest in which is held by a person having a controlling interest in no more than two thousand acres of irrigated agricultural lands in the State of Washington which are irrigated under rights acquired after December 8, 1977. Furthermore, the land being irrigated under this authorization must continue to conform to the definition of a family farm."

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Yakima, *Washington, this* 19th *day of* May *19* 78

Department of Ecology

by Russell K. Taylor

Russell R. Taylor, Regional Manager

ENGINEERING DATA

OK ..... ab

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

[ ] Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[X] Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 28, 1977	G4-2[illegible]648		

NAME
J. E. BITTNER

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
33 Crest Circle	Yakima,	Washington	98901

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
A well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	1000	926

QUANTITY, TYPE OF USE, PERIOD OF USE
478 acre-feet per year, to be used from April 1 to October 31, for the irrigation of 131 acres; 448 acre-feet per year, to be used continuously for a community domestic supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
200 feet east and 1300 feet north of the west quarter corner of Section 14.

LOCATED WITHIN SMALLEST LEGAL SUBDIVISION	SECTION	TOWNSHIP N.	RANGE E. OR W. W.M.	W.R.I.A.	COUNTY
SE¼ NW¼	14	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

N½ SE¼ and SE¼ SE¼ of Section 15, T. 13 N., R. 19 E.W.M. and a portion of Lot 178, Terrace Heights Subdivision, No. 1, Less 30 feet right of way for Rona Hill Drive and 20 feet right of way for Terrace Heights Pump Lateral.

DESCRIPTION OF PROPOSED WORKS

Diameter of well is 12 inches and depth is 1042 feet; cased 800 feet.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Begun	October 1, 1979	October 1, 1980

PROVISIONS

The field examination of your application was performed on March 1, 1978, by Mike Connell of the Central Washington Region.

The following quantities and provisions are recommended for approval:

The requested instantaneous quantity of 1000 gallons per minute is recommended for approval for the purposes of irrigation during irrigation season and continuous community domestic supply.

The total annual quantity is recommended for approval as follows:

The water requirement for irrigation of lawn & garden in this area is 3.65 feet per acre (which includes a 30 percent efficiency loss) from April 1 to October 31 or 478 acre-feet per year for the irrigation of 131 acres. An additional 448 acre-feet per year is recommended for continuous community domestic supply.

This application is in conjunction with Application Nos. G4-25728 and G4-25775 which will be backup wells to this well, No. G4-25648. The total withdrawal from G4-25728, G4-25775, and G4-25648 shall not exceed 926 acre-feet per year.

Use of the waters to be appropriated under this application will be for a public water supply. State Board of Health rules require every owner of a public water supply to obtain written approval from the Assistant Secretary, Division of Health, prior to any new construction or alterations of a public water supply. The applicant is advised to contact the Washington State Division of Health, Public Health Building No. 4, Thurston Airdustrial Center, Olympia, with the regard to the need for compliance.

"The installation of an access port as described in attached Ground Water Bulletin No. 1 shall be required prior to issuance of final certificate of water right. The applicant may, for his own convenience, wish to install an airline and gage in addition to the access port."

Owing to the proximity of neighboring wells, the applicant is reminded of his responsibility toward same and advised that he may be required to regulate his withdrawal and pumping rate if existing rights are injuriously affected.

Signed at Yakima, Washington
this 9th day of May, 1978.

Mike J. Connell

MIKE J. CONNELL
Resource Management Division
Department of Ecology

State of Washington Department of Ecology

RECEIVED NOV 28 1977

APPLICATION FOR PERMIT
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ SURFACE WATER ☑ GROUND WATER

$10.00 MINIMUM STATUTORY EXAMINATION FEE REQUIRED WITH APPLICATION

(GRAY BOXES FOR OFFICE USE ONLY)

APPLICATION NO.	WRIA	COUNTY	PRIORITY DATE	TIME	ACCEPTED
G4-25623	37	Yakima	11/28/77		

APPLICANT'S NAME: C. E. BITTNER — YAKIMA, WA

BUSINESS TEL / HOME TEL

ADDRESS (STREET) (CITY) (STATE) (ZIP CODE): 33 CREST CIRCLE

DATE & PLACE OF INCORPORATION IF APPLICANT IS A CORPORATION

1. SOURCE OF SUPPLY

IF SURFACE WATER

SOURCE (NAME OF STREAM, LAKE, SPRING, ETC.) (IF UNNAMED, SO STATE)

TRIBUTARY

IF GROUND WATER

SOURCE (WELL, TUNNEL, INFILTRATION TRENCH, ETC.): A WELL

SIZE AND DEPTH

2. USE

USE TO WHICH WATER IS TO BE APPLIED (DOMESTIC SUPPLY, IRRIGATION, MINING, MANUFACTURING, ETC.): COMMUNITY - DOMESTIC, LAWN & GARDEN

ENTER QUANTITY OF WATER REQUESTED USING UNITS OF: CUBIC FEET PER SECOND CFS **OR** GALLONS PER MINUTE 1000 GPM; ACRE FEET PER YEAR

Community domestic supply irrigation during irrigation season

TIMES DURING YEAR WATER WILL BE REQUIRED

Continuous for Domestic Supply

IF IRRIGATION, NUMBER OF ACRES

IF DOMESTIC USE, NUMBER OF UNITS BY TYPE, E.G. 1-HOME, 1-MOBILE HOME, 2 CAMPSITES, ETC.: 500 units

IF MUNICIPAL USE, ESTIMATED POPULATION 20 YEARS FROM TODAY

DATE PROJECT WAS OR WILL BE STARTED

DATE PROJECT WAS OR WILL BE COMPLETED

3. LOCATION OF POINT OF DIVERSION/WITHDRAWAL

3A. IF IN PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)	SECTION	TOWN	RANGE

ALSO, PLEASE ENCLOSE A COPY OF THE PLAT AND MARK THE POINT(S) OF WITHDRAWAL OR DIVERSION

3B. IF NOT IN PLATTED PROPERTY

ON ACCOMPANYING SECTION MAPS, ACCURATELY MARK AND IDENTIFY EACH POINT OF DIVERSION. SHOW NORTH-SOUTH AND EAST-WEST DISTANCES FROM NEAREST SECTION CORNER OR PROPERTY CORNER

ALSO, ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N	RANGE (E. OR W.) W.M.	COUNTY
SW1/4 NW1/4	14	13	19 E	YAKIMA

4. DO YOU OWN THE LAND ON WHICH THIS SOURCE IS LOCATED? IF NOT, INSERT NAME & ADDRESS OF OWNER

Yes

5. LEGAL DESCRIPTION OF PROPERTY *ON WHICH WATER IS TO BE USED*

ATTACH A COPY OF THE LEGAL DESCRIPTION OF THE PROPERTY (ON WHICH THE WATER WILL BE USED) TAKEN FROM A REAL ESTATE CONTRACT, PROPERTY DEED OR TITLE INSURANCE POLICY, OR, COPY CAREFULLY IN THE SPACE BELOW

ATTACHED

WHAT IS YOUR INTEREST IN THE PROPERTY ON WHICH WATER IS TO BE USED (PROPERTY OWNER, LESSEE, CONTRACT PURCHASER, ETC.)

LAND OWNER

ARE THERE ANY EXISTING WATER RIGHTS RELATED TO THE LAND ON WHICH THE WATER IS TO BE USED (INCLUDING WATER PROVIDED BY IRRIGATION DISTRICTS OR DITCH COMPANIES)? ☐ YES ☑ NO

IF YES, FROM WHAT SOURCE (I.E. SURFACE OR GROUND WATER) AND UNDER WHAT AUTHORITY

6. DESCRIPTION OF SYSTEM PROPOSED OR INSTALLED

(FOR EXAMPLE: SIZE OF PUMP, CAPACITY OF PUMP, PUMP MOTOR HORSE POWER, PIPE DIAMETER, NUMBER OF SPRINKLERS, ETC.)

REMARKS

7.

IF 10 ACRE-FEET OR MORE OF WATER IS TO BE STORED AND/OR IF THE WATER DEPTH WILL BE 10 FEET OR MORE AT THE DEEPEST POINT, A STORAGE PERMIT MUST BE FILED IN ADDITION TO THIS PERMIT. THESE FORMS CAN BE SECURED, TOGETHER WITH INSTRUCTIONS, FROM THE DEPARTMENT OF ECOLOGY.

SIGNATURES

Joseph E Bittner
APPLICANT'S SIGNATURE

Joseph E Bittner
LEGAL LANDOWNER'S SIGNATURE

33 Crest Circle Yakima Wash
LEGAL LANDOWNER'S ADDRESS

FOR OFFICE USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY } ss.

This is to certify that I have examined this application together with the accompanying maps and data, and am returning it for correction or completion as follows: .....

.....

.....

J. E. BITTNER PROPERTY

AREA TO BE SERVICED

THE NORTH HALF OF THE SOUTHEAST QUARTER AND THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 15 - TOWNSHIP 13 NORTH - RANGE 19 EAST WILLAMETTE MERIDIAN, EXCEPT THE SOUTH 30' OF THE SOUTHEAST QUARTER OF SAID SECTION 15 FOR COUNTY ROAD RIGHT-OF-WAY.

ALSO TRACT 178, [illegible] HEIGHTS SUBDIVISION NO. 1 AS RECORDED IN VOL E OF PLATS, PAGE 2. EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCEL THEREOF: BEGINNING AT THE MOST EASTERLY CORNER OF LOT 168 OF SAID PLAT; THENCE NORTHEASTERLY ON A DIRECT LINE OF THE EXTENSION OF THE LINE BETWEEN SAID LOT 168 AND 169 OF SAID PLOT, A DISTANCE OF 142'; THENCE NORTHWESTERLY PARALLEL WITH THE NORTHERLY LINE OF SAID LOT 168, A DISTANCE OF 303', MORE OR LESS, TO THE NORTH LINE OF SAID LOT 178; THENCE WEST ALONG SAID NORTH LINE TO THE NORTHWESTERLY CORNER OF SAID LOT 178, THENCE SOUTHEASTERLY TO THE POINT OF LOCATION.

LOCATION OF WELL

THE WEST 150' OF THE NORTH 150' APPROXIMATELY OF THE S W 1/4 OF THE N W 1/4 OF SECTION 14 - T13 N - R19 E W M.

Well 3

Water Rights

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

file

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
October 14, 1992	G4-31494	G4-31494P	

NAME
Yakima County (Public Works Department)

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
128 North 2nd Street	Yakima	Washington	98901-2614

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
two (2) wells

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	2,250	2,722

QUANTITY, TYPE OF USE, PERIOD OF USE

For continuous municipal water supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION–WITHDRAWAL

Well #1: 600 feet east and 500 feet north from the southwest corner of Section 16;
Well #2: 700 feet east and 600 feet north from the southwest corner of Section 16

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SW¼SW¼	16	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The Ecology approved future service area of the Terrace Heights municipal water system as depicted within the system's Department of Health approved comprehensive water system plan.

DESCRIPTION OF PROPOSED WORKS

Up to two wells will be used to serve Terraced Estates and the municipal water needs of the surrounding area.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
April 1, 1994	April 1, 2004	April 1, 2004

PROVISIONS

Please see attached Provisions.

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Yakima, Washington,

this 14th *day of May, 1993.*

Department of Ecology

ENGINEERING DATA
OK
47x106 FR:ska

by
Doug Clausing, Section Manager

It is the intent of this authorization that the place of use shall be the updated future service area approved by Ecology and included within the most recent Department of Health approved Comprehensive Water System Plan or plan update.

Any well constructed for use under this authorization shall be cased and sealed a minimum of 900 feet in depth below ground surface. The intent of this requirement is to isolate the well from the water source of existing rights and the surface waters associated with the Yakima River Basin. If a basalt formation is not penetrated within the required depth of 900 feet the permittee shall consult with Ecology staff of the Central Region Office to determine if the intent to provide isolation of the ground water withdrawn under this permit, has been achieved. Additional depth of casing and sealing may be required to achieve the intent of this provision.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Any well or diversionary works which are unused in favor of the authorized system must be properly abandoned or removed.

Any senior right which remains in use in conjunction with water supplied under this authority shall be considered the primary right for that use. Water authorized by this authority shall only be supplied supplementally after every reasonable effort is made to obtain water under the senior right.

Yakima County shall provide this office with its GIS based map of the project area and assist in maintaining an accurate map of the project area on a GIS system which depicts facilities constructed under this permit and existing infrastructure and water uses.

Yakima County shall produce a Comprehensive Water System Plan which is acceptable to the Washington State Department of Health. The plan shall include, to the satisfaction of Ecology: justification of a future service area; a strategy for the disposition of existing rights which are modified or unused in favor of the permitted system; a water conservation plan; a plan to maximize and maintain system efficiency; and str tegies to maximize existing available water supplies such as the existing irrigation water supply or the municipal system of the City of Yakima.

Yakima County shall participate in planning the coordination of area municipal water systems at the request of the State Department of Health.

The planning and engineering of the permitted system shall rely, to the degree possible, upon improvements to the distribution system and storage capacities within the area rather than upon additional withdrawals of water.

While it is anticipated that the project may not be completed for ten years, the permittee shall be required to file annual reports of the progress made in development of the project until such time that a Comprehensive Water System Plan is approved by the Department of Health and filed with this office. Updates to the Comprehensive Water System Plan shall be filed with this office during the remaining life of this permit.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
October 14, 1992	G4-31494		

NAME
Yakima County (Public Works Department)

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
128 North 2nd Street	Yakima	Washington	98901-2614

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
two (2) wells

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	2,250	2,722

QUANTITY, TYPE OF USE, PERIOD OF USE

For continuous municipal water supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION–WITHDRAWAL

Well #1: 600 feet east and 500 feet north from the southwest corner of Section 16;
Well #2: 700 feet east and 600 feet north from the southwest corner of Section 16

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SW¼SW¼	16	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The Ecology approved future service area of the Terrace Heights municipal water system as depicted within the system's Department of Health approved comprehensive water system plan.

DESCRIPTION OF PROPOSED WORKS

Up to two wells will be used to serve Terraced Estates and the municipal water needs of the surrounding area.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
April 1. 1994	April 1. 2004	April 1. 2004

REPORT

Background

On October 14, 1992, Yakima County (Public Works Department), filed an application to withdraw public ground waters. The application was accepted and assigned No. G4-31494. Public notice was made of the application in the Yakima Herald Republic on December 2 and 9, 1992.

A protest to the application was received from the City of Yakima on January 8, 1993. within the thirty day period after the last date of public notice provided for the filing of protests and objections to applications.

The application and the objections filed by the City of Yakima are discussed and considered within the following report.

Investigation

The following information has been obtained through research of office records, the author's knowledge of the project area, an interview with Vern Redifer of Yakima County Public Works Department on March 2, 1993, a public meeting conducted by Yakima County on February 16, 1993 with the affected residents of the project area, discussion with Craig Riley of the State Department of Health, and a discussion with Ty Wick, representing the City of Yakima on March 12, 1993.

Yakima County has proposed withdrawing up to 5,000 gallons per minute (gpm) from 2 wells located within the SW¼SW¼ of Section 16, T. 13 N., R. 19 E.W.M. for the purpose of continuous municipal water supply. The well sites are approximately 1/2 mile east from the Yakima River. The City of Yakima, west of the Yakima River, has a public water supply extended to near the west shore of the Yakima River.

The County has requested that the application be reduced in quantity to a proposed rate of withdrawal of 2,250 gpm. This reduced quantity is felt to be adequate to satisfy the likely initial water requirements of the project and will allow the County to explore its alternatives in siting a second well or receiving water from existing systems such as from the protestant, City of Yakima.

The place of use of water is generally described as being within Sections 14, 15, 16, 21, 22, 23, 26, 27, and the portions of Sections 17, 20, and 28 east of the Yakima River, all within T. 13 N., R. 19 E.W.M. The place of use is an unincorporated area of Yakima County generally known as Terrace Heights.

The actual place of use may be modified to some degree through the planning process which will result in the production of a comprehensive water system plan, a companion planning process which Yakima County is being encouraged to participate in by the Departments of Health and Ecology which would result in the coordination of water service planning between participating public water supplies, and the engineering and design phase of project development.

Public Health Safety and Welfare

Yakima County has asserted that the project as a whole is planned on behalf of the residents of the project area in the interest of public health, safety and welfare. This application is part of the County's plans on behalf of the County owned water system, Terraced Estates, and the area as a whole if other water systems wish to connect.

Ecology, in investigating this application, has become aware of several examples of possible threats to public health, safety and welfare within the project area:

1. The largest public water system within the project area, Country Club Estates, lacks sufficient water supply to provide adequate fire protection. If the fire hydrants installed within this system are used, water could be syphoned into the water system causing contamination. To prevent potential contamination to the system the fire hydrants have been covered to prevent use. Providing adequate fire flows may require the construction of a reservoir and the installation of new distribution pipe, an expensive renovation for the one system to undertake alone.

2. The owners of a lot within the Butterfield Domestic System were told that the system could not serve their lot since water was barely adequate for existing connections. In order to construct upon their property, the owners were forced to seek a variance from this office to drill a well within 85 feet of an existing sewer line. Wells are normally required to be a minimum distance of 100 feet from potential sources of contamination such as sewer lines to avoid potential contamination of the ground water aquifer through the well if the sewer line should develop a leak.

3. Department of Health records indicate that there are 38 public water supply systems within the project area, while water right records appear to only document 31 public water supply systems. Apparently several public water supplies are operating without a water right and are subject to termination as provided by Section 90.44.050 Revised Code of Washington (RCW). A regulatory effort by this office would be triggered by impairment to existing rights or in response to declines in available water supply.

4. A comparison of the state water right record and records of public water supply systems maintained by the Department of Health indicates that several systems which have obtained water rights have failed to obtain approval as a public water supply. Department of Health records would include those systems known to the County Health Department. If public water supply systems are not operated in accordance with procedures of the Department of Health or the County Health Department, water supplies to the public may be improperly monitored or constructed and maintained in a manner which could permit contamination, threatening the health of system subscribers.

5. Some of the existing water supplies are within the flood plain of the Yakima River or penetrate shallow ground water aquifers subject to potential contamination through existing wells within the flood plain if a flood event were to occur.

6. Lack of a public water supply has prevented the development of additional housing units within the project area.

Place of use

Portions of the project area are served irrigation water through the Roza Irrigation District canal or smaller irrigation systems which exist within the area. As much as two-thirds of the area may have been farmed in the past. Due in part to the area's close proximity to the City of Yakima, land use has been slowly changing from farm uses to residential uses.

The population of the nearly ten square mile area during 1990 was 6,413 people. The population of the area is estimated by Yakima County to be 7,825 people in 20 years, if water is made available for development.

Interest in the siting of industrial and commercial uses in the area have been expressed to the County.

It is the intent of Yakima County to begin the proposed project by installing a water supply to Terraced Estates within the most densely populated areas which are generally located along the base of Yakima Ridge within Sections 15, 16, and 22. The system will be extended throughout the area as demand makes construction economically feasible and existing systems desire to connect.

Satellite systems may be operated by the county, under rights obtained from this office for that purpose, to serve any new developments which may be proposed but would be too distant from the system proposed by the subject application to be connected. As the regional system expands the satellite systems will be connected to the regional system and the rights from the satellite system source abandoned or altered to become an additional source to the regional system.

As the system expands, existing systems will be encouraged to connect to the regional system, although some privately owned systems may opt not to do so while their systems remain adequate.

Annual Water Requirements

It is difficult to predict the annual volume of water which may be required by the project at full capacity since the area could develop into varying mixes of residential, commercial and water consuming industrial purposes.

During the year of 1990, the City of Selah averaged 1.471 gallons per day per service. On an annual basis, that rate of consumption within the project area would result in the consumption of about 6.590 acre-feet of water assuming 4,000 connections were served.

Assuming an average pumping time of 18 hours per day throughout the year, 2,722 acre-feet of water could be pumped at the rate of 2,250 gpm.

If the proposed system, with conservation, utilized an average of 1.200 gallons per day per connection then 2,722 acre-feet of water could serve about 2,025 connections. The author assumes that this number of connections could be achieved in ten years time.

The implementation of water conservation, and a high level of water use efficiency that can be expected through an adequate management program for what will in large part be a new delivery system throughout the area, may result in a somewhat lower annual consumption.

To meet the ultimate water demands of the anticipated population, additional solutions will be needed.

Existing Water Rights of the project area

The state water right record includes about 471 Water Right Claims filed to document rights not documented by a state issued permit or certificate.

About 79 state issued permits, certificates or applications seeking permits are within the state water right record. About 31 public water supplies are represented within the water right record.

If existing water rights to public water supplies are abandoned in favor of a regional system, or if development of domestic uses replaces a different existing water use, this office should be informed so that the state water right record may be updated. Existing rights within the area could be acquired by the County for public use if changes to the right can be approved or formally relinquished if they are of no further use.

Yakima County has produced a map of the project area depicting the locations of the known public water supplies within the area using a Geographic Information System (GIS). Ecology will obtain this information and expand on the map by adding water right information as staff time permits. This GIS information will be useful in reporting development progress of the project and coordinating the disposition of water rights associated with existing water uses replaced by the regional system.

Where an existing water supply which is authorized by existing water rights is connected to the project system, the existing right will be fully exercised first, unless that right is relinquished or conveyed to the County for future municipal use. Water provided by a project authorized under a permit issued to this application would be considered as a supplemental water supply, only to be used to make up shortages in the primary supply authorized by such existing rights.

Public Water Supply Planning

Yakima County will be working with the Washington State Department of Health, local government, and the privately owned systems of the area, to properly plan the water system, water conservation, water use efficiency, system maintenance and capitol facilities planning.

Yakima County should also participate in a coordinated water system planning process along with other upper valley water systems such as the Cities of Yakima, Selah, and Moxie and the Nob Hill Water Association. Coordinated planning would achieve understanding regarding future areas which each system may serve, identify potential cost savings through shared facilities and be of other service to the subscribers of the systems.

Although the county intends to rapidly begin the construction of the project to provide for the basic health. safety, and welfare of the area residents, specifically Terraced Estates, it also expects to be engaged in planning for the area for a period of 3 to 4 years to resolve the general water service problems of the area.

Water source

The subject application, as reduced, proposes the construction of two wells located approximately 1/2 mile easterly of the Yakima River.

The flows of the Yakima River and its tributaries must be protected from diminishment for the following reasons:

1. The extent of validity and relative priority of existing surface water rights diverting from the Yakima River Basin is the subject of a general adjudication being conducted by the Superior Court for the County of Yakima. Until the court makes its final ruling, the impact of any water use which would diminish the flows of the Yakima River upon existing water rights cannot be determined.

2. The unappropriated waters of the Yakima River Basin have been withdrawn from further appropriation during studies to examine the opportunities to enhance irrigation water supplies and instream water needs within the basin. These studies are being conducted by the U.S. Bureau of Reclamation.

An examination of Ecology's library of water well reports reveals that numerous private domestic wells have been constructed within the vicinity of the proposed well site. Wells within the vicinity are generally not more than 200 feet in depth and have yielded 10 to 50 gpm.

Country Club Estates has constructed a well located within the SE¼SE¼SE¼ of Section 16, about 3/4 mile easterly of the proposed well site. The Country Club Estates well penetrated sedimentary layers of sand, gravel, and clay which are collectively called the Ellensburg formation to the well's completed depth of 1,495 feet.

A well constructed at the proposed well site of this application will perhaps penetrate the Ellensburg formation to depths of over 1,000 feet. The Ellensburg formation includes layers of sedimentary material which can provide partial isolation between ground water aquifers and the surface waters of the Yakima River. Due to the proximity of the well site to the Yakima River and the incomplete isolation which may be provided by the sediments penetrated by the well, it should be the applicant's plan to case and seal the project well into basalt underlying the Ellensburg formation.

The depth to which the Ellensburg formation exists at the project site is not known since there are no well logs in the project vicinity of sufficient depth to have penetrated the underlying basalt. The goal of providing adequate isolation from the Yakima River and from existing wells may be achieved at some depth prior to encountering basalt rock depending upon the materials penetrated.

The author concludes that a minimum casing and sealing provision for the subject well should include extensive opportunity for consultation between Yakima County and this office to assure that the goals of protecting existing rights and the natural resources of the area are met at a minimum expense to the public to be served by the project.

Objections

The author discussed the basis of the objections filed by the City of Yakima to the subject application with Ty Wick of the City of Yakima Public Works Department on March 12, 1993.

The City of Yakima is in general agreement that a consolidated system would be of benefit to the project area.

Mr. Wick pointed out that the proposed new source of water will not resolve existing problems within the area with fire flow water nor insufficient water pressures unless a program is undertaken to replace inadequate pipe sizing and storage capacity to the service area.

Mr. Wick expressed concern that the development of a new water source would fail to take advantage of existing water rights held by existing systems within the project area or nearby existing facilities such as the well operated by the City of Yakima located at Kiwanis Park on the west side of the Yakima River, about 1 mile southwesterly from the well site proposed by the instant application.

The City also objects to the lack of planning that has been undertaken prior to the submission of this application. The draft Interim Guidelines for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology and Conservation Programs requires that a greater demonstration of need for additional water supplies be made by the County and that alternatives to a new source be fully explored.

The City has apparently had discussions with Yakima County concerning water service to the area and Mr. Wick described several alternatives which he feels are superior to that which is proposed by the subject application.

One alternative to the subject application would be the wholesaling of water by the City of Yakima to the area thro·n improved distribution system. Existing systems could create an administrative board to manage the wate. ₍pply facilities and coordinate distribution of water to the area residents.

Another alternative is that the City of Yakima is prepared to provide service to the area but would prefer that an adequate planning process be accomplished to address the long-term problems associated with the area rather than the seeking of "short term fixes".

The letter of objection filed by the City of Yakima argues that the application and notice are not in compliance with Chapter 246-290-210 of the Washington Administrative Code (WAC).

Consideration of Objections

The author has fully considered the objections filed by the City of Yakima and has the following responses:

The City of Yakima objected that the notice and application is not in compliance with WAC 246-290-210. This rule, entitled Source Protection and adopted by the Department of Health, provides for control areas surrounding well facilities and requires that the well source be owned by the water purveyor. Yakima County should consult with the Department of Health regarding the applicability of these rules to the proposed project. The author does not believe that they are pertinent to the permit decision to be made regarding the instant application.

Yakima County is planning under the requirements of the Growth Management Act (GMA) and must, through that process, address issues related t· the project area.

The State Department of Health will require that Yakima County prepare a comprehensive water system plan for any system that is constructed to serve the project area.

T. Department of Health is also encouraging Yakima County to participate in coordinated water system planning with other water purveyors to resolve uncertainty as to the future service areas of the participating systems and to provide adequate service to the public.

Several of the objections raised by the City of Yakima regarding planning issues which are issues that are best resolved by local government and the Department of Health rather than through the permitting authority of Department of Ecology.

The concept of planning under GMA is to allow public participation in planning at the local level, allowing areas of the state to remain masters of their own destiny.

A document entitled Preliminary Assessment of Terrace Heights Water Supply Issues was produce by the Department of Health during 1980 at the request of the Yakima County Board of Commissioners. The assessment concluded that 1) water supply could become a serious concern if an organized management program was not put into effect, and; 2) the Terrace Heights area needs water utility direction.

The a··ssment provided four alternatives to help the area develop in accordance with the county Urban Area Plan (b.iefly described here):

1. Develop service area agreements/design standards for existing and future systems.

2. Implement the county Services Act. Essentially the county would operate public water supply systems under Chapter 36.94 RCW.

3. Develop a Comprehensive Water Supply Program pursuant to the Planning Enabling Act.

4. Implement Public Water System Coordination Act.

Each alternative presented advantages and disadvantages, but the document provided a basis for continued consideration of the resolution of the problems of the project area.

The Department of Health is the qualified state agency to supervise the planning, installation and operation of the proposed municipal water supply.

The responsibility of the Department of Ecology is to provide management of the state water resources and administer the state water right program.

The decision as to whether a permit may issue in response to an application is based upon several tests provided by statute. They are: that unappropriated water is available; that water may be appropriated without injury or impairment to the rights of others; that the water use is beneficial; and that the water use is not detrimental to the public interest. The author concludes that this proposal passes these tests.

Conclusions

The project area has several thousand residents. The safety of some residents may be jeopardized without sufficient water for fire protection. The County wishes to explore the entire range of possible solutions with affected residents.

Public health may be threatened by the operation of small public water systems which are not under the supervision of the proper health official.

The welfare of the area residents is threatened if existing public water supply systems which lack water rights (and possibly cannot obtain them) are terminated as provided by RCW 90.44.050.

Yakima County is committed to provide adequate, professionally managed, water service to the project area.

The County will participate in planning to coordinate water service to the area with other nearby municipal systems and create a comprehensive water system plan for this project under the supervision of the Department of Health.

Application No. G4-31494 proposes a beneficial use of public water which is not contrary to the public interest.

Water is available for appropriation and the withdrawal of water should not impair the rights of others if it is properly cased and sealed to afford protection to the flows of Yakima River.

The project area is located within unincorporated Yakima County. The County has authority over development within the project area and has available right-of-way for system installation along county roads.

Development within the project area is subject to County ordinance which includes high standards for the development of public water supplies and provides for county acquisition of future systems when desired by the county.

The author concludes that the objections raised by the City of Yakima do not raise sufficient grounds to deny a permit to Yakima County in response to the subject application.

The author also concludes that further delay in issuing a permit might prolong the potential threat to the health, safety and welfare of area residents.

The City of Yakima and Yakima County are encouraged to work together through a planning process to coordinate the orderly development of adequate municipal water service to the residents of the project area.

Ecology will give exceptional consideration to additional proposals which are intended to result in improved or expedient service to the public, such as the utilization of the City of Yakima, Kiwanis Park well.

Recommendations

The author respectfully recommends that a permit issue to Yakima County authorizing the withdrawal of up to 2.250 gallons per day, 2.722 acre-feet per year, from up to two wells for the purpose of continuous municipal domestic supply. The authorized place of use shall be within the Ecology approved future service area of the Yakima County municipal water service for the Terrace Heights area as identified within a Department of Health approved Comprehensive Water System Plan for the project system.

The following provisions shall apply:

It is the intent of this authorization that the place of use shall be the updated future service area approved by Ecology and included within the most recent Department of Health approved Comprehensive Water System Plan or plan update.

Any well constructed for use under this authorization shall be cased and sealed a minimum of 900 feet in depth below ground surface. The intent of this requirement is to isolate the well from the water source of existing rights and the surface waters associated with the Yakima River Basin. If a basalt formation is not penetrated within the required depth of 900 feet the permittee shall consult with Ecology staff of the Central Region Office to determine if the intent to provide isolation of the ground water withdrawn under this permit, has been achieved. Additional depth of casing and sealing may be required to achieve the intent of this provision.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Any well or diversionary works which are unused in favor of the authorized system must be properly abandoned or removed.

Any senior right which remains in use in conjunction with water supplied under this authority shall be considered the primary right for that use. Water authorized by this authority shall only be supplied supplementally after every reasonable effort is made to obtain water under the senior right.

Yakima County shall provide this office with its GIS based map of the project area and assist in maintaining an accurate map of the project area on a GIS system which depicts facilities constructed under this permit and existing infrastructure and water uses.

Yakima County shall produce a Comprehensive Water System Plan which is acceptable to the Washington State Department of Health. The plan shall include, to the satisfaction of Ecology: justification of a future service area; a strategy for the disposition of existing rights which are modified or unused in favor of the permitted system; a water conservation plan; a plan to maximize and maintain system efficiency; and strategies to maximize existing available water supplies such as the existing irrigation water supply or the municipal system of the City of Yakima.

Yakima County shall participate in planning the coordination of area municipal water systems at the request of the State Department of Health.

The planning and engineering of the permitted system shall rely, to the degree possible, upon improvements to the distribution system and storage capacities within the area rather than upon additional withdrawals of water.

While it is anticipated that the project may not be completed for ten years, the permittee shall be required to file annual reports of the progress made in development of the project until such time that a Comprehensive Water System Plan is approved by the Department of Health and filed with this office. Updates to the Comprehensive Water System Plan shall be filed with this office during the remaining life of this permit.

REPORT BY: Fred Rajala DATE: 3-23-93

APPROVED BY: Doug Clausing, Section Manager DATE: 3/23/1993

47x106 ska

WASHINGTON STATE DEPARTMENT OF ECOLOGY

APPLICATION FOR PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ SURFACE WATER ☐ GROUND WATER

$10.00 MINIMUM STATUTORY EXAMINATION FEE REQUIRED WITH APPLICATION

(GRAY BOXES FOR OFFICE USE ONLY)

APPLICATION NO.	W.R.I.A.	COUNTY	PRIORITY DATE	TIME	ACCEPTED
G1-31494	37	Yakima	10-14-92		C²

APPLICANT'S NAME — PLEASE PRINT

(YAKIMA COUNTY (PUBLIC WORKS DEPARTMENT))

Bus. Tel. (509)575-4151
Home Tel. _____
Other Tel. _____

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
128 N. 2nd St.,	(Yakima	WA)	98901-2614

DATE & PLACE OF INCORPORATION IF APPLICANT IS A CORPORATION

1. SOURCE OF SUPPLY

IF SURFACE WATER	IF GROUND WATER
SOURCE (NAME OF STREAM, LAKE, SPRING, ETC.) (IF UNNAMED, SO STATE)	(SOURCE (WELL, TUNNEL, INFILTRATION TRENCH, ETC. 2 WELLS)
TRIBUTARY	SIZE AND DEPTH 16" x 900'

2. (Continuous) USE

USE TO WHICH WATER IS ~~TO BE~~ APPLIED (DOMESTIC SUPPLY, IRRIGATION, MINING, MANUFACTURING, ETC.)

(MUNICIPAL ~~WATER~~ SUPPLY)

ENTER QUANTITY OF WATER REQUESTED USING UNITS OF:	CUBIC FEET PER SECOND (CFS)	OR	GALLONS PER MINUTE (GPM)	ACRE FEET PER YEAR
			(5,000)	

TIMES DURING YEAR WATER WILL BE REQUIRED
CONTINUOUS

IF IRRIGATION, NUMBER OF ACRES	IF DOMESTIC USE, NUMBER OF UNITS BY TYPE, E.G. 1-HOME, 1 MOBILE HOME, 2 CAMPSITES, ETC.	IF MUNICIPAL USE, ESTIMATED POPULATION 20 YEARS FROM TODAY
2,000	SEE NO. 5 BELOW	7825

DATE PROJECT WAS OR WILL BE STARTED	DATE PROJECT WAS OR WILL BE COMPLETED
1992	2017

3. LOCATION OF POINT OF DIVERSION/WITHDRAWAL

3A. IF IN PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)	SECTION	TOWN	RANGE	ALSO, PLEASE ENCLOSE A COPY OF THE PLAT AND MARK THE POINT(S) OF WITHDRAWAL OR DIVERSION

#1 600' E & 500' N FROM SW¼ SEC 16; #2 700' & 600' N FROM SW¼ SEC 16

3B. IF NOT IN PLATTED PROPERTY

ON ACCOMPANYING SECTION MAPS, ACCURATELY MARK AND IDENTIFY EACH POINT OF DIVERSION, SHOW NORTH-SOUTH AND EAST-WEST DISTANCES FROM NEAREST SECTION CORNER OR PROPERTY CORNER

ALSO, ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	COUNTY
#1 SW¼SW¼; #2 SW¼SW¼	16	13	19	YAKIMA

4. DO YOU OWN THE LAND ON WHICH THIS SOURCE IS LOCATED IF NOT, INSERT NAME & ADDRESS OF OWNER

NO; NEGOTIATIONS FOR ACQUISITION ARE IN PROCESS

5. LEGAL DESCRIPTION OF PROPERTY *ON WHICH WATER IS TO BE USED*

ATTACH A COPY OF THE LEGAL DESCRIPTION OF THE PROPERTY (ON WHICH THE WATER WILL BE USED) TAKEN FROM A REAL ESTATE CONTRACT, PROPERTY DEED OR TITLE INSURANCE POLICY, OR, COPY CAREFULLY IN THE SPACE BELOW.

SEC 14, 15, 16, 21, 22, 23, 26, 27 AND THE PORTIONS OF SEC 17, 20, and 28 EAST OF YAKIMA RIVER ALL IN T 13 N, R 19 E

RESPONSE TO NO. 2: BASED ON 1990 CENSUS THERE ARE 1885 SINGLE FAMILY RESIDENCES, 428 MOBILE HOMES, AND 196 MULTI-FAMILY STRUCTURES. 1990 POPULATION IS 6413 PERSONS.

WHAT IS YOUR INTEREST IN THE PROPERTY ON WHICH THE WATER IS TO BE USED (PROPERTY OWNER, LESSEE, CONTRACT PURCHASER, ETC.)

ARE THERE ANY EXISTING WATER RIGHTS RELATED TO THE LAND ON WHICH THE WATER IS TO BE USED (INCLUDING WATER PROVIDED BY IRRIGATION DISTRICTS OR DITCH COMPANIES.) ☐ YES ☐ NO

IF YES, FROM WHAT SOURCE (i.e. SURFACE OR GROUND WATER) AND UNDER WHAT AUTHORITY

6. DESCRIPTION OF SYSTEM PROPOSED OR INSTALLED

(FOR EXAMPLE: SIZE OF PUMP, CAPACITY OF PUMP, PUMP MOTOR HORSE POWER, PIPE DIAMETER, NUMBER OF SPRINKLERS, ETC.)

REMARKS

7.

8.

COMPLETE THIS SECTION ONLY IF THIS APPLICATION INCLUDES IRRIGATION AS A USE

IN ORDER TO IMPLEMENT THE PROVISIONS OF INITIATIVE MEASURE NUMBER 59, THE FAMILY FARM WATER ACT WHICH WAS PASSED BY THE VOTERS ON NOVEMBER 3, 1977, WE MUST ASK THE FOLLOWING QUESTIONS:

DOES THE TOTAL NUMBER OF ACRES IN WHICH YOU HAVE CONTROLLING INTEREST IN THE STATE OF WASHINGTON EXCEED 2000 ACRES FOR THE FOLLOWING THREE CATEGORIES:

1. LANDS THAT ARE BEING IRRIGATED UNDER WATER RIGHTS ACQUIRED AFTER DECEMBER 8, 1977. YES ☐ NO ☐
2. LANDS THAT MAY BE IRRIGATED UNDER APPLICATIONS NOW ON FILE WITH THE DEPARTMENT OF ECOLOGY. YES ☐ NO ☐
3. LANDS THAT MAY BE IRRIGATED UNDER THIS APPLICATION. YES ☐ NO ☐

IF 10 ACRE-FEET OR MORE OF WATER IS TO BE STORED AND/OR IF THE WATER DEPTH WILL BE 10 FEET OR MORE AT THE DEEPEST POINT, A STORAGE PERMIT MUST BE FILED IN ADDITION TO THIS PERMIT. THESE FORMS CAN BE SECURED, TOGETHER WITH INSTRUCTIONS, FROM THE DEPARTMENT OF ECOLOGY.

SIGNATURES

X Alex Deccio

APPLICANT'S SIGNATURE

ALEX DECCIO, CHAIRMAN

LEGAL LANDOWNER'S NAME (PLEASE PRINT)

BOARD OF YAKIMA COUNTY COMMISSIONERS

LEGAL LANDOWNER'S SIGNATURE (OWNER OF PROPERTY DESCRIBED IN ITEM NUMBER 5)

LEGAL LANDOWNER'S ADDRESS

FOR OFFICE USE ONLY

STATE OF WASHINGTON }
DEPARATMENT OF ECOLOGY } ss.

This is to certify that I have examined this application together with the accompanying maps and data, and am returning it for correction or completion as follows: .....

.....

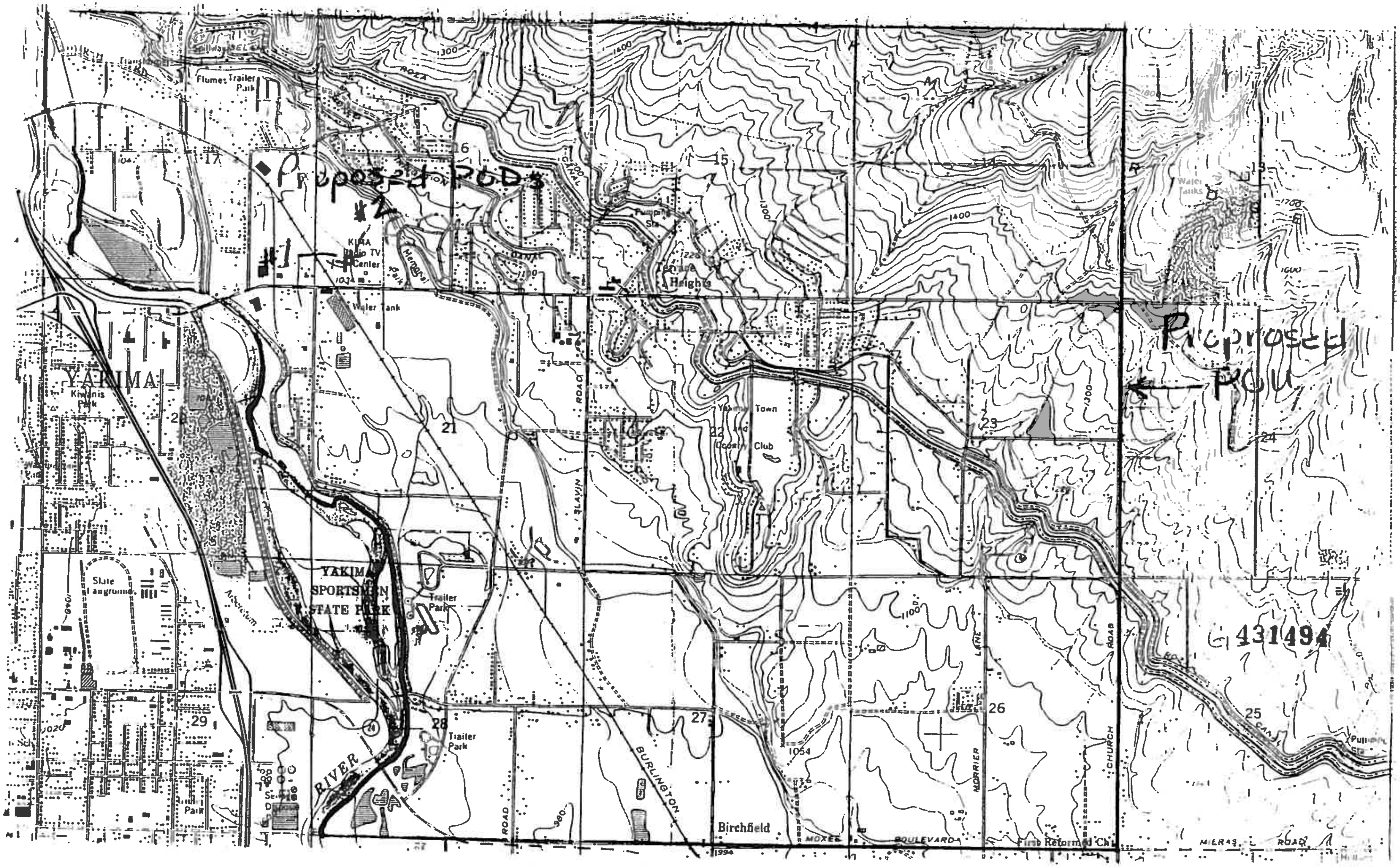
.....

In order to retain its priority date, this application must be returned to the Department of Ecology, with corrections, on or before ..... *19*.....

Witness my hand this .....*day of* ..... *19*.....

.....
Department of Ecology

ECY 040-1_14
Rev 8/91 F



Proposed PODs
#2
#1
Proposed
POU
431494
YAKIMA
Kiwanis Park
Flume Trailer Park
KIMA Radio TV Center
Water Tank
Memorial Park
Terrace Heights
Pumping Sta
Yakima Town and Country Club
YAKIMA SPORTSMEN STATE PARK
Trailer Park
State Fairground
Arboretum
RIVER
BURLINGTON
Birchfield
MOXEE BOULEVARD
MORRIER LANE
CHURCH ROAD
SLAVIN ROAD
ROZA CANAL
MIERAS ROAD
First Reformed Ch
Water Tanks

Well 4

Water Rights

CERTIFICATE RECORD NO. 2 PAGE NO. 891-D UNDER DECLARATION OF CLAIM NO. 238

STATE OF WASHINGTON, COUNTY OF Yakima

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY That: COUNTRY CLUB DISTRICT WATER COMPANY, a corporation, of Yakima, Washington has filed in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 238 to withdraw ground waters of the State from a Pump Well located within Lot 4 of Country Club Suburban Tracts (Sec. 22, Twp. 13 N., Rge. 19 E.W.M.)

for the purpose of Municipal supply and supplemental irrigation

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 2 of Ground Water Certificates at page 891-D; the right approved has a priority of June 1, 1926; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 165 gallons per minute; 162 acre-feet per year; and is appurtenant to the following described lands or place of use:

Terrace Heights Subdivision Nos. 1 and 2; and the S½ of S½ of SE¼ of Sec. 16; and the N½ of NE¼ of NE¼ of Sec. 21; and the E½ of the NW¼ of NE¼ of Sec. 21; and that portion of the NW¼ of NW¼ of Sec. 22 lying below the Solah and Moxee Canal; all of the above in Twp. 13 N., Rge. 19 E.W.M.

Cert. 891 Changed Purpose + Place of Use

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 21st day of March, 19 49

H. W. POLLOCK
State Supervisor of Hydraulics.

BY: Chas. J. Barthelet

CHAS. J. BARTHOLET, Deputy

REPORT ON APPLICATION TO APPROPRIATE WATER Declaration No. 238

NAME Country Club Dist. Water Co.

TYPE OF WORKS: Well Date of Examination

Dimensions: 8-10" by 420' Progress of Works: Completed 1926

LOCATION: Lot 4 of Country Club Suburban Tracts, (Sec. 22, Twp. 13 N., Rge. 19 E.N.M.P.M.).

QUANTITY Claimed or ~~Accepted~~ 165 G.P.M. 270 acre feet per year

USE: Irrigation and domestic

Irrigation-acreage: Present Planned Feasible

Municipal: Population 3000 as of 1950

Industrial:

Time Pump Will Be Operated: Daily

Other Water Rights ~~Affected~~: Terrace Heights Irrigation Dist. water and Selah-Moxee Irrigation Dist. water irrigates much of this land.

Proximity to existing works, springs or streams: Geo. Sourwine 1320 feet-west ; Lillian Borden -680 feet -North.(latter abandoned).

Estimated effect of withdrawal of water on existing water rights:

Water Bearing Zone: sand and gravel 400-420

RECOMMENDATIONS

Approved for 165 G.P.M. 162 acre feet per year, subject to existing water rights.

The amount of water used from this well is calculated at the pump running 80 per cent of the time during the six warmer months, and 40 per cent of the time during the six cooler months, or 162 acre feet a year.

This well is used for a water company and does not irrigate 460 acres.

Signed this 6th day of November, 1946.

FRED B. ROBERTS
Ground Water Geologist
Division of Hydraulics

...odore Weisberger Mgr. ... the company at 3... West 72 Seattle 7 Wash. ... regarding his application to

S. F. No. 2249 12-45—750 20784

A $2.00 recording fee should accompany each declaration.

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
Division of Hydraulics

RECEIVED JUN 21 1946 DIVISION OF HYDRAULICS

Declaration of Ground Water Claim

(Separate claims should be filed for each well, tunnel or infiltration trench)

Declaration No. 238

Your well No. No.one.
(If you have more than one)

I, Country Club District Water Company, a corporation.
(Name of claimant)

of Box 795 Yakima, Washington
(Complete postoffice address)

do hereby make declaration of claim of vested right to ground water by use prior to June 7, 1945, and file the same with the State Supervisor of Hydraulics, in accordance with Section 9, Chapter 263, Laws of 1945 of the State of Washington, and request a Certificate of Ground Water Right thereunder.

1. SOURCE from which water is withdrawn is Pump well
(Give type of works: well, infiltration trench, or tunnel)

2. LOCATION is: About three miles east of Yakima, Wash. on the east 74 ft. of Lot 4 of Country Club Suburban Tracts a replat of Tracts
(Approximate distance and direction from nearest city or town)

and is more particularly described as follows: 205, 206, 210 and 211 of Terrace Heights Subdivision No. 2.

(a) 780 ft. south and 24 feet west of the N.E. Cor. of N.W. 1/4 of of N.E 1/4 Section 22.
(Give distance and bearing to corner of section or other legal subdivision)

being within S.E. 1/4 of N.W. 1/4 of N.E. 1/4 of Sec. 22 , Twp. 13 N., Rge. 19.
(Smallest legal subdivision) (E. or W.)

or (b) Within limits of recorded platted property. The east 74 feet of

in Lot 4 ... of Country Club Suburban Tracts.
(Name of plat or addition)

(If within city or town, give name) County of Yakima ... area
(Leave blank)

(Leave blank) sub-area zone
(Leave blank)

(c) The location of the well or other works is shown on the accompanying plat, or other adequate maps or drawings.

(d) The owner of property on which the works are constructed is:

Country Club District Water Co. Box 795 Yakima Wash.
(Name) (Post office address)

3. CONSTRUCTION WORK was begun on October 1925 ; was completed on June 1, 1926
(Date) (Date)

and the ground water claimed was first used for the purposes set out below on June 1 1926
(Date)

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

from June 1 1926 to the present time.
(Date) (Date)

4. QUANTITY of water claimed and used is 165 gallons per minute; 270 acre feet per year.

Maximum number of days water is used each year:

For irrigation: 210 days.

For other purposes: 365 days.

5. PURPOSE OR PURPOSES for which water is used (a) Supplying domestic water to our stockholders and (b) supplying irrigation water to supplement the irrigation water supplied by the Terrace Heights Irrigation District and Selah and Moxee Irrigation District and water for lands lying above those districts.
(Domestic, irrigation, municipal, manufacturing, industrial, etc.)

5. *(Continued)*

(a) FOR MUNICIPAL SUPPLY: *To supply the city, town or community of* Terrace Heights *in the county of* Yakima *having a present population of* 1000 *and an estimated population of* 3000 *in 19* 50

by supplemental water

(b) FOR IRRIGATION: *The land irrigated has a total area of* 460 *acres, and water is used each year for this purpose from* Mar. 15th. *(Date)* *to* October 15th. *(Date)* including

(c) Legal description of property on which water is used for all purposes ~~other than~~ municipal supply: Terrace Heights Subdivision No.1 and Terrace Heights Subdivision No 2 and the S. 1/2 of the S. 1/2 of the S.E. 1/4 Sec. 16 and the N. 1/2 of the N.E. 1.4 of the N.E. 1/4 of Sec. 21. and the E. 1/2 of the N.W. 1/4 of the N.E. 1/4 of Sec 21.and that portion of the N.W. 1/4 of the N.W. 1/4 of Sec. 22 lying below the Selah and Moxee Canal all of the above in Twp. 13 N. R. 19 E.W.M.

Note. This is the area in which our company now supplies water for domestic purposes and our water users also use considerable water for irrigation purposes drawn through service connections. The use of water for irrigation purposes is increasing as it is found that the irrigation water supply from the Terrace Heights Irrigation District is not sufficent in volume when the land is subdivided in lots and smaller tracts.

6. DESCRIPTION OF WORKS:

(a) WELL: *Depth* 420 *feet. Diameter* 10 and 8" *inches or feet. Dug or drilled* Drilled *Flowing or pump well* Pump well.

IF PUMP WELL: *Type and size of pump is* Peerless Deep Well turbine/6" discharge.

Type and size of motor or engine is Verticle fifteen horse power.

Depth from ground surface to water level before pumping 200 *feet.*

After continuous operation for at least four hours, the measured discharge of pump is 165 to 180 G.P.M. *g.p.m., and the drawdown of water level is* 10 *feet.*

Date of test November 1945

IF FLOWING WELL: *Measured discharge* ____ *g.p.m. on* ____ *(Date)*

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

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

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

10 *inch diameter* Standard Pipe *from* 0 *to* 265 *feet*

8 *inch diameter* " " *from* 265 *to* 400 *feet*

8 *inch diameter* Screen *from* 400 *to* 420 *feet*

inch diameter ____ *from* ____ *to* ____ *feet*

Describe and show depth of shoe, plug, adapter, liner or other details:

Depth of water bearing material is 20 feet. Well screen was attached to forward end of 8" pipe and driven down with it. There is an 8" drive shoe at end of well screen. Well screen is milled out of a length of eight inch standard pipe.

PERFORATED CASINGS OR SCREENS:

20 feet 6" Pipe 840 1/4x2" slots from 400 to 420
(Number per foot and size of perforations, or describe screen)

from ____ to ____

from ____ to ____

from ____ to ____

LOG OF WELL: *(Describe each stratum or formation clearly, indicate if water bearing, and give thickness and depth as indicated.)*

MATERIAL	Thickness (Feet)	Depth to Bottom (Feet)
76 feet alternate strata gravel and hard pan	76	76
189 Hard Yellow clay	189	265
Water bearing quick sand	15	280
Clay	120	400
Sand and Gravel	20	420

(b) INFILTRATION TRENCH: Covered or open____

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

Bottom width ____ ft. Discharge ____ g.p.m. Date of test____

(c) TUNNEL: Type of lining ____

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

Position of water bearing stratum with reference to portal of tunnel____

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

7. Ownership of each existing well or other works for withdrawal of ground water within a radius of one-quarter mile and the distance and direction from well or other works being reported herein:

George Sourwine (Name of owner) West (Direction) 1320 feet. (Distance)

(This is used for domestic purposes by a single family, well is located on Lot 204 Terrace Heights Subdivision No.2)

Lillian Barlon North 680 feet.

(This is a 265 foot well with 6" casing. The well was drilled so crooked that the use of it has been abandoned)

(On accompanying plat or map show location of these existing wells or works.)

8. Remarks:

Country Club District Water Co.
by. [signature] President

[signature] Secretary
(Signature of claimant)

I, the claimant named in the foregoing claim, being first duly sworn, depose and say that I have read the above and foregoing claim to ground water right; that I know the contents thereof; and that to the best of my knowledge, information and belief, the facts therein stated are true and correct.

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

Notary Public in and for the State of Washington,

Residing at .....

DIRECTIONS FOR PREPARING DECLARATIONS OF CLAIM

1. $2.00 filing and recording fee should accompany each declaration.
2. Write plainly in ink or use typewriter.
3. Read carefully all questions. Answer only those that apply to your project.
4. In answering Question 2, concerning location, give distance and direction of location of well or other construction works for withdrawal of water from nearest 40 acre corner or other legal subdivision, as
   (a) "320 feet north and 1100 feet east from the southwest corner of SE¼ of SW¼ of Sec. 1. Twp. 13 N., Rge. 2 E. W. M.," or
   "North 36° 20' east 400 feet from the northeast corner of NW¼ of SW¼ of Sec. 33, Twp. 12 N., Rge. 3 W. W. M." or
   (b) If within limits of incorporated town or city, or recorded plat:
   "Lot 4, Block 6 of Churchill's Addition to City of Spokane."
5. Maps, showing location of well or other works and place of use, must be made in triplicate (3) on the enclosed section plats. If for irrigation, show the approximate area irrigated. Show also location of other existing wells or other works for withdrawing ground water within a radius of one-quarter mile.
6. Sign declaration and affidavit on back of form.

STATE OF WASHINGTON }
County of Yakima } ss.

George W. McLaughlin and Lloyd A. Porter, being first duly sworn, depose and say: That we are the President and Secretary, respectively, of Country Club District Water Company, a mutual corporation, the claimant mentioned in the foregoing claim; that we have read the above and foregoing claim to ground water right; that we know the contents thereof; and that to the best of our knowledge, information and belief, the facts therein stated are true and correct.

Geo W McLaughlin,

Lloyd A Porter

Subscribed and sworn to before me this 19th day of June, 1946.

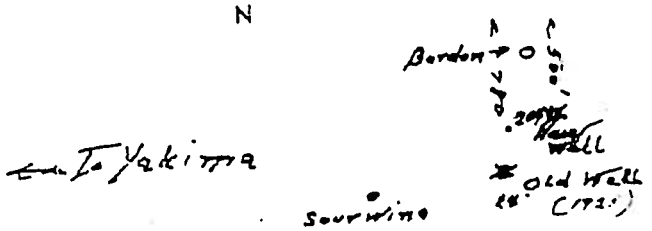
Notary Public in and for the State of Washington, residing at Yakima.

S. F. No. 1931-A—5-40—650 11-38 SECTION PLAT

Application for Ground Water Right
Country Club District Water Co.

Sec. 22 Twp. 13 N. R. 19

N



W E

S Grand Water Right

Show by a cross (X) the location of the well or other works covered by the application or declaration. Show by circle (O) the locations of other wells or works within a quarter of a mile. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

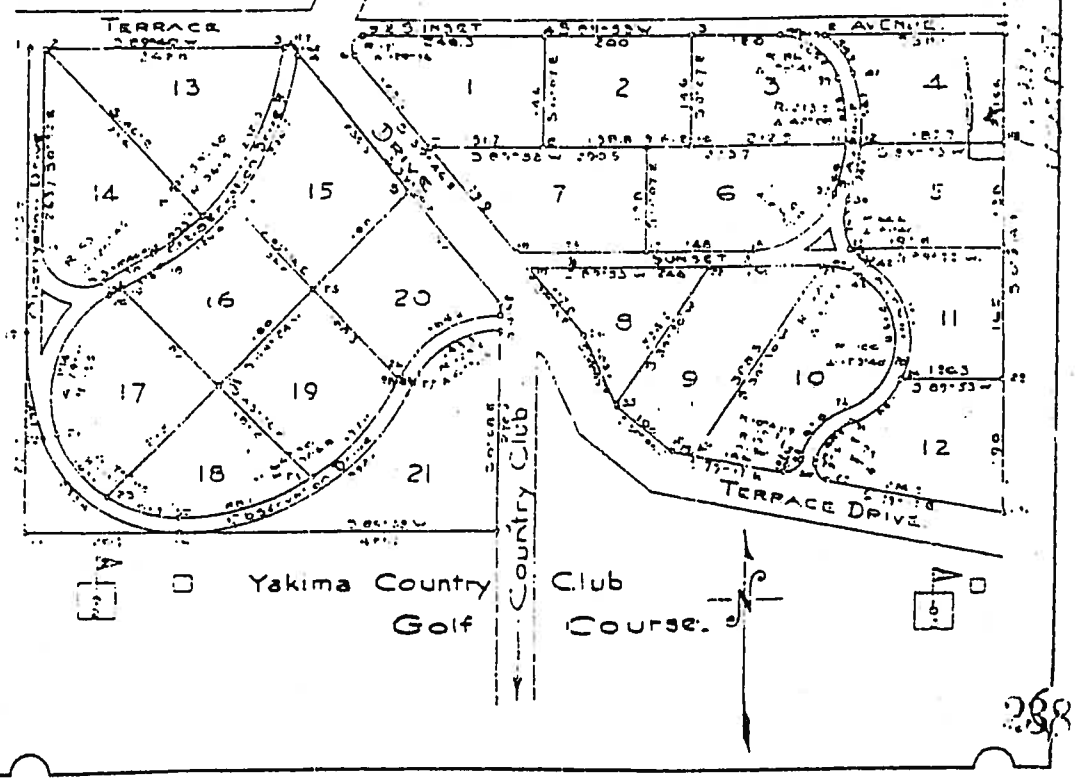
Our old well is in connection with a brick veneer Water Tower about three miles east of Yakima. This is a land mark and there will be trouble to find it.

238

NORTH

COUNTRY CLUB SURBURBAN TRACTS

A Replat of Lots 205-206-210-211
TERRACE HEIGHTS . SUBDIVISION. No-2
YAKIMA COUNTY WN.
Scale. 1" = 100'



288

Wells 4, 5 and 6

Water Rights

886

R. F. No. 1361—3-51—[illegible] 27784.

CERTIFICATE RECORD No. 2 PAGE No. 886-A

STATE OF WASHINGTON, COUNTY OF Yakima

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.

THIS IS TO CERTIFY That COUNTRY CLUB DISTRICT WATER COMPANY, A CORPORATION, of Yakima, Washington, *has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of* ~~xx~~ two pump wells

Well #1 *located within* the NW¼ of NE¼ and Well #2 within the NE¼ of NW¼, both within Sec. 22, Twp. 13 N., Rge. 19 E.W.M.

for the purpose of irrigation of lawns and gardens and domestic supply, *under and subject to provisions contained in Ground Water Permit No.* 537 *issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is herby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume* 2 *at page* 886-A; *that the right hereby confirmed dates from* June 21, 1946; *that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed* 1500 gallons per minute; 1210 acre-feet per year. [illegible]

A description of the lands to which such ground water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

Terrace Heights Subdivision Nos. 1, 2 and 3; the SE¼ of SE¼ of Sec. 15; the N½ of SE¼ of Sec. 15; S½ of NW¼ of Sec. 15; S½ of NE¼ of Sec. 16 and the NE¼ of NE¼ of Sec. 16, all within Twp. 13 N., Rge. 19 E.W.M.

Also, all of SE¼ of Sec. 16 lying South of Selah and Moxee Canal, also the N½ of NE¼ of Sec. 21; and that part of the NW¼ of NW¼ of Sec. 22 lying South of the Selah and Moxee Canal; and that part of the SE¼ of NW¼ of Sec. 22 lying North and above the Selah and Moxee Canal. All of the above described lands lying in Township 13 North, Range 19 E.W.M.

[illegible]

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 30th *day of* November, 1951.

[signature]
State Supervisor of Water Resources

ENGINEERING DATA
O.K. MMW

S. P. No. 7334—11-46—2M. 12682.

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
DIVISION OF HYDRAULICS

Permit to Appropriate Public Ground Waters of the State of Washington

Book No. 2 of Ground Water Permits, on page 931 under Application No. 282

COUNTRY CLUB DISTRICT WATER COMPANY, A CORPORATION,

of Yakima, Washington

is hereby granted a permit to appropriate the following described public ground waters of the State of Washington, subject to existing rights, and to the limitations and provisions set out herein.

Priority date of this permit is June 21, 1946

Source of the proposed ground water appropriation is Two Pump Wells within area, sub-area zone. Name or number of works is

Quantity of water appropriated shall be limited to the amount which can be beneficially applied and not to exceed 1500 gallons per minute: 1210 acre-feet per year, to be used for the following purposes: Domestic supply and irrigation of lawns and gardens

as more definitely set out below.

Location of the well, ~~tunnel, or infiltration trench~~ is/are: Well #1, East 74 feet of Lot 4 of Country Club Suburban Tracts within NW¼ of NE¼ of Section 22; Well #2, 500 feet South and 804 feet East of the Northwest corner of the NE¼ of NE¼ of Section 22

Well #1 being within the NW¼ of NE¼ and Well #2 within the NE¼ of NE¼, both within Section 22, Township 13 North, Range 19 E.W.M.

county of Yakima

Use, or uses to which water is to be applied:

For municipal supply: gallons per minute: acre-feet per year, to supply

For irrigation: / and domestic supply 1500 gallons per minute: 1210 acre-feet per year, for the irrigation of lawns and / gardens ~~XXXX~~ acres.

For miscellaneous uses: gallons per minute: acre-feet per year, for

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Terrace Heights Subdivision Nos. 1, 2 and 3; the S½ of SE¼ of Sec. 15; the N½ of SE¼ of Sec. 15; S½ of NW¼ of Sec. 15; S½ of NE¼ of Sec. 16 and the NE¼ of NE¼ of Sec. 16, all within Twp. 13 N., Rge. 19 E.W.M.

Also, all of SE¼ of Sec. 16 lying South of Selah and Moxee Canal, also the N½ of NE¼ of Sec. 21; and that part of the NW¼ of NW¼ of Sec. 22 lying South of the Selah and Moxee Canal; and that part of the SE¼ of NW¼ of Sec. 22 lying North and above the Selah and Moxee Canal. All of the above described lands lying in Township 13 North, Range, 19 E.W.M.

DESCRIPTION OF WORKS FROM WHICH WATER IS TO BE WITHDRAWN

The well will be drilled and have a diameter of 12 inches, and depth of 435 feet.
(Dug or drilled)

Description of tunnel or infiltration trench:

(Please read carefully provisions below)

Particular specifications required by the Supervisor of Hydraulics for the purpose of preventing waste of public waters:

Construction work shall begin on or before Started

and shall thereafter be prosecuted with reasonable diligence and completed on or before Completed

and complete application of water to proposed use shall be made on or before October 1, 1950

Given under my hand and the seal of this office at Olympia, Washington, this 17th day of March, 19 49

H. W. POLLOCK
State Supervisor of Hydraulics.

BY: Chas J. Luthard
CHAS. J. LUTHARD, Deputy

AMENDED

REPORT OF FINDINGS ON GROUND WATER Appli. No. 282

NAME Country Club District Water Company

TYPE OF WORKS: two wells Date of Examination

Dimensions: #1 10" x 420' #2 12" x 590' Progress of Works complete

QUANTITY ~~xxxxxxxxx~~
Applied for: 1500 g.p.m. acre feet per year

LOCATION NE¼ of NE¼ of Sec. 22, Twp. 13 N., Rge. 19 E.,W.,M.

USE: domestic supply and irrigation

Irrigation- acreage: Present Planned 700/ supplemental Feasible

Municipal: Population 6,000 as of 1950

Industrial:

Time Pump Will be Operated: daily

Other Water Rights of Applicant: Ground Water Decl. 238 (Terrace Heights and Selah-Moxee Ditch irrigates much of this land.

Proximity to existing works, springs or streams: George Sourwine 900' SW: Lillian Bordon 375' NW

Water Bearing Zone:

~~LOCAL LIMITATIONS~~

Approved for 1500 g.p.m. 1210 acre-feet per year, subject to existing water rights. (1 acre-foot = 325,850 gallons)

The amount of water needed by 6,000 people is calculated on the basis of each person needing 100 gallons a day which amounts to 672 acre-feet a year.

An addition acre-foot a year is estimated to be needed for 700 acres by Mr. Weisberger in addition to the Selah-Moxee Ditch rights which amount to 700 acre-feet annually. The total estimated to be needed comes to 1,372 acre-feet a year.

The amount of water calculated to have been furnished by Well #1 (see Declaration No. 238) is 162 acre-feet a year, which subtracted from 1,372 acre-feet leaves 1,210 acre-feet annually for this right.

Well #1 is estimated to be capable of producing 1,200 g.p.m. of which 165 g.p.m. have been used (see Declaration #238) so that 1,035 g.p.m. are to be developed. Well #2 is thought to be capable of furnishing 465 g.p.m. Thus adding 1035 to 465, the total of 1500 g.p.m. is reached.

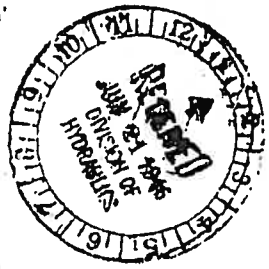
Signed this 3rd day of February, 1949

FBR

FRED B. ROBERTS
Ground Water Geologist
Division of Hydraulics

$5.00 examination fee should accompany each application.

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
Division of Hydraulics



APPLICATION FOR A PERMIT
To Appropriate Public Ground Waters
OF THE STATE OF WASHINGTON

Application No. G. W. 2882

I, Country Club District Water Company, a corporation,
(Name of applicant)

of Box 795 Yakima, Washington
(Complete postoffice address)

do hereby make application for a permit to appropriate the following described public ground waters of the State of Washington, subject to existing rights. This application is made under the provisions of Chap. 263 of the Session Laws of 1945 of the State of Washington and subject to the rules and regulations of the Department of Conservation and Development, Division of Hydraulics.

1. The source of the proposed appropriation is 2 Pump wells
(Well, tunnel, infiltration trench)

located about three miles east of Yakima, Washington.
(Give approximate distance and direction from nearest city or town)

Area (Leave blank) Sub-area (Leave blank)

Zone (Leave blank)

Applicant's name or number of well or other works, if any Well No. 1 now in use.
(This application is for well No.2) Wells No 2 and 3 still to be drilled.

2. The quantity of water which applicant intends to apply to beneficial use is ~~1200~~ gallons per minute; ~~2000~~ acre feet per year.

3. The use or uses to which water is to be applied Domestic and irrigation
(Domestic supply, irrigation, municipal, manufacturing, industrial use, etc.)

4. The time during which water will be required each year the entire year

5. Location of well or other works for withdrawal of water: In county of Yakima

(a) Well #2 500 feet south and 204 feet east of the N.W. corner of the
(Distance and direction from closest corner of section or legal subdivision)

being within the N.E. 1/4 of N.E. 1/4 of Sec. 22 Twp. 13 N., Rge. 19 E. or W.
(Give smallest legal subdivision)

or (b) If within limits of recorded platted property, town or city: Lot 295 ####

of Terrace Heights Subdivision No.2.
(Give name of plat or addition) (If within town or city, give name)

(c) Show this location on accompanying section plat, in triplicate. Other adequate maps or drawings will be acceptable.

6. Name and address of owner of land on which well or works are located:

Theodore Weisberger and Maude Weisberger
(Name)
3225 West 72 Seattle 7 Wash.

We have the contract to drill the well and will transfer it with the land to Country Club District Water Company when completed

7. Description of Works:

(a) Well will be drilled (Dug or drilled) and have a diameter of 12 inches and an estimated depth of 455 feet.

(b) Tunnels or trenches to be described: (Attach additional sheets if needed for full description.)

(c) Distribution system to be described:

Water will be piped to our existing reservoir about four hundred feet distant and from there will be distributed by our water mains covering almost all of Terrace Heights District.

(d) If pumps are to be used, give size and type: Our present installation will be a Peerless Deep Well Turbine Type pump with a capacity of 165 gallons per minute but this installation will be taken out as the demand for our service increases and larger pump installed. We have purposely drilled the well of large size to accommodate larger pump to be installed later.

(e) Give capacity and type of motor or engine to be used: Present installation calls for a fifteen horse power motor and this will be taken out later when the demand increases. At our facilities need to be enlarged.

(f) If the location of the well, tunnel, or other works is less than one-fourth mile from a natural stream or stream channel, give the distance to the nearest point on each of such channels and the difference in elevation between the stream bed and the ground surface at the source of development:

Our well is about two and half miles from the nearest stream, the Yakima River.

(g) Ownership of each existing well or other works from which ground water is withdrawn within a radius of one-quarter mile and the distance and direction from well or other works being reported herein:

(Name)	(Direction)	(Distance)
Country Club District Water Company	Southeast	about 400 feet
George Sourwine	Abt. 780' west 450 feet South	Abt. 900 feet
Lillian Barder	Abt. 430' North 170 feet West	Abt. 375 feet

(On accompanying plat show location of the existing wells or works.)

8. Supply the Following Information According to Use Proposed

(a) For Municipal Supply: *To supply the city, town, or community of* Terrace Heights *in the county of* Yakima *, having a present population of* 1100 *, and an estimated population of* 3600 *in 19* 50

(b) For Irrigation: *The land to be irrigated has a total area of* [illegible] *acres.*

(c) Legal Description of Property on which water is to be used for all purposes other than municipal supply: (If more space is required, attach separate sheet.)

The company will not be called upon to use water only for irrigation purposes but primarily supplie water for domestic purposes but will be called upon to supply supplemental water for irrigation of lawns and gardens on the following area.

Terrace Heights Subdivision No. 1, Terrace Heights Subdivision No. 2, Terrace Heights Subdivision No. 3, the SE 1/4 of N.E. 1/4 Sec. 15 and N. 1/2 of S.E. 1/4 Sec 15 and W 1/2 of N.W 1/4 Sec. 14 and S. 1/2 of N. E. 1/4 Sec 15 and N.E. 1/4 of S.E. 1/4 Sec 16 all in Twp 13 N. R 19 E.W.M.

Also A.L of S.E. 1/4 Sec. 16 lying South of Selah and Moxee Canal, also the N. 1/2 of the N.E. 1/4 of Section 21 and that part of the N.W. 1/4 of the N.W. 1/4 of Sec. 22 lying South of the Selah and Moxee Canal and that part of the S.W. 1/4 of the N.W 1/4 of Sec. 22 lying north and above the Selah and Moxee Canal. All of the above lands lying in Township 13 No. Range 19 E.W.M.

9. Construction work will begin on or before July 1, 1946 or as soon as we can obtain permission to begin work.

10. Construction work will be completed on or before Jan. 1, 1947

11. Water will be put to complete beneficial use on or before Jan. 1st, 1947.

Country Club District Water Co.
BY

(Signature of applicant)

C. W. McLaughlin President.

Secretary.

Signed in the presence of us as witnesses:

(Name)

(Name)

(Address of witness)

S. E. Miller Building
YAKIMA, WASHINGTON
(Address of witness)

STATE OF WASHINGTON,
COUNTY OF THURSTON. ss

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

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

WITNESS my hand this day of , 19

State Supervisor of Hydraulics.

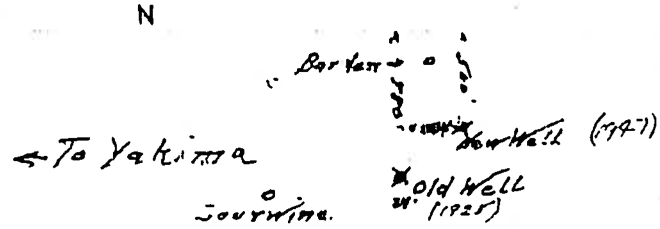
S. F. No. 1854-A—6-1—3M. 9183.

SECTION PLAT

Application for Ground Water Appropriation
Country Club District Water Co.

Sec. 23 Twp. 13 N. R. 18

N



W E

S

Ground Water Appropriation.

Show by a cross (X) the location of the well or other works covered by the application or declaration. Show by circle (O) the locations of other wells or works within a quarter of a mile. Also traveling directions from nearest town on main highway.

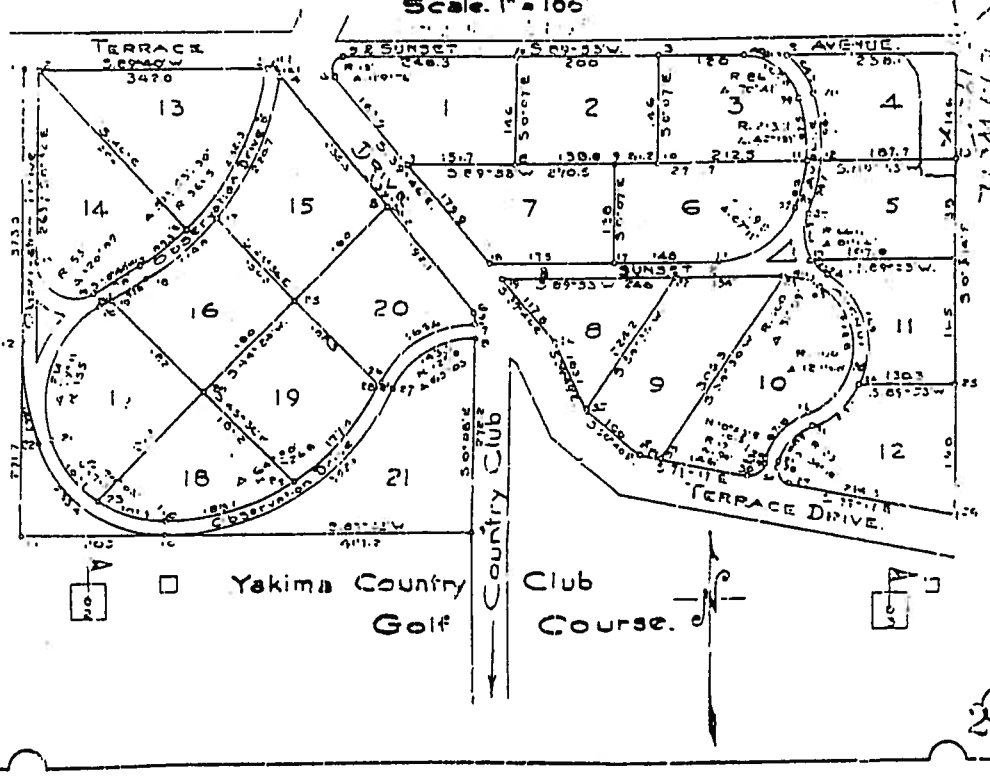
Scale: 1 inch = 800 feet.

Our old well is in connection with a brick veneer Water Tower about three miles east of Yakima. This is a land mark and no trouble to find.

NORTH

COUNTRY CLUB SURBURBAN TRACTS

A Replat of Lots 205-206-210-211
TERRACE HEIGHTS . SUBDIVISION. No.2
YAKIMA COUNTY. WN.
Scale. 1" = 100'



282

Well 6

Water Rights

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
September 21, 1981	G4-27699	G4-27699P	

NAME
COUNTRY CLUB DISTRICT WATER COMPANY

ADDRESS (STREET)	CITY	STATE	ZIP CODE
P.O. Box 795	Yakima,	Washington	98907

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
A well
TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	500	*376

QUANTITY, TYPE OF USE, PERIOD OF USE
* This authorization is classified as an alternate source to existing rights under Ground Water Certificate No. 886C and Ground Water Declaration Certificate No. 891D and is not additional to them. The total municipal water right shall not exceed 1210 acre-feet from all sources.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
153 feet north and 54 feet west from the southeast corner of Section 16.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W. W.M.	W.R.I.A.	COUNTY
SE¼SE¼SE¼	16	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
174		Terrace Heights Subdivision No. 1

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Portions of Sections 15, 16, 21, 22 of T. 13 N., R. 19 E.W.M. (see diagrams of area served dated October 7, 1982).

DESCRIPTION OF PROPOSED WORKS

A well 12 inches in diameter connected to an existing community domestic system.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
October 1, 1983	October 1, 2003	October 1, 200~~3~~4

PROVISIONS

The total annual withdrawal under Certificates No. 891-D, No. 886-C and this right shall not exceed 1210 acre-feet per year.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

This well shall be cased and sealed to a depth of 400 feet..

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Yakima, *Washington, this* 3rd *day of* December *19* 82

Department of Ecology

by [signature]

RUSSELL K. TAYLOR, REGIONAL MANAGER

ENGINEERING DATA
OK M. [signature]
le

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
September 21, 1981	G4-27699		

NAME
COUNTRY CLUB DISTRICT WATER COMPANY

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
P.O. Box 795	Yakima,	Washington	98907

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
A well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	500	*376

QUANTITY, TYPE OF USE, PERIOD OF USE
* This authorization is classified as an alternate source to existing rights under Ground Water Certificate No. 886C and Ground Water Declaration Certificate No. 891D and is not additional to them. The total municipal water right shall not exceed 1210 acre-feet from all sources.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
153 feet north and 54 feet west from the southeast corner of Section 16.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W. W.M.	W.R.I.A.	COUNTY
SE¼SE¼SE¼	16	13	19 E.	37	Yakima

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
174		Terrace Heights Subdivision No. 1

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Portions of Sections 15, 16, 21, 22 of T. 13 N., R. 19 E.W.M. (see diagrams of area served dated October 7, 1982).

DESCRIPTION OF PROPOSED WORKS

A well 12 inches in diameter connected to an existing community domestic system.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
October 1, 1983	October 1, 2003	October 1, 2003

REPORT

Background

On September 21, 1981 the Country Club District Water Company applied for a water right permit to appropriate 500 gallons per minute (gpm) of public ground water of the state. The application was assigned No. G4-27699 and proper public notice was prepared and advertised. No objections were received prior to the expiration of the protest period.

The application was examined by the undersigned. Additionally office files and maps were examined.

Mr. Henderson of the Country Club District Water Company was contacted. He verified that the area of service could support an expansion from the existing population of 2,000 to 4,000 people within 20 years. Records indicate total annual water pumped into the system from the two existing wells is 91,336,200 gallons per year, 280 acre-feet. Based on the existing usage 560 acre-feet of water would be required to support a population of 4,000 people.

The requested 500 gpm is within current guidelines for a population increase of 2,000 people. Department of Ecology files indicate the Country Club Water District has existing water rights under Ground Water Declaration Certificate No. 891D for 165 gpm, 162 acre-feet per year and under Ground Water Certificate No. 886C for 1500 gpm, 1210 acre-feet per year. Based on actual recorded usage, the two existing ground water rights are sufficient to accommodate a projected population of 4,000.

Existing water rights total 1372 acre-feet. Therefore no additional acre-feet are required to insure an adequate annual quantity of water for the needs of the projected population.

Wells within one-half mile of the proposed well site range in depth from 100 to 720 feet. The nearest well which is about one-quarter mile to the north is 325 feet deep. In order to isolate the proposed well from shallower wells a 400 foot casing requirement is needed. The static water level at the proposed well site should be approximately 80 feet plus or minus 10 feet. Production will be from a zone within the Ellensburg sediments. The well depth needed to obtain the requested 500 gpm is estimated at 700 feet.

Conclusions

1. Water is available for this appropriation;

2. Prior rights will not be adversely affected;

3. Community domestic supply is a beneficial use;

4. This use is not contrary to the public interest.

COUNTRY CLUB DISTRICT WATER COMPANY G4-27699
Report Continued

Recommendations

The requested quantity of 500 gpm is recommended for approval for continuous community domestic supply; 375 acre-feet are to be allowed for additional instantaneous demand to existing rights.

The total annual withdrawal under Certificates No. 891-D, No. 886-C and this right shall not exceed 1210 acre-feet per year.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

This well shall be cased and sealed to a depth of 400 feet to preclude interference with other wells in the area.

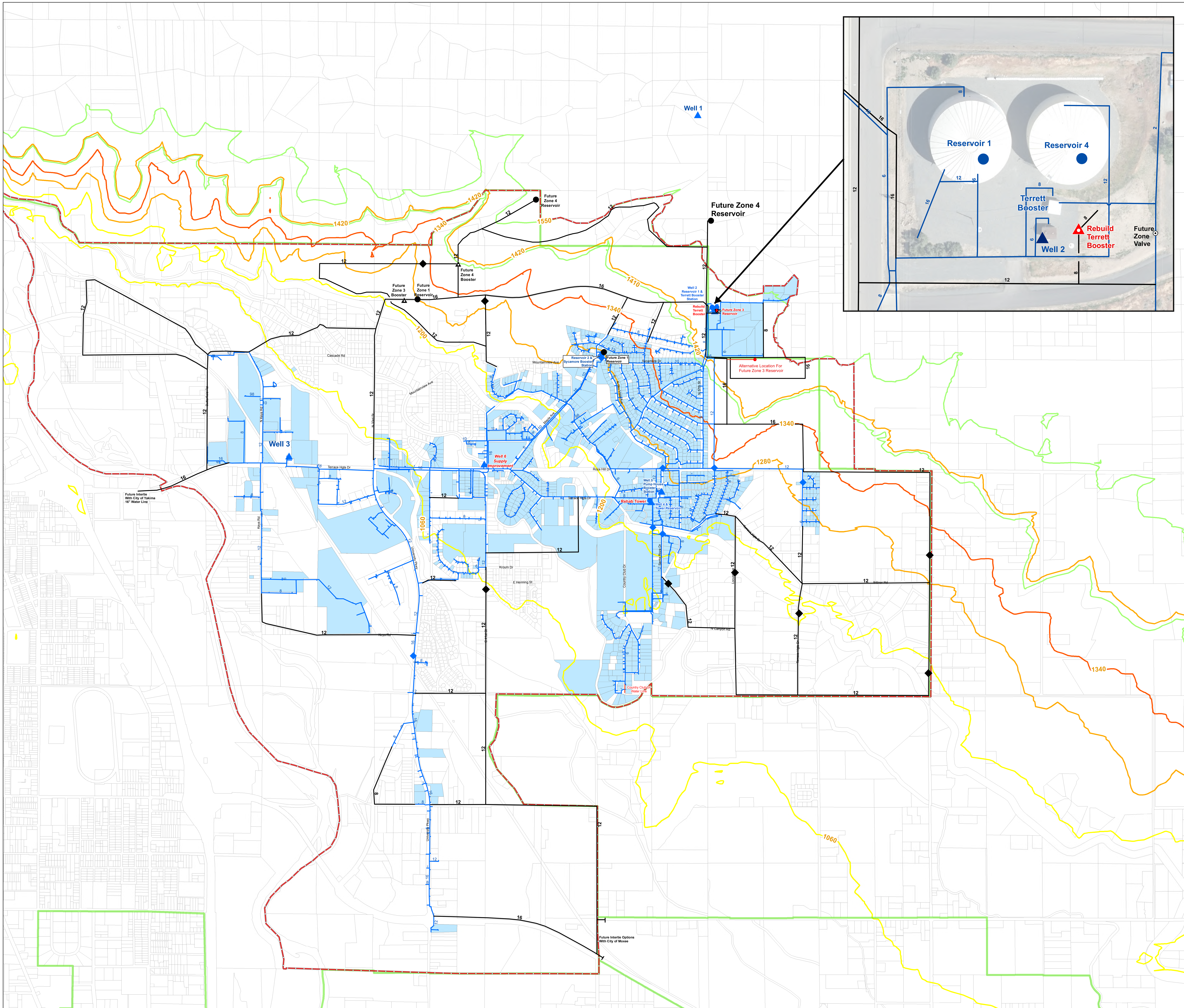
REPORT BY: William W. Myers DATE: November 2, 1982
William W. Myers

APPROVED BY: Doug Clausing DATE: 11/2/82
Doug Clausing, Regional Supervisor

ske

Appendix F

Figure of Future System Improvements



Yakima County Comprehensive Water System Plan

FIGURE F-1

Terrace Heights Water System Proposed Improvements

Lots Within Service Area Currenty Receiving Water Service

Service Area & Retail Service Area Boundary

Urban Growth Boundary

	Existing System	Existing System Improvement	Future System Improvement
Supply Wells	▲	▲	▲
Storage Reservoirs	●	●	●
Pressure Reducing Stations	◆	◆	◆
Booster Stations	△	△	△
Water Lines	—	—	—

Pressure Zone Boundaries

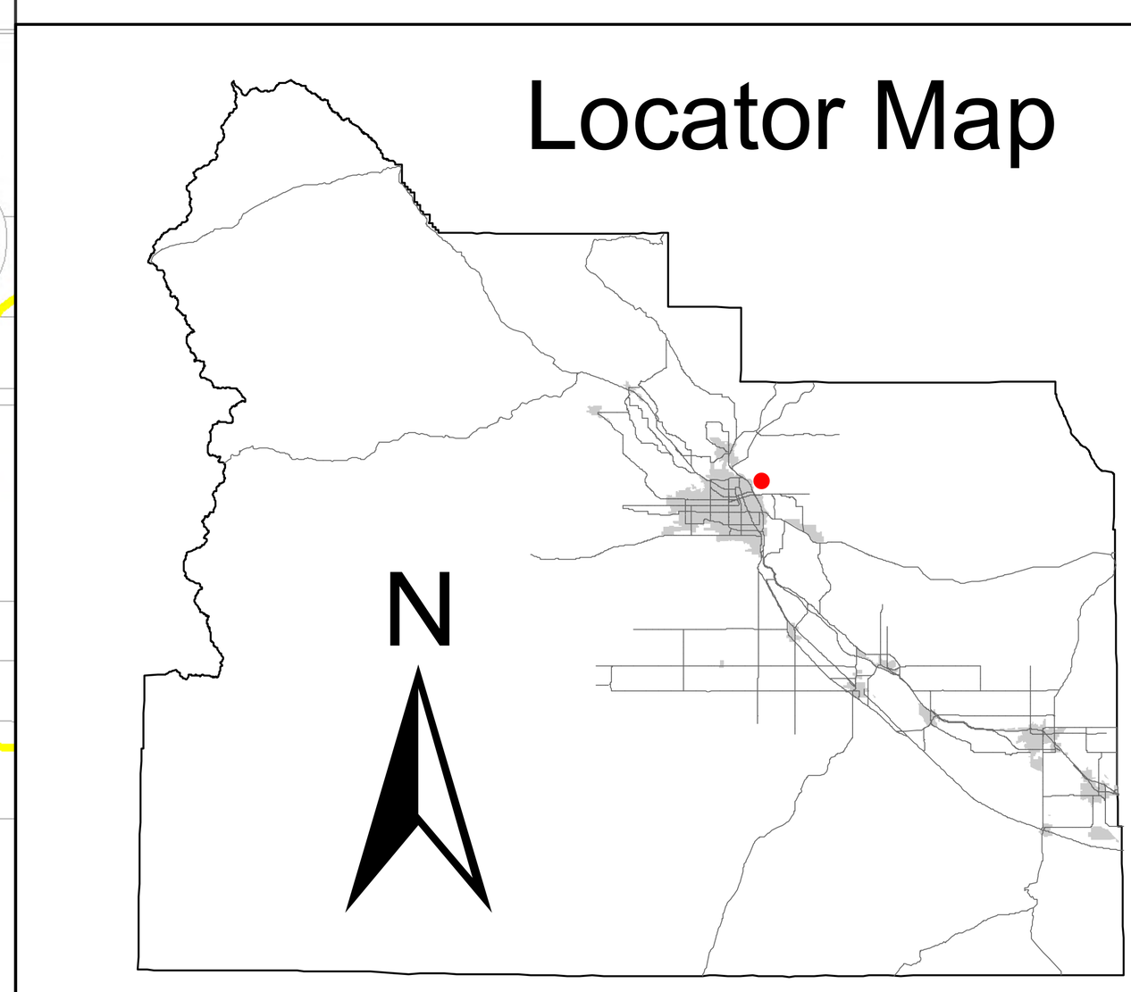
	40 psi	100 psi
Zone 1	1200	1060
Zone 2	1340	1200
Zone 3	1420	1280
Zone 4	1550	1410

Date: September 2017

1 in equals 700 feet

0 875 1,750 3,500 Feet

Aerial Photo: 2017 Yakima County



Appendix G

Water System County Code

Chapter 12.08
WATER SYSTEM*

Sections:

ARTICLE I – DEFINITIONS

12.08.010 Definitions.

ARTICLE II – AUTHORITY

12.08.020 County to Operate Water Systems.
12.08.030 Connection Required for Service.
12.08.040 Public Services Director – Duties.
12.08.050 Evidence of Adequate Water Supply Required.

ARTICLE III – GENERAL PROVISIONS

12.08.060 Water Meters Installation Required – Costs – Inspection.
12.08.070 Water Meters – Type.
12.08.080 Water Meters – Location.
12.08.090 Water Meters – County Ownership.
12.08.100 Water Meters – Protection, Repair and Replacement.
12.08.110 Water Meters and Valves – Obstruction Prohibited.
12.08.120 Interference with System Prohibited.
12.08.130 Application for Service.
12.08.140 Separate Connection Required for Each Unit.
12.08.150 Required Connection.
12.08.160 Abandonment of Service.
12.08.170 Building or Property Once Connected Must Continue to Use Public System.

ARTICLE IV – PUBLIC WATER SYSTEM PROVISIONS

12.08.180 Water Service Pipes and Connections.
12.08.190 Private Water Lines – Permitted When – Construction Standards.
12.08.200 Private Water Lines – Regulations.
12.08.210 Authority to Shut Off and Repair Private Water Lines.
12.08.220 Authority to Shut Off and Repair Public Water Lines.
12.08.230 Fire Hydrants – Operation.
12.08.240 Fire Hydrants – Obstruction Prohibited.
12.08.250 Pipe Depth Below Ground.
12.08.260 Responsibility for Leaks and Damages.
12.08.270 Cross-Connections – Prohibited – Exception.
12.08.280 Cross-Connections – Failure to Remedy.
12.08.290 Cross-Connections – Inspection.
12.08.300 Air Gap and Flood Level Specifications for Tanks.
12.08.310 Double Check Valve Assemblies.
12.08.320 Reduced Pressure Principle Backflow Prevention Assemblies.
12.08.330 Backflow Prevention Assemblies – Installation Location.
12.08.340 Backflow Prevention Assemblies – Situations Requiring Assemblies.
12.08.350 Backflow Prevention Assemblies – Premises Requiring.

12.08.360 Backflow Prevention Assemblies – Determination of Type.
12.08.370 Backflow Prevention Assemblies – Standards and Inspection.
12.08.380 Backflow Prevention Assemblies – Termination of Service for Noncompliance.

ARTICLE V – YAKIMA COUNTY WATER RESOURCE SYSTEM PROVISIONS

12.08.390 Applicability.
12.08.400 Property Eligibility Criteria.
12.08.410 Well Eligibility Criteria.
12.08.420 Well Depth Standards.
12.08.430 Discontinuance of Well Use – Well Decommissioning.
12.08.440 Limitations on Use.

ARTICLE VI – RATES AND CHARGES

12.08.450 Water Connection Permit Charges.
12.08.460 Service Installation Charges.
12.08.470 Ready to Serve Charges.
12.08.480 Water Consumption Charges.
12.08.490 Fire Protection Service Charge.
12.08.500 Total Monthly or Quarterly Charge.
12.08.510 Charge for Turning on After Turnoff for Nonpayment or New Account.
12.08.520 Charges for Premises Supplied Through More Than One Meter.
12.08.530 Backflow Prevention Assembly Inspection Charges.
12.08.540 Temporary Water Use Charges.
12.08.550 Annual Charge Adjustment.
12.08.560 Returned Check Charges.

ARTICLE VII – BILLING AND COLLECTION

12.08.570 Accounts – Collection Responsibility.
12.08.580 Billing.
12.08.590 Single Billing for Each Connection and Meter.
12.08.600 Liability for Charges.
12.08.610 Due and Delinquency Dates.
12.08.620 Delinquency Charge.
12.08.630 Lien for Delinquent Charges.
12.08.640 Suspension of Service – Hearing Procedure.
12.08.650 Suspension of Service – Exceptions.
12.08.660 Adjustment for Water Leakage.

ARTICLE VIII – VIOLATION – PENALTY

12.08.670 Public Nuisance Violations Designated.
12.08.680 Violation – Penalty.

ARTICLE IX – MISCELLANEOUS REGULATIONS

12.08.690 Use to Comply with Regulations.
12.08.700 Inspection by County.
12.08.710 Temporary Shutoff.
12.08.720 Limit of Water Use During Shortages.

12.08.730 Transfer of Service.
12.08.740 Disconnection Procedure.
12.08.750 Extension of System.

* Prior Ordinance History: Ord. 4-1985, 1985 as amended by Ord. 4-1985 Mod. 1, 1988; Ord. 4-1985 Mod. 2, 1989; Ord. 4-1985 Mod. 3, 1991; Ord. 4-1985 Mod. 4, 1994; Ord. 7-1998; Ord. 9-2001; Ord. 9-2007; and Ord. 3-2015.

ARTICLE I – DEFINITIONS

12.08.010 Definitions.

For the purposes of this chapter, unless otherwise apparent from the context, certain words and phrases used in this chapter are defined as follows:

(1) “Adequate Water Supply” means a supply of potable water adequate to serve a land use associated with a project permit in terms of quality, quantity, and legal availability.

(2) “Approved Water Purveyor” means an entity owning a public water system approved by the Washington State Department of Health (DOH) to serve additional connections. Group A water systems must have a green or yellow operating permit from DOH. Group B water systems must be approved by DOH for the proposed connection.

(3) “Backflow” means the undesirable reversal of flow of water or other substances through a cross-connection into the public water system or consumer’s potable water system.

(4) “Connection” means water service provided through one water meter to residential, commercial, industrial or institutional consumers from a public water system or YCWRS domestic well.

(5) “County” means Yakima County under the direction of the Yakima County department of public services.

(6) “Cross-connection” means any actual or potential physical connection between a public water system or the consumer’s water system and any source of non-potable liquid, solid, or gas that could contaminate the potable water supply by backflow.

(7) “Customer” or “consumer” means any individual, firm, company, association, society, hospital, church, corporation or group provided service from a public water system or a YCWRS domestic well.

(8) “Domestic water system” means that water, and water system in which it is carried, which is for human consumption and normal household, commercial, industrial or institutional uses provided under the county’s direction. Public water systems and YCWRS domestic wells are domestic water systems.

(9) “Extension” means continuation of the domestic water system to serve additional customers.

(10) “Fire protection service charge” means the monthly charge, based on private water line size, for fire protection service from the public water system.

(11) “Multiple family unit” means a building or arrangement of buildings or portions thereof, used or intended to be used as the home of two or more families or householders living independently of each other.

(12) “Permit Exempt Well” or “Exempt Well” means a well withdrawing water under the groundwater permit exemption contained in RCW 90.44.050.

(13) “Private water lines” means those lines serving more than one single dwelling unit and larger than one inch in diameter constructed, operated and maintained by private owners and connected to the county’s public water system.

(14) “Public services director” means the county public services director or his assigns charged with the operation of the domestic water systems.

(15) “Public water system” means a Group A or Group B public water system as defined in WAC 246-290-020.

(16) “Ready to serve charge” means the minimum monthly, bimonthly, or quarterly charge for connection to the domestic water system based on size of the water meter servicing the customer.

(17) “Service line” means the water line connection to a public water system from the customer’s side of the water meter box to the structure or facility served and shall be owned and maintained by the customer.

(18) “Shall” and “May.” The word “shall” is mandatory; the word “may” is permissive.

(19) “Single dwelling unit” means a building arranged or designed to be occupied by not more than one family or household.

(20) “Water Budget Neutral” – means the withdrawal of water whose impact to area streams and senior water rights is offset by water from existing water rights being left in-stream. The consumptive use (amount of water not returned to rivers and streams) does not exceed the amount of water of these existing water rights.

(21) “Water consumption charge” means the monthly, bimonthly, or quarterly charge for the amount of water used by the customer based upon monthly, bimonthly, or quarterly meter readings.

(22) “YCWRS domestic well” means a privately owned permit exempt well that provides water for human consumption and normal household use where the legal withdrawal of water from the well is permitted under the Yakima County Water Resource System.

(23) “Yakima County Water Resource System (YCWRS)” is a water system organized pursuant to RCW 36.94.140 which provides service to the public in the form of “mitigated” or “water budget neutral” water supplies for domestic use through the withdrawal of domestic supply from a groundwater permit exempt well. The service area of the water system is all of the privately held property in Yakima County within the Yakima River watershed except those areas within the corporate limits of a City, within the exterior boundaries of the Yakama Reservation, or within the service areas of Type A and Type B water systems in existence prior to Jan. 1, 2018. The YCWRS holds senior water rights and allows the use of such rights by the public when wells are constructed and metered according to YCWRS procedures.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE II – AUTHORITY

12.08.020 County to Operate Water Systems.

A utilities division under the supervision of the county public services department to develop, design and operate county domestic water systems is established.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.030 Connection Required for Service.

Each separate dwelling, building or structure shall be connected in accordance with the provisions of this chapter before the county will provide water service.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.040 Public Services Director – Duties.

The public services director shall supervise and be responsible for development, design, construction, excavations, repairs, connections, maintenance, operation and administration of the county water systems and enforce the rules and regulations provided in this chapter.

The public services director has the authority, on behalf of the County, to ascertain whether there is legal evidence of an adequate water supply.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.050 Evidence of Adequate Water Supply Required.

All applicants for a building permit or other development permit requiring potable water must provide evidence of an adequate water supply to the county prior to the issuance of the permit. Applicants for a building permit to improve, repair, or replace a residential structure permitted prior to January 1, 2018 that is served by an existing permit exempt well are exempt from this requirement.

(1) Evidence of the legal availability of water shall be in the form of:

(a) A water right permit from the Department of Ecology, or

(b) A letter from an approved water purveyor stating the ability to provide water, or

(c) A YCWRS domestic well permit, or

(d) Other adequate evidence of interest in a suitable water right held for mitigation purposes by an existing water bank, or

(e) A Yakama Nation Water Code permit for properties located within the exterior boundaries of the Yakama Nation, or

(f) Documentation that the well site is located outside of the Yakima River watershed.

(2) Evidence of the quality of water shall be in the form of:

(a) A letter from an approved water purveyor stating the ability to provide water, or

(b) Notification from the Yakima Health District that the water supply is potable.

(3) Evidence of the quantity of water shall be in the form of:

(a) A letter from an approved water purveyor stating the ability to provide water, or

(b) Notification from the Yakima Health District that the water supply is adequate to meet the intended use.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE III – GENERAL PROVISIONS

12.08.060 Water Meters Installation Required – Costs – Inspection.

All water services to a county owned public water system or to a YCWRS domestic well, connected after January 1, 2018, except fire hydrants and standby fire services, shall be metered and the cost of the water meter and service line installation shall be the responsibility of the property owner being served. All water service connections shall be inspected by the public services director.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.070 Water Meters – Type.

The meter type shall be as specified by the public services director.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.080 Water Meters – Location.

Meters shall be so placed as to render the meters convenient and accessible to the inspection and reading thereof by the county. The right is given and granted to the county to enter all premises where any such meter or meters are placed for the purpose of inspecting and reading the same at all reasonable times.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.090 Water Meters – County Ownership.

All meters, following installation, shall be and remain the property of the county and shall be set and placed for use upon lands and premises or building or structure of the applicant at said applicant's charge and expense.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.100 Water Meters – Protection, Repair and Replacement.

It shall be the responsibility of the customer to protect water meters from damage caused by activities on their property. In the event that such activities result in damage to the meter then the county will repair or replace the meter and the cost thereof shall be borne by the customer.

It shall be the responsibility of the county to protect water meters from damage by freezing. When necessary, a frozen meter will be repaired or replaced by the county and the cost thereof shall be borne by the county.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.110 Water Meters and Valves – Obstruction Prohibited.

(1) No water meter, valve or other appurtenance shall be obstructed in any manner and nothing shall be permitted to block access to said meter, valve or appurtenance.

(2) A 3-foot clear space shall be maintained around the circumference of meters, valves and other appurtenances except as otherwise required or approved by the public services director.

(3) Upon notice from the county, the customer shall within fourteen (14) days remove such obstruction. If the obstruction is not removed within the time required, the county shall remove the obstruction and bill the customer for the actual cost of the work.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.120 Interference with System Prohibited.

(1) No person shall break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is a part of the domestic water system.

(2) Customers shall notify the county in writing prior to making changes to their landscaping which then necessitates the county to make changes to the water system, such as raising or lowering meter boxes, valve boxes, etc. Customers shall reimburse the county for the county's costs to make changes to the water system resulting from the customer's landscaping changes.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.130 Application for Service.

All applications for water service installation shall be made at the office of the public services department on forms furnished by the county, which the applicant shall supplement with such information as deemed necessary by the public services director. All applications shall be made by the owner of the property to be served or his authorized agent, and all accounts shall be in the name of the owner of such property. No person shall make any connection to the domestic water system or add any additional unit to an existing connection without first obtaining a permit as required in this section.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.140 Separate Connection Required for Each Unit.

(1) Each residence, residential unit, individual business, business enterprise or business unit, or industrial enterprise or unit connecting to the domestic water system or using a YCWRS domestic well, shall be considered an individual customer and shall be supplied through a separate service connection, unless modified by the public services director.

(2) Multiple dwelling units, such as apartment complexes, mobile home parks, and duplexes, may be served by a single service connection with a master meter, provided they are on a single tax lot. Multiple dwelling units served by a single meter that later convert to condominiums shall first install individual meters to each dwelling unit.

(3) Individual businesses, business enterprises or business units, or industrial enterprises or units connecting to the domestic water system that are located on more than one tax lot, shall have a separate connection for each tax lot where water is being used, unless modified by the public services director.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.150 Required Connection.

Any building or structure built or moved to within two hundred feet of an existing public water system main water line for the purpose of residential, business, industrial or institutional use after adoption of the ordinance codified in this chapter must connect to and obtain water from the public water system.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.160 Abandonment of Service.

All service installations connected to a public water system that have been abandoned or that have not been used for three years or that for any reason have become useless for further service may be disconnected at the meter by the public services department, and all pipe and appurtenances removed shall be the property of the county.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.170 Building or Property Once Connected Must Continue to Use Public System.

Any building, mobile home or other property connected to the public water system must continue to receive water from the public water system and shall not receive potable water from any other source.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE IV – PUBLIC WATER SYSTEM PROVISIONS

12.08.180 Water Service Pipes and Connections.

All water service pipes and connections, including the stop valve and water meter, shall be placed in the county road right-of-way or utility easement as directed by the public services director, and shall be furnished, installed and maintained by and under the exclusive control and supervision of the public services director. The property owner shall be solely responsible for maintaining the water line on the building side of the water meter box.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.190 Private Water Lines – Permitted When – Construction Standards.

Water connections by construction of private water lines to the public water system shall be constructed in conformance with the applicable county water line construction standards in effect. Private water lines will only be allowed when approved by the public services director when the public services director determines that the impact to the existing water system is insignificant.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.200 Private Water Lines – Regulations.

All private water lines shall be installed, owned and maintained by the customers and the County shall have no duty to repair or replace such mains or lines. Water meters on private water lines shall be placed, installed and maintained as directed by the Public Services Director, and shall remain the property of the County regardless of location. Private water lines used for fire protection service lines shall include all piping downstream of the County's tee and isolation valve supplying the fire protection service line, including the piping between the County's isolation valve and the customer's backflow assembly.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.210 Authority to Shut Off and Repair Private Water Lines.

The public services director is directed and authorized to immediately shut off all private water lines whenever such water lines develop leaks or their condition is such as to constitute a danger to the domestic water supplies of the county. Such private water lines shall remain shut off until properly repaired or replaced by the owner. In the event of leaks or defects on service lines connected to the private water line or on any portion of private water lines, such repairs and replacements as may be necessary shall be accomplished by and at the sole expense of the customers or owner of the property to which the service is provided, subject to the supervision and final approval of the public services director.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.220 Authority to Shut Off and Repair Public Water Lines.

The public services director is directed and authorized to immediately shut off all public water system lines whenever such water lines develop leaks or their condition is such as to constitute a danger to the drinking water supplies of the county. Such water lines shall remain shut off until properly repaired or replaced. All repairs shall be at the expense of the county.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.230 Fire Hydrants – Operation.

No person other than an authorized employee of county public services or the fire department shall operate fire hydrants or interfere therewith in any way without first obtaining authority to do so from the public services department. Fire hydrants on private water lines shall be operated by the county, and all necessary easements to access and operate the fire hydrants shall be granted to the county. All maintenance costs of the hydrants shall be the responsibility of the owner of the private water line.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.240 Fire Hydrants – Obstruction Prohibited.

(1) No fire hydrant shall be obstructed in any manner and nothing shall be permitted to block access to said fire hydrant within fifteen feet thereof.

(2) A 3-foot clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved by the public services director.

(3) Upon notice from the county, the customer shall within fourteen (14) days remove such obstruction. If the obstruction is not removed within the time required, the county shall remove the obstruction and bill the customer for the actual cost of the work.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.250 Pipe Depth Below Ground.

All new service lines shall be placed not less than thirty inches below the surface of the ground.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.260 Responsibility for Leaks and Damages.

Owners of service lines are responsible for all leaks or damages to the lines. Privately owned services shall be deemed to include all domestic service lines between the meter box and consumer's property, and all domestic service lines lying in, on or under the consumer's property.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.270 Cross-Connections – Prohibited – Exception.

Cross-connections between the public water systems and other systems or equipment containing water and other substances of unknown or questionable safety are prohibited, except when and where suitable backflow prevention assemblies, as approved by the public services department, are installed and maintained by the customer and tested by a backflow assembly tester certified by the Washington State Department of Health to ensure proper operation on a continuing basis.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.280 Cross-Connections – Failure to Remedy.

Failure on the part of customers to discontinue the use of any and all cross-connections and to physically separate such cross-connections or install a suitable backflow prevention assembly when ordered to do so by the public services department will be sufficient cause for the discontinuance of water service to the premises on which the cross-connection exists and shall subject the customer to penalties as provided by Section 12.08.680.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.290 Cross-Connections – Inspection.

The county may make periodic inspections of premises served by the water supply to check for the presence of cross-connections. Any cross-connections found in such inspection shall be ordered removed and water service to the premises shall be discontinued until it is verified that the cross-connection has been removed.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.300 Air Gap and Flood Level Specifications for Tanks.

Air gap separation shall be an unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of the receptacle. To be an approved air gap, the separation must be in accordance with WAC 246-290 and be at least:

(1) Twice the diameter of the supply piping measured vertically from the overflow rim of the receiving vessel, and in no case be less than one inch, when unaffected by vertical surfaces (sidewalls); and

(2) Three times the diameter of the supply piping, and in no case less than one and one-half inches, if the horizontal distance between the supply pipe and a vertical surface (sidewall) is less than or equal to three times the diameter of the supply pipe; and

(3) Four times the diameter of the supply piping, and in no case less than one and one-half inches, if the horizontal distance between the supply pipe and two intersecting vertical surfaces (sidewalls) is less than or equal to four times the diameter of the supply pipe.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.310 Double Check Valve Assemblies.

Double check valve assemblies shall be an assembly composed of two single, independently acting check valves, with tightly closing shutoff valves located at each end of the assembly and suitable connections for testing the watertightness of each check valve. Only Washington State Department of Health approved assemblies shall be accepted.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.320 Reduced Pressure Principle Backflow Prevention Assemblies.

A reduced pressure principle backflow prevention assembly shall be an assembly incorporating two or more check valves and an automatically operating differential relief valve located between the two checks, two shutoff valves, and equipped with necessary appurtenances for testing. The assembly shall operate to maintain the pressure in the zone between the two check valves, less than the pressure on the water supply side of the assembly. At cessation of normal flow, the pressure between the check valves shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve shall operate to maintain this reduced pressure by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere, thereby providing an air gap in the assembly. Only Washington State Department of Health approved assemblies shall be accepted.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.330 Backflow Prevention Assemblies – Installation Location.

Backflow prevention assemblies, where required, shall be installed at the meter or at a location designated by the public services director at the expense of the consumer. The assembly shall be located so as to be readily accessible for maintenance and testing, and where no part of the assembly will be submerged.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.340 Backflow Prevention Assemblies – Situations Requiring Assemblies.

Backflow prevention assemblies shall be installed at the service connection or within any premises identified in Section 12.08.350 where, in the judgment of the public services director, the nature and extent of activities on the

premises, or the materials used in connection with the activities, or materials stored on the premises may present an immediate and dangerous hazard to health should a cross-connection occur, even though such cross-connection does not exist at the time the backflow prevention assembly is required to be installed, including, but not limited to, the following situations:

(1) Premises having an auxiliary water supply;

(2) Premises having internal cross-connections that are not correctable; or intricate plumbing arrangements which make it impracticable to ascertain whether or not cross-connections exist;

(3) Premises where entry is restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist;

(4) Premises having a repeated history of cross-connections being established or reestablished;

(5) Premises on which any substance is handled under pressure so as to permit entry into the public water supply, or where a cross-connection could reasonably be expected to occur. This shall include the handling of process waters and cooling waters;

(6) Premises where materials of a toxic or hazardous nature are handled such that, if back siphonage should occur, a serious health hazard may result;

(7) Premises with underground sprinkler systems;

(8) Premises recommended in the latest edition of the Pacific Northwest Section of the American Water Works Association Cross Connection Control Manual.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.350 Backflow Prevention Assemblies – Premises Requiring.

The following types of facilities shall have a backflow prevention assembly installed as provided in Section 12.08.340 unless the public services director determines that no hazard will exist without said assembly:

(1) Hospitals, mortuaries, clinics;

(2) Laboratories;

(3) Piers and docks;

(4) Sewage treatment plants;

(5) Food or beverage processing plants;

(6) Chemical plants using a water process;

(7) Metal plating industries;

(8) Petroleum processing or storage plants;

(9) Radioactive material processing plants or nuclear reactors;

(10) Others specified by the public services director.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.360 Backflow Prevention Assemblies – Determination of Type.

The type of backflow prevention assembly required shall depend on the degree of hazard which exists, as follows:

(1) An air gap separation or a reduced pressure principle backflow prevention assembly shall be installed where the water supply may be contaminated with sewage, industrial waste of a toxic nature, or other contaminant which would cause a health or system hazard;

(2) In the case of a substance which may be objectionable but not hazardous to health, a double check valve assembly, air gap separation or a reduced pressure principle backflow prevention assembly shall be installed.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.370 Backflow Prevention Assemblies – Standards and Inspection.

(1) Backflow prevention assemblies shall be installed by the consumer under the supervision of, and with the approval of, the county at the expense of the consumer.

(2) Backflow prevention assemblies shall be inspected and tested by the public services department at the time of installation, annually after installation, after an assembly is repaired, reinstalled or relocated, or more often where successive inspections indicate repeated failure. Assemblies shall be repaired, overhauled or replaced whenever they are found to be defective. Inspections, tests and repairs and records thereof shall be done under the county's supervision at the expense of the consumer.

(3) In lieu of the public services department inspecting and testing the consumer's backflow assembly, the consumer may elect to contract the inspecting and testing with a backflow assembly tester certified by the Washington State Department of Health at the consumer's expense.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.380 Backflow Prevention Assemblies – Termination of Service for Noncompliance.

Failure of the customer to cooperate in the installation, maintenance, testing or inspection of backflow prevention assemblies required in this chapter shall be grounds for the termination of water service to the premises or the requirements for an air gap separation and shall subject the customer to the penalties provided in Section 12.08.680.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE V – YAKIMA COUNTY WATER RESOURCE SYSTEM PROVISIONS

12.08.390 Applicability.

An applicant for a building permit or land use permit necessitating an adequate water supply determination where potable water is not available from an approved water purveyor may obtain a YCWRS domestic well permit for a permit exempt well as evidence of the legal availability of water up to 5,000 gallons per day, provided the applicant's property is an eligible property as defined in 12.08.400 and further provided that the well is an eligible well as defined in 12.08.410.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.400 Property Eligibility Criteria.

An applicant for a YCWRS domestic well permit for a specific property and use shall go through an eligibility review process. The review process shall include an evaluation of YCWRS water availability for the property and the proposed use of the well. Only those properties located within areas of the county where the YCWRS has water available shall be eligible properties for a YCWRS domestic well permit.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.410 Well Eligibility Criteria.

A permit exempt well on an eligible property may be permitted as a YCWRS domestic well, provided the well meets the well depth standards contained in 12.08.420. In such cases, the applicant for a YCWRS domestic well permit shall provide a well report meeting the requirement of WAC 173-160-141 to the county for a well depth standard evaluation. Upon verification that the well is in compliance with the well depth requirement, the county will issue a YCWRS domestic well permit.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.420 Well Depth Standards.

The YCWRS holds senior water rights and allows the use of such rights by the public when wells are constructed according to YCWRS procedures. Accordingly, all permit exempt water wells permitted as a YCWRS domestic well must be constructed to the water bearing zone as specified by the public services director.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.430 Discontinuance of Well Use – Well Decommissioning.

If a customer using a YCWRS domestic well is later required or elects to connect to a public water system then the well shall be decommissioned in accordance with Chapter 173-160 WAC. It shall be the responsibility of the county to decommission the well and the cost thereof shall be borne by the county.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.440 Limitations on Use.

A YCWRS domestic well permit for a permit exempt well may only be obtained concurrent with a building permit or a land use permit. The amount of water withdrawal permitted shall not exceed 5,000 gallons per day.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE VI – RATES AND CHARGES

12.08.450 Water Connection Permit Charges.

A connection permit charge shall be paid to the county by the person desiring to make such connection, which charges shall be payable at the time application is made for the permit to perform the work and make the connection. Connection permit charges shall apply to all connections, including connections for domestic service and connections for fire protection service. The connection permit charge shall be in accordance with the following schedule:

Meter Size	Buena Water System Connection Permit Charge
3/4" and less	$2,500.00
1"	$2,790.00
1-1/2"	$4,000.00
2"	$5,670.00
3"	$9,670.00
4"	$13,330.00

Meter Size	Terrace Heights Water System Connection Permit Charge
3/4" and less	$2,500.00
1"	$2,790.00
1-1/2"	$4,000.00
2"	$5,670.00
3"	$9,670.00
4"	$13,330.00
6"	$26,990.00
8"	$40,480.00
10"	$53,970.00

Meter Size	Gala Estates Water System Connection Permit Charge
3/4" and less	$4,000.00
1"	$4,460.00
1-1/2"	$6,600.00
2"	$9,060.00

Meter Size	Crewport Water System Connection Permit Charge
3/4" and less	$2,500.00
1"	$2,790.00
1-1/2"	$4,000.00
2"	$5,670.00

Meter Size	YCWRS Domestic Well
3/4" to 1"	$650.00

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.460 Service Installation Charges.

A charge shall be paid to the county by the customer for the installation of a water service, which charge shall be the actual costs incurred, including administration and overhead, for all materials and labor for the installation. The service installation charge shall be payable in the user's next water bill after the installation. Service installation charges shall be in addition to the water connection permit charges.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.470 Ready to Serve Charges.

(1) The minimum monthly ready to serve charge for the Buena water system shall be in accordance with the following table. The amounts shown below are current 2018 charges adjusted annually in accordance with

Section 12.08.550 of this Code.

Meter Size	Buena Water System Ready to Serve Charge
3/4" and less	$11.90
1"	$20.30
1-1/2"	$43.00
2"	$70.90
3"	$160.00
4"	$281.00

(2) The minimum monthly ready to serve charge for the Terrace Heights water system shall be in accordance with the following table. The amounts shown below are current 2018 charges adjusted annually in accordance with Section 12.08.550 of this Code.

Meter Size	Terrace Heights Water System Ready to Serve Charge
3/4" and less	$19.20
1"	$34.30
1-1/2"	$76.80
2"	$136.00
3"	$309.00
4"	$548.00
6"	$1,228.00
8"	$2,188.00
10"	$3,415.00

(3) The monthly service charge for any single-family residential customer in the Terrace Heights water system that does not have a readable meter shall be a flat rate of thirty dollars per month.

(4) The minimum monthly ready to serve charge for the Gala Estates water system shall be in accordance with the following table. The amounts shown below are current 2018 charges adjusted annually in accordance with Section 12.08.550 of this Code.

Meter Size	Gala Estates Water System Ready to Serve Charge
3/4" and less	$32.20
1"	$39.30
1-1/2"	$88.80
2"	$151.00

(5) The 2018 minimum monthly ready to serve charge for the Crewport Water System shall be $43.70 per month for a 3/4-inch connection. The minimum monthly ready to serve charge shall be adjusted annually in accordance with Section 12.08.550 of this Code.

(6) The minimum monthly ready to serve charge for small satellite water systems with 14 or less connections shall be in accordance with the following table. The amounts shown below are current 2018 charges adjusted annually in accordance with Section 12.08.550 of this Code.

Water System	Minimum for Undeveloped Lot	Minimum for Developed Lot
Beckon Ridge	$14.40	$39.90
Bittner	$16.30	$125.00
Bonair	$14.80	$43.10
Buchanan	$16.30	$53.50
Fairway Estates	$11.10	$54.30
Gibson	$11.60	$34.00
Heysman	$14.40	$33.20
Horizon	$13.00	$42.00
Huntzinger	$11.70	$44.50
Kodiak	$11.10	$27.70
Meadowbrook	$12.10	$39.70
Nagler	$11.60	$34.90
Norman	$14.40	$46.50
Oliver	$13.00	$37.00
Pleasant View	N/A	$54.00
Raptor	$14.40	$46.50
Ray Symmonds	$16.10	$52.10
Speyers	$14.40	$46.50
Star Crest	$11.70	$52.70
Stein	$11.40	$33.10
Wendt	$18.30	$48.90
Wiseacre	$14.40	$39.90

(7) The 2018 minimum quarterly ready to serve charge for a YCWRS domestic well shall be $35.00 per quarter. The minimum quarterly ready to serve charge shall be adjusted annually in accordance with Section 12.08.550 of this Code.

(8) Ready to serve charges and flat rate monthly service charges shall not apply when water service is suspended following disconnection for nonpayment of delinquent charges or when suspension of service is requested by the customer, if the disconnection or suspension is for an entire billing cycle, and if the connection is not on a small satellite water system with 14 or less connections.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.480 Water Consumption Charges.

(1) For water delivered based upon monthly meter readings or estimated water consumption, the water consumption charge shall be computed at the following rates per one hundred cubic feet or prorated to portions thereof of water consumption. Rates shown below are current 2018 charges adjusted annually in accordance with Section 12.08.550 of this Code.

Water System	Rate Per 100 Cubic Feet
Buena water system	$1.10/100cf
Terrace Heights water system	$1.58/100cf (first 1,000cf)
	$1.75/100cf (second 1,000cf)
	$1.92/100cf (over 2,000cf)
Gala Estates water system	$3.84/100cf (first 1,000cf)
	$4.28/100cf (second 1,000cf)
	$4.89/100cf (over 2,000cf)
Crewport water system	$0.71/100cf (first 1,000cf)
	$0.83/100cf (second 1,000cf)
	$0.95/100cf (over 2,000cf)
Oliver Drive water system	$1.00/100cf

(2) Consumption charges for small water systems not listed in subsection (1) of this section with 14 or less connections shall be computed based on monthly service meter readings if the source meter at the well indicates the source is producing more than allowed for an exempt well (5,000 gallons per day). Consumption charges shall not apply if the well is producing less than 5,000 gpd.

When applicable, water consumption charges for small water systems with 14 or less connections shall be computed at the rate of one dollar ($1.00) per one hundred cubic feet, or prorated to portions thereof, for water consumption in excess of the volume included in the minimum ready to serve charge.

Water System	Volume Included in Ready to Serve Charge
Beckon Ridge	2,500 cf
Bittner	5,010 cf
Bonair	3,340 cf
Buchanan	2,500 cf
Fairway Estates	2,500 cf
Gibson	3,340 cf
Heysman	2,500 cf
Horizon View*	2,500 cf
Huntzinger	5,010 cf
Kodiak	2,500 cf
Meadowbrook	3,340 cf

Water System	Volume Included in Ready to Serve Charge
Nagler	2,860 cf
Norman	2,500 cf
Oliver	0 cf
Pleasant Hill*	2,500 cf
Raptor	3,340 cf
Ray Symmonds	3,340 cf
Speyers	2,860 cf
Star Crest	6,680 cf
Stein	2,500 cf
Wendt	2,500 cf
Wiseacre	2,860 cf

(3) For water delivered annually based upon meter readings, the water consumption charge for a YCWRS domestic well shall be computed at the following rates per 100 cubic feet or prorated to portions thereof of water consumption. Rates shown below are current 2018 charges adjusted annually in accordance with Section 12.08.550 of this Code.

Water System	Rate Per 100 Cubic Feet
YCWRS Domestic Well	$0.36/100 cf (first 17,000 cf)
	$1.86/100 cf (from 17,000 cf to 50,000 cf)
	$2.48/100 cf (from 50,000 cf to 100,000 cf)
	$3.72/100 cf (from 100,000 cf to 200,000 cf)
	$4.34/100 cf (over 200,000 cf)

(Ord. 13-2017 (Exh. A) (part), 2017).

* Code reviser's note: Information concerning Horizon View and Pleasant Hill was inadvertently omitted in Ordinance 13-2017. Entries have been included to reflect the intent of the county.

12.08.490 Fire Protection Service Charge.

A monthly fire protection service charge shall be paid to the county for fire protection service received from the public water system when the fire protection service is delivered from a private unmetered water line. The minimum monthly fire protection service charge for the Terrace Heights and Buena water system shall be in accordance with the following table. The amounts shown below are current 2018 charges adjusted annually in accordance with Section 12.08.550 of this Code.

Private Water Line Size	Terrace Heights and Buena Water System Fire Protection Service Charge
2"	$37.00
3"	$86.00

Private Water Line Size	Terrace Heights and Buena Water System Fire Protection Service Charge
4"	$155.00
6"	$346.00
8"	$615.00
10"	$960.00

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.500 Total Monthly or Quarterly Charge.

The total monthly or quarterly charge shall be the sum of the ready to serve charge (Section 12.08.470), the water consumption charge (Section 12.08.480), the fire protection service charge (Section 12.08.490), and any other miscellaneous charges described within this chapter.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.510 Charge for Turning on After Turnoff for Nonpayment or New Account.

(1) A prepaid thirty-five-dollar service charge shall be required for the establishment of new accounts at existing connections and the establishment of temporary services.

(2) A prepaid thirty-five-dollar service charge shall be required for resumption of water service following disconnection for nonpayment of delinquent charges, when resumption of water service is requested during normal business hours (8:00 a.m. to 5:00 p.m., Monday through Friday, excluding holidays). If resumption of water service is requested outside of normal business hours, the service charge shall be seventy dollars.

(3) The service charge for resumption of water service following disconnection for nonpayment shall apply once the county arrives at the property to turn the water off for nonpayment. If the customer agrees to make payment within one business day, then the county shall leave the water on and include the service charge for resumption of water service on the customer's bill. If the customer fails to make payment within one business day, then the county shall disconnect the service and charge an additional service charge for resumption of water service when water service is restored.

(4) A thirty-five-dollar service charge shall apply for resumption of water service when disconnection of water service was requested by the customer due to a leak on the customer's side of the meter and the customer did not have a shut-off valve to isolate the leak. If resumption of water service is requested outside of normal business hours, the service charge shall be seventy dollars. The service charge will be waived if the customer installs a shutoff valve before water service is returned, or, if the leak is in the service line, and the customer replaces the service line.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.520 Charges for Premises Supplied Through More Than One Meter.

Where an individual customer is supplied with water through more than one metered service, charges shall be computed separately for each individual meter.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.530 Backflow Prevention Assembly Inspection Charges.

(1) Backflow prevention assembly inspection and testing, as required under Section 12.08.370 of this chapter, shall be thirty-five dollars per assembly.

(2) Repairs made to backflow prevention assemblies shall be performed by the property owner or a licensed plumber at the property owner's expense. The property owner or licensed plumber shall provide written notification of completion of repairs and request an inspection and/or test upon completion of the work.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.540 Temporary Water Use Charges.

(1) Water furnished through a temporary service shall be measured by a meter furnished by the county. A rental charge of five dollars ($5.00) per day shall apply for each day the meter is charged out to the customer, regardless of the number of days the meter is actually used.

(2) In addition to the daily rental charge, the customer shall pay the county for the volume of water furnished through a temporary service in accordance with the consumption charges included in Section 12.08.480 and as adjusted by Section 12.08.550 of this chapter.

(3) The customer shall provide a damage deposit of two hundred fifty dollars ($250.00) for the use of a hydrant meter. The customer shall return the hydrant meter in the same state of repair as when furnished to the customer by the county, or shall be responsible to the county for the actual cost of any repair, or the replacement cost of the hydrant meter in the event of its destruction or loss.

(4) Temporary services used to fill a water tank shall be inspected by the county for proper backflow prevention at the customer's expense. A backflow prevention assembly inspection charge as provided in Section 12.08.530 shall apply.

(5) When a temporary service is used to fill a water tank that is not equipped with a proper air gap or backflow prevention assembly, then the service shall be equipped with a double check valve assembly furnished by the county. A rental charge of one dollar ($1.00) per day shall apply for each day the assembly is charged out to the customer, regardless of the number of days the assembly is actually used.

(6) The customer shall provide a damage deposit of fifty dollars ($50.00) for use of a double check valve assembly. The customer shall return the assembly in the same state of repair as when furnished to the customer by the county, or shall be responsible to the county for the actual cost of any repair, or the replacement cost of the assembly in the event of its destruction or loss.

(7) Prior to the installation of a temporary service, the customer shall sign an application agreeing to the terms and conditions of this section.

(8) No charge shall be made for water supplied through fire hydrants when the water is used for fire suppression or for maintenance and operation purposes by the county.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.550 Annual Charge Adjustment.

The Public Services Director shall annually determine a water system's financial ability to meet its annual operating expenses and required fund reserves in comparison to the system's annual revenue received from the system's ready to serve charges, consumption charges, and fire protection service charges. The Public Services Director's findings will be presented to the Board of Yakima County Commissioners on or before September 1st of

each year. The findings shall include a recommendation for any charge adjustment deemed necessary for a system to meet its annual operating expenses and required system fund reserves.

The Board of Yakima County Commissioners may adjust by resolution a system's ready to serve charges, consumption charges, and fire protection service charges annually up to the seasonally adjusted Consumer Price Index (CPI) as published by the U.S. Bureau of Labor Statistics for water and sewerage maintenance in the closest applicable area. Such adjustments shall be effective as of January 1st of each year, and shall be based on increases in the CPI for the previous calendar year.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.560 Returned Check Charges.

Checks returned due to insufficient funds shall result in an additional charge of ten dollars ($10.00) per occurrence. The ten-dollar charge will be in addition to applicable county treasurer charges.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE VII – BILLING AND COLLECTION

12.08.570 Accounts – Collection Responsibility.

All accounts shall be kept in the office of the county public services department under the name of the property owner and the tenant or occupant if so requested and approved. The public services director shall collect all fees and charges provided for by this chapter.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.580 Billing.

Billing shall be done on a monthly basis for water service provided by the county from a public water system during the preceding month. Billing shall be done on a quarterly basis for water service provided by the county from a YCWRS domestic well during the preceding quarter. Bills and other notices shall be sent to the address of the property owner, provided that the public services director may, upon written request of the property owner, cause bills and notices to be sent to the tenant or other occupant of the property served. Deposit of the bill or notice in the U.S. mail, with postage prepaid and addressed to the owner of the property, or other addressee if requested by the owner, shall be evidence of receipt of the bill or notice by the customer.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.590 Single Billing for Each Connection and Meter.

(1) Where two individual customers are supplied with water through one meter, the individual who applies for service shall be responsible for all charges. If the meter is 3/4-inch or smaller and serves two homes, the bill shall be computed with two 3/4-inch ready to serve charges. If the meter is 1-inch or larger, the bill shall be computed with one ready to serve charge.

(2) When more than two individual customers are supplied with water through one meter, the individual who applies for service shall be responsible for all charges and the bill shall be computed as described in Section 12.08.500 of this chapter, and the bill shall include one ready to serve charge based on the size of the meter.

(3) All new services providing water to two individual residential customers on one tax lot shall be a minimum 1-inch diameter. The minimum diameter of all other new services providing water to more than one individual customer on one tax lot shall be based on an engineering study by the public services director that takes into consideration estimated peak demands and the normal flow range of the meter.

(4) For purposes of this section, each one-family dwelling unit and each dwelling unit in a two-family or multiple dwelling unit shall constitute one individual customer. Each individually housed business or commercial enterprise shall constitute one customer. Further, for purposes of this section, each separate mobile home site within a mobile home court, park or other mobile home complex shall constitute one individual customer.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.600 Liability for Charges.

The owner of the premises to which water services are provided shall be responsible for all fees and charges.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.610 Due and Delinquency Dates.

All charges for water service shall be due and payable on the date of billing and shall become delinquent 21 days from the date of the billing. If the charges remain delinquent and unpaid for a period of forty-five days following the delinquency date, the public services director shall certify the delinquency to the county treasurer and cause a notice of suspension of service to be sent to the property owner and the tenant or other occupant.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.620 Delinquency Charge.

(1) If the charges for water service are not paid by the delinquency date, then there shall be added to the charges a one-time late payment penalty of ten percent (10%) of the previous month's delinquent charges, and interest shall then be attached and accrue on all unpaid charges computed at a rate of eight percent (8%) per annum starting on the next day after the delinquency date until paid. Interest shall be computed on the entire unpaid balance, excluding lien certification costs, whereas the one-time late payment penalty shall only apply to charges accrued during the previous month.

(2) A partial payment on any delinquent charges shall first be applied to the oldest unpaid bills.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.630 Lien for Delinquent Charges.

(1) All charges for water connections and service as provided in this chapter together with penalties and interest thereon shall be a lien upon the property served. The lien shall be superior to all other liens and encumbrances, except general taxes and local and special assessments of the county.

(2) The public services director shall periodically certify delinquencies to the county treasurer at which time the lien shall attach. Upon expiration of sixty days after the attachment of the lien, the county may bring suit in foreclosure by civil action in superior court. The lien shall be foreclosed in the same manner as the foreclosure of real property taxes.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.640 Suspension of Service – Hearing Procedure.

(1) As an additional and concurrent method of enforcing the county's lien for water service charges, the public services director is authorized and directed to suspend service to any premises for which the charges remain unpaid for a period of fourteen days from the date on which the written notice of suspension was served upon or mailed to the property owner and tenant or other occupant. Such notice shall state the date upon which service will be suspended, the amount of delinquent charges, and that the customer may request in writing a hearing

before the public services director or his designee to contest the suspension, provided such request is received prior to the suspension date set in the notice of suspension.

(2) Upon timely receipt of a request for a hearing, the public services director or his designee shall conduct a hearing, and the customer requesting the hearing shall be notified in writing of the date, time and place of such hearing. Pending the outcome of the hearing, no service shall be suspended. The customer shall be notified in writing of the decision prior to suspension of service.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.650 Suspension of Service – Exceptions.

Suspension of service for nonpayment shall only apply to customers in which the total unpaid charges are more than $200.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.660 Adjustment for Water Leakage.

(1) Adjustments for the billing of water consumption based upon a water loss resulting from a leak or leaks in any portion of the water system within the customer's property may be made one time per calendar year, at the discretion of the Public Services Director.

(2) Prior to receiving a billing adjustment for water losses resulting from leaks in the customer's system, the customer shall:

(a) Cause all leaks to be repaired as soon as possible after being discovered.

(b) File a written request for billing adjustment in which the cause of the water loss and the repair or repairs made to the customer's system are described.

(c) Provide copies of the plumbing bill or cost of defective parts indicating that the leaks causing the water loss have been repaired.

(d) Provide evidence that the repairs for leaks have been made on the premises receiving water service.

(3) If it is determined by the public services director that a water loss has occurred by reason of a leak or leaks in the customer's system, and the customer has complied with the procedures set forth in this section, then an adjustment shall be calculated in accordance with the following criteria and credited to the customer's account.

(a) The public services director shall determine the amount of water consumed by the customer during the period of water loss in excess of the average amount of water used for the same period in the previous two years.

(b) The adjustment shall be calculated as 50% of the difference between the amount of water consumed during the period of water loss and the average amount of water used for the same period in the previous two years.

(c) In no case shall the leak adjustment exceed $200.00.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE VIII – VIOLATION – PENALTY

12.08.670 Public Nuisance Violations Designated.

The violation of Sections 12.08.150, 12.08.170, 12.08.250, 12.08.270 and 12.08.690 of this chapter is declared to be a public nuisance and shall be subject to prevention or abatement in an action at law or equity to the same extent as are other public nuisances.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.680 Violation – Penalty.

The violation of the provisions of this chapter or the failure to comply with any requirements except those referred to in Section 12.08.640 of this chapter constitutes a misdemeanor punishable by a fine of not more than one thousand dollars or imprisonment in the county jail for not more than ninety days, or both.

(Ord. 13-2017 (Exh. A) (part), 2017).

ARTICLE IX – MISCELLANEOUS REGULATIONS

12.08.690 Use to Comply with Regulations.

No person connected to the water system shall supply water therefrom to any other person or persons, firm or corporation.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.700 Inspection by County.

Authorized persons of the county shall have free access at all reasonable times to all parts of the buildings, structures and premises supplied with water from the system of the county, for the purpose of inspecting the condition of water pipes and fixtures used, the manner in which they are being used and the purpose for which they are being used.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.710 Temporary Shutoff.

The county reserves the right to shut off the water without notice. This may be done in order to make repairs, extensions, or for nonpayment of charges, or in case of an accident to any part of the water system or for any other purpose, and the county shall not be responsible for any damage resulting from the shutting off of said water. There shall be no remission of the service charge for such activity.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.720 Limit of Water Use During Shortages.

The county reserves the right in case of shortage of water to forbid or limit the use of water. Such a limitation may be made at any time and, when printed in the county's official paper, broadcast over a local radio station or served in writing upon the customers, shall be deemed as sufficient notice thereof.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.730 Transfer of Service.

Should any property owners desire to transfer their water service to a new owner or tenant, they shall notify the public services director, stating the date of transfer.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.740 Disconnection Procedure.

Should any property owners desire to have their water service disconnected, they shall give notice thereof to the public services director stating the date of disconnection. Resumption of service will be subject to the established reconnection fee as specified in Section 12.08.510 of this chapter.

(Ord. 13-2017 (Exh. A) (part), 2017).

12.08.750 Extension of System.

(1) All water line extensions shall extend the entire distance between opposite boundaries of the property to be served unless modified by the public services director.

(2) All water line extensions shall be located within public right-of-way unless the public services director determines it is necessary to construct the water lines on easements across private property.

(3) The applicant requesting the extension will be responsible for the design and construction of the extension.

(4) The county may require a larger main to be installed than needed for the applicant’s service requirements. When it does so, the county will bear the additional material costs of the extension.

(5) The applicant will be responsible for reimbursing the county for water quality tests submitted by the county to determine if the extension has been satisfactorily flushed and disinfected.

(6) The applicant requesting the extension shall be responsible for a warranty period of one year after acceptance of the extension for failures of materials or workmanship.

(Ord. 13-2017 (Exh. A) (part), 2017).

Appendix H

Cross Connection Control Program, List of Backflow Assemblies and Annual Summary Report for Year 2016

Cross Connection Control Program

Requirement for Program

Yakima County has the responsibility to protect the Buena Water System from contamination due to cross connections. A cross connection may be defined as *"any actual or potential physical connection between a potable water line and any pipe, vessel, or machine that contains or has a probability of containing a non-potable gas or liquid, such that it is possible for a non-potable gas or liquid to enter the potable water system by backflow."*

All public water systems are required to develop and implement cross-connection control (CCC) programs. The CCC requirements are contained in Washington Administrative Code (WAC) 246-290-490 of the Group A Drinking Water Regulations. The minimum required elements of a CCC program are:

1. Establishment of legal authority and program policies;
2. Evaluation of premises for cross-connection hazards;
3. Elimination and/or control of cross connections;
4. Provision of qualified personnel;
5. Inspection and testing of backflow preventers;
6. Quality control of testing process;
7. Response to backflow incidents;
8. Public education for consumers;
9. Record keeping for CCC program; and
10. Special requirements for reclaimed water use.

Other CCC program requirements include:

1. Coordination with the Local Administrative Authority (LAA), i.e., the local building or plumbing official regarding CCC activities;
2. Prohibition of the return of used water into the public water system (PWS) distribution system; and
3. Inclusion of a written CCC program in a Water System Plan (WSP) or a Small Water System Management Program (SWSMP).

Program Objectives

The objectives of the CCC program are to:

1. Reasonably reduce the risk of contamination of the public water distribution system; and
2. Reasonably reduce the Purveyor's exposure to legal liability arising from the backflow of any contaminant originating from the customer's plumbing system and then supplied to other customers.

Summary of Program Decisions

The following table summarizes the major policy and program decisions adopted for the County.

The items in the table represent CCC program areas that have more than one acceptable approach or option.

Table 1 CCC Program Decision Summary	
Decision Item	**Decision**
1. Type of Program [General, WAC 246-290-490(2)(e)]	
a. Premises isolation only	☐
b. Premises isolation and in-premises protection (combination program)	☑
2. Extent of Coordination with LAA [WAC 246-290-490(2)(d)]	
a. Information exchange	☐
b. Interaction	☑
c. Joint program	☐
3. Relationship with Customer [Element 1]	
a. Signed service agreement or contract	☐
b. Ordinance/resolution; implied service agreement	☑
4. Enforcement of Corrective Action [Element 1]	
a. Rely upon shut-off of water service	☑
b. Rely upon purveyor-installed premises isolation	☐
5. Assessment and Re-assessment of Hazard [Element 2]	
a. By purveyor's staff or equivalent	☑
b. By cross-connection control specialist (CCS) employed by customer; report reviewed by purveyor's CCS	☐
6. Location and Ownership of Premises Isolation Assembly [Element 3]	
a. On purveyor's service line	☐
b. On customer's service line	☑
7. CCS Option – Purveyor's Program Management [Element 4]	
a. Purveyor's staff member certified	☑
b. Inter-agency agreement or use other agency's CCS	☐
c. Contract with consultant CCS	☐
8. Testing of Assemblies [Element 5]	
a. By purveyor's staff or purveyor-employed backflow assembly tester (BAT)	☑
b. By customer-employed (contractor) BAT	☐
9. Cost Recovery [WAC 246-290-100(4)(h) and –105(4)(p)]	
a. Borne by all customers (general water rates)	☐
b. Assessed to specific class (commercial meters)	☐
c. Each customer directly bears cost	☑

Required Elements of Program

The drinking water regulations for Group A public water systems in Washington, WAC 246-290, require CCC programs to include certain minimum elements. The elements are listed in WAC 246-290-490(3). This section describes how the County intends to comply with each of the required program elements. Elements are numbered the same as they appear in the WAC.

Element 1: *Adoption of a written legal instrument authorizing the establishment and implementation of a CCC program.*

Yakima County's Water System Code (Chapter 12.08) establishes the legal authority for the County to implement a CCC program. The Code also describes the operating policies and technical provisions of the program, and describes the corrective actions used to ensure that customers comply with the program.

Element 2: *Development and implementation of procedures and schedules for evaluating new and existing service connections to assess the degree of hazard.*

1. **New Service Connections**

   A Yakima County CCS inspects all **new non-residential services** for cross connections before service is provided. The inspection is included in the connection permit fee. As an alternative to allowing an inspection, the customer may agree to install an approved air gap (AG) or RPBA for premises isolation as a condition of service.

   New residential services have not historically been inspected prior to receiving service, since it is often after the residence is receiving service that underground sprinkler systems, swimming pools and spas are installed. Yakima County will begin requiring the customer to submit with the application for water service a completed "Water Use Questionnaire" (copy shown on page 12). If the customer's questionnaire indicates special plumbing or water use on the premises, the customer will be required to install the appropriate backflow prevention assembly.

2. **Existing Service Connections**

   A hazard assessment of each customer was initially completed in 1995 to verify the hazard and the presence, absence, type, and condition of any cross connection control assemblies.

   For subsequent cross-connection hazard surveys, procedures for evaluating the backflow prevention requirements are:

   - For all **non-residential services**, the County will conduct a hazard re-assessment by a DOH-certified CCS. The CCS may be a County employee or a contracted CCS. The County will consider revising their Water Code to include a charge for hazard reassessments.
   - For **residential services,** the County will require the customer to submit to the County, within two months of County notification, a completed "Water Use Questionnaire." The County will conduct a hazard re-assessment by a DOH certified CCS if the customer does not submit the Questionnaire.

   Residential customers are notified of the need for a backflow assembly if they are found to be installing an underground sprinkler system. Utility locate requests are checked and

if the work involves the installation of underground sprinkler systems then the customer is contacted.

Regular reassessments have not been completed on each customer in the past. A proposed schedule for the reassessments is included in Table 2.

Table 2
Hazard Re-Assessment Schedule

Hazard Description	Schedule
Customers assessed as a high health hazard (Table 9) and protected by a premise isolation air gap or RPBA.	None required as long as the RPBA passes annual tests and inspections.
Nonresidential customers.	Within 3 years and upon change of use, ownership, or plumbing.
Residential customers.	Within 5 years.
Comments: 1. RPBA means reduced pressure backflow assembly. 2. Residential customers may be mailed a questionnaire.	

Element 3: *Development and implementation of procedures and schedules for elimination and/or control of cross-connections.*

1. Backflow Preventer Requirements

Backflow prevention assemblies, where required, shall be installed at the meter or at a location designated by the County's CCS at the expense of the customer. The assembly shall be located so as to be readily accessible for maintenance and testing, and where no part of the assembly will be submerged. All high hazard connections of the type described in Table 9 of WAC 246-290-490 shall be isolated with an air gap or RPBA.

Customers with special plumbing or water use on the premises will be isolated with a DCVA. "Special plumbing" includes, but is not limited to, the following:

- A lawn irrigation system;
- A solar heating system;
- An auxiliary source of supply, e.g., a well or creek;
- Piping for livestock watering, hobby farming, etc.; and
- Residential fire sprinkler system.

2. Approved Backflow Preventers and Installation

All backflow preventers relied upon by the County to protect the public water system shall meet the definition of "approved backflow preventer" as contained in WAC 246-290-010. The County will obtain and maintain a current list of assemblies approved for

installation in Washington State from the DOH Office of Drinking Water. All backflow preventers will be installed in:

- The orientation for which they are approved;
- A manner and location that facilitates their proper operation, maintenance, and testing or inspection;
- A manner that will protect them from weather-related conditions such as flooding and freezing; and
- Compliance with applicable safety regulations.

Installation standards contained in the most recently published edition of the Pacific Northwest Section, American Water Works Association (PNWS-AWWA) *CCC Manual* or the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USCFCCCHR) *CCC Manual* shall be followed unless the manufacturer's requirements are more stringent.

The County has no regulatory responsibility or authority over the operation of the customer's plumbing system. The customer is solely responsible for compliance with all applicable regulations and for prevention of contamination of his plumbing system from sources within his/her premises. Any action taken by the County to survey plumbing, inspect or test backflow prevention assemblies, or to require premises isolation (installation of DCVA or RPBA on service) is solely for the purposes of reducing the risk of contamination of the County's distribution system.

3. Schedule for Installation of Backflow Preventers

The following table shows the schedule that the County will follow for installation of backflow preventers when they are required (based on the hazard evaluation).

Table 3
Backflow Assembly Installation Schedule

Hazard Description	Schedule
New connections with cross-connection hazards.	Before service is initiated.
Existing connections with Table 9-type hazards and other high cross-connection hazards.	Within 90 days after Notification.
Existing connections with other than Table 9 of WAC 246-290-490 or high cross-connection hazards.	Within 180 days after notification.
Existing fire protection systems using chemicals or supplied by unapproved auxiliary water source.	Within 90 days after notification.
Existing fire protection systems not using chemicals and supplied by purveyor's water.	Within 1 year after notification (suggested).
Customers where in-premises backflow assemblies are relied upon by County.	Within 1 year.

Element 4: *Provision of qualified personnel, including at least one person certified as a CCS, to develop and implement the CCC program.*

1. Provide Qualified Personnel

Yakima County must ensure at least one person is certified as a Cross Connection Control Specialist to develop and implement the Cross Connection Control Program. The County meets this requirement by requiring the Utilities Supervisor and each of the Utility Maintenance Technicians to be certified as a Cross Connection Control Specialist. The Utilities Supervisor is responsible for implementing the Cross Connection Control Program.

As an alternative, or when no staff or employees are properly qualified, the County may retain a DOH-certified CCS on contract to provide the necessary expertise and services.

2. Cross Connection Related Tasks

The following cross-connection related tasks will be performed by or under the direction of the certified CCS (on staff or under contract):

- Preparation of and recommendations regarding changes to the CCC program;
- Performance of and/or reviews of CCC hazard evaluations;
- Recommendations on the type of backflow preventer to be installed;
- Recommendations on schedules for retrofitting of backflow preventers;
- Inspections of backflow preventers for proper application and installation;
- Reviews of backflow preventer inspection and test reports;
- Reviews of backflow testing quality control information;
- Recommendations and/or the granting of exceptions to mandatory premises isolation;
- Participation in or cooperation with other water utility staff in the investigation of backflow incidents and other water quality problems;
- Completion of Backflow Incident Reports; and
- Completion of CCC Activity and Program Summary Reports.

3. Other Tasks

The County may delegate other CCC program activities to other personnel who are not certified CCSs, including clerical support staff. These activities include:

- Administration of paperwork associated with service agreements;
- Mailing, collecting, and initial screening of hazard evaluation/water use questionnaires;
- Mailing of assembly testing notices;
- Receiving and screening of assembly testing reports;
- CCC program database administration and record keeping; and
- Dissemination of public education material.

Element 5: *Development and implementation of procedures to ensure that approved backflow preventers are inspected and/or tested (as applicable).*

1. Inspection and Testing of Backflow Preventers

Each year Yakima County contracts with a certified Backflow Assembly Tester (BAT) to inspect and test all of the backflow preventers relied upon for protection of the water system. This includes backflow preventers installed for in-premises protection. Customers are then billed for the inspection and testing. Customers are also provided the opportunity to contract with a certified BAT to inspect and test their assembly. Assemblies are to be inspected and tested at the following intervals:

- At the time of installation;
- Annually after installation;
- After a backflow incident; and
- After an assembly is repaired, reinstalled, or relocated.

The County may require a backflow preventer to be inspected and/or tested more frequently than once a year, when it protects against a high-health hazard or when it repeatedly fails tests or inspections.

2. Approved Test Procedures

The County requires all assemblies be tested in accordance with DOH-approved test procedures as specified in WAC 246-290-490(7)(d). Any proposal to use alternate test procedures must be approved by the County's CCS.

3. Notification of Inspection and/or Testing

The County will notify in writing all customers who own backflow preventers that the County has contracted with a BAT to inspect and test their backflow preventer(s). Notices include the BAT's name, an estimate of when the inspection and testing will take place, and a statement that the BAT will have identification available upon request.

4. Enforcement

When a customer refuses to allow a BAT to inspect and test their backflow preventer, then the County will contact the property owner to explain the need for inspecting and testing their backflow preventer. If the customer continues to refuse inspection and testing of the backflow preventer, and refuses to contract with a BAT to inspect and test the assembly, then the County will take the following enforcement action:

- The County will send a notice giving the customer 30 days to arrange for a BAT to inspect and test their backflow preventer, and send in the inspection/test report.
- If the customer has not sent in the inspection/test report within the due date given in the first notice, the County will send a second notice, by certified mail, giving the customer an additional 15 days to send in the report. The notice will also

inform the customer that failure to satisfactorily respond to this notice will result in water service shut-off.

- The County will send copies of the second notice to the owner and occupants of the premises (if different from the customer).
- If the owner and/or occupants have not responded satisfactorily to the County within the due date specified in the second notice, the County will implement water service shut-off procedures.

Element 6: *Development and implementation of a backflow prevention assembly testing quality assurance/quality control program.*

1. Request for Proposals

Each year the County requests proposals from certified BATs to test the backflow prevention assemblies in the system. As part of the proposal, the BATs are required to submit a copy of the following:

- Evidence of current DOH certification in good standing;
- Make and model of testing equipment;
- Evidence of test equipment verification of accuracy and/or calibration within the past 12 months;
- Insurance certifications;
- Evidence of current contractor registration in the State of Washington under RCW 18.27.

2. List of Pre-Approved BATs

The County will maintain a list of local, DOH-certified BATs that are pre-approved by the County to perform the following activities:

- Backflow preventer inspection for proper installation; and
- Backflow assembly testing.

The list will be revised annually or more frequently if necessary.

3. Pre-Approval Qualifications

BATs who wish to be included on the County's preapproved list and/or provide testing in the County's service area must apply to the County and furnish the following information:

- Evidence of current DOH certification in good standing;
- Make and model of testing equipment;
- Evidence of test equipment verification of accuracy and/or calibration within the past 12 months;

The County will consider the inclusion of the applicant on a current list of pre-approved CCSs or BATs issued by the City of Yakima or another public water system with more than 1,000 connections having similar quality assurance requirements as sufficient evidence of qualification to be included on the County's pre-approved list.

4. Quality Assurance

The County's CCS will review within 30 days of receipt the backflow preventer inspection/test report forms submitted by the customer. The County's CCS may accept reports that are signed by a CCS or BAT not on the preapproved CCS or BAT list provided that the same information as listed in "Pre-Approval Qualifications" is also submitted to the County.

The County's CCS will provide follow up on test reports that are deficient in any way.

The County's CCS will report incidences of fraud or gross incompetence on the part of any BAT or CCS to DOH Operator Certification program staff.

Element 7: *Development and implementation (when appropriate) of procedures for responding to backflow incidents.*

Response procedures should a backflow incident occur include the following:

a. Notify water system personnel.
b. Isolate the source of the contamination and the affected area.
c. Notify the affected customers and the Department of Health in accordance with the Drinking Water Regulations based on the contaminant involved.
d. Flush and disinfect all contaminated lines.
e. Collect water samples as appropriate.
f. Apply corrective measures to prevent future backflow incidents.

Element 8: *Development and implementation of a cross-connection control public education program.*

1. Customer Education

Yakima County will distribute with water bills or some other means, at regular intervals, public education brochures to system customers. For residential customers, such brochures will describe the cross-connection hazards in homes and the recommended assemblies or devices that should be installed by the homeowner to reduce the hazard to the public water system. The education program will emphasize the responsibility of the customer in preventing the contamination of the public water supply. Yakima County will produce the public education brochures or will obtain brochures from:

- PNWS-AWWA;
- Spokane Regional Cross-Connection Control Committee (SRC4);

- Western Washington Cross-Connection Prevention Professionals Group (The Group);
- USC FCCCHR;
- Other national backflow prevention associations, such as the American Backflow Prevention Association (ABPA); and/or
- Other water utilities.

The information distributed will include, but not be limited to, the following subjects:

- Cross-connection hazards in general;
- Irrigation system hazards and corrective actions;
- Fire sprinkler cross-connection hazards;
- Importance of annual inspection and/or testing of backflow preventers; and
- Thermal expansion in hot water systems when backflow preventers are installed for premises isolation.

Yakima County will distribute information brochures to all customers every two to three years, and to every new customer at the time a service application is signed.

Element 9: *Development and maintenance of cross-connection control records.*

1. Types of Records and Data to be Maintained

Yakima County will maintain records of the following types of information required by WAC 246-290-490:

- Service connections/customer premises information including:
  - Assessed degree of hazard; and
  - Required backflow preventer to protect the public water system.

- Backflow preventer inventory and information including:
  - Air gap (AG) location, installation and inspection dates, inspection results and person conducting inspection;
  - Backflow assembly location, assembly description (type, manufacturer, make, model, size, and serial number), installation, inspection and test dates, test results and data, and person performing test; and
  - Information on atmospheric vacuum breakers used for irrigation system applications, including manufacturer, make, model, size, dates of installation and inspections, and person performing inspections.

Yakima County will maintain records on all assemblies that protect the public water system from contamination, including premises and in-premises isolation assemblies.

2. Reports to be Prepared and Submitted to DOH

Yakima County will prepare the following reports required by WAC 246-290-490 including:

- Cross-connection control program activities report for the calendar year, to be sent to DOH when requested;
- Cross-connection control program summary information, when required, or when there are significant policy changes;
- Backflow incident reports to DOH; and
- Documentation when exceptions to mandatory premises isolation are granted.

Yakima County's CCS will prepare and sign all required CCC-related reports.

Element 10: *Additional cross-connection control requirements for reclaimed water.*

At this time Yakima County does not receive or distribute reclaimed water. In the event that reclaimed water use is proposed within the Buena Water System service area, Yakima County will make all cross-connection control requirements mandated by the Permitting Authority in accordance with Chapter 90.46 RCW part of the written CCC program plan and comply with such additional requirements.

Water Use Questionnaire
Residential Customers

Customer Name_____
Address Line 1_____
Address Line 2_____

Please indicate whether the special plumbing or activities listed below apply to your premises:

Yes	No	Plumbing or Activity Present on Customer's Premises
		Underground sprinkler system
		Water treatment system (e.g., water softener)
		Solar heating system
		Residential fire sprinkler system
		Other water supply (whether or not connected to plumbing system)
		Sewage pumping facilities or grey water system
		Hobby farm
		Animal watering troughs
		Swimming pool or spa
		Greenhouse
		Decorative pond
		Photo lab or dark room
		Home-based business. If Yes, list type/describe (e.g., beauty salon, machine shop, etc.): _____ _____ _____

Completed by (print name): _____ Date: _____

Resident's Signature: _____

YAKIMA COUNTY CROSS-CONNECTION CONTROL INVENTORY

RESULT CODES

1. ASSEMBLY THAT PASSES TEST
2. SOME QUESTION AS TO THE ADEQUACY OR EXISTENCE OF AN ASSEMBLY
3. NOT TO CODE. ASSEMBLY MISSING, INSTALLED INCORRECTLY, OR FAILED TEST
4. NO ASSEMBLY NEEDED, OR AVBs INSTALLED AND TO CODE
5. HOUSE UNDER CONSTRUCTION
6. NEEDS INSPECTIONS
7. ASSEMBLY THAT NEEDS TO BE TESTED, AND HAVE NOT BEEN TESTED IN THE PAST
8. ASSEMBLY COULD NOT BE TESTED

16	17	CUSTOMER NAME	PHONE	SYSTEM	No	Address	City	COMMENTS	Make	Model	Size	SeriAl .	PSI	Location	
1	1			Terrace Heights Water Customer	406	Autumn Way	YAKIMA	New 2015	Wilkins	350	1"	A071682	95	Right side behind fence	
	3/1			Terrace Heights Water Customer	5300	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A649302	65	Right side of house	
	1			Terrace Heights Water Customer	5301	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A602576	65	Right side of house	
	1			Terrace Heights Water Customer	5302	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A6614396	65		
	3/1			Terrace Heights Water Customer	5303	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A649312	65	Right side	
1	1			Terrace Heights Water Customer	5304	Blackstone Ct.	YAKIMA	New 2016	Wilkins	350	1"	A552386	60	Left of driveway	
	1			Terrace Heights Water Customer	5306	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A596060	65	Left side	
	1			Terrace Heights Water Customer	5400	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A597146	55	Right side	
	1			Terrace Heights Water Customer	5402	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A597152	55	Left side behind garaage	
	1			Terrace Heights Water Customer	5404	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A5805500	55	Right side behind AC	
	1			Terrace Heights Water Customer	5406	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A552408	50		
	1			Terrace Heights Water Customer	5408	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A597166	55		
1	1			Terrace Heights Water Customer	5500	Blackstone Ct.	YAKIMA	New 2016	Wilkins	350	1"	A534753	45		
	1			Terrace Heights Water Customer	5502	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A559935		by meter	
	1			Terrace Heights Water Customer	5504	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A582554		by meter	
	3/1			Terrace Heights Water Customer	5506	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A597128	40	Right side behind garage	
	1			Terrace Heights Water Customer	5600	Blackstone Ct.	YAKIMA	New 2017	Wilkins	350	1"	A597158	35	Right side by AC unit	
1	1			Terrace Heights Water Customer	5002	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A327658	85	E side of house	
1	1			Terrace Heights Water Customer	5003	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A064263	85		
1	1			Terrace Heights Water Customer	5004	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A309379	80	W side of house	
1	1			Terrace Heights Water Customer	5005	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A064260	65	Right side of house	
1	1			Terrace Heights Water Customer	5006	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A21474	78	Back yard	
1	1			Terrace Heights Water Customer	5007	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A127535	75	left corner of house	
1	1			Terrace Heights Water Customer	5008	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A271409	78	Front N corner	
1	1			Terrace Heights Water Customer	5009	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A243101	75	Back yard	
8	8	Cynthia Nichols	307-6863	Terrace Heights Water Customer	5100	Boulder Way	YAKIMA	Gate Locked 2017	Wilkins	350	1"	A357728	65	Next to Meter	
1	1			Terrace Heights Water Customer	5101	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A258224	65	Behind fence gate	
8	1	Randall Eckert	949-8263	Terrace Heights Water Customer	5102	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A131497	68	By fence gate	Dogs
1	1			Terrace Heights Water Customer	5103	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A071687	70	E side behind house	
1	1			Terrace Heights Water Customer	5104	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A127534	65	Back yard	
1	1			Terrace Heights Water Customer	5105	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A064259	65	W side of house	
1	1			Terrace Heights Water Customer	5106	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A153953	65	NW side of house	
1	8			Terrace Heights Water Customer	5107	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A064261	70	E side behind fence	

1	1			Terrace Heights Water Customer	5108	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A211344	65	By back deck	
8	1	Brian Bruley	949-3943	Terrace Heights Water Customer	5109	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A103966	60	Back yard by gate	Locked gate
1	1			Terrace Heights Water Customer	5201	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A071683	55	Right side of house	
1	3/1			Terrace Heights Water Customer	5202	Boulder Way	YAKIMA	New 2015	Wilkins	350	1"	A307163	60	Back yard by house	
	1			Terrace Heights Water Customer	5306	Boulder Way	YAKIMA	New 2017	Wilkins	350	1"	A582545	50	Right side behind garage	
	3/1			Terrace Heights Water Customer	5401	Boulder Way	YAKIMA	New 2017	Wilkins	350	1"	A582557			
1	1			Terrace Heights Water Customer	5403	Boulder Way	YAKIMA		Wilkins	350	1"	A534747	50	Under front window	
	1			Terrace Heights Water Customer	5404	Boulder Way	YAKIMA	New 2017	Wilkins	350	1"	A580539	55	Right side of house	
	3/1			Terrace Heights Water Customer	5405	Boulder Way	YAKIMA	New 2016/17	Wilkins	351	1"	A559919	50		
	1			Terrace Heights Water Customer	5406	Boulder Way	YAKIMA	New 2016/17	Wilkins	350	1"	A485275	50	next to meter	
	3/1			Terrace Heights Water Customer	5408	Boulder Way	YAKIMA	New 2017	Wilkins	350	1"	A597126	45		
	1			Terrace Heights Water Customer	5500	Boulder Way	YAKIMA	New 2017	Wilkins	350	1"	A582514	45		
3/1	1			Terrace Heights Water Customer	5502	Boulder Way	YAKIMA	New 2016	Wilkins	350	1"	A534755	45	Right side of house	
	3/1			Terrace Heights Water Customer	5503	Boulder Way	YAKIMA	New 2017	Wilkins	350	1"	A580547	40		
3/1	1			Terrace Heights Water Customer	5504	Boulder Way	YAKIMA	New 2016	Wilkins	350	1"	A534751	40	left side behind fence	
	1/1			Terrace Heights Water Customer	5506	Boulder Way	YAKIMA	New 2017	Wilkins	350	1"	A582536	40		
1	1	Silver Meadows		Terrace Heights Water Customer		Bridal Way	YAKIMA	DCVA	Febco	805	8	960712	50	IN VAULT	CONF SPACE
1	1	WASTE WATER TREATMENT PLANT	5742300	Buena Water System	1688	BUENA RD	BUENA		Watts	009QT	3/4"	61663	50	Inside WWTP	
1	3	WASTE WATER TREATMENT MAINT	5742300	Buena Water System	1688	BUENA RD	BUENA		Watts	009QT	2"	30192	50	Inside WWTP	
1	1	WASTE WATER TREATMENT MAINT	5742300	Buena Water System	1688	BUENA RD	BUENA		Febco	825Y	3/4"	A19761	50	Inside WWTP	
1	1			Terrace Heights Water Customer	2600	BUSINESS LANE	YAKIMA		Febco	850	1"	H817146	100	N-W corner of property in grass next to meter	
3	1	GOLD'S GYM OF YAKIMA		Terrace Heights Water Customer	2500	BUSINESS LN	YAKIMA		Watts	**007M2QT**	1 1/2"	**16286**	108	North west of parking lot.	
	1	PROVIDENCE HEALTH SYSTEMS			2501	BUSINESS LN	YAKIMA		Watts	009QT	0.5	125639	70	Janitor closet	
	1	PROVIDENCE HEALTH SYSTEMS			2501	BUSINESS LN	YAKIMA		Watts	007M1QT	1	178147	110	West side in grass area	
	1	PROVIDENCE HEALTH SYSTEMS			2501	BUSINESS LN	YAKIMA		Appollo	40105T2	1	253-264	110	Back lot in island	
1	1	Pacific Steel		Terrace Heights Water Customer	409	Buterfield Rd	YAKIMA		Watts	009M2QT	1	A74547	75	Electrical Rm East Wall	
1	1	Pacific Steel		Terrace Heights Water Customer	409	Buterfield Rd	YAKIMA	New 2013	Febco	850	1 1/2	H22256	75	East side of Parking lot	
1	1	H.R. Spinner		Terrace Heights Water Customer	717	Buterfield Rd	YAKIMA		Watts	009M2QT	2	332853	105	Behind wall panel in breakroom	
	1	H.R. Spinner		Terrace Heights Water Customer	717	Buterfield Rd	YAKIMA		Wilkins	350ADA	8	V36200	115	In vault North of building	
	1	H.R. Spinner		Terrace Heights Water Customer	717	Buterfield Rd	YAKIMA		Wilkins	950 XL	0.75	3740613860	110	In valut North of building	meter read 001097
8				Terrace Heights Water Customer	412	CANYON RD	YAKIMA		Wilkins	950XLT	1"	682607	69	N side by drive	Valve has been removed

1	3			Terrace Heights Water Customer	506	CANYON RD	YAKIMA	# 2 check leaked	Wilkins	950DC	1"	150377	72	N-W corner of douplex	
1	1			Terrace Heights Water Customer	5500	CASTLE MT CT	YAKIMA	Valve replaced in 16 Marvin Burton	Watts	LF007M1QT	1"	28434	50	South side of garage by front porch	
3	3			Terrace Heights Water Customer	5502	CASTLE MT CT	YAKIMA	Needs new # 1 diac and O rings	Wilkins	350	1"	2639195	60	Back of house west by patio	
1	1			Terrace Heights Water Customer	5503	CASTLE MT CT	YAKIMA		Wilkins	350	1"	A181554	55	Front By Porch	
1	1			Terrace Heights Water Customer	5506	CASTLE MT CT	YAKIMA		Watts	007M3QT	3/4"	164949	55	W-side behind fence	
1	1			Terrace Heights Water Customer	5602	CASTLE MT CT	YAKIMA		Wilkins	950XL	1"	263004	50	east side of house	
1	3			Terrace Heights Water Customer	405	CHANNEL DR	YAKIMA	# 2 check leaked	Wilkins	950XLT	3/4"	773316	90	south end of house southwest corner	
				Terrace Heights Water Customer	407	CHANNEL DR	YAKIMA		Wilkins	950 XLt	1"	W152729	90	W- of garage	Water off 2014
1	1			Terrace Heights Water Customer	505	CHANNEL DR	YAKIMA		Watts	007M1QT	1"	139715	80	south side of house 1st box	
1	1			Terrace Heights Water Customer	5302	CHANNEL DR	YAKIMA		conbraco	DCVA	1"	4010572	65	Next to Meter	
1	1			Terrace Heights Water Customer	5304	CHANNEL DR	YAKIMA		conbraco	DCv	3/4"	C2883	65	west front corner of house	
1	1			Terrace Heights Water Customer	5305	CHANNEL DR	YAKIMA		Wilkins	950DC	1"	60064	60	east side of house	
1	1			Terrace Heights Water Customer	5306	CHANNEL DR	YAKIMA		Wilkins	950DC	1"	43625	57	front of house by bay window	
1	1			Terrace Heights Water Customer	5403	CHANNEL DR	YAKIMA		Watts	007M1QT	1	23262	55	west side by gas meter	
1	1			Terrace Heights Water Customer	5404	CHANNEL DR	YAKIMA		Watts	007M1QT	1"	239787	65	West side of house	
1	1			Terrace Heights Water Customer	5406	CHANNEL DR	YAKIMA	New vavle in 2017	Wilkins	350	1"	A596983	57	South of meter under gravel east of drive	
				Terrace Heights Water Customer	5500	CHANNEL DR	YAKIMA	using hoses					50	N-W corner of House	
1	1			Terrace Heights Water Customer	5502	CHANNEL DR	YAKIMA		Wilkins	950XLT	1"	2919636	56	east side of house under wooden box	
3/1	1			Terrace Heights Water Customer	5503	CHANNEL DR	YAKIMA		Rainbird	DCQT100	1"	28196	60	East of Garage by AC	
1	1			Terrace Heights Water Customer	5504	CHANNEL DR	YAKIMA		Wilkins	950 DC	1"	77708	60	west front corner of house	
1	1			Terrace Heights Water Customer	5601	CHANNEL DR	YAKIMA		Wilkins	720A	1"	W09789	45	front of house under bay window	
1	1			Terrace Heights Water Customer	5602	CHANNEL DR	YAKIMA		Wilkins	950 XLT	1"	1702605	55	east side of house	
1	1			Terrace Heights Water Customer	5603	CHANNEL DR	YAKIMA	Locked	Wilkins	950 XL	1"	2233444	45	east side of house right side box	
1	1			Terrace Heights Water Customer	191	COUGAR LN	YAKIMA		Wilkins	950 XL	1"	253406	80	east of garage door by big rock	
1	1	YAKIMA COUNTRY CLUB		Terrace Heights Water Customer	500	COUNTRY CLUB DR	YAKIMA		Febco	850	3\4	HC23580	60	East side of road across from parking lot	
1	1	YAKIMA COUNTRY CLUB		Terrace Heights Water Customer	500	COUNTRY CLUB DR	YAKIMA		Wilkins	950XLT	1.5	2950551	65	Main Flower bed under big tree	
1	1			Terrace Heights Water Customer	618	COUNTRY CLUB DR	YAKIMA		Wilkins	950XLT	1"	1541043	50	Front yard by road	water off 2014
1	1			Terrace Heights Water Customer	620	COUNTRY CLUB DR	YAKIMA		flomatic	DCv	1"	A2580	60	North east couner of side yard	
3				Terrace Heights Water Customer	313	CRAWFORD LN	YAKIMA	# 1 check failed	Wilkins	975XL	1"	W099325	92	N-W corner of lot	
1	1			Terrace Heights Water Customer	4702	Goat Rocks CT	YAKIMA		Wilkins	350	1"	2773053	98	East side of Home	
1	1			Terrace Heights Water Customer	4704	Goat Rocks CT	YAKIMA		Wilkins	350	1"	A007991	96	W-Side	
1	1			Terrace Heights Water Customer	4705	Goat Rocks CT	YAKIMA		Wilkins	350	1"	A035545	95	W-Side Back yard	

1	1			Terrace Heights Water Customer	4800	Goat Rocks CT	YAKIMA		Wilkins	350	1	A3139066	97	W-side of House	
1	1			Terrace Heights Water Customer	4801	Goat Rocks CT	YAKIMA		Wilkins	350	1"	A005004	95	W-Side Back yard	
1	1			Terrace Heights Water Customer	4802	Goat Rocks CT	YAKIMA		Wilins	350		A005145	100	Front left of house	
1	1			Terrace Heights Water Customer	4803	Goat Rocks CT	YAKIMA		Wilkins	950 XLT	1"	2840661	94	East side of Home	
8	3			Terrace Heights Water Customer	4804	Goat Rocks CT	YAKIMA		Wilkins	350	1"	2642305	92	Front of Home in Flower Bed	Box is covered with dirt
1	1			Terrace Heights Water Customer	4805	Goat Rocks CT	YAKIMA		Wilkins	350	1"	2798947	94	East Side of Home	
1	1			Terrace Heights Water Customer	4807	Goat Rocks CT	YAKIMA		Wilkins	350	1"	AD35544	94	N-side back yard	
1	1			Terrace Heights Water Customer	4803	GUN CLUB RD	YAKIMA		Watts	007M2QT	1.25"	1134	100	north of driveway green box top of hill	
1	1	BUENA NUEVA		Buena Water System	66	HIGHLAND DR	BUENA		Wilkins	950XLT	2"	1521155	47	East Side of Community Building	
1	3	BUENA NUEVA		Buena Water System	66	HIGHLAND DR	BUENA	# 2 spring is broke	Wilkins	950XLT	2"	521163	55	East Side of Community Building	
1		BUENA WELL SITE	5742300	Buena Water System	180	HIGHLAND DR	BUENA		Febco	850	3/4"	A46871		Near SW corner of pumphouse	
8	8	LDS Church	614-839-4503	Terrace Heights Water Customer	105	HILLCREST DR	YAKIMA	1st test in 2010	Colt	200	4"	HL-0480		Valve room inside	church locked
1	1			Terrace Heights Water Customer	4204	HILLCREST DR E	YAKIMA	replaced in 2010	Watts	007M1QT	1"	A96221	80	South by driveway in roses.	
1	1			Terrace Heights Water Customer	4217	Hillcrest Dr	YAKIMA	New 2014	Wilkins	350	4-Mar	A353800	60	Next to meter	
8	8	New Hope Church - Sandy	452-2673	Terrace Heights Water Customer	4917	Hillcrest	YAKIMA		Wilkins	975XL	1/2"	W268680		Mechanical room North wing	
				Terrace Heights Water Customer	5505	HILLTOP DR	YAKIMA		Febco	850	1"	74502	60	westside of house	#2 CV broke 2009 used hoses in 2010
				Terrace Heights Water Customer	5507	HILLTOP DR	YAKIMA		Febco	805Y	1"	A032413		back pouch	Off uses hose
1	1			Terrace Heights Water Customer	5509	HILLTOP DR	YAKIMA	New valve installed in 2015 used to be flowmatic	Wilkins	950XLT	1"	3916857	55	Back yard against house.	
1	1			Terrace Heights Water Customer	5604	HILLTOP DR	YAKIMA		Wilkins	950XLT	3/4"	1127225	60	by entry	
3/1	3			Terrace Heights Water Customer	5607	HILLTOP DR	YAKIMA	needs new rubber disk	Febco	850	1"	A22872	62	east side of house	
		Burnes Thomas		Terrace Heights Water Customer	5608	HILLTOP DR	YAKIMA	water off	Watts	800M4QT	1"	178732	70	backyard against house	water off 2014
1	3/1			Terrace Heights Water Customer	6400	HILLTOP DR	YAKIMA	New 2016	Wilkins	350	1"	2724638		Left of driveway	
	1			Terrace Heights Water Customer	6404	HILLTOP DR	YAKIMA	New 2017	Wilkins	350	3/4"	A159399		Backyard	
	8			Terrace Heights Water Customer	6406	HILLTOP DR	YAKIMA	Valve removed 2017	?	?					
	1			Terrace Heights Water Customer	6408	HILLTOP DR	YAKIMA	New 2017	Wilkins	350	1"	A268064		By meter	
1	1			Terrace Heights Water Customer	6400	HORIZONS CT	YAKIMA		Wilkins	950XLT	1"	1530870	55	East side	
1	1			Terrace Heights Water Customer	6403	HORIZONS CT	YAKIMA		Watts	775QT	1"	19473	55	N. OF METER IN 1ST TERRACE	
1	1			Terrace Heights Water Customer	6404	HORIZONS CT	YAKIMA	Handy hands 0.0 2.0	Wilkins	950 XLT	1"	2279101	55	By Meter	Repaired by Rusty 2015
				Terrace Heights Water Customer	6405	HORIZONS CT	YAKIMA	water off	Wilkins	950XLT	1"	1584466	55	Front by drive	water off could not test
1	1			Terrace Heights Water Customer	6406	HORIZONS CT	YAKIMA		Watts	007 M1QT	1"	178133	55	Front yard by house	
1	1			Terrace Heights Water Customer	6408	HORIZONS CT	YAKIMA		Watts	007M1QT	1"	178134	55	North side of house	
1	1			Terrace Heights Water Customer	810	INDIAN HAVEN CT	YAKIMA		Wilkins	350	1"	A013407	95	N - side of house	

1	1			Terrace Heights Water Customer	812	INDIAN HAVEN CT	YAKIMA		Wilkins	350	1"	A004678	95	South side of Home	
1	1			Terrace Heights Water Customer	813	INDIAN HAVEN CT	YAKIMA		Wilkins	350	1"	A046542	90	S-Side	
1	1			Terrace Heights Water Customer	814	INDIAN HAVEN CT	YAKIMA		Wilkins	950 XLT	1"	2841251	93	N-Side behind house	
1	1			Terrace Heights Water Customer	900	INDIAN HAVEN CT	YAKIMA		Wilkins	350	1"	2639174	93	West side by front porch	
1	1			Terrace Heights Water Customer	901	INDIAN HAVEN CT	YAKIMA		Wilkins	350	1"	A030478	98	East side of home	
	1			Terrace Heights Water Customer	2305	Industry Lane	YAKIMA	New 2017	Watts	LF009M2QT	1"	*099626		East Building inside	
	1			Terrace Heights Water Customer	2305	Industry Lane	YAKIMA	New 2017	Wilkins	950XLT	1"	3426089		Irrigation South side grass area	
1	1			Terrace Heights Water Customer	191	Iron Horse	YAKIMA		Watts	009M2QT	1.5"	27942		In Mechanical Room	
1	1	F & M CONSTRUCTION CO	2480444	Terrace Heights Water Customer	215	KEYS RD	YAKIMA		Watts	800 M4 QT	1"	339218	56	North side of office building (around warehouse).	
8		MOXEE DEVELOPMENT LLC	452-3494	Terrace Heights Water Customer	501	KEYS RD	YAKIMA	SONITROL 453-7126	Wilkins	950	6"	A02422	115	old part of warehouse small room	Phone # 452-3494
1	1	Riverside Christian School		Terrace Heights Water Customer	721	KEYS RD	YAKIMA		Ames	2000SS	3"	103591	115	In electrical Room	
1	1	Riverside Christian School		Terrace Heights Water Customer	721	KEYS RD	YAKIMA		Watts	009 RP	3"	15657	115	In electrical Room	
1	1			Terrace Heights Water Customer	5504	KLOOCHMAN WY	YAKIMA		Febco	850	1"	A75151	60	Front of house by porch	
1	1			Terrace Heights Water Customer	5506	KLOOCHMAN WY	YAKIMA		Wilkins	950XLT	1"	W063012	60	N-E corner of house	
1	1			Terrace Heights Water Customer	5508	KLOOCHMAN WY	YAKIMA	Water off cant test	Wilkins	550A	3/4"	W107253	60	west side of house- back yard	
1	1			Terrace Heights Water Customer	5510	KLOOCHMAN WY	YAKIMA		Wilkins	950XL	3/4"	498880	60	S-E corner of garage	
1	1			Terrace Heights Water Customer	5601	KLOOCHMAN WY	YAKIMA		Watts	007M2QT	3/4"	151028	50	front of house south west corner	
				Terrace Heights Water Customer	5602	KLOOCHMAN WY	YAKIMA		Febco	805Y	1"	A132203	60	Back east of garage	customer would not allow access
1	1			Terrace Heights Water Customer	5603	KLOOCHMAN WY	YAKIMA	have to remove handle on SO2 to operate	Wilkins	720A	1"	W635517	60	north east corner of house	
3/1	1			Terrace Heights Water Customer	5604	KLOOCHMAN WY	YAKIMA		Wilkins	350	1"	AD28290	60	SE corner back yard	
8	8	Jimmy & Sylivia Taylor	248-0538	Terrace Heights Water Customer	5605	KLOOCHMAN WY	YAKIMA		Watts	007M1QT	3/4"	13426	80	east side of house	gate locked
1	1			Terrace Heights Water Customer	51	LAREDO LN	YAKIMA		Wilkins	950XL	1"	317897	95	left corner of huge shed by driveway	
	1			Terrace Heights Water Customer	110	LAREDO LN	YAKIMA		Wilkins	950XLT	1"	2880023	100	Right side of Driveway	valve gone no hook up
1	1			Terrace Heights Water Customer	603	LOCKHART	YAKIMA		Wilkins	350	3/4"	2689884	85	Front of home south of Drive.	
1	1			Terrace Heights Water Customer	4907	MAPLE AVE	YAKIMA		WILKINS	950xlt	1"	2381493	60	Next to meter - at corner of fence east of shed	gate locked

1	1			Terrace Heights Water Customer	6400	MORNINGSIDE CT	YAKIMA		Wilkins	950 XLT	1"	974490	52	By meter	
1	1			Terrace Heights Water Customer	6402	MORNINGSIDE CT	YAKIMA		Wilkins	950 XLT	1"	841543	53	By meter	
1	1			Terrace Heights Water Customer	6403	MORNINGSIDE CT	YAKIMA		Wilkins	950 XLT	1"	1274924	50	By meter	
1	1			Terrace Heights Water Customer	6404	MORNINGSIDE CT	YAKIMA		Wilkins	950 XLT	3/4"	783094	60	Near meter box	
1	1			Terrace Heights Water Customer	6406	MORNINGSIDE CT	YAKIMA		Wilkins	950 XLT	1"	W219872	55	By meter	

				Terrace Heights Water Customer	6407	MORNINGSIDE CT	YAKIMA	valve removed	Watts	800 M4 QT	3/4"	179573	50	South east corner by back porch.	valve removed
				Terrace Heights Water Customer	5821	MORNINGSIDE DR	YAKIMA	Water off cant test	Wilkins	950 XLT	1"	3280236	80		Water off
3/1	3/1			Terrace Heights Water Customer	5201	MT AIX WAY	YAKIMA		Wilkins	950DC	0.75	36483	75	S-side by A C	
1	1			Terrace Heights Water Customer	801	Mt Aix Way North	YAKIMA		Wilkins	950 XLT	1"	1773591	76	by meter	
1	1			Terrace Heights Water Customer	803	MT AIX WAY NORTH	YAKIMA		Febco	850	1"	48208	76	by meter	
1	1			Terrace Heights Water Customer	804	MT AIX WAY NORTH	YAKIMA		Wilkins	950XLT	1"	1465993	70	by meter	
1	1			Terrace Heights Water Customer	805	MT AIX WAY NORTH	YAKIMA		Wilkins	950XLT	1"	147185	75	by meter	
1	1		0	Terrace Heights Water Customer	806	MT AIX WAY NORTH	YAKIMA		Wilkins	950XLT	1"	1496053	65	by meter	
1	3			Terrace Heights Water Customer	807	MT AIX WAY NORTH	YAKIMA	Repaired by Marv Burton 2016	Febco	850	1"	1H05568	70	By Meter	
3/1	1			Terrace Heights Water Customer	809	MT AIX WAY NORTH	YAKIMA		Wilkins	950XLt	1	1702668	66	By Meter	
1	1			Terrace Heights Water Customer	604	MT AIX WY	YAKIMA		Watts	007 M1QT	1"	162394	80	South east corner after water meter.	
1	1			Terrace Heights Water Customer	605	MT AIX WY	YAKIMA		Wilkins	950XLT	3/4"	636383	77	North west corner of property - by street.	
1	1			Terrace Heights Water Customer	701	MT AIX WY	YAKIMA		Watts	007 M1QT	1"	82108	80	South west corner of property by street.	
1	1			Terrace Heights Water Customer	702	MT AIX WY	YAKIMA		Watts	007M1QT	1"	276274	75	S side of House	
1	1			Terrace Heights Water Customer	703	MT AIX WY	YAKIMA		Wilkins	950XLt	1"	1025256	75	By Meter	
1	1			Terrace Heights Water Customer	705	MT AIX WY	YAKIMA		Watts	007 M1QT	1"	1387947	75	South west corner of driveway by street.	
1	1			Terrace Heights Water Customer	706	MT AIX WY	YAKIMA		Wilkins	950XLT	1"	873223	80	S- side above ground behind shrub	
1	1			Terrace Heights Water Customer	707	MT AIX WY	YAKIMA		Wilkins	950XLT	1"	1201164	70	BY METER	
1	1			Terrace Heights Water Customer	708	MT AIX WY	YAKIMA		FEBCO	850	3/4"	HA 55393	75	N-E corner of house	
				Terrace Heights Water Customer	710	MT AIX WY	YAKIMA	Water off cant test	Wilkins	950XLT	1"	798397	74	South side next to heat pump.	Water off
1	3			Terrace Heights Water Customer	5202	MT AIX WY	YAKIMA	# 1 disc washer and screw missing	Watts	007M3 QT	3/4"	282770	78	Trap door under deck east of entry	
1	1			Terrace Heights Water Customer	5203	MT AIX WY	YAKIMA		Wilkins	350	1"	A163756	75	left front of house under by window left box	
1	1			Terrace Heights Water Customer	5204	MT AIX WY	YAKIMA		Watts	007M1QT	1"	143937	75	N-W corner of house	
1	1			Terrace Heights Water Customer	5205	MT AIX WY	YAKIMA		Wilkins	350	1"	2639165	75	east side of garage under white box	
1	1			Terrace Heights Water Customer	5206	MT AIX WY	YAKIMA		Watts	007M2QT	0.75	180299	82	West side of house	
1	1			Terrace Heights Water Customer	5300	MT AIX WY	YAKIMA		Watts	007M1QT	1"	130030	75	Front of house - north east corner.	
1	1			Terrace Heights Water Customer	5301	MT AIX WY	YAKIMA		Watts	775QT	3/4"	6318	75	E-side by heat pump	
8	1	Robert Newell	952-6737	Terrace Heights Water Customer	5303	MT AIX WY	YAKIMA		Rainbird	DC100b	1"	93457	75	West corner of garage	Dogs
1	1			Terrace Heights Water Customer	5400	MT AIX WY	YAKIMA		Wilkins	350	3/4"	2564564	75	N-E Corner of house	
1	1			Terrace Heights Water Customer	5401	MT AIX WY	YAKIMA		Watts	007M!QT	1"	388539	75	by deck east side	
1	1			Terrace Heights Water Customer	5402	MT AIX WY	YAKIMA		Febco	850	3/4"	21512	75	N-E corner	
1	1			Terrace Heights Water Customer	5403	MT AIX WY	YAKIMA		Wilkins	350	1"	A603256	77	Right of front steps	
1	1			Terrace Heights Water Customer	5407	MT AIX WY	YAKIMA		Wilkins	950XLT2	1"	3829745	75	front of house by porch	
8		Jeff Washburn	452-1386 373-3105	Terrace Heights Water Customer	5409	MT Aix Wy	YAKIMA	New 2015	Watts	007M1QT	1"	???	70	Front by door	Locked box
				Terrace Heights Water Customer	5500	MT AIX WY	YAKIMA	Cant find valve	Febco	805Y	1"	R02566		front yard by water meter	can't find valve
1	1			Terrace Heights Water Customer	5501	MT Aix Wy	YAKIMA	New 2015	Wilkins	350	1"	A357465	70	Front by door	

1	3			Terrace Heights Water Customer	5504	MT AIX WY	YAKIMA		Febco	850	1"	A22895	75	In backyard - SE corner of house	
1	1			Terrace Heights Water Customer	5505	MT AIX WY	YAKIMA		Wilkins	950XLt	3/4"	636381	75	front of house by porch	
1	1			Terrace Heights Water Customer	5506	MT AIX WY	YAKIMA		Wilkins	950XL	3/4"	353949	75	north east corner of house	
				Terrace Heights Water Customer	5300	MT CLEMANS WY	YAKIMA	Valve missing direct connect 2013	Wilkins	720A	3/4"	353575	70	south side of house	valve missing
1	1			Terrace Heights Water Customer	5303	MT CLEMANS WY	YAKIMA		Watts	007M1QT	1"	422196	68	South west corner of front yard.	
1	1			Terrace Heights Water Customer	5305	MT CLEMANS WY	YAKIMA		Watts	007M1QT	1"	605782	65	Front of house behind bush.	
1	1			Terrace Heights Water Customer	5306	MT CLEMANS WY	YAKIMA		Watts	007M1QT	1"	143951	65	east of house	
1	1			Terrace Heights Water Customer	5308	MT CLEMANS WY	YAKIMA		Febco	805Y	1"	S0472	66	backyard west side of sidewalk	
1	1			Terrace Heights Water Customer	5402	MT CLEMANS WY	YAKIMA		Wilkins	550A	1"	W109352	65	east side of house	
1	1			Terrace Heights Water Customer	5403	MT CLEMANS WY	YAKIMA	New 2015	Febcp	850	1"	H11344	65	Front by driveway	
1	3			Terrace Heights Water Customer	5404	MT CLEMANS WY	YAKIMA		Wilkins	350	1"	3026704	64	South west corner of house-above ground	# 1 disk is damaged
1	1			Terrace Heights Water Customer	5406	MT CLEMANS WY	YAKIMA		Watts	007M1QT	1"	A04814	65	N-W side of property by fence	
1	1			Terrace Heights Water Customer	5408	MT CLEMANS WY	YAKIMA		Watts	007M1QT	1"	6831	65	E-side of house	
1	1			Terrace Heights Water Customer	5502	MT CLEMANS WY	YAKIMA		Watts	007M1QT	1"	24353	66	west side of driveway	
1	1			Terrace Heights Water Customer	5601	MT CLEMANS WY	YAKIMA		conbraco	AV927	0.75	4010402	65	east side	
1	1			Terrace Heights Water Customer	306	N 34th St	YAKIMA		Flowmatic	DCV	1"	A2122	95	behind unit A	
1	1			Terrace Heights Water Customer	308	N 34th St	YAKIMA		Wilkins	950 XLT	1"	508338	95	Behind unit B	
		Steve Buchanan	728-3299	Terrace Heights Water Customer	101	N. 41st St.	YAKIMA				8"			in vault s/w corner of school yard	In Vault
		School		Terrace Heights Water Customer	101	N. 41st St.	YAKIMA				1"			in vault s/w corner of school yard	Bypass in Vault
3	8			Terrace Heights Water Customer	700	N 54TH ST	YAKIMA	Gate Locked 2017	Watts	775	1"	28773	80	E-Side gated	# 2 check is broken
8	1			Terrace Heights Water Customer	701	N. 54th St	YAKIMA		Watts	LF007M3QT	3/4"	*006159	68	by meter	
8	1	Kevin Palmasteer	457-0774	Terrace Heights Water Customer	708	N. 54th St	YAKIMA		Watts	775QT	1"	31669	80	behind house	Locked gate
1	1			Terrace Heights Water Customer	709	N. 54th St	YAKIMA		Febco	850 U	1"	H07794	70	by meter	
1	1			Terrace Heights Water Customer	712	N 54TH ST	YAKIMA		Watts	775QT	1"	28756	66	Center of front yard	
1	1			Terrace Heights Water Customer	713	N. 54th St	YAKIMA		Watts	775QT	1"	29260	70	By street and water meter	
1	1			Terrace Heights Water Customer	714	N. 54th St	YAKIMA		Watts	775QT	1"	5382	70	South of Drive by Meter	
1	3			Terrace Heights Water Customer	717	N. 54th St	YAKIMA	# 1 disk needs replaced	Wilkins	950XL	1"	2195155	64	S-W corner or garage in utility area power,phone	
1	1			Terrace Heights Water Customer	718	N. 54th St	YAKIMA		Wilkins	950 XLT	1"	1530862	70	by meter	
1	1			Terrace Heights Water Customer	720	N. 54th St	YAKIMA		Wilkins	950 XLT	1"	530830	70	Front by Water Meter	
1	1			Terrace Heights Water Customer	721	N. 54th St	YAKIMA		Watts	775QT	1"	25764	69	By Meter	
1	1			Terrace Heights Water Customer	700	N. 55th St	YAKIMA		Wilkins	950XLT	1"	1998593	62	Front by Porch	
3/1	3/1			Terrace Heights Water Customer	703	N.55th St	YAKIMA		Wilkins	950 XLT	1"	3349760	60	east side of house	
1	1			Terrace Heights Water Customer	704	N. 55th ST	YAKIMA		Watts	775QT	1"	35221	60	by meter	
1	1			Terrace Heights Water Customer	706	N. 55th ST	YAKIMA		Watts	775QT	1"	33124	60	North of Driveway	
1	1			Terrace Heights Water Customer	707	N.55th St	YAKIMA		Watts	007MqQT	1"	8870	60	N/W corner by road	

1	1			Terrace Heights Water Customer	710	N.55th St	YAKIMA		Wilkins	950XLT	1"	1926245	60	S-of Driveway	
3/1	1/1			Terrace Heights Water Customer	711	N.55th St	YAKIMA		Wilkins	950XLT	1"	1924673	60	S-W corner of house	
1	1			Terrace Heights Water Customer	102	N 57TH ST	YAKIMA	new valve 2011	Watts	007M3QT	3/4	A90413	55	north side of house	
1	1			Terrace Heights Water Customer	104	N 57TH ST	YAKIMA		Rainbird	DCQT-100 1"	1"	n/A	80	South side of house. EAST GREN BOX	
3	1			Terrace Heights Water Customer	105	N 57TH ST	YAKIMA	New valve tested by Rusty 2017	Wilkins	350	1"	A603249	80	front yard between arbavida trees	
1	1			Terrace Heights Water Customer	107	N 57TH ST	YAKIMA		Wilkins	950XLT	1"	815559	80	front of house by pouch	
	1			Terrace Heights Water Customer	108	N 57TH ST	YAKIMA		Wilkins	950 XLT	1"	1399695	80	Right side of House	
3	3/1			Terrace Heights Water Customer	204	N 57TH ST	YAKIMA	Repaired by Josh Shipley	Wilkins	950XL	1"	390210	80	south side of house BIHIND FENCE	# 1 check needs replaced
1	1			Terrace Heights Water Customer	301	N 57TH ST	YAKIMA		Wilkins	350	1"	A596962	80	north side of house under bio dome	
1	1			Terrace Heights Water Customer	302	N 57TH ST	YAKIMA		Rainbird	DCQT100	1"	21595	80	back of house 3rd box fom fence	
1	1			Terrace Heights Water Customer	303	N 57TH ST			Watts	007M1QT	1"	A64413	75	south side of house	
1	1			Terrace Heights Water Customer	305	N 57TH ST	YAKIMA		Rainbird	DCQT100	1"	25187	80	south corner of lawn by street	
1	3			Terrace Heights Water Customer	306	N 57TH ST	YAKIMA	# 2 check is broken	floWmatic	DCV	1"	A2592	75	north side of driveway by meter	
1	1			Terrace Heights Water Customer	307	N 57TH ST	YAKIMA		Wilkins	950XLT	1"	786249	75	N-W corner of house	
1	1			Terrace Heights Water Customer	308	N 57TH ST	YAKIMA		Wilkins	350	1"	A029638	75	north wall of house	
1	1			Terrace Heights Water Customer	309	N 57TH ST	YAKIMA		Watts	007M1QT	1"	154424	75	front of house by pouch	
1	1			Terrace Heights Water Customer	313	N 57TH ST	YAKIMA		Watts	007M1QT	1"	17203	75	southwest corner of lawn by street	
1	1			Terrace Heights Water Customer	315	N 57TH ST	YAKIMA		Wilkins	950XLT	1"	967705	65	North side of garage.	
1				Terrace Heights Water Customer	317	N 57TH ST	YAKIMA		Watts	007M1 QT	1"	496455	65	south side of house behind gate	
1	1			Terrace Heights Water Customer	319	N 57th St	YAKIMA		Wilkins	950 XL	1"	2033925	68	N/W corner of property	
1	1			Terrace Heights Water Customer	321	N 57TH ST	YAKIMA		flomatic	DCv	1"	A2584	65	front of house by porch	
1	1			Terrace Heights Water Customer	512	N 57TH ST	YAKIMA		Wilkins	350	1"	2703809	80	Back yard North of patio.	
1	1			Terrace Heights Water Customer	513	N 57TH ST	YAKIMA		Wilkins	950XLt	1"	786261	80	north of house by property line	
1	1			Terrace Heights Water Customer	600	N 57TH ST	YAKIMA		Febco	765PVB	1"	FB8198	50	North side of house	
1	1			Terrace Heights Water Customer	603	N 57TH ST	YAKIMA		Watts	007 M1QT	1"	A07812	50	North side of house north west corner in flower bed before fence.	
1	1			Terrace Heights Water Customer	604	N 57TH ST	YAKIMA		Wilkins	350	1"	A030681	50	north side front yard by wall under bush	
8		Daniel Case	952-9389	Terrace Heights Water Customer	605	N 57TH ST	YAKIMA		Febco	850	1	A00665	50	NORTH SIDE HOUSE NEED KEY	gate locked
1	1			Terrace Heights Water Customer	700	N 57TH ST	YAKIMA	New valve 2012	wilkins	950XL	3/4	3144822	50	left side of the driveway,	
1	1			Terrace Heights Water Customer	701	N 57TH ST	YAKIMA	New 2010	Wilkins	950XLT	1"	3197722	50	north side of house	
1	1			Terrace Heights Water Customer	702	N 57TH ST	YAKIMA	needs rotated to repair # 2 disk 0.0	Febco	805Y	1"	A002723	50	north side of house	

1	1			Terrace Heights Water Customer	703	N 57TH ST	YAKIMA		Wilkins	950XL	3/4	178627	45	s w corner front yard	
1	1			Terrace Heights Water Customer	705	N 57TH ST	YAKIMA		Rainbird	DCQT100	1"	2820	40	S-side S-W Corner of house	
1	1			Terrace Heights Water Customer	709	N 57TH ST	YAKIMA		Watts	007M1QT	1"	103009	40	back yard north of house	Locked gate
1	1			Terrace Heights Water Customer	710	N 57TH ST	YAKIMA	New valve in 2016 tested by Rusty	Wilkins	350	1"	A414395	45	south side of house under porch	
1				Terrace Heights Water Customer	711	N 57TH ST	YAKIMA		Febco	805Y	1"	A014006	43	Back yard N-E corner of house by AC	Locked gate
1	1			Terrace Heights Water Customer	801	N 57TH ST	YAKIMA		Watts	007M1QT	1"	466999	90	West of S-W corner of shop across road under bench	
1		Terrett Booster station		Terrace Heights Water Customer		N 57th street	YAKIMA	DCVA	Watts	007M2QT	3/4	46629	88	In pump house	
1	1			Terrace Heights Water Customer	103	N CANYON RD	YAKIMA		Watts	775QT	1"	29194	50	back pouch off faucet on house	
1	1			Terrace Heights Water Customer	105	N CANYON RD	YAKIMA		Watts	800M4	3/4"	68775	52	East side	
1	1			Terrace Heights Water Customer	108	N CANYON RD	YAKIMA		Watts	007M1QT	1"	A07815	50	South east corner of yard by fence	
1	1			Terrace Heights Water Customer	110	N CANYON RD	YAKIMA		Watts	007M1QT	1"	29597	60	front lawn by hedge	
3	3			Terrace Heights Water Customer	5100	N CANYON RD		# 2 check needs cleaned or rebuilt. Counln't access	Febco	805 Y	3/4"	30514		In front by meter	
1	1			Terrace Heights Water Customer	5103	N CANYON RD	YAKIMA		Wilkins	950 XLT	1"	302006	100	front of house by porch	
8	1	Frank Apodaca	??	Terrace Heights Water Customer	5104	N CANYON RD	YAKIMA		Wilkins	950 XLT	3/4"	72235	70	by A.C. south west corner	gate locked
1	1			Terrace Heights Water Customer	5105	N CANYON RD	YAKIMA		conbraco	DCv40105A2	1"	W8533	70	back yard south west corner of fence	
1	1			Terrace Heights Water Customer	5201	N CANYON RD	YAKIMA		Wilkins	950XLT	1"	1336115	70	by meter	
1	1			Terrace Heights Water Customer	5202	N CANYON RD	YAKIMA		Febco	805Y	1"	15225	70	NW corner of fence	
1	1			Terrace Heights Water Customer	5203	N CANYON RD	YAKIMA		Wilkins	950XL	3/4"	390264	70	west side by AC	
1	3/1			Terrace Heights Water Customer	5204	N CANYON RD	YAKIMA		Watts	007M1QT	1"	9433	90	Front of house by porch.	
1	1			Terrace Heights Water Customer	5300	N CANYON RD	YAKIMA		Wilkins	950XL	1"	711535	70	north east corner of house	
1	1			Terrace Heights Water Customer	5301	N CANYON RD	YAKIMA		Watts	007M1QT	1"	119194	97	front of house 2nd box	
1	1			Terrace Heights Water Customer	5302	N CANYON RD	YAKIMA		Wilkins	950XLT	3/4"	1641736	98	front of house	
1	1			Terrace Heights Water Customer	5305	N CANYON RD	YAKIMA		Wilkins	350	1"	A019746	90	west of garage by AC	
8	8			Terrace Heights Water Customer	5400	N CANYON RD	YAKIMA	Water off 2017	Wilkins	950XLT	3/4"	W107085	95	front of house	Water off
1	1			Terrace Heights Water Customer	5403	N CANYON RD	YAKIMA		Watts	007M1QT	1"	228889	90	By Meter	
1	1			Terrace Heights Water Customer	5404	N CANYON RD	YAKIMA	Valve changed out in 2016	Wilkins	950XLT2	1"	4096659	95	By meter under tree	
1	8			Terrace Heights Water Customer	5408	N CANYON RD	YAKIMA	Dogs 2017	Watts	007M3QT	3/4"	123465	90	South side of house in back yard under box.	
1	1			Terrace Heights Water Customer	5409	N CANYON RD	YAKIMA		Wilkins	950 XLT	1	1801827	90	Front yard by meter box	
1	1			Terrace Heights Water Customer	401	N KEYS RD	YAKIMA	New valve 2011	Watts	007 M1QT	2"	A46478	104	North side of building by parking lot.	

1	1			Terrace Heights Water Customer	601	N. KEYS RD	YAKIMA	Tested By Water Tech 2017	Appollo	RPLF4A	1.5	453366	115	Sprinkler riser room	
1	1			Terrace Heights Water Customer	601	N KEYS RD	YAKIMA	Tested By Water Tech 2017	Wilkins	350 DC	1.5	A339577	115	S. of Building	
1	1			Terrace Heights Water Customer	711	N KEYS RD	YAKIMA		Wilkins	950XL	1.25	315926	110	by meter west side	
1	1			Terrace Heights Water Customer	808	Mt Aix Way	YAKIMA		Watts	007M1QT	1"	199863	65	by meter	
1	1			Terrace Heights Water Customer	4940	N SKY VISTA	YAKIMA		Watts	007M1QT	1"	153934	100	south west corner of backyard	
1				Terrace Heights Water Customer	4948	N SKY VISTA	YAKIMA		Wilkins	950XL	3/4"	195108	95	south east corner of house	
1	1			Terrace Heights Water Customer	4949	N SKY VISTA	YAKIMA		Febco	805Y	1"	A154382	95	n-side by gas meter	
1	1			Terrace Heights Water Customer	4952	N SKY VISTA	YAKIMA		Watts	775 QT	1	45219	100	Next to Meter	
1				Terrace Heights Water Customer	4953	N SKY VISTA	YAKIMA		Febco	850	1"	H38257	95	South side by gas meter	
1	1			Terrace Heights Water Customer	4956	N SKY VISTA	YAKIMA		Watts	007M3QT	3/4"	132196	100	back yard by heat pump	
1	1			Terrace Heights Water Customer	4957	N SKY VISTA	YAKIMA		Watts	007M1QT	1"	143521	94	N W corner by house	
1	1			Terrace Heights Water Customer	4960	N SKY VISTA	YAKIMA		Wilkins	950XL	3/4"	354142	96	west side of house back yard	
1	1			Terrace Heights Water Customer	4961	N SKY VISTA	YAKIMA		Wilkins	950XL	1"	289152	95	S side by gas meter	
1	1			Terrace Heights Water Customer	5038	N SKY VISTA	YAKIMA		Wilkins	950XL	1"	876273	95	S side	
1	1			Terrace Heights Water Customer	5039	N SKY VISTA	YAKIMA		Wilkins	950XLT	1"	2084079	80	S-Side of home	
1	1			Terrace Heights Water Customer	5042	N SKY VISTA	YAKIMA		Wilkins	950DC	1"	119393	95	north side of house	
1	1			Terrace Heights Water Customer	5043	N SKY VISTA	YAKIMA	no unions on dcva	Wilkins	950XL	1"	1366079	96	NW corner above ground	
1	1			Terrace Heights Water Customer	5047	N SKY VISTA	YAKIMA	letter 8-3-12	Wilkins	950DC	3/4"	120301	98	south side of garage	
1	1			Terrace Heights Water Customer	5050	N SKY VISTA	YAKIMA	Replaced in 2016 Marvin Burton	Wilkins	305	3/4"	A560397	95	N side	
1	1			Terrace Heights Water Customer	5051	N SKY VISTA	YAKIMA		Wilkins	950XL	1"	200145	100	north side of house by gas meter	
8	1	Linda Burns	575-8655	Terrace Heights Water Customer	5054	N SKY VISTA	YAKIMA	Gate Locked	Watts	007M3QT	3/4"	130964	100	above ground North side of garage	575-8655
1	1			Terrace Heights Water Customer	5059	N SKY VISTA	YAKIMA		Wilkins	950 DC	1"	150217	95	North side of house	
1	1			Terrace Heights Water Customer	5062	N SKY VISTA	YAKIMA		Wilkins	950XL	3/4"	165040	95	S-side	
1	1			Terrace Heights Water Customer	5063	N SKY VISTA	YAKIMA		Watts	007M1QT	3/4"	173615	96	east side of house	
1				Terrace Heights Water Customer	5066	N SKY VISTA	YAKIMA		Febco	805Y	1"	A16352	95	front of house by walkway	
1	1			Terrace Heights Water Customer	5067	N SKY VISTA	YAKIMA		Watts	007M1QT	1	275657	95	S-W corner of house	
				Terrace Heights Water Customer	5070	N SKY VISTA	YAKIMA	0 & 0	Wilkins	950XL	3/4"	1401318	90	east side of garage	valve removed 2014
1	1			Terrace Heights Water Customer	5071	N SKY VISTA	YAKIMA		Watts	007M1QT	1"	135323	95	South side of house	
1	1			Terrace Heights Water Customer	5074	N SKY VISTA	YAKIMA		Watts	007M1QT	1"	112137	98	Right side of house	
1	1			Terrace Heights Water Customer	5075	N SKY VISTA	YAKIMA		Wilkins	950XL	3/4"	771411	96	N-W corner	
1	1			Terrace Heights Water Customer	5078	N SKY VISTA	YAKIMA		Wilkins	350	0.75	A76Y535	105	east side of house under little house	
1	1			Terrace Heights Water Customer	5079	N SKY VISTA	YAKIMA	new valve 2011	Wilkins	950 XLT	1"	3465559	96	Front under window	
1	1			Terrace Heights Water Customer	5082	N SKY VISTA	YAKIMA		Wilkins	950XLT	1"	1110383	100	South side of house	
1	1			Terrace Heights Water Customer	5083	N SKY VISTA	YAKIMA		Wilkins	950DC	1"	155567	95	North of drive by meter	

1	1			Terrace Heights Water Customer	5086	N SKY VISTA	YAKIMA		Wilkins	950XLT2	1"	4069948	105	above ground south side	
1	1			Terrace Heights Water Customer	5090	N SKY VISTA	YAKIMA	Replaced in 2016 test by Marvin	Wilkins	350	1"	A508728	100	above ground N side behind fence	
1	1			Terrace Heights Water Customer	5103	N SKY VISTA	YAKIMA		Wilkins	720A	1"	417721	100	West side of garage.	
8		Brian Sanderson 576-8273 or 966-3539	576-8273 or 966-3539	Terrace Heights Water Customer	5105	N SKY VISTA	YAKIMA	Inside garage	Wilkins	950XLT	1"	727466	100	IN GARAGE	Brian Sanderson 576-8273 or 966-3539
1	1			Terrace Heights Water Customer	5107	N SKY VISTA	YAKIMA		Watts	007M3QT	3/4"	114219	100	East side of house.	
1	1			Terrace Heights Water Customer	5202	N SKY VISTA	YAKIMA		Wilkins	350	3/4"	467541	98	S-W-side above ground	
1	1			Terrace Heights Water Customer	5204	N SKY VISTA	YAKIMA		Wilkins	950XL	1"	508337	96	front left of house	
1	1			Terrace Heights Water Customer	5205	N SKY VISTA	YAKIMA		Wilkins	950 XLT	1"	1702641	100	above ground S- side of Garage	
1	1			Terrace Heights Water Customer	5302	N SKY VISTA	YAKIMA		Watts	007M1QT	1"	A92735	96	Front yard by driveway.	
1	1			Terrace Heights Water Customer	5304	N SKY VISTA	YAKIMA		Watts	775QT	1"	33160	96	north side of house	
3/1	1			Terrace Heights Water Customer	5305	N SKY VISTA	YAKIMA		Watts	007 M1QT	1"	124095	96	Front of house by porch.	
1	1			Terrace Heights Water Customer	5306	N SKY VISTA	YAKIMA	new valve in 2012	Wilkins	350	3/4"	A064723	100	east side of house	
3	1			Terrace Heights Water Customer	5309	N SKY VISTA	YAKIMA	# 1 check failed	Watts	007M3QT	3/4"	A49342	100	above ground N-W corner	
				Terrace Heights Water Customer	5311	N SKY VISTA	YAKIMA		Febco	850	1"	A02195	100	Front of house by porch.	System not in use
1	1			Terrace Heights Water Customer	5405	N. CANYON RD	YAKIMA		Watts	007M1QT	1"	228893	95	Front under center window	
1	8			Terrace Heights Water Customer	5406	N. CANYON RD	YAKIMA	No Access 20174	Neptune	720A	1"	538265	96	Back yard under box PVB	
1	1			Terrace Heights Water Customer	4202	NOLA LOOP A	YAKIMA		Watts	007 M2 QT	3/4"	173627	55	On south side of duplex	
1	1			Terrace Heights Water Customer	4204	NOLA LOOP A	YAKIMA		Watts	007 M2 QT	3/4"	178771	55	Back OF APT A	
1	1			Terrace Heights Water Customer	4206	NOLA LOOP A	YAKIMA		Watts	007M1QT	1"	190472	53	South Side	
1	8			Terrace Heights Water Customer	4207	NOLA LOOP A	YAKIMA	Gate Locked 2017	Watts	775	3/4"	19127	52	BACK OF APT A	
1	1			Terrace Heights Water Customer	4215	NOLA LOOP A	YAKIMA		Febco	805Y	1"	A029246	56	Side of Apt A	
1	1			Terrace Heights Water Customer	4219	NOLA LOOP A	YAKIMA	DCVA	Wilkins	950XLT	3/4"	1323955	46	SIDE OF APT A	
1	1			Terrace Heights Water Customer	4220	NOLA LOOP A	YAKIMA		Wilkins	950XL	1"	1030488	46	IN FRONT OF APT A GREEN BOX TO LEFT	
1	1			Terrace Heights Water Customer	4221	NOLA LOOP A	YAKIMA		Wilkins	950XLT	1	814573	45	IN FRONT NEXT TO CURB two in one box	
1	1			Terrace Heights Water Customer	4223	NOLA LOOP A	YAKIMA		Watts	007M3QT	3/4"	24775	50	NORTH SIDE OF APT	
8	1			Terrace Heights Water Customer	4225	NOLA LOOP A	YAKIMA		Watts	007M1QT	1"	205425	58	NORTH SIDE OF APT	Valve under water
				Terrace Heights Water Customer	4226	NOLA LOOP A	YAKIMA	Water off cant test	Watts	007M3QT	1"	24468	50	BEHIND APT NEXT TO PATIO	System not in use
3/1	1			Terrace Heights Water Customer	4227	NOLA LOOP A	YAKIMA		Febco	805Y	1"	A013868	60	IN BACK Next to Heat pump	
1	1			Terrace Heights Water Customer	4230	NOLA LOOP A	YAKIMA		Wilkins	950 XLT	1"	1027353	53	FRONT LEFT OF DRIVEWAY EAST BOX	
1	1			Terrace Heights Water Customer	4231	NOLA LOOP A	YAKIMA		Watts	007M2QT	3/4"	183017	50	BACK OF APT A	
1	1			Terrace Heights Water Customer	4233	NOLA LOOP A	YAKIMA		Watts	007M2QT	3/4"	179802	58	South side of unit A	

1	1			Terrace Heights Water Customer	4234	NOLA LOOP A	YAKIMA		Wilkins	950 XLT	1"	102543	53	Front yard north of driveway near meter box	
1	1			Terrace Heights Water Customer	4235	NOLA LOOP A	YAKIMA		Watts	007M1QT	1"	222746	56	BACK OF APT A	
1	1			Terrace Heights Water Customer	4202	NOLA LOOP B	YAKIMA		Watts	007 M2	3/4"	180295	55	BEHIND APT B	
1	1			Terrace Heights Water Customer	4204	NOLA LOOP B	YAKIMA		Watts	007M2	3/4"	179810	55	West Side	
8	1	Courtney King	208-520-7014	Terrace Heights Water Customer	4206	NOLA LOOP B	YAKIMA	gate locked	Watts	007M1	1"	190737	60	BACK OF APT B	gate locked
1	1			Terrace Heights Water Customer	4207	NOLA LOOP B	YAKIMA		Watts	007 M3QT	3/4"	24759	58	SIDE OF APT B	
3	1			Terrace Heights Water Customer	4215	NOLA LOOP B	YAKIMA	# 2 needs new seat	Wilkins	950XLT	1"	W314739	55	SIDE OF APT A	
1	1			Terrace Heights Water Customer	4217	NOLA LOOP B	YAKIMA		Wilkins	950XLT	1"	1808908	50	SIDE OF APT BY CAR PORT	
1	1			Terrace Heights Water Customer	4219	NOLA LOOP B	YAKIMA	DCVA	Wilkins	950 XLT	3/4"	323938	56	SIDE OF APT B	
1	1			Terrace Heights Water Customer	4220	NOLA LOOP B	YAKIMA		Wilkins	950XL	1"	1083666	46	IN FRONT OF APT A GREEN BOX TO RIGHT	
1	1			Terrace Heights Water Customer	4221	NOLA LOOP B	YAKIMA		Wilkins	950 XLT	1	879239	45	Near meter Two in one box	
1	1			Terrace Heights Water Customer	4223	NOLA LOOP B	YAKIMA		Watts	007M3QT	3/4"	24481	46	SOUTH SIDE OF APT	
1	1			Terrace Heights Water Customer	4225	NOLA LOOP B	YAKIMA		Watts	007M1QT	1"	205420	50	SOUTH SIDE OF APT	
1	1			Terrace Heights Water Customer	4226	NOLA LOOP B	YAKIMA		Watts	007M3 QT	1"	24468	58	NORTH SIDE IN BACK YARD	
1	1			Terrace Heights Water Customer	4227	NOLA LOOP B	YAKIMA		Febco	805Y	1"	A013869	49	North SIDE OF APT NEXT TO PATIO	
1	1			Terrace Heights Water Customer	4230	NOLA LOOP B	YAKIMA	Replaced valve in 2016	Watts	LF007M1QT	1"	28622	53	IN 4230 APT A FRONT YARD WEST BOX	
1	1			Terrace Heights Water Customer	4231	NOLA LOOP B	YAKIMA		Watts	007M2QT	3/4"	180288	52	North side of unit B	
1	1			Terrace Heights Water Customer	4233	NOLA LOOP B	YAKIMA		Watts	007M2QT	3/4"	196194	58	BACK OF APT B	gate locked
1	1			Terrace Heights Water Customer	4234	NOLA LOOP B	YAKIMA		Wilkins	950 XLT	1"	1027346	53	FRONT YARD NEXT TO DRIVEWAY	
1	1			Terrace Heights Water Customer	4235	NOLA LOOP B	YAKIMA		Watts	007M1QT	1"	222125	53	ON SIDE OF APT B	
		PACIFIC CORP		Terrace Heights Water Customer	500	North'KEYS RD	YAKIMA		Febco	825Y	2"	BE3846		east of parking lot by road	water off could not test
	1	PACIFIC CORP		Terrace Heights Water Customer	500	North'KEYS RD	YAKIMA	Fire contact 452-0242 Gloria	Febco	806Yd	8"	9408180659	110	vault by parking lot on keys rd	meter read 000961
1	1	PACIFIC CORP		Terrace Heights Water Customer	500	North'KEYS RD	YAKIMA		Watts	007M1QT	2"	21708	115	maintence room main building North end	
	1	PACIFIC CORP		Terrace Heights Water Customer	500	North'KEYS RD	YAKIMA		Febco	805Y	3/4"	AL1719	110	vault by parking lot on keys rd bypass line	
1	1			Terrace Heights Water Customer	721	North'KEYS RD	YAKIMA		Watts	009 QT	1/2"	89679	76	Supply room.	
1	1			Terrace Heights Water Customer	721	North'KEYS RD	YAKIMA		Watts	009 M2 QT	1"	78263	75	Supply room.	
1	1			Terrace Heights Water Customer	721	North'KEYS RD	YAKIMA		Watts	007 M1QT	1"	143944	60	South end of building.	
1	1			Terrace Heights Water Customer	802	OVERBLUFF CT	Yakima		Wilkins	950 XLT	1"	1649899	70	by meter	
1	1			Terrace Heights Water Customer	803	OVERBLUFF CT	YAKIMA		Wilkins	950XLT	1"	1471814	70	by meter	
1	1			Terrace Heights Water Customer	804	OVERBLUFF CT	YAKIMA		Wilkins	950XLT	1"	1561798	70	by meter	
1	1			Terrace Heights Water Customer	805	OVERBLUFF CT	YAKIMA		Wilkins	950XLT	1"	1541104	70	Between house and road by phone box	
1	1			Terrace Heights Water Customer	4702	OVERBLUFF DR	YAKIMA		Wilkins	350	1"	A006386	100	Under front Window	
1	1			Terrace Heights Water Customer	4900	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1773594	95	by meter	
1	1			Terrace Heights Water Customer	4901	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1924657	90	By meter	
1	1			Terrace Heights Water Customer	4904	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1914579	90	By Meter	
1	1			Terrace Heights Water Customer	4905	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1496133	95	by meter	

1	1			Terrace Heights Water Customer	4906	OVERBLUFF DR	YAKIMA		Febco	850	1"	H148216	90	By Meter	
1	1			Terrace Heights Water Customer	4909	OVERBLUFF DR	YAKIMA		Watts	007M1QT	1"	312428	90	by meter	
1	1			Terrace Heights Water Customer	4910	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1926192	90	By Meter	
1	1			Terrace Heights Water Customer	4911	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1702673	87	by meter	
1				Terrace Heights Water Customer	4912	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT 2	1"	1914534	94	By Meter	
1	1			Terrace Heights Water Customer	4914	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	4357894	95	by meter	
1	1			Terrace Heights Water Customer	4915	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1914571	95	By Meter	
1	1			Terrace Heights Water Customer	4916	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1924647	85	By Meter	
1	1			Terrace Heights Water Customer	4918	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	2343801	85	by meter	
1	1			Terrace Heights Water Customer	5000	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1695902	80	by meter	
1	1			Terrace Heights Water Customer	5001	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1793264	80	by meter	
1	1			Terrace Heights Water Customer	5002	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1695880	80	by meter	
1	1			Terrace Heights Water Customer	5003	OVERBLUFF DR	YAKIMA		Febco	850	1"	55239	75	by meter	
1	1			Terrace Heights Water Customer	5004	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1695911	76	by meter	
1	1			Terrace Heights Water Customer	5005	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1695901	75	by meter	
1	1			Terrace Heights Water Customer	5006	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1695915	75	by meter	
1	1			Terrace Heights Water Customer	5100	OVERBLUFF DR	YAKIMA		Wilkins	950XLT	1"	2553422	75	by meter	
1	1			Terrace Heights Water Customer	5101	OVERBLUFF DR	YAKIMA		Wilkins	950 XLT	1"	1695905	65	by meter	
1	1			Terrace Heights Water Customer	5102	OVERBLUFF DR	YAKIMA		Febco	850	1"	48214	75	by meter	
1	1			Terrace Heights Water Customer	5104	OVERBLUFF DR	YAKIMA		Wilkins	950XLT	1"	1496042	75		
8	1			Terrace Heights Water Customer	810	OVERBLUFF LN	YAKIMA		Wilkins	950XLt	1	1924667	80	by meter	
1	1			Terrace Heights Water Customer	812	OVERBLUFF LN	YAKIMA		Wilkins	950 XLT	1"	1541179	80	by meter	
1	1			Terrace Heights Water Customer	813	OVERBLUFF LN	YAKIMA		Febco	850	1"	48168	80	by meter	
1	1			Terrace Heights Water Customer	814	OVERBLUFF LN	YAKIMA		Wilkins	950XLT	1	144670	80	by meter	
1	1			Terrace Heights Water Customer	817	OVERBLUFF LN	YAKIMA		Wilkins	950XLT	1"	1561780	80	by meter	
1	1			Terrace Heights Water Customer	818	OVERBLUFF LN	YAKIMA		Febco	850	1"	48209	85	by meter	
1				Terrace Heights Water Customer	819	OVERBLUFF LN	YAKIMA		Wilkins	950XLT	1"	154184	80	Front by Meter	
1	1			Terrace Heights Water Customer	820	OVERBLUFF LN	YAKIMA		Wilkins	950 XLt	1"	649922	90	by meter	
1	1			Terrace Heights Water Customer	821	OVERBLUFF LN	YAKIMA		Febco	850	1	H47740	85	by meter	
1	1			Terrace Heights Water Customer	823	OVERBLUFF LN	YAKIMA		Wilkins	950 XLT	1	2234665	85	By Meter	
1	1			Terrace Heights Water Customer	4941	PEAR BUTTE	YAKIMA		Wilkins	950XL	1"	253417	90	south side of house	
8				Terrace Heights Water Customer	4944	PEAR BUTTE	YAKIMA		Wilkins	950XLT	1"	2079505	85	N-E CORNER OF HOUSE	Water off
1	1			Terrace Heights Water Customer	4948	PEAR BUTTE	YAKIMA		Wilkins	950XL	3/4"	352113	85	south side of by gas meter	
1	1			Terrace Heights Water Customer	4949	PEAR BUTTE	YAKIMA		Wilkins	950XLT	1"	3859202	85	North side of house by AC.	
8	8	Dan and Jackie Vannelt	454-8204	Terrace Heights Water Customer	4952	PEAR BUTTE	YAKIMA		Wilkins	950XLT	1"	798567		Basement crawl space.	
1	1			Terrace Heights Water Customer	4953	PEAR BUTTE	YAKIMA		conbraco	4010502DCv	1"	13502	90	above ground sw corner	
8	8	Kenneth Wheeler	248-0117 961-6313	Terrace Heights Water Customer	4956	PEAR BUTTE	YAKIMA	Assembly Gone	Wilkins	950XL	3/4"	354132	95	south side of house backyard has dog call 1st	Call 1st 248-0117 or 961-6313
1	1			Terrace Heights Water Customer	4957	PEAR BUTTE	YAKIMA		Febco	850	1"	HA26654	90	North side of house.	
1	3			Terrace Heights Water Customer	4959	PEAR BUTTE	YAKIMA		Wilkins	350	3/4"	W010577	90	south side of house	
1	1			Terrace Heights Water Customer	4960	PEAR BUTTE	YAKIMA		Wilkins	720A	1"	1026584	90	North side of house by AC PVB	
	1			Terrace Heights Water Customer	4962	PEAR BUTTE	YAKIMA		Wilkins	350	3/4"	2689957	90	N-E side of house	
8	1			Terrace Heights Water Customer	4963	PEAR BUTTE	YAKIMA		Watts	775QT	1"	37033	85	south side of house	
1	1			Terrace Heights Water Customer	4964	PEAR BUTTE	YAKIMA		Wilkins	975 XL	3/4"	3749084	90	northside of house	
3	1			Terrace Heights Water Customer	4965	PEAR BUTTE	YAKIMA		Febco	805Y	1"	A032348	85	nw corner	
1	1			Terrace Heights Water Customer	4966	PEAR BUTTE	YAKIMA		Wilkins	950XL	1"	317896	90	southside of house by gas meter	
1	1			Terrace Heights Water Customer	4967	PEAR BUTTE	YAKIMA		Wilkins	950XL	3/4"	251072	90	south side of garage	

8	1	James Bartheld	453-4329 952-1916	Terrace Heights Water Customer	4968	PEAR BUTTE	YAKIMA	New valve 2013	Wilkins	950 XLT	1"	1913154	100	northside of house by gas meter	Locked gate
1	1			Terrace Heights Water Customer	5051	PEAR BUTTE	YAKIMA	New 2016	Watts	009QT	0.75	865414	90		
1	1			Terrace Heights Water Customer	5054	PEAR BUTTE	YAKIMA		Watts	775QT	1"	27399	86	north side backyard by gas meter	
1	1			Terrace Heights Water Customer	5055	PEAR BUTTE	YAKIMA		Febco	805Y	1"	A003252	90	south east of house	
1	1			Terrace Heights Water Customer	5057	PEAR BUTTE	YAKIMA		Wilkins	950XLT	1"	2841253	90	northside of garage	
1	1			Terrace Heights Water Customer	5059	PEAR BUTTE	YAKIMA		Wilkins	950XL	1"	262207	85	south side of house by a.c.	
1	1			Terrace Heights Water Customer	5062	PEAR BUTTE	YAKIMA		Watts	007M1QT	1"	85674	86	south sid of house by gas meter	
8	8			Terrace Heights Water Customer	5063	PEAR BUTTE	YAKIMA		Watts	007M1QT	1"	66416	84	west side of house by heat pump	Water off
1	1			Terrace Heights Water Customer	5064	PEAR BUTTE	YAKIMA		Wilkins	950XLT	1"	2079474	80	North side of house	
1	1			Terrace Heights Water Customer	5065	PEAR BUTTE	YAKIMA		Wilkins	950XL	1"	262164	82	left of front door	
1	1			Terrace Heights Water Customer	5201	PEAR BUTTE	YAKIMA	Replace old valve 2016	Wilkins	350	3/4"	A838971	85	west corner front of house	
3	8			Terrace Heights Water Customer	5202	PEAR BUTTE	YAKIMA	Locked 2017	Watts	800M4QT	1"	14459	83	east side of house PVB	Broken disk holder
8	1	Deboral Small	452-0944 or 969-1491	Terrace Heights Water Customer	5203	PEAR BUTTE	YAKIMA	Locked gate	Wilkins	950 XLT	1"	975645	83	E-Side	Deborah Small 452-0944 or 969-1491
1	1			Terrace Heights Water Customer	5205	PEAR BUTTE	YAKIMA		Wilkins	950 XLT	3/4	1939708	83	Front in Flower bed	Shut off valve not code
1	1			Terrace Heights Water Customer	5206	PEAR BUTTE	YAKIMA		Watts	007M1QT	1"	A12634	85	east side of house	
1	1			Terrace Heights Water Customer	5207	PEAR BUTTE	YAKIMA		Watts	007M1QT	1"	20831	85	east side of garage	
1	1			Terrace Heights Water Customer	5300	PEAR BUTTE	YAKIMA		Wilkins	350	1"	??	80	Left side	
1	1			Terrace Heights Water Customer	5301	PEAR BUTTE	YAKIMA		Watts	007M1QT	1"	24385	80	east side of house	
1	1			Terrace Heights Water Customer	5302	PEAR BUTTE	YAKIMA		Watts	007M1QT	1"	154392	83	Front in flower bed	
8	1			Terrace Heights Water Customer	5305	PEAR BUTTE	YAKIMA		Rainbird	DCQT100	1"	26763	87	east side of house	Valve in place - water off
1	1			Terrace Heights Water Customer	5400	PEAR BUTTE	YAKIMA		Wilkins	720 A	1"	7279859	85	front of house PVB	
3	3			Terrace Heights Water Customer	5405	PEAR BUTTE	YAKIMA	Needs # 2 disk replaced	Febco	805Y	1"	A132217	82	Right side of house	
1	1			Terrace Heights Water Customer	5500	PEAR BUTTE	YAKIMA	Rusty Jordon 2016	Watts	800M4QT	1"	30138	83	west side of house PVB	
1	1			Terrace Heights Water Customer	5501	PEAR BUTTE	YAKIMA		Rainbird	DCQT100	1"	28284	80	front of house	
1	1			Terrace Heights Water Customer	5507	PEAR BUTTE	YAKIMA		Rainbow	DCV100	1"	81660	80	north side of garage	
8	8	Luke Hoisington	952-9024	Terrace Heights Water Customer	5508	PEAR BUTTE	YAKIMA		Wilkins	550A	3/4"	107187	83	crawl space under master bedroom	Luke Hoisington 952-9024
1	1			Terrace Heights Water Customer	5512	PEAR BUTTE	YAKIMA		Rainbird	DCQT100	1"	25109	83	west side of garage	
1	1			Terrace Heights Water Customer	5602	PEAR BUTTE	YAKIMA		Rainbird	DCQT100	1"	273221	80	east side of house	
1	1			Terrace Heights Water Customer	5702	PEAR BUTTE	YAKIMA		Watts	775QT	1"	21590	80	south side by AC	
1	1			Terrace Heights Water Customer	5303	PEARBUTTE	YAKIMA		Watts	775QT	1"	27397	85	West side of house behind fence	
?	8			Terrace Heights Water Customer	5050	PEARL PLACE	YAKIMA	Gate Locked 2017	Wilkins	950XL	1"	309550	90	NE corner	
1	1			Terrace Heights Water Customer	219	RIDGEWAY DR	YAKIMA		Watts	007M1QT	1"	125616	84	S-E corner of house	
1	1			Terrace Heights Water Customer	229	RIDGEWAY DR	YAKIMA		Watts	007 M1QT	1"	178365	65	W side of house	

8	8	Robin Smith	248-8064 452-8860	Terrace Heights Water Customer	230	RIDGEWAY DR	YAKIMA	Wouldn't let BMI test 20017	Febco	805Y	1"	U7420	90	back yard by garage door	gate locked
				Terrace Heights Water Customer	234	RIDGEWAY DR	YAKIMA		Rainbird	DCQT100	1"	26169		front yard by driveway direct connect	System not in use
1	1			Terrace Heights Water Customer	235	RIDGEWAY DR	YAKIMA	replaced in 2010	Wilkins	350	1"	2574519	75	by driveway & steps	
				Terrace Heights Water Customer	238	RIDGEWAY DR	YAKIMA		Watts	AVB	3/4"	274901	90	front of house behind box	valve not to code
1	1			Terrace Heights Water Customer	242	RIDGEWAY DR	YAKIMA	Water off cant test	Watts	007 M1QT	1"	12239	75	Front lawn by driveway.	
1	1			Terrace Heights Water Customer	6400	RIDGEWAY DR	YAKIMA		Wilkins	950XLT	1"	3748467	62	East of drive	
1	1			Terrace Heights Water Customer	6401	RIDGEWAY DR	YAKIMA		Wilkins	950 XLT	1"	366031	67	After meter above ground	
3/1	1			Terrace Heights Water Customer	6405	RIDGEWAY DR	YAKIMA		Wilkins	350	3/4"	2435467	60	Front of house	
1	1	Terrace Heights Sewer		Terrace Heights Water Customer	1801	RIVERSIDE RD.	YAKIMA	New 09	Watts	009M2QT	1"	A02955	70	E BUILDING MECHANICAL RM	
1	1	Terrace Heights Sewer		Terrace Heights Water Customer	1801	RIVERSIDE RD.	YAKIMA	New 2012	Watts	009M2QT	1/12"	148467	75	E BUILDING MECHANICAL RM	
1	1	Terrace Heights Sewer		Terrace Heights Water Customer	1801	RIVERSIDE RD.	YAKIMA	New 09	Wilkins	975 XL	1	2893516	60	W-BUILDING DRY WELL ROOM	
1	1	Terrace Heights Sewer		Terrace Heights Water Customer	1801	RIVERSIDE RD.	YAKIMA	New 09	Wilkins	975 XL	1.5	2912106	75	W- BUILDING	
1	8			Terrace Heights Water Customer	5506	ROZA HILL DR	YAKIMA	Freeze Split 2017	Wilkins	350	3/4"	2689886	30	Back next to house center	
1	1			Terrace Heights Water Customer	5508	ROZA HILL DR	YAKIMA		Watts	775 QT	3/4"	12359	45	Back next to house center	
1	1			Terrace Heights Water Customer	5510	ROZA HILL DR	YAKIMA		Febco	850	1"	H24106	48	Back of House above ground	
8	8			Terrace Heights Water Customer	5606	ROZA HILL DR	YAKIMA	Water off 2017	Wilkins	950XLT	1"	3032360	50	backyard end of hill south west corner	Water off
1	3	Landfill		Terrace Heights Water Customer	7151	ROZA HILL DR	YAKIMA	new in 2012	Wilkins	350	3"	J41001		E of well house	
1	1	Landfill		Terrace Heights Water Customer	7151	ROZA HILL DR	YAKIMA		Wilkins	950XLT	1"	W220096	130	N side of main office	
1		Yakima County		Terrace Heights Water Customer		Roza Hill Dr and Hillcrest	YAKIMA		Febco	850	1 1/2	H03610		N-W corner of church property	
1	1	Well # 5		Terrace Heights Water Customer		Morning side		DCVA	Wilkins	950 XLT	1	W220115	70	North of Pump house	
				Terrace Heights Water Customer	126	ROZA VISTA DR	YAKIMA	valve has been removed	Watts	007M1QT	1"	13200	65	N side	valve has been removed
1	1			Terrace Heights Water Customer	133	ROZA VISTA DR	YAKIMA		Wilkins	950XLT	1"	833144	70	By meter	
	1			Terrace Heights Water Customer	407	S. 38TH	YAKIMA	New 2017	Wilkins	350	1"	A571392	100	Under front window	
	1			Terrace Heights Water Customer	409	S. 38TH	YAKIMA	New 2017	Wilkins	350	1"	A586285	100	Under front window	
	1			Terrace Heights Water Customer	414	S. 38TH	YAKIMA	New 2017	Wilkins	350	1"	A571897	100	By meter	
1	1			Terrace Heights Water Customer	112	S 39TH ST	YAKIMA		Wilkins	550A	1"	W65592	80	east side of bldg by sign in bushes	
1	3/1			Terrace Heights Water Customer	114	S 41TH ST	YAKIMA		Watts	007M2QT	1 1/2"	62459	76	west side of building # 114	
1	3/1			Terrace Heights Water Customer	116	S 41TH ST	YAKIMA		Febco	850	1 1/2"	4214	65	N/W-Side next to meter	
1	1			Terrace Heights Water Customer	126	S 41TH ST	YAKIMA		Febco	850	1 1/2"	H04851	76	S/E By meter	
1	1			Terrace Heights Water Customer	128	S 41TH ST	YAKIMA		Watts	007M2QT	1 1/2"	62458	78	west side of building # 128	
1	1			Terrace Heights Water Customer	101	S 57TH ST	YAKIMA		Febco	850	3/4"	A10744	58	front of house by porch	

1/8				Terrace Heights Water Customer	103	S 57TH ST	YAKIMA		Wilkins	950 XLT	1"	741705	60	North side behind fence	Valve has been removed
1	1			Terrace Heights Water Customer	104	S 57TH ST	YAKIMA		Watts	LF007M3QT	3/4"	0`0`6166	56	S-side	
1	1			Terrace Heights Water Customer	109	S 57TH ST	YAKIMA		Febco	850U	1"	H03367	65	N- Side above Ground	
1	1			Terrace Heights Water Customer	111	S 57TH ST	YAKIMA		Watts	007M1QT	1"	143941	70	south west of front porch	
1	1			Terrace Heights Water Customer	113	S 57TH ST	YAKIMA		Watts	007 M1QT	1"	83323	70	Front of house - left of porch.	
1	1			Terrace Heights Water Customer	202	S 57TH ST	YAKIMA		Wilkins	950 XLT	1"	1451262	80	Front of House under concrete Blocks	
1	1			Terrace Heights Water Customer	203	S 57TH ST	YAKIMA		Wilkins	950XLT	1"	W057328	85	by entry	
1	1			Terrace Heights Water Customer	204	S 57TH ST	YAKIMA		Wilkins	950XLT	1"	1451254	80	right of front door	
1	1			Terrace Heights Water Customer	205	S 57TH ST	YAKIMA		Wilkins	950XLT	3/4"	W046553	84	East of meter	
3/1	1			Terrace Heights Water Customer	207	S 57TH ST	YAKIMA		Febco	805Y	1"	A132903	86	Front of house.	
				Terrace Heights Water Customer	209	S 57TH ST	YAKIMA		Wilkins	950XLT	1	2565045	90	S-S ide above ground	System not in use
1	1			Terrace Heights Water Customer	103	S 58TH ST	YAKIMA		Watts	775QT	1"	25855	62	Front of house by porch.	
1	1			Terrace Heights Water Customer	105	S 58TH ST	YAKIMA		Watts	007M1QT	1"	437490	65	back porch (north)	
				Terrace Heights Water Customer	107	S 58TH ST	YAKIMA								
1	3			Terrace Heights Water Customer	108	S 58TH ST	YAKIMA	Need # 1 check module	Watts	007M1QT	1"	20847	65	middle of front lawn	
				Terrace Heights Water Customer	109	S 58TH ST	YAKIMA		Wilkins	950XLT	3/4"	773320		Front of house by porch.	System not in use
1	1			Terrace Heights Water Customer	112	S 58TH ST	YAKIMA		Watts	007 M1QT	1"	166561	80	in box east side by garage	
1	1			Terrace Heights Water Customer	114	S 58TH ST	YAKIMA		Wilkins	950XLT2	0.75	3844609	85	Front of House	
1	1			Terrace Heights Water Customer	118	S 58TH ST	YAKIMA		Watts	007M3QT	3/4"	327486	85	in box by front porch	
1	1			Terrace Heights Water Customer	202	S 58TH ST	YAKIMA		Wilkins	950XLT	1	840633	80	Front by meter	
1	1			Terrace Heights Water Customer	208	S 58TH ST	YAKIMA		Febco	805Y	1"	Ab1633	84	front of house by porch	
3	1			Terrace Heights Water Customer	201	SANTA ROZA	YAKIMA	Needs new # 1 disk possibly worn seat	Febco	805Y	1"	138743	80	between garage and entry	
1	1			Terrace Heights Water Customer	210	SANTA ROZA	YAKIMA		Watts	007M1QT	1"	190749	84	front by bay window under two rocks	
1	1			Terrace Heights Water Customer	409	Santa Roza	YAKIMA	# 4 test cock needs replaced	Wilkins	950 XLT	1"	682513	60	N-side by AC unit	
1	1			Terrace Heights Water Customer	204	SANTA ROZA DR	YAKIMA		Watts	007M1QT	1"	178121	72	SE corner of lot near road	
8	1			Terrace Heights Water Customer	205	SANTA ROZA DR	YAKIMA		Watts	775 QT	1"	19472	74	By Front Window	Upside down in dirt
1	1			Terrace Heights Water Customer	208	SANTA ROZA DR	YAKIMA		Watts	007M1QT	1"	178159	84	by meter	
1	1			Terrace Heights Water Customer	209	SANTA ROZA DR	YAKIMA		Watts	007 M1QT	1"	130013	75	Front of house under window.	
1	1			Terrace Heights Water Customer	211	SANTA ROZA DR	YAKIMA		Watts	007 M1QT	1"	130023	86	west of entry west side	
3/1	3/1			Terrace Heights Water Customer	212	SANTA ROZA DR	YAKIMA		Watts	007 M1QT DC	1"	178171	80	Front north of entry	
1	1			Terrace Heights Water Customer	213	SANTA ROZA DR	YAKIMA		Watts	007M1QT	1"	166564	80	By front door	
1	1			Terrace Heights Water Customer	214	SANTA ROZA DR	YAKIMA		Watts	007 M1QT	1"	139713	85	East side of house.	
1	1			Terrace Heights Water Customer	215	SANTA ROZA DR	YAKIMA		Watts	007M1QT	1"	242045	83	S-side of house	

1	1			Terrace Heights Water Customer	216	SANTA ROZA DR	YAKIMA		Watts	007 M2 QT	3/4"	146774	85	Front of house under window.	
1	1			Terrace Heights Water Customer	217	SANTA ROZA DR	YAKIMA		Watts	007 M1 QT	1"	139698	84	Front by house	
1	1			Terrace Heights Water Customer	218	SANTA ROZA DR	YAKIMA	replaced in 2010	Wilkins	350	1"	A030048	85	Meter box by front porch.	
1	1			Terrace Heights Water Customer	220	SANTA ROZA DR	YAKIMA		Watts	007 M1QT1	1"	187106	85	NE corner of house	
1	1			Terrace Heights Water Customer	516	SANTA ROZA DR	YAKIMA		Watts	007M1QT	1"	12549	55	N-W Corner by Fountain back yard	
3	3			Terrace Heights Water Customer	518	SANTA ROZA DR	YAKIMA	Both checks need repaired	Febco	850	1"	H73472	60	W-side of house	
3/1	1			Terrace Heights Water Customer	308	Seasons Parkway	YAKIMA	New 2016	Wilkins	950 XLT	1"	3036240			
1	1			Terrace Heights Water Customer	310	Seasons Parkway	YAKIMA	New 2016	Wilkins	350	1"	A500037		Right side of house	
	3			Terrace Heights Water Customer	312	Seasons Parkway	YAKIMA	New 2017	Wilkins	950 XLT	1"	3043297		Right side back yard	
1	1			Terrace Heights Water Customer	313	Seasons Parkway	YAKIMA	New 2015	Wilikins	350	1"	3090341	105	Back yard by shed	
8	8	Ray Carnevali	206-387-8093	Terrace Heights Water Customer	400	Seasons Parkway	YAKIMA	New 2015 Gate Locked	Wilkins	350	1"	A042415	107	S. side Back Yard	Ray Carnevali 206-387-8093
1	1			Terrace Heights Water Customer	401	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	0.75	A214381	105	S. Side front	
1	1			Terrace Heights Water Customer	402	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	1"	A035550	106	N. side backyard	
1	1			Terrace Heights Water Customer	403	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	0.75	A214362	110	NB. Side back yard	
1	1			Terrace Heights Water Customer	404	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	1"	A377123	110	Front S. of door	
1	1			Terrace Heights Water Customer	406	Seasons Parkway	YAKIMA	New 2015	Watts	007M1Qt	1"	474399	109	Back yard left side	
1	1			Terrace Heights Water Customer	408	Seasons Parkway	YAKIMA	New 2016	Wilkins	350	1"	A051403	105		
1	1			Terrace Heights Water Customer	410	Seasons Parkway	YAKIMA	New 2016	Wilkins	950 XLT	1"	3036251	115		
8				Terrace Heights Water Customer	412	Seasons Parkway	YAKIMA	New 2016	?	?	?	?			No valve
1	1			Terrace Heights Water Customer	413	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	0.75	A227114	109	N. side backyard	
	1			Terrace Heights Water Customer	415	Seasons Parkway	YAKIMA	New 2017	Wilkins	350	1"	A580339		Right side	
1	1			Terrace Heights Water Customer	416	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	1"	A415464	110	NW side of house	
1	1			Terrace Heights Water Customer	417	Seasons Parkway	YAKIMA	New 2016	Wilkins	350	1"	A497418	105	By meter	
1	1			Terrace Heights Water Customer	3902	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	1"	A035541	100	W side Front	
1	1			Terrace Heights Water Customer	3904	Seasons Parkway	YAKIMA	New 2016	Wilkins	950 XLT	1"	3036244	96	Left side	
1	1			Terrace Heights Water Customer	3906	Seasons Parkway	YAKIMA	New 2016	Wilkins	950 XLT	1"	2985274	96		
1	1			Terrace Heights Water Customer	4002	Seasons Parkway	YAKIMA	New 2016	Wilkins	950 XLT	1"	253389	100	Left side of house	
1	1			Terrace Heights Water Customer	4004	Seasons Parkway	YAKIMA	New 2016	Wilkins	950	1"	3036242	100	Right side of house	
1	1			Terrace Heights Water Customer	4008	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	0.75	A227080	100	Backyard by gate	
1	1			Terrace Heights Water Customer	4014	Seasons Parkway	YAKIMA	New 2015	Wilkins	350	1"	A185422	95	Side of house	
1	1			Terrace Heights Water Customer	106	SKY VISTA PL	YAKIMA		Febco	850	1"	A75115	68	W/E side of huse	
	1	Hapo Credit Union		Terrace Heights Water Customer	3001	STONEWOOD CT	YAKIMA	No Charge 2017 tested by other	Wilkins	950 XLT	1 1/2"	3080279	113	S-W yard	Tested by Pacific Backflow
	1	Happo Credit Union		Terrace Heights Water Customer	3001	STONEWOOD CT	YAKIMA	No Charge 2017 tested by other	Watts	009QT	0.5	A75958	113	Janitor Closet	Tested by Pacific Backflow
1	1				4912	SYCAMORE DR	YAKIMA		Watts	007 M1QT	1"	A31096	100	East side next to gas meter.	
1	1			Terrace Heights Water Customer	4920	SYCAMORE DR	YAKIMA	SOV's not approved	Wilkins	950XLT	1"	1584516	95	South side of house next to patio	
3/1	1			Terrace Heights Water Customer	4921	SYCAMORE DR	YAKIMA		Watts	007M1QT	3/4"	22532	85	S side by garage door	
1	1			Terrace Heights Water Customer	5005	SYCAMORE DR	YAKIMA		Watts	007 M1QT	1"	162404	90	S-E corner of lot	
1	1			Terrace Heights Water Customer	5007	SYCAMORE DR	YAKIMA		Watts	007 M1QT	1"	125644	90	Front of house under bay window.	
1	1			Terrace Heights Water Customer	5009	SYCAMORE DR	YAKIMA		Febco	805Y	1"	A014429	85	east side of house	

				Terrace Heights Water Customer	5101	SYCAMORE DR	YAKIMA						couldn't find valve - needs one	
1	1			Terrace Heights Water Customer	5103	SYCAMORE DR	YAKIMA		Watts	007 M1QT	3/4"	166712	85	S/E CORNER Garage area	
1	1			Terrace Heights Water Customer	5105	SYCAMORE DR	YAKIMA		Watts	007 M1QT	1"	148156	85	S-E corner of property	
1	1			Terrace Heights Water Customer	5107	SYCAMORE DR	YAKIMA		Watts	007 M1QT	1"	187116	75	Front lawn	
1	1			Terrace Heights Water Customer	5200	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	3/4"	1530299	85	East side of House	
1	1			Terrace Heights Water Customer	5205	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	747734	78	east side of house by a c	
1				Terrace Heights Water Customer	5206	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	2553482	80	West Side of House	
1				Terrace Heights Water Customer	5301	SYCAMORE DR	YAKIMA		Watts	775QT	1"	3903	68	by meter	
8	1			Terrace Heights Water Customer	5302	SYCAMORE DR	YAKIMA		Wilkins	950XLT	1"	2845677	66	by meter	Test cocks facing down
1	1			Terrace Heights Water Customer	5303	SYCAMORE DR	YAKIMA		Watts	775QT	1"	28757	70	by meter	
1	1			Terrace Heights Water Customer	5401	SYCAMORE DR	YAKIMA		Febco	850	1"	50552	65	N of meter	
1	1			Terrace Heights Water Customer	5403	SYCAMORE DR	YAKIMA		Febco	850	1"	58508	60	N of meter	
1	1			Terrace Heights Water Customer	5405	SYCAMORE DR	YAKIMA		Watts	775 QT	1"	33960	62	Next to meter	
1	1			Terrace Heights Water Customer	5407	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	1998582	60	S-E corner of house	
1	1			Terrace Heights Water Customer	5500	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	W159095	58	Next to meter	
1	1			Terrace Heights Water Customer	5501	SYCAMORE DR	YAKIMA		Febco	850	1"	21154	60	By gas meter	
1	1			Terrace Heights Water Customer	5502	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	2193790	58	Next to meter	
1	1			Terrace Heights Water Customer	5503	SYCAMORE DR	YAKIMA	Tested by Eric's Backflow 2017	Wilkins	950 XLT	1"	2028706	60		
3/1	3/1			Terrace Heights Water Customer	5505	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	?1963495	58	left of driveway	
1	1			Terrace Heights Water Customer	5506	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	1988586	58	Next to meter	
1	1			Terrace Heights Water Customer	5507	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	2130944	50	Next to meter	
1	1			Terrace Heights Water Customer	5508	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1"	1638965	50	Next to meter	
1	1			Terrace Heights Water Customer	5600	SYCAMORE DR	YAKIMA		Wilkins	950 XLT	1	2005250	50	Right of Drivway	
1	1			Terrace Heights Water Customer	5601	SYCAMORE DR	YAKIMA		Wilkins	950XLT	1"	2193746	50	Next to Meter	
3/1	3/1			Terrace Heights Water Customer	5602	SYCAMORE DR	YAKIMA		Wilkins	950XLT	1"	1988573	50	N-E side of property	
3/1	3/1			Terrace Heights Water Customer	5603	SYCAMORE DR	YAKIMA		Wilkins	950XLT	1"	219467	50	East of House	
1	1			Terrace Heights Water Customer	5604	SYCAMORE DR	YAKIMA		Watts	007M1QT	1"	319415	50	S-W of water metrer in Roses	
1	1			Terrace Heights Water Customer	5605	SYCAMORE DR	YAKIMA		Wilkins	950XLT	1"	3044101	50	S-W Corner of House	
1	1			Terrace Heights Water Customer	5607	SYCAMORE DR	YAKIMA		Febco	850	1"	89297	46	East of drive	
1	1			Terrace Heights Water Customer	5608	SYCAMORE DR	YAKIMA		Watts	775 QT	1"	37100	40	West of Drive	
1	1			Terrace Heights Water Customer	5609	SYCAMORE DR	YAKIMA		Wilkins	950XLT	1"	2005253	45	West of Drive	
1	1			Terrace Heights Water Customer	0	T/H & SANTA ROZA DR	YAKIMA		Watts	007 M1QT	1"	125513	85	Left bank of entrance.	
1	1			Terrace Heights Water Customer	2807	TERRACE HEIGHT DR	YAKIMA		Watts	800M4QT	1"	802582	55	S - of back door	
1	1	MAID O CLOVER		Terrace Heights Water Customer	2412	TERRACE HEIGHTS DR	YAKIMA	new 2012	Wilkins	350	1"	A161538	105	eastside of parking lot by keys road	
1	1	MAID O CLOVER		Terrace Heights Water Customer	2412	TERRACE HEIGHTS DR	YAKIMA		Wilkins	975XL	1/2"	342267	105	pop storage room	
1	1			Terrace Heights Water Customer	2501	TERRACE HEIGHTS DR	YAKIMA		Watts	009M2QT	2"	117051	80	maintenance room	
1		Del Monte		Terrace Heights Water Customer	2506	TERRACE HEIGHTS DR	YAKIMA		Febco	806Yd	8"	11774	116	vault in parking lot by office	
1		Del Monte			2506	TERRACE HEIGHTS DR	YAKIMA		Febco	805YDC	3/4"	j2965	115	By pass on 8"	
		Del Monte		Terrace Heights Water Customer	2506	TERRACE HEIGHTS DR	YAKIMA		Wilkins	975XL	2	3442559	115	Plant 141 RM 1800	
		Del Monte		Terrace Heights Water Customer	2506	TERRACE HEIGHTS DR	YAKIMA		Wilkins	975 XL	2	3347261	55	Boiler Room	
		Del Monte		Terrace Heights Water Customer	2506	TERRACE HEIGHTS DR	Yakima		Watts	007M3QT	3/4	28390	100	Basement of sales office	
		Del Monte		Terrace Heights Water Customer	2506	TERRACE HEIGHTS DR	Yakima		Watts	LF009M2QT	1/1	24827	45	Boiler room	

1	1	Yakima Waste Systems		Terrace Heights Water Customer	2812 1/2	TERRACE HEIGHTS DR	YAKIMA		Wilkins	950 xl	2"	2352089	120	S-W corner of dump warehouse	
				Terrace Heights Water Customer	3503	TERRACE HEIGHTS DR	YAKIMA	Broke - not in service	Wilkins	950 XLT	1"	1200829	105	Against back of house (north)	not in service
1	1	7-11 DIST OFFICE #14435		Terrace Heights Water Customer	3908	TERRACE HEIGHTS DR	YAKIMA	No Charge 2017 tested by other	Watts	009QT	1/2"	89987	85	Above metal sink in side room	Tested by American Backflow 2017
3/1	1	J's Asian Flaming Grill		Terrace Heights Water Customer	4007	TERRACE HEIGHTS DR	YAKIMA		Wilkins	975 XL	0.5	W217796	75	Pop Machine	
1	1	East of Glaciers		Terrace Heights Water Customer	4040	TERRACE HEIGHTS DR	YAKIMA		Wilkins	950 XLT	1"	1988491	72	Lawn next to meter	
1	1	Glaciers Frozen Yogurt		Terrace Heights Water Customer	4040	TERRACE HEIGHTS DR	YAKIMA	New 2013	Apollo	RP40	0.5	292939	65	glycol machine	
1	1	Subway		Terrace Heights Water Customer	4040	TERRACE HEIGHTS DR	YAKIMA		Watts	007 M1 QT	0.5	51404		Ice Machine	
1	1	Glaciers Frozen Yogurt		Terrace Heights Water Customer	4040	TERRACE HEIGHTS DR	YAKIMA		Apollo	RP40	1"	332500			
1	1	BANNER BANK	0	Terrace Heights Water Customer	4104	TERRACE HEIGHTS DR	YAKIMA		Watts	007M1QT	1"	143935	78	North east couner of bank	Says it passsed but no numbers 2017
3/1	3/1			Terrace Heights Water Customer	4108	TERRACE HEIGHTS DR	YAKIMA	No Charge 2017 tested by other	Wilkins	975 XL	0.5	W365201TCU	65	Under soda pop machine	Tested by K & L Plumbing 2017
1	1	YAKIMA COUNTY		Terrace Heights Water Customer	4301	TERRACE HEIGHTS DR	YAKIMA		Watts	007M1QT	1	141963	70	Dranage Swale Terrace Hgts Dr & Roza Hill	
1	3	PAPE MACHINERY		Terrace Heights Water Customer	2209	TERRACE HEIGHTS Dr.	Yakima	handy hands	Watts	009M2QT	1"	24632	115	In vehicle wash rack room	
1		Well # 6		Terrace Heights Water Customer		Terrace hgts Dr. & 41st st	YAKIMA	DCVA	Febco	850	2	A03245	71	south of Pump House	
1	1			Terrace Heights Water Customer	91	TERRACOTTA PL	YAKIMA		Febco	850	1"	72190	90	N-East corner of house.	
1	1			Terrace Heights Water Customer	191	TERRACOTTA PL	YAKIMA		Watts	007M1QT	1"	13294	80	east side of house by big garage	
				Terrace Heights Water Customer	124	TOP COURT	YAKIMA	Using hoses	Wilkins	950 XLT	3/4"	973270	50	E-side	System not in use
	1			Terrace Heights Water Customer	811	Topaz Ct.	Yakima	New 2017	Wilkins	350	1"	A569619	45	Right side back yard	
1	1			Terrace Heights Water Customer	812	Topaz Ct.	Yakima	New 2016	Wilkins	350	1"	A515489	45	by meter	
	1			Terrace Heights Water Customer	813	Topaz Ct.	Yakima	New 2016/17	Wilkins	350	1"	A573181	45	Next to meter	After the season
	1			Terrace Heights Water Customer	814	Topaz Ct.	Yakima	New 2016/17	Wilkins	350	1"	A537541	45	Left side by AC	
	1			Terrace Heights Water Customer	815	Topaz Ct.	Yakima	New 2016/17	Wilkins	350	1"	A573152	45	by meter	
1	1			Terrace Heights Water Customer	810	TROUTLAKE COURT	YAKIMA		Wilkins	350	1"	A091333	90	Left side of home	
1	1			Terrace Heights Water Customer	811	TROUTLAKE COURT	YAKIMA		Wilkins	350		A005116	90	EAST SIDE OF HOUSE	
1	1			Terrace Heights Water Customer	812	TROUTLAKE COURT	Yakima		Wilkins	350	1"	2998659	90	N-side back yard	locked gate
1	1			Terrace Heights Water Customer	813	TROUTLAKE COURT	YAKIMA		Wilkins	350	1	3041095	90	S-side back yard	
1	1			Terrace Heights Water Customer	814	TROUTLAKE COURT	Yakima		Wilkins	350	1"	A00789	92	W-side front yard	
1	1			Terrace Heights Water Customer	815	TROUTLAKE COURT	Yakima		Wilkins	350	1"	A153947	95	W-side back yard	Locked Gate
8	8	Brian Miller	969-2440	Terrace Heights Water Customer	816	TROUTLAKE COURT	YAKIMA	**Dog 2017**	Wilkins	950 XLT	1"	2386089	88	East side in back yard	Dogs
1	1			Terrace Heights Water Customer	819	TROUTLAKE COURT	YAKIMA		Wilkins	350	1"	2992449	90		
1	1			Terrace Heights Water Customer	821	TROUTLAKE COURT	YAKIMA		Wilkins	350	1"	30506621	86	W-side front yard	
1	8			Terrace Heights Water Customer	601	TUMAC DR	YAKIMA	Dog 2017	Watts	007M1QT	1"	166574	83	east side	
1	1			Terrace Heights Water Customer	602	TUMAC DR	YAKIMA		Watts	775Qt	1	45914	84	Back under patio	

1	1			Terrace Heights Water Customer	605	TUMAC DR	YAKIMA		Wilkins	950XLT	1"	2154789	80	south by driveway by white fence	
1	1			Terrace Heights Water Customer	607	TUMAC DR	YAKIMA		Watts	007M1QT	1"	18711	80	S- Side	
1	1			Terrace Heights Water Customer	608	TUMAC DR	YAKIMA		Watts	007M1QT	1"	70294	85	south side of house	
1	1			Terrace Heights Water Customer	609	TUMAC DR	YAKIMA		Watts	007 M1QT	1"	187118	80	N-W corner of house	
1	1			Terrace Heights Water Customer	612	TUMAC DR	YAKIMA		Watts	007 M1QT	1"	125612	80	NEXT TO METER	
1	1			Terrace Heights Water Customer	700	TUMAC DR	YAKIMA		Watts	007 M1QT	1"	122426	85	west of meter front yard	
1	1			Terrace Heights Water Customer	701	TUMAC DR	YAKIMA		Wilkins	950XLt	1"	553234	85	S/W corner of house	
1	1			Terrace Heights Water Customer	702	TUMAC DR	YAKIMA		Wilkins	950XLt	1"	2845463	80	Front by meter	water off 2014
8	1			Terrace Heights Water Customer	703	TUMAC DR	YAKIMA	water off	Febco	805Y	3/4"	A105853	85	N-W corner of house	
1	1			Terrace Heights Water Customer	704	TUMAC DR	YAKIMA		Wilkins	950XLT	3/4"	4057051	85	north side of garage	spring broke
1	1			Terrace Heights Water Customer	705	TUMAC DR	YAKIMA		Wilkins	350	3/4"	A258674	85		
1	1			Terrace Heights Water Customer	706	TUMAC DR	YAKIMA		Wilkins	350	3/4"	2703824	80	South east corner by sidewalk.	
1	1			Terrace Heights Water Customer	707	TUMAC DR	YAKIMA		Watts	007M1QT	1"	96406	85	north side of house by a c	
1	1			Terrace Heights Water Customer	708	TUMAC DR	YAKIMA		Wilkins	950XLT	.3/4	796581	85	North east corner of driveway.	
1	1			Terrace Heights Water Customer	709	TUMAC DR	YAKIMA		Watts	007M1QT	1"	103034	80	south side of garage behind fence by AC	
1				Terrace Heights Water Customer	710	TUMAC DR	YAKIMA		Wilkins	950XLT	1"	553236	80	south east corner of house	
1	1			Terrace Heights Water Customer	711	TUMAC DR	YAKIMA		Watts	007M1QT	1"	29596	85	north side of garage	
8	8			Terrace Heights Water Customer	712	TUMAC DR	YAKIMA	Gate Locked 2017	FloWmatic	DCV	1"	A2113	82	north west corner back yard	Locked gate
1	1			Terrace Heights Water Customer	713	TUMAC DR	YAKIMA		Watts	007M1QT	1"	238023	84	Front in Flower bed	
1	3			Terrace Heights Water Customer	5200	TUMAC DR	YAKIMA		Watts	007M1QT	3/4"	22523	84	north side of house next to A.C.	
1	1			Terrace Heights Water Customer	5203	TUMAC DR	YAKIMA		Wilkins	720A	1"	336369	80	N-E corner of house	
1	1			Terrace Heights Water Customer	5205	TUMAC DR	YAKIMA		Wilkens	950XLT	1"	2845601	80	South West corner of house.	
1	1			Terrace Heights Water Customer	5207	TUMAC DR	YAKIMA		Watts	007M1QT	1"	66433	78	east side of house	
8	8			Terrace Heights Water Customer	5208	TUMAC DR	YAKIMA		Febco	850	1"	15809	80	Basement storage area - ceiling.	need contact
1	1			Terrace Heights Water Customer	5300	TUMAC DR	YAKIMA		Watts	007M3QT	0.75	223867	80	East side of house	
1	1			Terrace Heights Water Customer	5302	TUMAC DR	YAKIMA		Wilkins	720-A	1"	W676935	84	West side of house.	
1	1			Terrace Heights Water Customer	5400	TUMAC DR	YAKIMA		Wilkins	950XL	3/4"	644688	85	S-E corner of house	
1	1			Terrace Heights Water Customer	5401	TUMAC DR	YAKIMA		Wilkins	950XL	3/4"	777071	80	Back of house - north east corner.	
1	1			Terrace Heights Water Customer	5403	TUMAC DR	YAKIMA		Febco	850	1"	H90258	80	east side of house	
1	1			Terrace Heights Water Customer	5404	TUMAC DR	YAKIMA		Wilkins	950XLT	1"	3036305	80	front of house	
8	8			Terrace Heights Water Customer	5405	TUMAC DR	YAKIMA		Wilkins	950DC	1"	155509	80	crawl space in kitchen	
1	1			Terrace Heights Water Customer	5406	TUMAC DR	YAKIMA		Watts	775QT	1"	37074	80	east side of house	
1	1			Terrace Heights Water Customer	5500	TUMAC DR	YAKIMA		Watts	007M1QT	1	430093	75	N-W by street	
1	1			Terrace Heights Water Customer	5501	TUMAC DR	YAKIMA		combraco	AW432 PVB	1"	4050502	78	West corner of house.	
1	1			Terrace Heights Water Customer	5502	TUMAC DR	YAKIMA		Watts	775 QT	1"	19484	80	East side of house locked gate	
3	3			Terrace Heights Water Customer	5505	TUMAC DR	YAKIMA	# 1 check spring is broke	Watts	007M1QT	1"	125640	81	South front corner of house	
8	1			Terrace Heights Water Customer	5506	TUMAC DR	YAKIMA		Wilkins	950XLT	1"	1303221	85	E - side of garage	water off

1	1			Terrace Heights Water Customer	5507	TUMAC DR	YAKIMA	Valve replaced in 2016 tested by Marvin	Wilkins	350	1"	A515010	75	E-Side in box	
1	**1**			Terrace Heights Water Customer	5508	TUMAC DR	YAKIMA	needs shut off handle	Wilkins	950 Xlt	1"	1071944	75	Right side of front porch	
1	**1**			Terrace Heights Water Customer	5600	TUMAC DR	YAKIMA		Watts	007M1QT	1"	13751	75	front of house	
3	**3**			Terrace Heights Water Customer	5601	TUMAC DR	YAKIMA	**needs # 1 check assembly**	Febco	850	1"	H58071	80	West side of house	BMI to repair
8		Pacific NW University		Terrace Heights Water Customer	206	Universty Parkway	YAKIMA		Wilkins	950 XLT	2	2844957	110	North side of building irrigation meter	
8		Pacific NW University		Terrace Heights Water Customer	206	Universty Parkway	YAKIMA		Wilkins	975XL	0.75	2951022	65	NW Janitor Closet	
8		Pacific NW University		Terrace Heights Water Customer	206	Universty Parkway	YAKIMA		Wilkins	975XL	0.5	W345123	50	Break Room	Behind ice machine
8		Pacific NW University		Terrace Heights Water Customer	206	Universty Parkway	YAKIMA		Wilkins	975XL	1 1/2	W335114	55	Mechanical Room	
8		Pacific NW University		Terrace Heights Water Customer	206	Universty Parkway	YAKIMA	**relief opend low 1.0**	Watts	909	4	217146	115	Mechanical Room	
1	**3**	IRON HORSE		Terrace Heights Water Customer	111	UNVERSITY PARK WAY	YAKIMA	RPBA	Febco	860	2	H05358	120	NEED KEY FROM COUNTY	MAKE CONTACT
1	**1**	IRON HORSE		Terrace Heights Water Customer	111	UNVERSITY PARK WAY	YAKIMA		Wilkins	950 XL	3/4"	1419852	115	NEED KEY FROM COUNTY	WITH IRON HORSE
1	**1**	IRON HORSE		Terrace Heights Water Customer	111	UNVERSITY PARK WAY	YAKIMA		Wilkins	350 DA	4"	N06043	115	NEED KEY FROM COUNTY	MANAGER
1		IRON HORSE		Terrace Heights Water Customer	111	UNVERSITY PARK WAY	YAKIMA		Febco	850	1.5	H03093	75	South of valve building	KIM
1	**3/1**	Sage Fruit Co.		Terrace Heights Water Customer	111	UNVERSITY PARK WAY	YAKIMA		Febco	850	1"	H03499	120	S-side of building	
1	**1**	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building A Fire sprinkler	Wilkins	950 XLTDA	2"	2277	120	Valve House	Don Desallier 509-930-2284
1	**1**	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building A Fire sprinkler	Wilkins	350D	3/4"	W390531	120	Valve House	Meter reading 000010
1	**1**	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building A	Watts	LF009M2QT	2"	*026752	65	Valve House	New 2016
1		Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	Yakima	Irrigation RP	Wilkins	375	2"	?		Between Building A and B in hot box	
1	**1**	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building B Fire sprinkler	Wilkins	950 XLTDA	2"	2271	120	Valve House	
1	**1**	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building B Fire sprinkler	Wilkins	350	3/4"	W384510350 D	120	Valve House	Meter reading 000010
1	**1**	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building B	Watts	LF009M2QT	2"	26842	80	Valve House	New 2016
1	**1**	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building C Fire sprinkler	Wilkins	950 XLTDA	2"	C02267	120	Valve House	

1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building C	Watts	LF009M2QT	2"	26839	55	Valve House	New 2016
1		Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building C Fire sprinkler	Wilkins	350	3/4"	W390532	120	Valve House	Meter reading 000014
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building D Fire sprinkler	Wilkins	950 XLTDA	2"	C02276	120	Valve House	
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building D Fire sprinkler	Wilkins	350	3/4"	W390530	112	Valve House	Meter reading 000014
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building D	Watts	LF009M2QT	2"	26838	75	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building E Fire sprinkler	Wilkins	950 XLTDA	2"	*02218	120	Valve House	
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building E Fire sprinkler	Wilkins	350	3/4"	W390529	120	Valve House	Meter reading 000012
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building E	Watts	LF009M2QT	2"	*026751	70	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building F Fire sprinkler	Wilkins	950 XLTDA	2"	*02266	120	Valve House	
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building F Fire sprinkler	Wilkins	350D	3/4"	W384509350 D	120	Valve House	Meter reading 000046
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building F	Watts	LF009M2QT	2"	*021538	65	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building G Fire Sprinkler	Wilkins	950 XLTDA	2"	*02907	124	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building G Fire Sprinkler	Wilkins	350	3/4	W483876	124	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building G	Watts	LF009M2QT	2"	*032323	60	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building H Fire Sprilkler	Wilkins	950 XLTDA	2"	*02905	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building H Fire Spuinkler	Wilkins	350D	3/4	W483879	120	Valve House	New 2016 meter 000015
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building H	Watts	LF009M2QT	2"	38071	57	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building I Fire Sprinkler	Wilkins	350D	0.75	W483868		Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building I Fire Sprinkler	Wilkins	950XLTDA	2"	C02912		Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building I	Wilkins	Watts	2"	34260	66	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building J Fire Sprinkler	Wilkins	950 XLTDA	2"	*02921	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building J Fire Sprinkler	Wilkins	350	3/4	W483882	120	Valve House	New 2016 meter 000014
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building J	Watts	LF009M2QT	2"	*033977	65	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building K Fire Sprinkler	Wilkins	950 XLTDA	2"	*02901	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building K Fire Sprinkler	Wilkins	350	3/4	W483802	121	Valve House	New 2016 meter 000000

1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building K	Watts	LF009M2QT	2"	*038414	64	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building L Fire Sprinkler	Wilkins	950 XLTDA	2"	2904	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building L Fire Sprinkler	Wilkins	350	3/4	W483884	120	Valve House	New 2016 meter 000007
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building L	Watts	LF009M2QT	2"	*038418	85	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building M Fire Sprinkler	Wilkins	950 XLTDA	2"	*02906	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building M Fire Sprinkler	Wilkins	350D	3/4	W438871	122	Valve House	New 2016 meter 0000011
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building M	Watts	LF009M2QT	2"	*038421	56	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building N Fire Sprinkler	Wilkins	950 XLTDA	2"	3127	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building N Fire Sprinkler	Wilkins	350	3/4	W506247	120	Valve House	New 2016 meter 000014
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building N	Watts	LF009M2QT	2"	*041408	51	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building O Fire Sprinkler	Wilkins	950 XLT	2"	*03683	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building O Fire Sprinkler	Wilkins	350D	3/4	W556483	120	Valve House	New 2016 meter 000030
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building O	Watts	LF009M2QT	2"	*049810	60	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA		Wilkins	950 XLT	2"	*03138	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building P Fire Srrinkler	Wilkins	350D	3/4	W506252	120	Valve House	New 2016 meter 000000
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building P	Watts	LF009M2QT	2"	*041597	85	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building Q Fire Sprinkler	Wilkins	950 XLTDA	2"	*03682	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building Q Fire Sprinkler	Wilkins	350	3/4	W556485	120	Valve House	New 2016 meter 000024
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building Q	Watts	LF009M2QT	2"	*049810	67	Valve House	New 2016
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building R Fire Sprinkler	Wilkins	950 XLTDA	2"	C03684		Valve House	New 2017
	3/1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building R Fire Sprinkler	Wilkins	350	3/4	W553591		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building R	Watts	LF009M2QT	2"	65698		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building S Fire Sprinkler	Wilkins	950 XLTDA	2"	C04047		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building S Fire Sprinkler	Wilkins	350	3/4	W594181		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building S	Watts	LF009M2QT	2"	*065739		Valve House	New 2017

	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building T Fire Sprinkler	Wilkins	950 XLTDA	2"	C03685		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building T Fire Sprinkler	Wilkins	350	3/4	W556486		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building T	Watts	LF009M2QT	2"	*026932		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building U Fire Sprinkler	Wilkins	950 XLTDA	2"	C01715		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building U Fire Sprinkler	Wilkins	350	3/4	W506246		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building U Fire Sprinkler	Watts	LF009M2QT	2"	*058121		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building V Fire Sprinkler	Wilkins	950 XLTDA	2"	C03962		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building V Fire Sprinkler	Wilkins	350	3/4	W		Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building V	Watts	LF009M2QT	2"			Valve House	New 2017
3/1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Office Building Relief did not open Repaired 2016	Watts	LF009M2QT	1"	29045	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Office Building Pool	Watts	LF009M2QT	1"	*010053	120	Valve House	New 2016
1	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Fitness Center	Watts	LF009M2QT	1"	29482	120	Valve House	New 2016
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building W	Watts	LF009M2QT	2"	71162	60	Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building X	Watts	LF009M2QT	2"	87054	65	Valve House	New 2017
	1	Apartments		Terrace Heights Water Customer	500	UNVERSITY PARK WAY	YAKIMA	Building Y	Watts	LF009M2QT	2"	77171	67	Valve House	New 2017
1	1	Junior Achievment		Terrace Heights Water Customer	650	UNVERSITY PARK WAY	Yakima	1st test 2011	Ames	200	4	LB-0087	115	fire sprinkler room	
	1	Sportsman State Park		Terrace Heights Water Customer	904	UNVERSITY PARK WAY	Yakima	New 2017	Wilkins	350	3"	J55805	70	In vault	New 2017
1		Beverage Distributors		Terrace Heights Water Customer	1203	UNVERSITY PARK WAY	Yakima	water Tech 2016	Wilkins	975 XL	1 1/4"	Wo72248	70	SW Corner behind pressure washer	
1		Beverage Distributors		Terrace Heights Water Customer	1203	UNVERSITY PARK WAY		water Tech 2016	Air Gap						
1	1			Terrace Heights Water Customer	40	VISTA VERDA	YAKIMA		Watts	007M1QT	1"	13302	50	east side of house	
1	1	BUENA VISTA		Buena Water System	9001	YAKIMA VALLEY HWY	BUENA	BMI	Wilkins	950 XLT	2"	3191872	50	Near fire hydrant at North end of Trailer Park	

Washington State Department of Health

Cross-Connection Control Activities (Blue) Annual Summary Report (ASR) for 2016

PWS ID: **06029J** PWS Name: **YAK CO - TERRACE HEIGHTS** County: **YAKIMA**

Part 1: Designated Cross-Connection Control Specialist (CCS) Information

CCS Name	Bill A Trout	CCS Phone	509-574-2300	CCS Cert. #	3959	BAT Cert. #	B3842
CCS is: PWS owner or employee							

Part 2: Status of Cross-Connection Control (CCC) Program at End of 2016

Provide information about the status of your CCC Program at the end of the reporting year.

PWS has:		
	A written CCC Program Plan[1] ◉ Yes ○ No	**Program Plan Last Updated**[3] 07/01/2009
	CCC implementation activities[2] ◉ Yes ○ No	

[1] Enter "Yes" if PWS has **any** type of written CCC Program Plan, policies, or procedures. Written CCC Program Plan must be part of a Water System Plan (WSP) or Small Water System Management Program (SWSMP).
[2] Enter "Yes" if PWS implemented **any** CCC Program activities during the reporting year, such as establishing legal authority, conducting hazard evaluations, requiring installation of backflow assemblies to protect the PWS, requiring assembly testing, maintaining CCC records, or enforcing the PWS's or CCC Program requirements.
[3] PWS can update the CCC Program Plan at any time (independent of WSP or SWSMP update).

Provide information regarding PWS's specific CCC Program Elements

Program Element Number	Description of Element [See WAC 246-290-490(3)]	This Program Element is:	
		Included in Written Program Plan	Being Implemented or Is Completed
1	**Legal Authority Established**	◉ Yes ○ No	◉ Yes ○ No
2	**Hazard Evaluation Procedures and Schedules**	◉ Yes ○ No	◉ Yes ○ No
3	**Procedures/Schedules for Ensuring Installation of Backflow Preventers**	◉ Yes ○ No	◉ Yes ○ No
4	**Certified CCS Provided**	◉ Yes ○ No	◉ Yes ○ No
5	**Backflow Preventer Inspection and Testing**	◉ Yes ○ No	◉ Yes ○ No
6	**Assembly Testing Quality Assurance/Quality Control (QA/QC) Program**	○ Yes ◉ No	◉ Yes ○ No
7	**Backflow Incident Response Procedures**	○ Yes ◉ No	○ Yes ◉ No
8	**Public Education Program**	◉ Yes ○ No	◉ Yes ○ No
9	**CCC Records**	◉ Yes ○ No	◉ Yes ○ No
10	**Reclaimed Water Permit**	○ Yes ○ No ◉ N/A	○ Yes ○ No ◉ N/A

Part 3A: PWS Characteristics at End of 2016

Enter the number of connections (new and existing) served by the PWS by type.

Type of Service Connection	Number
Residential (As defined by PWS)	1942
All Other (include dedicated fire lines, dedicated irrigation lines, and PWS-owned facilities such as water and wastewater treatment plants and pumping stations, parks, piers, and docks)	88
Total Number of Connections	2030

Part 3B: Cross-Connection Control for Severe and High-Hazard Premises and High-Hazard Dedicated Lines Served by the PWS

Answer the following questions carefully. These answers control your access to pages 2 and 3 for data entry.

1. Does your PWS serve any severe or high-hazard premises or any high-hazard dedicated fire or irrigation lines? ◉ Yes ○ No

2. Does PWS serve any high-hazard medical premises? ◉ Yes ○ No

- If you answer Yes to both questions, you must enter data in at least one row on page 2 and one row on page 3.
- If you answer Yes to Question 1 and No to Question 2, you must enter data on page 2 only.
- If you answer No to both questions, pages 2 and 3 will be grayed out to prevent data entry.

- Count only premises PWS serves water to.
- Report data as accurately as possible. **DOH currently bases CCC compliance actions on this information.**

Type of Severe or High-Hazard Premises or Dedicated Lines [WAC 246-290-490(4)(b)]	Number of Connections at end of 2016			
	A. Being Served Water by PWS[1]	B. With Premises Isolation by AG/RP[2]	C. With Column B AG Inspected or RP Tested[3]	D. Granted Exception from Premises Isolation
Agricultural (farms and dairies)	0	0	0	0
Beverage bottling plants (including breweries)	0	0	0	0
Car washes	1	1	1	0
Chemical plants	0	0	0	0
Commercial laundries and dry cleaners	0	0	0	0
Both reclaimed water and potable water provided	0	0	0	0
Film processing facilities	0	0	0	0
Dedicated fire lines with chemical addition or using unapproved auxiliary supplies	0	0	0	0
Food processing plants (including canneries, slaughter houses, rendering plants)	0	0	0	0
Hospitals, medical centers, medical, dental and veterinary clinics, mortuaries, nursing homes, etc., reported on Part 3C page 3 (totals imported from page 3)	3	2	2	0
Dedicated irrigation systems using purveyor's water supply and chemical addition[4]	0	0	0	0
Laboratories	0	0	0	0
Metal plating industries	0	0	0	0
Petroleum processing or storage plants	0	0	0	0
Piers and docks	0	0	0	0
Radioactive material processing plants or nuclear reactors	0	0	0	
Survey access denied or restricted	0	0	0	0
Wastewater lift/pump stations (non-residential only)	1	1	1	0
Wastewater treatment plants	0	0	0	
Unapproved auxiliary water supply interconnected with potable water supply	2	2	2	0
Totals	7	6	6	0

[1] Count multiple connections or parallel installations to the same premises as **separate** connections.

[2] Count only connections with premises isolation AGs or RPs. Don't include connections with in-premises preventers only or connections with DCVAs or DCDAs installed for premises isolation. The number in Column B can't be larger than the number in Column A in the same row.

[3] Count only connections whose premises isolation preventers were inspected (AGs) or tested (RPs) during the reporting year.

[4] For example, dedicated irrigation lines to parks, playgrounds, golf courses, cemeteries, estates, etc.

[5] Premises with hazardous materials or processes (requiring isolation by AG or RP), such as aircraft and automotive manufacturers, pulp and paper mills, metal manufacturers, military bases, and wholesale customers that pose a high hazard to the PWS. May be grouped together in categories, for example:"Other manufacturing" or "Other commercial".

Part 3C: Cross-Connection Control for High-Hazard Medical Premises Served by the PWS

- Count only medical premises PWS serves water to.
- Don't count the same premises more than once. If you serve different medical category premises through a single connection, count the connection under the medical category you consider to pose the highest hazard to PWS.
- Report data as accurately as possible. **DOH currently bases CCC compliance actions on this information**

Type of High-Hazard Medical Premises [WAC 246-290-490(4)(b)]	Number of Connections at end of 2016			
	A. Being Served Water by PWS[1]	B. With Premises Isolation by AG/RP[2]	C. With Column B AG Inspected or RP Tested[3]	D. Granted Exception from Premises Isolation
Hospitals				
Hospitals (include psychiatric hospitals and alcohol and drug treatment centers)	0	0	0	0
Facilities for Treatment and Care of Patients Not Located in Hospitals Counted Above				
Same day surgery centers	0	0	0	0
Out-patient clinics and offices	1	1	1	0
Alternative health out-patient clinics and offices	0	0	0	0
Psychiatric out-patient clinics and offices	0	0	0	0
Chiropractors with water-connected X-ray equipment	0	0	0	0
Hospice care centers	0	0	0	0
Childbirth centers	0	0	0	0
Kidney dialysis centers	0	0	0	0
Blood centers	0	0	0	0
Dental clinics and offices	1	0	0	0
Facilities for Housing Patients				
Nursing homes	0	0	0	0
Assisted Living Facilities (formerly Boarding Homes)	0	0	0	0
Residential treatment centers	0	0	0	0
Other Medical-Related Facilities				
Mortuaries with embalming equipment	0	0	0	0
Morgues and autopsy facilities (not in hospitals)	0	0	0	0
Veterinarian offices, clinics and hospitals	1	1	1	0
Totals	3	2	2	0

[1] Count multiple connections or parallel installations to the same premises as **separate** connections.

[2] Count only connections with premises isolation AGs or RPs. Don't include connections with in-premises preventers only or connections with DCVAs or DCDAs installed for premises isolation. The number in Column B can't be larger than the number in Column A in the same row.

[3] Count only connections with premises isolation AGs or RPs. Don't include connections with in-premises backflow preventers only or connections with premises isolation DCVAs or DCDAs isolation.

Part 4A: Backflow Preventer Inventory and Testing Information for 2016

- Complete all fields. Enter **zero (0)**, if no backflow preventers in a specific category.
- Count only backflow preventers relied on to protect the PWS.
- Count AVBs on *irrigation systems only*. Select No to AVB question above Table 2 if PWS doesn't track AVBs.
- Count multiple tests (or failures) for the same backflow preventer as one test (or failure) for that backflow preventer.
- For multiple service connections or parallel installations, count each assembly separately.
- Count RPDAs and DCDAs as ***single*** assemblies. Count the tests of the mainline assembly and bypass assembly as ***one test***. Count the failure of either the mainline or bypass assembly (or the failure of both) as ***one failure***. Count an entire detector assembly taken out of service as ***one assembly removed from service***.
- Count assemblies installed on dedicated fire or irrigation lines as **Premises Isolation Assemblies** in Table 1.

	Backflow Preventer Category and Inspection/Testing Information	Air Gap	RPBA	RPDA	DCVA	DCDA	PVBA	SVBA	AVB
Table 1: Premises Isolation Preventers (include preventers isolating PWS-owned facilities)									
Existing Premises Isolation Backflow Preventers									
1	In service at beginning of 2016	0	7	0	12	0			
2	Inspected and/or tested in 2016[1]	0	0	0	0	0			
3	Failed inspection or test in 2016	0	0	0	0	0			
New Premises Isolation Backflow Preventers									
4	Installed in 2016[2]	0	20	0	0	0			
5	Inspected and/or tested in 2016[1]	0	20	0	0	0			
6	Failed inspection or test in 2016	0	0	0	0	0			
Premises Isolation Backflow Preventers (existing or new)									
7	Removed from service in 2016[3]	0	0	0	0	0			
Total Premises Isolation Preventers at End of 2016		**0**	**27**	**0**	**12**	**0**	**0**	**0**	**0**
	Does PWS track AVBs on irrigation systems? ○Yes ◉No								
Table 2: In-Premises Preventers (include preventers within PWS-owned facilities)									
Existing In-Premises Backflow Preventers									
8	In service at beginning of 2016	0	17	0	568	0	23	0	unk
9	Inspected and/or tested in 2016[1]	0	0	0	0	0	0	0	unk
10	Failed inspection or test in 2016	0	0	0	0	0	0	0	unk
New In-Premises Backflow Preventers									
11	Installed in 2016[2]	0	2	0	36	0	0	0	unk
12	Inspected and/or tested in 2016[1]	0	2	0	36	0	0	0	unk
13	Failed inspection or test in 2016	0	0	0	0	0	0	0	unk
In-Premises Backflow Preventers (existing or new)									
14	Removed from service in 2016[3]	0	0	0	0	0	0	0	unk
Total In-Premises Preventers at End of 2016[4]		**0**	**19**	**0**	**604**	**0**	**23**	**0**	**0**
Grand Totals at End of 2016		**0**	**46**	**0**	**616**	**0**	**23**	**0**	**0**

[1] Initial and/or routine annual inspection (for proper installation and approval status) and/or test (for testable assemblies only, using DOH-approved USC field test procedures).

[2] Includes preventers installed on connections where backflow prevention was not previously required and any preventers that replaced those in service at the beginning of the reporting year. Replacement preventers may be of a different type than the originals.

[3] Existing or new preventers taken out of service, whether or not they were replaced by the same or a different type of preventer.

Part 4B: Other Implementation Activities in 2016

Complete all cells. Enter zero if not applicable.

Water Use Questionnaires	
Did your PWS send any water use questionnaires to customers during 2016?	○ Yes ◉ No

On-site Hazard Surveys			
Did your CCS conduct any on-site hazard surveys during 2016?	◉ Yes ○ No Number 58		
	Service Connection Type		
	New	**Existing**	**Total**
1. Number of connections surveyed for cross-connection hazards to PWS.	58	0	58
2. Number of connections requiring backflow prevention to protect PWS.[1,2]	58	0	58

New Exceptions to Premises Isolation	
Did your CCS grant any new premises isolation exceptions in 2016 to high-hazard premises?[3]	○ Yes ◉ No

CCC Enforcement Actions	
Did your PWS take any enforcement actions during 2016?[4]	○ Yes ◉ No

[1] Include services where either premises isolation or in-premises preventers were required to protect the PWS.
[2] Include existing services that need new, additional or higher level backflow prevention.
[3] Submit a completed DOH Exception Form (green) for each new exception granted in the reporting year.
[4] "Enforcement actions" means actions taken by the PWS (such as water shut-off, PWS installation or testing of backflow preventer, assessment of fines, etc.) when the customer fails to comply with the PWS's CCC requirements.

Part 5: Backflow Incidents and "Off-Normal" Events in 2016

	Backflow Incidents, Risk Factors, and Indicators during 2016	Number
Backflow Incidents during 2016		
1	Backflow incidents that contaminated the PWS[5].	0
2	Backflow incidents that contaminated the customer's drinking water system ***only***[5].	0
Risk Factors for Backflow during 2016		
3	Distribution main breaks per 100 miles of pipe.	6.00
4	Low pressure events (<20 psi in PWS distribution system).	5
5	Water outage events.	1
Indicators of Possible Backflow during 2016		
6	Total health-related complaints received by PWS.[6]	0
7	Received during BWA or PN events.[7]	0
8	Received during low pressure or water outage events.	0
9	Total aesthetic complaints (color, taste, odor, air in lines, etc.).	0
10	Received during BWA or PN events.[7]	0
11	Number of these complaints received during low pressure or water outage events.	0

[5] Purveyors must submit a Backflow Incident Report form for each backflow incident known to have contaminated the public water system. DOH is also interested in receiving incident report forms for backflow incidents that contaminated the customer's drinking water system only.
[6] Such as stomach ache, headache, vomiting, diarrhea, skin rashes, etc.
[7] **"BWA"** means **Boil Water Advisory** and **"PN"** means **Public Notification** for water quality reasons.

Part 6: Comments and Clarifications

- Enter comments to:
  - Explain or clarify information in this report.
  - Describe challenges faced or accomplishments made in this reporting year.
  - Share your goals and objectives for the coming reporting year.
- Delete comments that are no longer valid.

Part No.	Date Added	Comments
Pt 1	04-06-2017	Part 5 # 3, we have 35 miles of main line, we had 2 breaks. The numbers are higher due to calculation 100 miles of pipe.

Part 7: Report Certification and Contact Information

I, Bill Trout , certify that the information in this form is true, complete and accurate to the best of my knowledge.

Last Saved	04/06/2017	**All ASR Forms Certified/Submitted**	04/06/2017

Designated CCS/CCC Program Manager[1]

Name	Bill A Trout	**Title**	Utilities Supervisor	**CCS Cert #**	3959
Email Address	bill.trout@co.yakima.wa.us	**Phone**	509-574-2300	**Phone Ext**	

PWS Manager[2]

Name	Joe Stump	**Title**	Utilities Manager	**Operator Cert #**	8282
Email Address	joe.stump@co.yakima.wa.us	**Phone**	509-574-2300	**Phone Ext**	

[1] The CCS responsible for developing and implementing the PWS's CCC program (CCC Program Manager).
[2] The person the designated CCS/CCC Program Manager reports to or other manager having direct oversight of the CCC Program.

Cross-Connection Control Program Summary (Cream)
Annual Summary Report (ASR) for 2016

PWS ID: **06029J** PWS Name: **YAK CO - TERRACE HEIGHTS** County: **YAKIMA**

Describe the characteristics of the PWS's Cross-Connection Control (CCC) Program at the end of 2016.

Part 1: CCC Program Characteristics

A. Type of Program Implemented

Type of Program	Check One
Premises isolation only.	○
Combination program: reliance on both premises isolation and in-premises prevention.	◉
In transition from a combination program to a premises isolation only program.	○

B. Coordination with Authority Having Jurisdiction (AHJ) on CCC Issues

Indicate the status of coordination with AHJs in your service area. The AHJ is the entity that enforces the Uniform Plumbing Code at the local level. The AHJ is usually your county or city building department. Don't list DOH as an AHJ.

AHJ #	Name of AHJ (City or County Building Department)[1]	PWS		AHJ Declined to Coordinate
		Coordinates with AHJ	Has Written Agreement with AHJ	
1	Yakima County Public Services	Yes ◉ No ○	Yes ○ No ◉	Yes ○ No ○

[1] Do not enter an individual's name.

C. Corrective/Enforcement Actions Available to the Purveyor

Type of Corrective Action/Enforcement Action	Indicate Whether Available	Most Often Used (Check One)
Purveyor denies or discontinues water service.	Yes ◉ No ○	◉
Purveyor installs backflow assembly and bills customer.	Yes ○ No ◉	○
Purveyor assesses fines (in addition to eliminating or controlling cross connection).	Yes ◉ No ○	○
Purveyor tests backflow assembly and bills customer.	Yes ○ No ◉	○

[1] Enter detailed description of other enforcement actions available to PWS. Don't enter "None", "Not Applicable", or "Not Available."

D. CCC Program Responsibilities
Do not include enforcement action related procedures or circumstances.

CCC Program Activity	Responsible Party (Check one per row)	
	Customer	Purveyor
Hazard Evaluation by DOH-certified CCS	○	◉
Backflow preventer (BP) ownership	◉	○
BP installation	◉	○
BP *initial* inspection (for proper installation - all BPs)	○	◉
BP *initial* test (for testable assemblies)	◉	○
BP *annual* inspection (Air Gaps and AVBs)	○	◉
BP *annual* test (for testable assemblies)	◉	○
BP maintenance and repair	◉	○

E. Backflow Prevention for Fire Protection Systems
Please remember to enter number of days allowed if you require retrofitting.

PWS coordinates with *AHJ* on CCC issues for fire sprinkler systems (FSSs)	Yes ◉ No ○ N/A ○
PWS coordinates with *local Fire Marshal* on CCC issues for FSSs.	Yes ◉ No ○ N/A ○
PWS ensures backflow prevention is installed before serving *new* connections with FSSs.	Yes ◉ No ○
PWS requires retrofits to *high*-hazard FSSs.	Yes ◉ No. of days allowed: 30 No ○ N/A ○
PWS requires retrofits to *low*-hazard FSSs.	Yes ◉ No. of days allowed: 30 No ○ N/A ○

F. Backflow Prevention for Irrigation Systems

Minimum level of backflow prevention required on irrigation systems *without* chemical addition.	Not Addressed ○ AVB ◉ PV/SVBA ○ DCVA ○ RPBA ○
PWS currently inspects AVBs upon *initial* installation.	Yes ◉ No ○ N/A ○
PWS currently inspects AVBs upon repair, reinstallation or relocation.	Yes ◉ No ○ N/A ○

G. Used Water

Does PWS prohibit, by ordinance, rules, policy, by-laws or agreement, the intentional return of used water (e.g. for heating or cooling) into the distribution system?	Yes ◉ No ○
If not prohibited at present, date plan to prohibit use.	N/A
Current number of service connections returning used water to distribution system.	0

H. Backflow Prevention for Unapproved Auxiliary Water Supplies[1] NOT Interconnected with PWS
Show the **minimum** backflow preventer and type of protection required for service connections having unapproved auxiliary water supplies *when they are NOT interconnected to the PWS.*

Existing **service connections.**	None ◉ DCVA ○ RPBA ○ AG ○
Type of protection required.	N/A ◉ In-premises prevention ○ Premises isolation ○
New **service connections.**	None ◉ DCVA ○ RPBA ○ AG ○
Type of protection required.	N/A ◉ In-premises prevention ○ Premises isolation ○

[1] An auxiliary water supply is any water supply on or available to customer's premises in addition to the purveyor's potable water supply.

I. Backflow Prevention for Tanker Trucks and Temporary Water Connections

Minimum **level of backflow prevention (installed on or associated with the truck) required for tanker trucks taking water from PWS.**	AG ○ DCVA ◉ RPBA ○ Not Specified ○ Tanker trucks not allowed ○
PWS requires tanker trucks to obtain water at designated fill sites each equipped with permanently installed backflow preventer(s).	Yes ○ (Minimum preventer: DCVA ○ RPBA ○) No ○ N/A ○ No sites provided ◉
PWS currently accepts tanker trucks approved by other PWSs without further inspection or testing.	Yes ○ No ◉ N/A ○
Minimum **level of backflow prevention required for temporary water connections (e.g., for construction sites).**	AG ○ DCVA ◉ RPBA ○ Not specified ○ Temp. connections not allowed ○
PWS provides approved backflow preventer for temporary connections.	Yes ◉ No ○ N/A ○ (Temp. connections not allowed)
PWS requires testing each time the temporary connection backflow preventer is relocated.	Yes ◉ No ○ N/A ○ (Temp. connections not allowed)

J. Backflow Prevention for Non-Residential Connections

For each category shown, indicate whether PWS has non-residential connections of that type and the **minimum** level of ***premises isolation*** backflow prevention required (whether or not PWS currently has that type of customer).

Type of Connection	PWS has Customers of this Type	Minimum Premises Isolation Backflow Prevention Required
Commercial	Yes ◉ No ○	Not Required ◉ DCVA ○ RPBA ○
Industrial	Yes ○ No ◉	Not Required ○ DCVA ◉ RPBA ○
Institutional	Yes ◉ No ○	Not Required ◉ DCVA ○ RPBA ○

K. Backflow Prevention for Wholesale Customers

Indicate whether the PWS requires backflow prevention at interties with wholesale customers (other PWSs).

Type of Intertie	PWS has Customers of this Type	Minimum Backflow Prevention Required (if prevention is required, indicate minimum level).	
Existing	Yes ○ No ◉	Not specified / Not required ◉ Always required ○ Required only if purchaser's CCC program is inadequate ○	Minimum required (if applicable): DCVA ○ RPBA ○
New	Yes ○ No ◉	Not specified / Not required ◉ Always required ○ Required only if purchaser's CCC program is inadequate ○	Minimum required (if applicable): DCVA ○ RPBA ○

L. Exceptions to Mandatory Premises Isolation

PWS's written CCC Program Plan *allows* system to grant exceptions to mandatory premises isolation per WAC 246-290-490(4)(b)(iii)	Yes ◉ No ○ Doesn't Address ○
PWS currently grants new Exceptions.	Yes ◉ No ○
PWS granted Exceptions in past reporting years.	Yes ○ No ◉

Part 2: CCC Program Record-Keeping Software

Indicate the type or name of computer software the PWS uses to track CCC records.

BPMS ○	**Cross-Track (BMI)** ○	**Tokay** ○	**XC2** ○	**Custom developed for or by PWS**[1] ○
Other non-CCC software (e.g. Excel) ◉	**Other commercial CCC software (specify)** ○	**None Used** ○		

[1] Do not include commercial CCC software customized for PWS. If PWS uses customized commercial software, check the box for the appropriate commercial software name.

Part 3: Comments and Clarifications

- Enter comments to:
  - Explain or clarify information in this report.
  - Describe accomplishments made in this reporting year.
  - Identify challenges faced in this reporting year.
  - Share your goals and objectives for the coming reporting year.
- Delete comments that are no longer valid.

No Comments

Part 4: Report Certification and Contact Information

I,Bill Trout, certify that the information in this form is true, complete and accurate to the best of my knowledge.

Last Saved	04/06/2017	**All ASR Forms Certified/Submitted**	04/06/2017

Designated CCS/CCC Program Manager[1]

Name	Bill A Trout	**Title**	Utilities Supervisor	**CCS Cert #**	3959
Email Address	bill.trout@co.yakima.wa.us	**Phone**	509-574-2300	**Phone Ext**	

PWS Manager[2]

Name	Joe Stump	**Title**	Utilities Manager	**Operator Cert #**	8282
Email Address	joe.stump@co.yakima.wa.us	**Phone**	509-574-2300	**Phone Ext**	

[1] The CCS responsible for developing and implementing the PWS's CCC program (CCC Program Manager).
[2] The person the designated CCS/CCC Program Manager reports to or other manager having direct oversight of the CCC Program.

Appendix I

Environmental Checklist

SEPA
ENVIRONMENTAL CHECKLIST
SUBMITTAL SUPPLEMENTAL

Yakima County Public Services
128 North Second Street · Fourth Floor Courthouse · Yakima, Washington 98901
(509) 574-2300 · 1-800 572-7354 · FAX (509) 574-2301 · www.co.yakima.wa.us

Form # PLN ENR 003-SS1-A
Revised: 8/12/14

(For Staff Use Only)
DATE: _____
REVIEWED BY: _____
PROJECT #: _____
CASE #: _____
RELATED FILES:

WAC 197-11-960 Environmental checklist.

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

For nonproject proposals complete this checklist and the supplemental sheet for nonproject actions (Part D). The lead agency may exclude any question for the environmental elements (Part B) which they determine do not contribute meaningfully to the analysis of the proposal.

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

STAFF USE ONLY

1. Name of proposed project, if applicable:

Yakima County Terrace Heights Water System Plan.

2. Name of applicant:

Yakima County Public Services

3. Address and phone number of applicant and contact person:

128 N. Second Street, 4th Floor Courthouse
Yakima, WA 98901
Contact: Joe Stump, 574-2425

4. Date checklist prepared:

October 16, 2017

5. Agency requesting checklist:

Washington State Department of Health, Division of Drinking Water

6. Proposed timing or schedule (including phasing, if applicable):

The Water System Plan Update evaluates the existing water system and projects future needs in phases through the year 2026. Refer to Chapter 10 of the Plan for details.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

The Water System Plan is in itself such a plan. The plan is required to be updated every ten years.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The SEPA process will be completed for the general impacts associated with this plan and its projected changes to the County's water system. Subsequent specific construction projects or water rights applications to implement the plan will remain subject to specific environmental review as required under SEPA.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

- ***SEPA Approval - Yakima County***
- ***Building Permits - Yakima County***
- ***Dust Control Plans – Yakima Regional Clean Air Agency***

- ***Right-of-Way Use Permits - Yakima County***
- ***Water System Plan Approval - Department of Health and Ecology***
- ***Water right change applications - Department of Ecology***

STAFF USE ONLY

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The Water System Plan is a plan for the expansion, operation, and maintenance of Yakima County's Terrace Heights Water System. The plan includes the following elements:

- ***Estimation of existing and future water system demands.***
- ***Assessment of the capability of the existing water system to meet existing and future demands in terms of supply, storage and distribution.***
- ***Development of the least costly system improvements needed to meet existing and future demands.***
- ***Evaluation of the financial impact of the improvements.***

Recommended improvements identified in the plan include:

1. ***Rehabilitation of the Country Club water tower, including draining, cleaning, inspecting and replacing the cover on the reservoir.***
2. ***Increasing the Well 6 pumping capacity from 340 gpm to 900 gpm.***
3. ***Painting Reservoir 1.***
4. ***Improving access to fire hydrants.***
5. ***Installing new fire hydrants in various locations.***
6. ***Replacing 4-inch diameter and smaller water lines with larger diameter water lines.***
7. ***Replacing the Terrett booster station.***
8. ***Installing storage in Pressure Zone 4 along with telemetry and piping.***
9. ***Replacing or looping an existing 4-inch diameter water line in Hillcrest Drive between Maple and Mountain View.***
10. ***Constructing a new water line in Maple Avenue.***
11. ***Testing source and service meters.***
12. ***Consolidate existing water rights and add points of withdrawal to the water rights for Well 1.***
13. ***Prepare a rate study.***
14. ***Conduct leak survey.***
15. ***Preparing a detailed operations plan for each facility.***
16. ***Constructing a storage building.***
17. ***Constructing a new water line in Butterfield Road.***

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by

the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

STAFF USE ONLY

The Water System Plan includes the service area of the Terrace Heights Water System. The service area is generally that part of the Yakima Urban Growth Area located east of the Yakima River. The water service area location is shown on Figure 1-1 in the plan.

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other.....

Because the plan covers a large area, the topography varies from flat to hilly. The site is east of the Yakima River along the sourthern foothills of Yakima Ridge.

b. What is the steepest slope on the site (approximate percent slope)?

Does not apply.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Typically, the top one or two feet is silt loam top soil. Below the top soil is a cemented hard pan layer.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Minor grading and filling will occur during pipeline installation and during construction of the booster station and water tanks. Quantities and sources of fill are not known at this time, but are expected to consist of the same material that was excavated.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Construction will be done in a manner to prevent significant erosion. Site development will require consideration of proper erosion control and engineering construction plans will address these needs.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Only a small area will be covered with impervious surfaces. Impervious surfaces will result from construction of a booster station and water storage tanks.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Design details for the recommended improvements will take into consideration measures to control erosion.

STAFF USE ONLY

2. **Air**

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Dust and some vehicle emissions will be generated during construction of recommended improvements.

b. Are there any offsite sources of emissions or odor that may affect your proposal? If so, generally describe.

Does not apply.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

During construction exposed soils shall be sprinkled with water.

3. **Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The Yakima River borders the west side of the service area.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year flood plain? If so, note location on the site plan.

Part of the service area lies within the 100-year floodplain. However, none of the proposed improvements are within the 100-year flood plain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well? Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

The Terrace Heights Water System uses ground water as its source of supply. The plan recommends increasing the pumping capacity of an existing well from 340 gpm to approximately 900 gpm. The County has water rights for up to 2,000 gpm and 1,210 acre-feet per year for municipal water supply purposes from the well.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

c. Water runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Sources of runoff and method of collection is not known at this time. Construction Stormwater General Permit applications, if required, will be submitted prior to construction. Project specific Stormwater Management Plans will be submitted when required to control post construction runoff.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, runoff water, and drainage pattern impacts, if any:

Care will be taken during construction to ensure that uncontrolled discharges to ground or surface water do not occur.

4. **Plants**

a. Check the types of vegetation found on the site:

__x__ Deciduous tree: Alder, maple, aspen, other

__x__ Evergreen tree: Fir, cedar, pine, other

STAFF USE ONLY

__x__ Shrubs

__x__ Grass

__x__ Pasture

____ Crop or grain

____ Orchards, vineyards or other permanent crops.

__x__ Wet soil plants: Cattail, buttercup, bullrush, skunk cabbage, other

____ Water plants: Water lily, eelgrass, milfoil, other

__x__ Other types of vegetation ***(sagebrush, cheat grass, and some wild dryland grasses and flowers.)***

b. What kind and amount of vegetation will be removed or altered?

Minor amounts of vegetation will be disturbed during the construction projects proposed in the plan. Water lines account for the majority of the excavation and they are typically installed in roads. Some native grasses will be removed during installation of the water tanks. The kind and amount are unknown at this time.

c. List threatened and endangered species known to be on or near the site.

None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None planned at this time.

e. List all noxious weeds and invasive species known to be on or near the site.

None known.

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

Birds: Hawk, heron, eagle, songbirds, other:

Mammals: Deer, bear, elk, beaver, other:

Fish: Bass, salmon, trout, herring, shellfish, other:

Hawks, songbirds, quail, small rodents, coyotes, and skunks. Other birds and animals are also likely on or near the proposed project sites.

b. List any threatened and endangered species known to be on or near the site.

None known.

c. Is the site part of a migration route? If so, explain.

No.

d. Proposed measures to preserve or enhance wildlife, if any:

None planned at this time.

e. List any invasive animal species known to be on or near the site.

None known.

6. **Energy and natural resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electricity is used to run the pump stations and automated controls. As customers are added to the system, pumping requirements and electrical consumption will increase. Adding new booster pumps and a larger pump in one of the wells will also impact electrical requirements.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

A water conservation program is one element of the Water System Plan. Measures included in the water conservation plan will help to reduce the volume of water that will need to be pumped. The plan also summarizes the efficiency of the pumping facilities so that the more efficient facilities can be operated first.

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

No.

1) Describe any known or possible contamination at the site from present or past uses.

None known.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

None known.

4) Describe special emergency services that might be required.

None known.

5) Proposed measures to reduce or control environmental health hazards, if any:

None proposed.

b. Noise
1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short-term noises from construction equipment would occur during construction hours. Also, low levels of noise would be created by the proposed booster pumps and well pump. At times the pumps will operate 24-hours a day. However, the proposed pumps will be located at existing pump station sites and will be within pump houses. Consequently, noise levels should not be noticeably different than what they are now.

3) Proposed measures to reduce or control noise impacts, if any:

Construction equipment will be required to meet current State of Washington regulations for noise control. Pump motors will be located inside pump houses. Submersible pumps and motors will be considered where well pumps are located in noise sensitive areas.

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Water line type projects will typically be within County Road Rights-of-Way. Pump houses and the proposed water tank sites are on County owned property or vacant land. The proposal should not affect current land uses on nearby properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

Not applicable.

STAFF USE ONLY

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

STAFF USE ONLY

No.

c. Describe any structures on the site.

Pump houses are on each of the well sites.

d. Will any structures be demolished? If so, what?

The existing Terrett pump house will be removed and replaced.

e. What is the current zoning classification of the site?

The proposed projects fall in several zoning classifications such as single-family residential, multi-family residential, valley rural, suburban residential, light industrial, central business support and professional business.

f. What is the current comprehensive plan designation of the site?

Urban Growth Area and Rural Self Sufficient.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified critical area by the city or county? If so, specify.

Part of the future reservoir site for Zone 4 is listed as an "Over Steepened Slope Intermediate Risk".

i. Approximately how many people would reside or work in the completed project?

Approximately 5,300 people are served by the water system.

j. Approximately how many people would the completed project displace?

None of the water system projects included in the plan will displace people. However, the Butterfield Road Waterline is part of a larger road project that does involve displacement of approximately 4 people.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Several alternatives were evaluated for the Butterfield Road project, and the project selected impacted the least number of homes.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Implementation of plan recommendations would be subject to local planning review for compliance with land use compatibility.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

None.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None of the water system projects included in the plan will eliminate housing units. However, the Butterfield Road Waterline is part of a larger road project that does involve elimination of 1 or 2 housing units.

c. Proposed measures to reduce or control housing impacts, if any:

Several alternatives were evaluated for the Butterfield Road project, and the project selected impacted the least number of homes. Impacted property owners will be compensated.

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Proposed new tanks for Pressure Zone 1 will likely be less than 20 feet in height. If the County's existing steel tanks are relocated and used for storage in Pressure Zone 4, the height would be approximately 13-feet.

b. What views in the immediate vicinity would be altered or obstructed?

Views to the south would be altered if a new tank is located at the booster station near Sycamore Drive and Maple Avenue. Views to the west would be altered if a new tank is located at Well 5.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Trees planted near the tanks would help lessen the impact.

11. **Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Outside security lighting will be provided near the pump house and storage tank. The lighting will turn on at night.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Security lighting could interfere with views.

STAFF USE ONLY

c. What existing offsite sources of light or glare may affect your proposal?

STAFF USE ONLY

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

Exterior lighting will be directed downward onto the site.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Recreational opportunities within the service area include the Yakima River, a golf course, and a state park.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Not applicable.

13. **Historic and cultural preservation**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

The Country Club water tower may be eligible for listing in a preservation register.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation. This may include human burials or old cemeteries. Is there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None known.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Potential impacts will be evaluated with each project.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

One improvement proposed in the plan is to rehabilitate the Country Club Tower, including replacing the tank cover, installing insulation and heating, repairing the roof and installing more secure doors.

14. **Transportation**

a. Identify public streets and highways serving the site or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.

STAFF USE ONLY

The various sites of the proposed improvements are served by County roads, State Route 24, and Interstate 82. Refer to Appendix F in the plan for a map of street names.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No. The nearest public transit stop is approximately ½ mile east of the water system near Sarg Hubbard Park.

c. How many additional parking spaces would the completed project or nonproject proposal have? How many would the project or proposal eliminate?

A limited number of parking places would be provided for maintenance personnel at the proposed reservoir sites.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will not use water, rail or air transportation. Burlington Northern Railroad has a line on the east end of the service area

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The number of vehicular trips to existing pump houses will not change. Approximately one vehicular trip per day would be generated to proposed water tank sites.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

None planned.

15. **Public services**

a. Would the project result in an increased need for public services (for example: Fire protection, police protection, public transit health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. **Utilities**

a. Circle utilities currently available at the site: Electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Not applicable.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electric service is provided by Pacific Power. The existing service at Well 6 may need to be modified to handle the increased pumping capacity that would be installed.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Date Submitted: 6/14/19

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

The Water System Plan Update will not have direct impacts on the environment. The recommendations of the Plan do not suggest projects that will permanently increase discharges to water; emissions to air; produce, store, or release toxic or hazardous substances; or produce significant amounts of noise. Air emissions (in the form of dust), and noise emissions are likely to be generated during construction only.

Proposed measures to avoid or reduce such increases are:

Construction impacts can be reduced by watering and replanting disturbed areas and monitoring the hours of operation within sound sensitive areas.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Recommendations of the Plan are not likely to affect plants, animals, fish, or marine life.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

None are proposed.

3. How would the proposal be likely to deplete energy or natural resources?

The recommended pumping facilities will require electrical energy.

As the demand for water increases, more water will need to be withdrawn from the aquifer.

Proposed measures to protect or conserve energy and natural resources are:

The Water System Plan includes a water conservation plan. The water conservation plan will help to reduce the volume of water pumped from the aquifer. The plan also summarizes the efficiency of the pumping facilities so that the more efficient facilities can be operated first.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, flood plains, or prime farmlands?

The recommended facility improvements should not affect such sensitive areas.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Does not apply.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The recommended improvements will not encourage land or shoreline uses incompatible with existing plans.

Proposed measures to avoid or reduce shoreline and land use impacts are:

None.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

The recommended improvements will not directly increase demands on transportation or public services and utilities. Rather, they will allow the Terrace Heights Water System to meet increased demands.

Proposed measures to reduce or respond to such demand(s) are:

Does not apply.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

The proposal does not conflict with any known local, state or federal laws or requirements for the protection of the environment.

Public Services

128 North Second Street • Fourth Floor Courthouse • Yakima, Washington 98901
(509) 574-2300 • 1-800-572-7354 • FAX (509) 574-2301 • *www.co.yakima.wa.us*

LISA H. FREUND – Director

DATE: July 31, 2019

TO: Joe Stump and Interested Agencies

FROM: Byron Gumz, Senior Project Planner

SUBJ: SEP2019-00017 - Terrace Heights Water System Plan Update
Final Threshold Determination

Enclosed is the Final Threshold Determination - Determination of Non-Significance for the proposal to update the Terrace Heights Water System Plan. We have determined that it will not have a probable significant adverse impact on the environment. Please review the attached documents for information on conditions of approval, and your appeal options. If you have any questions on the project or the appeal process, please contact me at (509) 574-2300.

Encl.: Threshold Determination - DNS

\\nt2\Planning\Development Services\Projects\2019\SEPA\SEP19-017 TH Water Plan Update\SEP2019-00017 TH Water Plan Update Final DNS_bjg_tc.doc

FINAL
DETERMINATION OF NON-SIGNIFICANCE

(Notice of Action)

1. **Description of Proposal:** An update to the Terrace Heights Water System Plan to address expansion, operation, and maintenance of the Terrace Heights Water System.

2. **File Number:** SEP2019-00017

3. **Proponent:** Yakima County Public Services
   Attn: Joe Stump
   128 N. 2nd Street, Fourth Floor
   Yakima, WA 98901

4. **Location of Proposal:** The Terrace Heights Water System service area within Unincorporated Yakima County.

5. **Lead Agency:** Yakima County Planning Division

6. **Determination:** The lead agency for this proposal has determined that it will not have a probable significant adverse impact on the environment and an Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after a careful review of the completed environmental checklist, and other information on file with the lead agency. This information (including all environmental documentation) is available to the public on request and can be examined in our offices during regular business hours or online at www.yakimap.com/permits. Environmental documents include the SEPA checklist, this threshold determination, and submittal materials.

7. **Comment and Appeal Information:** This Final DNS is issued under WAC 197-11-355. There is no further comment on it. There are no administrative appeals available for this threshold determination. A 21-day judicial appeal period is available after the Board of Yakima County Commissioners (BOCC) finalizes their decision. For information on the comment or appeal processes, or on other issues relating to this proposal, contact Byron Gumz, Senior Project Planner, at (509) 574-2300.

8. **SEPA Responsible Official:** Lynn Deitrick, AICP

9. **Address:** 128 N. 2nd St.,
   4th Floor Courthouse,
   Yakima, WA 98901

10. **Date:** August 1, 2019

Appendix J

Agency Review Comments

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
EASTERN DRINKING WATER REGIONAL OPERATIONS
16201 E Indiana Avenue, Suite 1500, Spokane Valley, Washington 99216-2830
TDD Relay 1-800-833-6384

November 25, 2019

Joe Stump, PE
Yak Co - Terrace Heights
128 N 2nd St - 4th Floor Courthouse
Yakima, WA 98901

Subject: Yak Co - Terrace Heights; PWS ID #06029; Yakima County Water System Plan; DOH Project #17-1101; **DOH Approval**

Dear Mr. Stump:

The Yak Co - Terrace Heights Water System Plan (WSP) received in this office on October 23, 2017, with revisions submitted on September 9, 2019, has been reviewed and in accordance with the provisions of WAC 246-290-100, is hereby **APPROVED**.

An approved update of this WSP is required **on or before November 25, 2026**, unless the Department of Health (DOH) requests an update or plan amendment pursuant to WAC 246-290-100(9). Approval of this WSP is valid as it relates to current standards outlined in Washington Administrative Code (WAC) 246-290, revised January 2017, and is subject to the qualifications herein. Future revisions in the rules and statutes may be more stringent and require facility modification or corrective action.

Standard Construction Specifications for distribution main extensions have been approved as part of this WSP. With this approval and consistent with WAC 246 290 125(2), Yakima County Public Services may proceed with the installation of distribution main extensions without additional DOH approval provided that the County maintains on file completed construction completion reports (a copy of which is attached) in accordance with WAC 246 290 125(2) and makes them available for review upon request by DOH.

Disclaimer: The department's approval of your Water System Plan does not confer or guarantee any right to a specific quantity of water. The approved number of service connections is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represented, the number of approved connections may be reduced to commensurate with the actual amount of water and your legal right to use it. A copy of the Department of Ecology's correspondence dated November 21, 2017 and October 21, 2019 regarding your water rights are enclosed.

Previously, DOH approved "unspecified" connections for the Yak Co - Terrace Heights Water System. Under current conditions, the water system serves 2,421 (1,521 single-family residential, 805 multi-family residential, and 95 commercial/industrial/institutional) connections whose water usage corresponds to 2725 ERUs (Equivalent Residential Units), including 78 ERUs for Distribution System Leakage (DSL), with an ERU utilizing an average day demand (ADD) of 539 gallons per day for Terraced Estates and 247 gallons per day for Country Club; and a maximum day demand (MDD) of 1,099 gallons per day for Terraced Estates and 385 gallons per day for Country Club.

The WSP includes capacity information that demonstrates the physical and legal ability of this water system to provide water during the 7-year period for which the approval of the WSP is valid. Based on the analysis presented in the WSP, the limiting factor in determining the approved number of connections is **Distribution**.

DOH bases the number of approved connections on Worksheet 6-1 and the updated Water Facilities Inventory (WFI) form information, both included in the WSP, assuming all new connections are single family connections:

From Worksheet 6-1

Water System Capacity:	3,100	ERUs (limiting component is Distribution)
Total Existing ERUs:	- 2,566	ERUs (based on existing connections and DSL)
Available ERUs:	534	ERUs

From WFI Information

Existing number of active service connections:	2421	
Available connections (= Available ERUs):	534	
Approved number of connections:	2,955	connections

Accordingly, the approved number of connections that will be reflected on the WFI form and in DOH records will remain "**unspecified**".

The Yak Co - Terrace Heights Water System is responsible for permitting new service connections in a manner consistent with the water system plan so that the physical capacity and water right limitations are not exceeded. As new water services are requested, the Yak Co - Terrace Heights Water System must evaluate each connection for the expected water demands and adjust the remaining connection allowance. The water system should keep an updated list that compares the overall ERUs expended against the overall number of connections placed into service. This will allow a better estimate of the system's adequacy.

Pursuant to RCW 90.03.386(2), the "Service Area & Retail Service Area" identified on Figure 1-1, *Terrace Heights Water System Service Area* in the WSP now represents "place of use" for this system's water rights. Future changes in service area should be made through a WSP amendment or update.

The Yak Co - Terrace Heights Water System has a duty to provide new water service within its retail service area. This WSP includes service policies to describe how your system plans to provide new service within your retail service area.

Submittal of the WSP included local government consistency determinations from Yakima County Planning Division, City of Moxee, and City of Yakima. This WSP meets local government consistency requirements for WSP approval pursuant to RCW 43.20 for these entities.

The Yak Co - Terrace Heights is located within Lower Yakima WRIA #37. Ecology has not determined whether the WSP was not inconsistent with an approved watershed plan. DOH encourages the water system to contact Ecology regarding this matter.

Thank you for your cooperation. DOH recognizes the significant effort and resource commitment involved in the preparation of this WSP. If you have any comments or questions concerning our review please contact either of us at (509) 329-2120 or (509) 329-2137, respectively.

Sincerely,

Andres Cervantes, P.E.
Regional Engineer
Office of Drinking Water
Division of Environmental Public Health

Jamie Gardipe
Regional Planner
Office of Drinking Water
Division of Environmental Public Health

Enclosures: Department of Ecology correspondence (2)
Construction Completion Form

cc: Yakima Health District
Yakima County Planning Division
Ying Fu, Department of Ecology, Eastern Regional Office
George Simon, DOH Compliance Program Manager
Matt Hadorn, DOH Regional Specialist

Washington State Department of Health

Division of Environmental Health
Office of Drinking Water

Local Government Consistency Determination Form

Water System Name: Yakima County Terrace Heights Water System PWS ID: 06029J

Planning/Engineering Document Title: Terrace Heights WSP Plan Date: August 2019

Local Government with Jurisdiction Conducting Review: City of Yakima

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system: Identify the page(s) in submittal	For use by local government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	1-3 to 1-4, 3-18 to 3-21	Yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	3-3 to 3-5	Yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	N/A	Not Applicable
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-4 to 1-8	Not Applicable
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	12-1	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signature

11/4/2019
Date

David Brown, Assistant Director of Public Works, City of Yakima
Printed Name, Title, & Jurisdiction

Washington State Department of Health

Local Government Consistency Determination Form

Water System Name: Yakima County Terrace Heights Water System PWS ID: 06029J

Planning/Engineering Document Title: Terrace Heights WSP Plan Date: August 2019

Local Government with Jurisdiction Conducting Review: City of Moxee

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system: Identify the page(s) in submittal	For use by local government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	1-3 to 1-4, 3-18 to 3-21	yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	3-3 to 3-5	yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	N/A	N/A
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-4 to 1-8	yes
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	12-1	yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Byron Adams — 11-1-2019

Signature — Date

Byron Adams City of Moxee Supervisor

Printed Name, Title, & Jurisdiction

Washington State Department of Health

Local Government Consistency Determination Form

Water System Name: Yakima County Terrace Heights Water System PWS ID: 06029J

Planning/Engineering Document Title: Terrace Heights WSP Plan Date: February 2019

Local Government with Jurisdiction Conducting Review: Yakima County Planning

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system: Identify the page(s) in submittal	For use by local government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	1-3 to 1-4, 3-18 to 3-21	Yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	3-3 to 3-5	Yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	N/A	Not Applicable
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-4 to 1-8	Yes
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	12-1	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Phil Hoge
Signature

3/11/2019
Date

Phil Hoge, Project Planner, Yakima County Planning Division
Printed Name, Title, & Jurisdiction

Consistency Review Guidance

For Use by Local Governments and Municipal Water Suppliers

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all of the elements; 1a), b), c), d), and e), when they apply.

For **water system plans (WSP)**, a consistency review is required for the service area and any additional areas where a municipal water supplier wants to expand its water right's place of use.

For **small water system management programs**, a consistency review is only required for areas where a municipal water supplier wants to expand its water right's place-of-use. If no water right place-of-use expansion is requested, a consistency review is not required.

For **engineering documents,** a consistency review is required for areas where a municipal water supplier wants to expand its water right's place-of-use (water system plan amendment is required). For noncommunity water systems, a consistency review is required when requesting a place-of-use expansion. All engineering documents must be submitted with a service area map (WAC 246-290-110(4)(b)(ii)).

A) Documenting Consistency: The planning or engineering document must include the following when applicable.

a) A copy of the adopted **land use/zoning** map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other portions of comprehensive plans or development regulations that relate to water supply planning.

b) A copy of the **growth projections** that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.

c) Include water service area policies and show that they are consistent with the **utility service extension ordinances** within the city or town boundaries. *This applies to cities and towns only.*

d) All **service area policies** for how new water service will be provided to new customers.

e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency – Other Relevant Elements, Policy B.07, September 2009.

B) Documenting an Inconsistency: Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.

C) Documenting a Lack of Local Review for Consistency: Where the local government with jurisdiction did not provide a consistency review, document efforts made and the amount of time provided to the local government for review. Please include: name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

Gardipe, Jamie C (DOH)

From: Fu, Ying (ECY)
Sent: Monday, October 21, 2019 2:28 PM
To: Gardipe, Jamie C (DOH)
Subject: Yak Co-Terrace Heights 2nd draft WSP

Hi Jamie,

I have reviewed the above 2nd draft report. The 1st draft WSP report was submitted in 2017 and I provided review comments back then. There has not been much change in their water system since 2017. I have no further comments.

Thanks

Ying Fu
Department of Ecology
Eastern reginal Office
4601 N. Monroe St.
Spokane, WA 99205

https://www.ecology.wa.gov/Water-Shorelines/Water-supply
email: yifu461@ecy.wa.gov
phone: 509-329-3451

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

November 21, 2017

Mr. Joe Stump, PE
Yak Co – Terrace Heights
128 N 2nd St – 4th Floor Courthouse
Yakima, WA 98901

Re: Yak Co – Terrace Heights; PWS ID # 06029; Yakima County Water System Plan; DOH Project #17-1101

Dear Mr. Stump:

I have reviewed the above referenced document in accordance with the *2007 Memorandum of Understanding* between Department of Health and Department of Ecology (Ecology), and in accordance with RCW 90.03.386. Ecology's review is focused only on the subject water system's water rights legitimacy, adequacy and related issues affecting the submitted report.

Ecology recently approved a change Report of Examination for ground water right 886-A, in which all water rights were evaluated. Terrace Heights water right self-assessment Tables 6-2 to 6-4 seem to be current and correct. The water system has seven water rights with total instantaneous right Qi of 6,155 gpm, and annual quantity Qa of 5,020 acre-ft/yr for municipal purposes of use. Terrace Heights has an adequate water rights for current operation, and 10 year and 20 year forecast growth.

On page 6-7, the report indicated a change application might be needed to add a new source to well #1 water rights. I would recommend to consider consolidation of existing water rights if they are withdrawing water from the same aquifer.

These are my comments at this time. Please contact me at (509) 329-3451 or at yifu461@ecy.wa.gov if you have any questions.

Sincerely,

Ying Fu
Water Resources Program

YF:sm

cc: Jamie Gardipe, DOH
Tom Perkow, DOE/CRO

Joe Stump

From: Brown, David <David.Brown@yakimawa.gov>
Sent: Monday, February 25, 2019 8:11 AM
To: Joe Stump
Cc: 'Gardipe, Jamie C (DOH)'
Subject: RE: Yakima County Terrace Heights Water System Plan

Thanks Joe,

The city does not have comments and consider the plans consistent.

David Brown

From: Joe Stump [mailto:joe.stump@co.yakima.wa.us]
Sent: Monday, February 25, 2019 8:05 AM
To: Brown, David <David.Brown@yakimawa.gov>
Cc: 'Gardipe, Jamie C (DOH)' <jamie.gardipe@doh.wa.gov>
Subject: Yakima County Terrace Heights Water System Plan

Good morning David,

Attached is a copy of the Terrace Heights Water System Plan update. DOH has asked that we provide a copy to the plan to neighboring water systems for review and comment. Sections of the plan that reference the City of Yakima include:

1. Service Area on Page 1-3 and Figure 1-1.
2. Interties on Page 2-13.
3. Compatibility with Other Related Plans on Page 12-1.

Due to the size of the file, I'll send the Appendices in a separate email. Please let me know if you have any comments or questions. Thanks.

Joe

Joe Stump

From: Joe Stump
Sent: Monday, February 25, 2019 7:56 AM
To: David Brown; Byron Adams
Cc: 'Gardipe, Jamie C (DOH)'
Subject: Yakima County Terrace Heights Water System Plan
Attachments: Terrace Heights Water System Plan (2-22-19).pdf

Good morning David and Byron,

Attached is a copy of the Terrace Heights Water System Plan update. DOH has asked that we provide a copy to the plan to neighboring water systems for review and comment. Sections of the plan that reference the Cities of Yakima or Moxee include:

1. Service Area on Page 1-3 and Figure 1-1.
2. Interties on Page 2-13.
3. Compatibility with Other Related Plans on Page 12-1.

Due to the size of the file, I'll send the Appendices in a separate email. Please let me know if you have any comments or questions. Thanks.

Joe

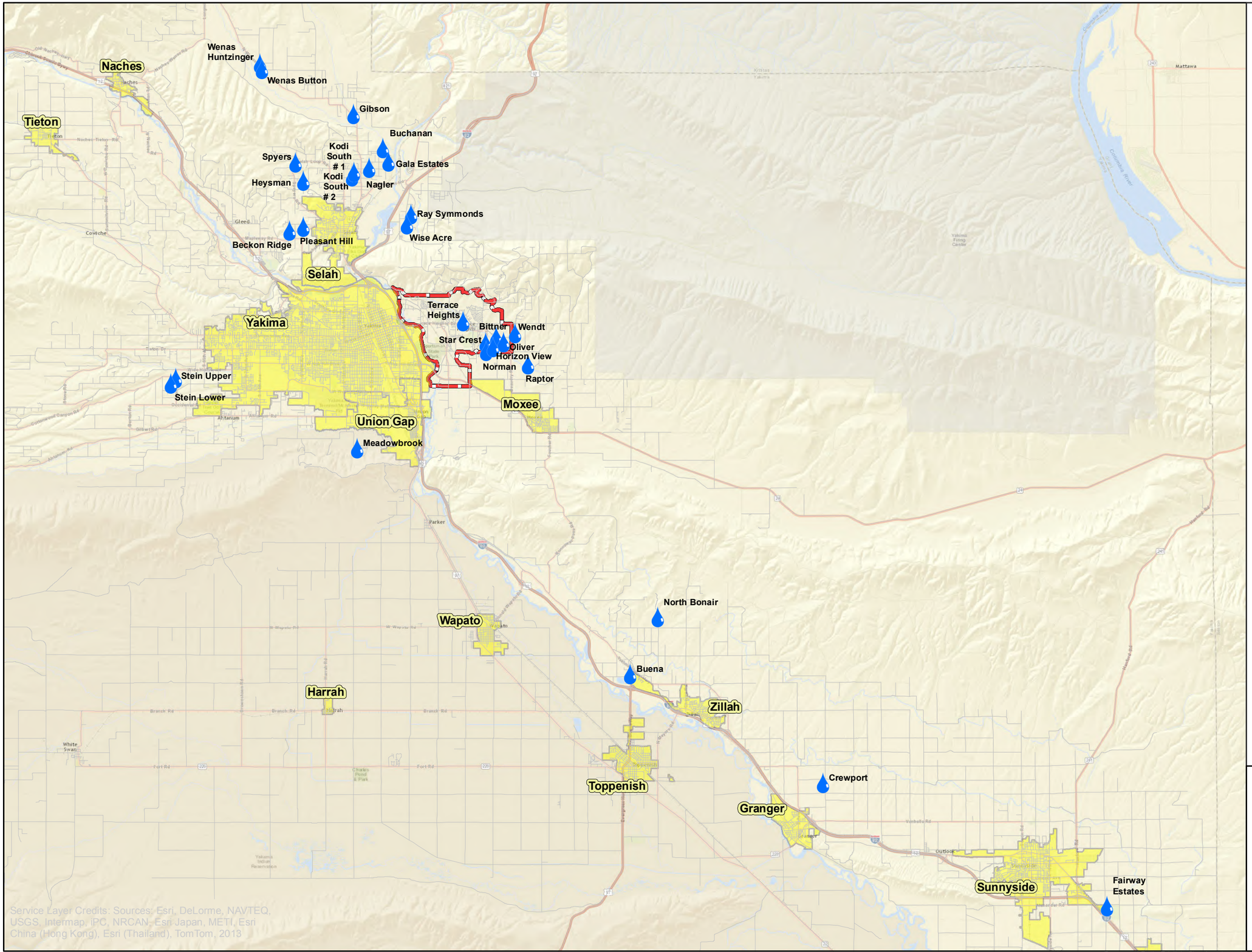
Appendix K

Yakima County Water Systems

Yakima County Comprehensive Water System Plan

FIGURE K-1

Yakima County Water Systems



Water Systems

Major Roads

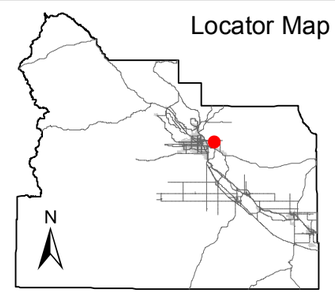
Streets

Cities

Service Area & Retail Service Area Boundary

1 inch = 17,500 feet

Locator Map



Date: September 2017

Document Path: R:\disk_5\projects\county\pw\waterplan\t_heights\watersystemsplan_17\figk1_waterplan.mxd

Appendix L

Wellhead Protection

Upper Yakima Valley Regional Wellhead Protection Program

For more information please contact:

Yakima County
(509) 574-2300

City of Yakima
(509) 575-6154

City of Union Gap
(509) 248-0432

City of Selah
(509) 698-7365

City of Moxee
(509) 575-8851

Nob Hill Water Association
(509) 966-0272

City of Tieton
(509) 673-3162

Town of Naches
(509) 653-2647

Department of Health
(509) 456-3115

December 1, 2017

Dear Property Owner or Resident:

The purpose of this letter is to inform you that your property is located within a wellhead protection area of the County's Terrace Heights Water System, and to provide you with information on how you can help protect the Terrace Heights drinking water supply.

The Upper Yakima Valley Wellhead Protection Committee and Yakima County understand that most property owners recognize the need to protect the environment. We hope that by informing you that your property is located within a wellhead protection area that you will take additional precautions to ensure your activities do not adversely impact our drinking water supply. The following practices can greatly reduce the threat of contamination to groundwater supplies:

- Recycle all household cleaners, paint thinner, motor oil, pesticides, antifreeze, batteries, and other chemicals at free local collection points throughout the valley. Contact Yakima County Solid Waste Division at 574-2450 for locations, drop times, and materials accepted.
- Reduce the amount of hazardous waste used through waste minimization efforts. Free literature on waste minimization is available from the Department of Ecology (DOE) and the City of Yakima.
- Conserve water whenever possible. Water conservation reduces waste volumes and reduces the threat of contaminant transport.

For more information, you may contact me at 574-2300 or visit the RWPC Website at: http://www.yakimacounty.us/584/Wellhead-Protection

Sincerely,

Joe Stump, P.E.
Utilities Manager
Yakima County Public Services

Terrace Heights

Wellhead Protection

Potential Contaminant Source List

Updated December 2017

1. Northwest Pipeline, 2607 Terrace Heights Dr.
   Mailing Address: Northwest Pipeline Corp
   PO BOX 8900
   Salt Lake City, Utah 84158-0900

2. Bush Property, 5412 Morningside Dr.
   Mailing Address: Property Owner
   5412 Morningside Dr.
   Yakima, WA 98901

3. Terrace Heights Elementary School, 4300 Maple Ct.
   Mailing Address: East Valley School District
   2002 Beaudry Rd.
   Yakima, WA 98901

Wellhead Protection
Contaminant Source Inventory

YAKIMA COUNTY
GEOGRAPHIC INFORMATION SERVICES

- Potential Contaminate Site
- Wellhead
- 10 Year wellhead

NORTH

Date: 12/1/2017

GRAHAM PACKAGING	510 E NACHES AVE
Robert Lince Elementary School	316 W NACHES AVE
YAKAMA JUICE LLC	1 RAILROAD AVE
BNRR SELAH MP 94 PRINT 401	LS048 SUB3RD PORTLAND DIVISION
TREE TOP INC OF SELAH UST 6550	209 E 5TH AVE
Tree Top Inc Ross Plant	101 S RAILROAD AVE
SELAH POLE YARD	501 E NACHES AVE
Pingrey Motor Co	102 W NACHES AVE
Selah School Dist 119 High School	316 W NACHES AVE
TREE TOP INC SELAH	1500 HARRISON RD
LARSON FRUIT PACKING WENAS AVE	109 N WENAS RD
YAKIMA CO OP ASSOCIATION INC	110 E 1ST AVE
WA DSHS Yakima Valley School	609 SPEYERS RD

Selah 7
Selah 6
Selah 5
Selah 4
Selah 8
Selah 3

SELAH VALLEY
SELAH HEIGHTS

Naches 3
Naches 2
Naches 1

Hobbit Antiques	2450 S NACHES RD

YAKIMA CITY KIWANIS WELL	MAPLE ST E OF FAIR AVE
ARREOLAS Tire	403 S 2nd St
YAKIMA HARDWARE COMPANY	226 S 1ST ST
WA AGR Yakima 4	515 S FAIR AVE
Yakima Tire Shop	401 S 3RD ST
DEL MONTE CORP 125 NPDES	108 W WALNUT
US GSA William O Douglas Fed Bldg	25 S 3RD ST
American Red Cross Yakima	302 S 2ND ST
FIRESTONE MASTER CARE	202 S 1ST ST
Lee Peterson Motors	410 S 1ST ST
Jiffy Lube	301 S 1st st
Washington Middle School	510 S 9th St
Yakima Bindery	310 E Chestnut Ave
Go's Collision Repair	402 S 2nd St
Jim and Jennis Tattoo	210 E Yakima Ave
Johnsons Auto Glass	119 S 1st St
AAMCO Transmission	112 S. 1st St
McKinney's Auto Glass	221 S 1st St
Auto Shoppers of Yakima	320 S 1st St
White Front Shop	332 S 1st ST
Finish Line Powder Coating LLC	309 S Front St
Inland Pipe and Supply Co	102 S Front St
Cascade Fire and Safety Equipment	123 S Front St
H R Spinner Corp.	115 S 1st Ave
Platt Electric Supply Inc	16 S 1st Ave
CED	131 S 1st Ave
Roy's Market / Laundry	201 S 6th St
Crazy Ink Tattoo	118 S 1st St
Sigs Office Machine	112 S 2nd St
City of Yakima Police Dept.	200 S 3rd St
Yakima Valley Business Times	416 S 3rd St
Yakima Valley Farm Workers Clinic	120 S 3rd St Suite 100
P&F Automotive Warehouse	409 S Front St
BNSF Yakima Warehouse	202 S Front St
Los Amigos Auto Repair	313 S 2nd St
Bosiers Automotive	502 S 3rd St
Capital Theater	19 S 3rd St
Scrivner Dental Lab	424 S 3rd St
City of Yakima MiCare Clinic	103 S 3rd St
KOI Hops	227 S. Front St

Nob Hill 3
Nob Hill 4
Nob Hill 2
Nob Hill 1

WA DA M Yakima 11	603 N 58TH AVE

ATT YAKIMA VALLEY CANAL	200 N 72ND AVE
ERICH E F HECHT	216 N 72ND AVE
EVANS FRUIT CO INC SUMMITVIEW	SUMMITVIEW 300 FEET NW OF HATTON
Northwest Striping and Sealing LLC	7320 SADDLE BROOK DR
USWCOM Yakima West Co	3 N 72ND AVE

YAKIMA CITY KISSEL WELL	S 32ND AVE & MEADE AVE
Burkhart Dental Supply	1705 Creekside Loop
Creekside Dental	1501 40th Ave
Pacific Vascular	3902 Creekside Lp Suite 105
Northwest Asthma and Allergy Clinic	3901 Creekside Lp Suite 100
Old Mill Country Store	1504 S 36th Ave
Cole Industries, Inc. (Boiler Repair and Service)	1502 S 36th Ave
Bergen Screen Print	1418 S 40th Ave
All American Self Storage	1416 S 40th Ave
Yakima Ear, Nose, and Throat	1601 Creekside Lp
Cascade Foot and Ankle	3919 Creekside Lp
Sole Therapy Medical Day Spa	3919 Creekside Lp
Yakima Pediatric Dentistry	3909 Creekside Lp Suite 140
Yakima Gastroenterology	3909 Creekside Lp Suite 120
PAML (Laboratory)	3909 Creekside Lp. Suite 100
Lally Chiropractic Clinic	1508 S 36th Ave
Cornerstone Medicine	4003 Creekside Lp
Yakima Podiatry	1607 Creekside Lp
Yakima Vascular	1607 Creekside Lp
Rad's Auto Repair	1602 S 36th Ave

West Valley Junior High	7505 ZIER RD
West Valley Middle School	1500 S 75TH AVE

Nob Hill 5
Nob Hill 7

Kissel
Gardner
Airport

YAKIMA AIR TERMINAL	2400 W WASHINGTON AVE
YAKIMA CITY AIRPORT WELL	W WASHINGTON AVE BETWEEN 16TH & 24TH AVE
TSA Yakima Air Terminal McAllister Field	2400 W WASHINGTON AVE TSA
NATIONAL WEATHER SERVICE	2406 W WASHINGTON AVE
HORIZON AIR YAKIMA AIR TERMINAL	2400 W WASHINGTON AVE
Tube Art	2323 W WASHINGTON
YAKIMA CITY FIRE DEPARTMENT UST 7636	2404 W WASHINGTON AVE
Yakima Airport	2800 W WASHINGTON AVE
Federal Express Corp Yakima	2108 W WASHINGTON AVE
J.M. Perry Institute	2011 W Washington Ave
Advanced Life Systems Ambulance Service	2106 W Washington
McCormick Air Center Maintenance	2108 W Washington Ave
Triumph	2720 W Washington Ave
Accurate Metalurgical Inc	2804 W Washington Ave
Stephens Metal Products	3211 W Washington Ave
Current Occupant	3202 W Washington Ave
McCormick Air Center	3210 W. Washington Ave
Auto Electric	3107 W Washington Ave

Ahtanum Crossing	2415 S 64th Ave
WA DOC AHTANUM VIEW CORRECTIONAL COMPLEX	2009 S 64TH AVE

Tieton 3
Tieton 1
Tieton 2
Tieton

AHTANUM VALLEY

Union Gap 6
Union Gap 4
Union Gap 2
Union Gap 3
Union Gap 5

NW PIPELINE ST YAKIMA	2607 TERRACE HEIGHTS DR

TH 1
TH 2
TH 3
TH 6
TH 5
TH 4

Terrace Heights Elementary School	4300 MAPLE CT
Yakima Ridge Phase 2 & 3	N of Sycamore Dr & W of N 57th

BUSH PROPERTY	5412 MORNINGSIDE DR

Kiwanis

CubCrafters	1918 S 16TH AVE
CITY OF YAKIMA GARDNER WELL	CORNELL AVE & PIERCE ST
MCALLISTER FLYING SERVICE	2000 S 16TH AVE
TAHOMA CEMETARY	1802 TAHOMA AVE
Yakima School Dist Central Coop	1802 PERRY ST
Arco (AM/PM)	1611 W WASHINGTON AVE
Hans Properties LLC	1601 W WASHINGTON AVE
DESIGN SERVICES	1507 S 9TH AVE
Autocraft Paint Body Works LLC	1804 S 3RD AVE
Absolute Drain and Septic	2020 S 10th AVE
Airport and Auto Wash	1003 W WASHINGTON AVE
All-Safe Storage	1611 W Perry St
Bronco Auto Sales	1710 S. 3rd Ave
Bruner Paint	306 W. Perry St
Colonial Lawn and Garden	1118 W. Washington Ave
Design Services	1507 S 9th Ave
Evergreen Self Storage	1715 S 3rd Ave
Lewis and Clark School	114 W Pierce St
Machine Unlimited	501 A. W Washington Ave
Modern Millworks	401 W Washington Ave
Ridgeview School	609 W Washington Ave
Roadrunner Gas	1820 3rd Ave S
Sinoloa Tires	906 W Mead Ave
The Garage	1802 S 3rd Ave
Yakima School Dist. (Bus Barn)	1802 W. Perry
Pingrey-Finger Hanger	2004 W Washington Ave
Current Occupant	2006 W Washington Ave
YKM Aerosport	2008 W Washington Ave

ANDERSEN DAIRY	3016 S 1ST ST
NOEL FOODS INC	601 W AHTANUM RD
UNION GAP SCHOOL DISTRICT 2	3200 S 2ND ST
WEYERHAEUSER PAPER CO UNION GAP	600 W AHTANUM RD
Macro Plastics Washington	3555 BAY ST
Liberty Bottleworks Inc	2900 Sutherland Rd
New Office Building	Longfiber Rd & Alder St
Northwest Truck Repair & Salvage Inc	805 W AHTANUM RD
Pacific Power & Light Yakima Power	2718 Lower Ahtanum Rd
Pacificorp Union Gap Substation	1007 W AHTANUM RD
Union Gap Fire Sta	107 AHTANUM FIRE STA
US DEA Pine Mountain Yakima	PINE MOUNTAIN LANE .5 M N OF ANTANUM RD
Western Recreational Vehicles Service Center	2921 SUTHERLAND PARK DR

Moxee 2
Moxee 3
Moxee 1

BLUELINE MANUFACTURING	105 N SPOKANE ST
Frenchies Fill N Food	106 E MOXEE AVE
Moxee City of	255 E Seattle Ave
SHARPS AUTOMOTIVE SERVICE	208 E MOXEE AVE

ROY FARMS CHARRON RD	1300 E CHARRON RD

0 0.5 1 2 3 4 Miles

Path: R:\disk_5\projects\county\pw\wellhead_2017Report\wellhead_120117.mxd

Yakima County Comprehensive Water System Plan

FIGURE 7-1
Terrace Heights Water System
Well 1
Sanitary Control Area
Travel Time Boundaries

- Supply Wells
- Sanitary Control Area
- 6 Month Travel Zone
- 1 Year Travel Zone
- 5 Year Travel Zone

2017 Yakima County Orthophotos

1 inch equals 300 feet

Path: R:\disk_5\projects\county\pw\wellhead\WellheadContaminant_010319\WellheadProtection_TH_010419\WellheadProtection_TH_010419.aprx

Yakima County Comprehensive Water System Plan

FIGURE 7-2
Terrace Heights Water System
Well 2
Sanitary Control Area
Travel Time Boundaries

- Catchbasins
- Supply Wells
- Sanitary Control Area
- 6 Month Travel Zone
- 1 Year Travel Zone
- 5 Year Travel Zone
- County Owned Property
- Future Service Area & Retail Service Area Boundary
- Urban Growth Area Boundary

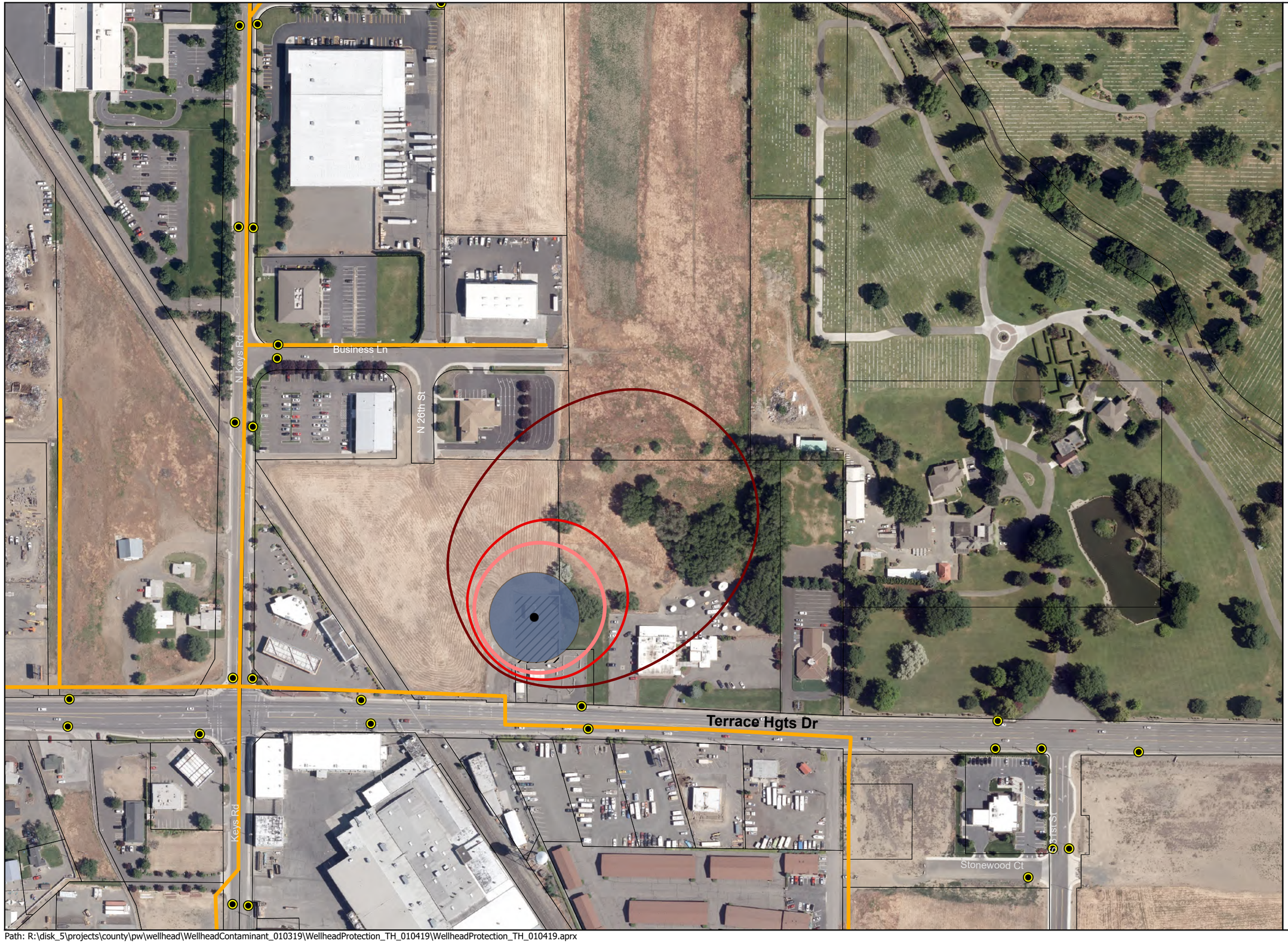
2017 Yakima County Orthophotos

1 inch equals 200 feet

Path: R:\disk_5\projects\county\pw\wellhead\WellheadContaminant_010319\WellheadProtection_TH_010419\WellheadProtection_TH_010419.aprx

Yakima County Comprehensive Water System Plan

FIGURE 7-3
Terrace Heights Water System
Well 3
Sanitary Control Area
Travel Time Boundaries



2017 Yakima County Orthophotos

1 inch equals 200 feet

Path: R:\disk_5\projects\county\pw\wellhead\WellheadContaminant_010319\WellheadProtection_TH_010419\WellheadProtection_TH_010419.aprx

Yakima County Comprehensive Water System Plan

FIGURE 7-4
Terrace Heights Water System
Well 4 +5
Sanitary Control Area
Travel Time Boundaries

- Catchbasins
- Supply Wells
- Sewer Lines
- Sanitary Control Area
- 6 Month Travel Zone
- 1 Year Travel Zone
- 5 Year Travel Zone
- County Owned Property
- Future Service Area & Retail Service Area Boundary

2017 Yakima County Orthophotos

1 inch equals 300 feet

Path: R:\disk_5\projects\county\pw\wellhead\WellheadContaminant_010319\WellheadProtection_TH_010419\WellheadProtection_TH_010419.aprx

Yakima County Comprehensive Water System Plan

FIGURE 7-5
Terrace Heights Water System
Well 6
Sanitary Control Area
Travel Time Boundaries

- Catchbasins
- Supply Wells
- Sewer Lines
- Sanitary Control Area
- 6 Month Travel Zone
- 1 Year Travel Zone
- 5 Year Travel Zone
- County Owned Property
- Future Service Area & Retail Service Area Boundary

2017 Yakima County Orthophotos

1 inch equals 300 feet

Path: R:\disk_5\projects\county\pw\wellhead\WellheadContaminant_010319\WellheadProtection_TH_010419\WellheadProtection_TH_010419.aprx

Appendix M

Emergency Call List

YAKIMA COUNTY UTILITIES
EMERGENCY PHONE LIST

UTILITIES

OFFICE		574-2300	24 HOUR NUMBER	
LISA FREUND	(H)	574-0811	(C) 961-0470	
DAVID HAWS	(H)		(C)	(P-C) 480-313-0170
JOE STUMP	(H)	965-8521	(C) 961-3707	(P-C) 388-7122
DON CAMPBELL	(H)		(C) 961-5287	(P-C) 571-7744
JOSE CAMPOS	(P-C)	305-1508	(C) 494-3429	
JACK WELLS	(P-C)	675-2582	(C) 961-3700	
GENE BUERMANN	(P-C)	945-4694	(C) 379-3626	
BILL TROUT	(H)	698-5676	(P-C) 969-4294	(C) 969-3320
BRYAN DWARSHIUS		574-2453		
JASON SAGER		424-1010		
ANSWERING SERVICE		575-3668	ACCT. NO. 7088	
TECHNOLOGY SERVICES		574-2000	24 HOUR NUMBER	

DEPT. OF HEALTH

SPOKANE OFFICE	509-239-2100	
REGIONAL ENGINEER		
ANDRES CERVANTES	509-329-2120	
AFTER HOURS EMER.	1-877-481-4901	24 HOUR NUMBER

ROADS/MAINTENANCE

LUNCH/OFFICE	574-2321	
SIGN SHOP	574-2321	
NANCY HARTMAN	574-2396	(C) 952-3553
EMERGENCY MAINTENANCE	961-6975	IF NO ANSWER LEAVE MESSAGE
AUGIE MARTINEZ	574-2330	(C) 961-3691
RYAN CALHOUN	574-2423	(C) 930-1957
MECHANICS	574-2395	
JASON RINEHART	574-2339	(C) 961-6013
JOHN HOOD (SUNNYSIDE)	574-2340	(C) 949-9191

EMERGENCY LOCATE NUMBERS

ONE CALL LOCATE	1-800-553-4344	I. D. NUMBER 76034#
PACIFIC POWER	1-888-221-7070	24 HOUR NUMBER
BRETT ALMON – PP&L FIELD CONTACT	961-8215	
CASCADE NATURAL GAS	457-5905	1-800-552-0615 (24 HOUR)
LOCATING, INC.	453-0987	

SYSTEM DIALERS

TERRACE HEIGHTS	574-2799	ACCESS 1234# AND ACK: PRESS 4321#
GALA ESTATES	698-3452	ACK: PRESS * KEY FOR 4 SEC.
BUENA WELL	865-3235	ACK: PRESS 9 KEY ONCE
BUENA MISSION EQUIP.	770-685-7942 LOGIN PHONE 509-574-2300 LOGIN PASSWORD 12345	
BUENA WASTE WATER	865-7720	ACK: PRESS 9 KEY ONCE
MT. SHADOWS	972-1603	ACK: PRESS 9 TWICE TO COMAND DIALER TO CALL NEXT PERSON ON LIST PRESS 1 ONCE TO ACK
FAIRWAY ESTATES WW	837-5898	N/A
CREWPORT	854-7828	ACK: PRESS 9 KEY ONCE

TERRACE HEIGHTS SEWER DIST.

OFFICE	453-8702	
JEFF	952-6874	24 HOUR SAME #
BRIAN	728-0545	24 HOUR SAME #
SHOP	225-3607	

TESTING LABORATORIES

CASCADE ANALYTICAL	452-7707

Revised August 2, 2019
Contractors in bold have annual contracts.

EQUIPMENT RENTAL VENDORS

PAPE MACHINERY	248-7910	
LESLIE PORTER (RENTAL)	952-6861	24 HOUR - IF NO ANSWER LEAVE MESSAGE
STAR RENT	575-1414	NO AFTER HOURS
CAT RENTAL STORE	457-3965	24 HOUR NUMBER GOES TO ANSWER SERVICE
CHARLIE JEWETT	509-494-9852	24 HOUR NUMBER

EXCAVATION CONTRACTOR

TTC CONSTRUCTION A.J. HECKART	509-457-3969	(C) 509-728-2534
GROUND PIERCING DAN PITTS	509-961-8241	

ELECTRICAL CONTRACTORS

TOTAL ENERGY MANAGEMENT	509-946-4500	24 HOUR SAME NUMBER AND PRESS 5
ISS WONDERWEAR (514)	924-1348	TECH SUPPORT
DAY WIRELESS	509-248-0314	

PUMP CONTRACTORS

AKLAND IRRIGATION	452-7867	
KURT AKLAND (H)	966-8757	
SHANES DIVERSIFIED PUMP (C)	961-2064	
FOREMOST PUMP (office)	966-0814	
ROY JENSEN (C)	930-2557	

SEWER CONTRACTORS

BUDGET SEPTIC	452-0102	865-6001
VALLEY SEPTIC	248-6810	

VENDORS AND SUPPLIERS

AKLAND IRRIGATION	452-7867	
KURT AKLAND (H)	966-8757	
MARK AKLAND (C)	969-7867	
HD FOWLER	248-8400	
SHAN HEARY AFTER HOUR # 1 (C))	(509) 302-8346	
DAN STUCKI AFTER HOUR # 2 (C)	728-3777	
WILSON IRRIGATION (YAKIMA)	453-9983	
WILSON IRRIGATION (BUENA)	865-9100	
BOB UDELL (C)	945-5527	(after hour) 877-2489
DUFFY DEAVER (C)	728-0267	
CLAY VALVE		
MARTY WALKER	1-208-691-7430	(C) 1-208-691-7430
GC SYSTEMS	800-525-9425	253-939-8322
CENTRAL PRE-MIX	248-2041	
COLUMBIA READY MIX	457-3654	
GRAHAM AND MORRIS	865-2975	
RAINWATER (KENETICO DEALER)		
TODD	509-832-1620	
OXARC	509-248-0827	

IRRIGATION DISTRICTS

SELAH MOXEE	469-0449	(C) 952-1230 NATHAN DRAPER 969-4274
ROZA	837-5141	SHOP 837-4157 Sonny 840-2913
TERRACE HEIGHTS	840-2913	Call Sonny for both Roza and Terrace Heights IDs.
BUENA IRRIGATION DISTRICT		
DAN MACKE	985-6234	
NACHES – SELAH IRRIGATION	697-4177	

GATED HOUSING

FAIRWAY VILLAGE # xxxx
WENDT WATER # xxxx
ISABELLA RD (EGLIN) #xxxx
RAPTOR WATER xxxx
SEASONS PKWY #xxxx
GIBSON WATER – xxxx
HORIZONS VIEW xxxx

Revised August 2, 2019
Contractors in bold have annual contracts.

TERRACE HEIGHTS WATER

WELL # 2	START 24’	STOP 28.5’	RESERVOIR # 1 HIGH ALARM 29.5’
WELL # 3 (summer)	START 23’	STOP 26’	RESERVOIR # 1 LOW ALARM 18.0’
WELL # 3 (winter)	START 21’	STOP 26’	RESERVOIR # 2 HIGH ALARM 8.5’
WELL # 4	START 24”	STOP 28.5’	RESERVOIR # 2 LOW ALARM 1’
WELL # 5	START (ON)	STOP (OFF)	
WELL # 6	START 24’	STOP 28.5’	

BUENA WATER SYSTEM

LEAD PUMP	START 54’	STOP 61’	RESERVOIR HIGH ALARM 62’
LAG PUMP	START 52’	STOP 59’	RESERVOIR LOW ALARM 50’

LEAD AND LAG PUMPS ALTERNATE

CREWPORT WATER SYSTEM

WELL # 1	START 91’	STOP 97’	RESERVOIR HIGH ALARM 98’
WELL # 2	START 91’	STOP 97’	RESERVOIR LOW ALARM 80’

ALTERNATING PUMPS

GALA ESTATES WATER

WELL # 1	START 12.0’	STOP 17.5’	RESERVOIR HIGH ALARM 18.0
			RESERVOIR LOW ALARM 11.0’

Revised August 2, 2019
Contractors in bold have annual contracts.

YAKIMA AREA MEDIA

MEDIUM	DEADLINE/CONTACT	FAX	PHONE
NEWSPAPERS			
Grandview Herald 107 Division St., 98930	**FRIDAY NOON** Deb Richards, Editor Email: debrichards@recordbulletin.com Judy Marie, general manager judymarie@recordbulletin.com	**(509) 882-2833**	**(509) 882-3712** **786-1711**
SS Daily Sun News P.O. Box 878, 98944	**DAILY** Bob Story, News Editor Email: bstory@eaglenewspaper.com	**(509) 837-6397**	**(509) 837-4500**
Toppenish Review-Mirror P.O. Box 511, 98948	**FRIDAY NOON** Mike & Pat Lindsey, owners Christine Ermey, Editor Email: news@yvnewspapers.com	**(509) 865-2655**	**(509) 865-4055**
Wapato Independent P.O. Box 67, 98951	**FRIDAY NOON**	**877-4770**	**(509) 877-3322** **(DISCONNECTED)**
Viva POB 511, Toppenish WA 98948	**WEDNESDAY NOON** Mike Lindsey, Owner Richard Berger, Editor Email: Richard@yvnewspapers.com	**(509) 865-2655** **Adalberto: 452-0541**	**(509) 865-4055**
Selah Independent	**FRIDAY NOON** Don Gronning, Editor e-mail: don@selahnews.com		**698-3632**
Yakima Herald-Republic P.O. Box 9668, 98907	Pat Muir, County Reporter Dave Lester, Staff Reporter Editor Email: newstips@yakimaherald.com pmuir@yakimaherald.com dlester@yakimaherald.com	**577-7767**	**577-7693 - Pat** **577-7674 - Dave** **577-7670**
Yakima Valley Business Times 416 S. 3rd Street Yakima, WA 98902	**Deadline: Last Friday of the month**	**(509) 865-2655** (***Toppenish Review Mirror***)	**(509) 865-4055**
Ellensburg Daily Record	Jeff Robinson, Editor Email: JRobinson@KVNews.com	**(509) 925-5696**	**925-1414**
Tri-City Herald	Sarah Schilling	**(509) 582-1510**	**509-786-7133**
TELEVISION			

KAPP-35 (ABC) 1610 S. 24th Ave. Yakima, WA 98902	Brian Paul, Station Mgr., V.P. Email: BrianP@KAPPTV.com	**453-2283**	**453-0351** **453-0354 newsrm** **969-1401 Scott**
KIMA-29 (CBS) P.O. Box 702 Yakima, WA 98907	Heather Reese, Assignment Editor Email: Heather@KIMATV.com	**575-5526** **cell: 961-5044**	**575-0029**
KNDO-23 (NBC) 1608 S. 24th Ave. Yakima, WA 98902	Christine Brown, News Director Paul Dughi, General Manager Email: Christine.Brown@KNDU.com	**225-2323** **News Rm. 573-9610** **News Fax 225-2330**	**248-2300** **225-2323 newsrm** **225-2327 (Travis)** **930-1265 Joe-cell**
KYVE-47 1105 S. 15th Ave., 98902	**Deadline: At least two weeks prior to event** Robert Maderville, General Manager RMaderville@KYVE.org	**452-4704**	**452-4700**
Yakima Comm. TV **YCTV/Y-PAC Cable TV** 124 S. 2nd St., 98901-2810	**Deadline: At least two weeks prior to event** Randy Beehler, Division Manager Email: RBeehler@CI.Yakima.WA.US	**576-6380**	**575-6092**
Mid Valley TV (cable access) Toppenish, Granger, Wapato, Zillah	Judy Devall, Manager Email: JD@MidValleyTv.com ($15.00/hour for copy of tape)	**865-8943**	**865-6888**
Charter Communications 1005 S. 16th Ave. Yakima, WA 98902	Gary Bailey, General Manager	**575-1749**	**575-1697 (phone number is for requesting new service, i.e. cable, telephone, hi-speed internet)**
KCYU Fox 68 3804 Kern Rd., Suite B Yakima, WA 98902	**Lonnie Eaton, Station Manager, email: Eaton@KCYUTV.com** John Rand, General Manager 509-448-2828; 4600 S. Regal Spokane, 99223	**457-9903**	**457-0253**

Hispanavision, Ch. 17 **713 W. Yakima Ave. 98902**	Ron Bevins, General Manager Gary Pierone, Sales Manager Email: kcjdtv@yahoo.com	**248-7499**	**248-5971**
RADIO			
KDNA P.O. Box 800 Granger, WA 98932	Ricardo Garcia, Manager Email: RGarcia@KDNA.org **Deadline: Two weeks prior for translation**	**(509) 854-2223**	**854-1900**
Clear Channel Communications **KIT/KATS/KMWX/KFFM/ KQSN** (92.9) 4010 Summitview Ave. Yakima, WA 98908	92.9 Thane Phelan, director Email: ThanePhelan@clearchannel.com KATS Ron Harris, director Email: RonHarris@clearchannel.com 107.3 Steve Rocha, director Email: SteveRocha@clearchannel.com 99.3 Ron Harris, director Email: RonHarris@clearchannel.com KUTI Jack Blazer, director Email: JackBlazer@clearchannel.com KIT Dave Ettel, director Email: DaveEttel@clearchannel.com	**FAX** **972-3540** katsfm@katsfm.com	**972-3461** **Lance pager:** **574-7296**
New Northwest Broadcasters **KXDD KHHK, KJOX, KRSE, KARY, KBBO** 1200 Chesterly Dr., Ste. 160 Yakima, WA 98902	Lou Bartelli (KBBO) Greg Douian, Station Manager Email: Greg.Douian@nnbradio.com	**452-9661**	**248-2900**
KYXE/KZTS (Butterfield) same as above	Adalberto Loreto??	**452-0541**	**457-1000**
KREW, KZTA, KZTB P.O. Box 2888 Yakima, WA 98907	Keith Teske, General Manager Email: KTeske@Bustosmedia.com	**(509) 452-0541**	**(509) 457-1000**
KENE/KAJR P.O. Box 350, Toppenish, 98948-0350	Ronn Washie, Station Manager Email: ynreview@yakama.com	**NO FAX**	**(509) 865-3900** **(509) 865-5121**

NEWSLETTERS			
Yakima Realtors (E-newsletter)	jodi@yarmls.com)		**457-8191**
Chamber Of Commerce (E-newsletter)	peggy@yakima.org)		**248-2021**
COG Newsletter	**Deadline: End of Month**	**574-1501**	**574-1500**
The Professionals (CWHB)	Steve Fuhriman **Deadline: Monthly, by 18th**	**454-4008**	**454-4006**
Yakima Valley Business	**Deadline: Last Friday of the**	**(509) 865-2655**	**(509) 865-4055**

Journal	**month**	(***Toppenish Review Mirror***)	
Home Reporter	**Published on the 1st & 15th** **Mail 3-4 days in advance** Don Cole	**No FAX** **Mail Articles To:** 1551 Alexander Rd./Sunnyside 98955	**837-6455**

TRI-CITIES MEDIA		FAX	PHONE
KVEW	**Or 735-7889**	**509-735-1836**	
KEPR		**509-547-2845**	
Tri-City Herald		**509-582-1510**	
KNDU		**509-783-6153**	
SPOKANE MEDIA			
Spokane AP			**1-800-824-4928**
KREM TV (CBS)			**509-838-7350**

Last Updated: Thursday, April 09, 2009

Appendix N

Well Logs

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ....
Permit No. ....

(1) OWNER: Name ANSON DEVELOPMENT Address P.O. Box 10191, Yakima, WA 98909

(2) LOCATION OF WELL: County YAKIMA NE¼ – SE ¼ NE ¼ Sec 10 T 13 N. R 19E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☒ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 10 inches.
Drilled ....ft. Depth of completed well ....ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8 " Diam. from +1 ft. to 337 ft.
Threaded ☐ ..." Diam. from ....ft. to ....ft.
Welded ☒ ..." Diam. from ....ft. to ....ft.

Perforations: Yes ☒ No ☐
Type of perforator used torch
SIZE of perforations 6 in. by 3/8 in.
90 perforations from 318 ft. to 337 ft.
.... perforations from ....ft. to ....ft.
.... perforations from ....ft. to ....ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ....
Type .... Model No ....
Diam. .... Slot size .... from ....ft. to ....ft.
Diam. .... Slot size .... from ....ft. to ....ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ....
Gravel placed from ....ft. to ....ft.

Surface seal: Yes ☒ No ☐ To what depth? 40 ft.
Material used in seal cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? .... Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name ....
Type: .... H.P ....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 262 ft. below top of well Date 8/12/85
Artesian pressure .... lbs. per square inch Date ....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Hall's Pump
Yield: 450 gal./min. with 57 ft. drawdown after 4 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water .... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
RECONDITIONED EXISTING WELL		

RECEIVED
SEP 12 1985
DEPARTMENT OF ECOLOGY

Work started 8/05 19 85 Completed 8/12 19 85

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME PONDEROSA DRILLING & DEVELOPMENT INC.
(Person, firm, or corporation) (Type or print)

Address E. 6010 Broadway, Spokane, WA 99212

[Signed] Lynnwood E. Hendrick
(Well Driller)

License No. 1351 Date 8/12 19 85

Owner's Copy
Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Permit No.

OWNER: Name Yakima Sheep Co. Address P.O. Box 1512, Yakima, Wash. 98907

(2) LOCATION OF WELL: County YAKIMA (COYOTE SPRINGS) NE¼ – SE¼ – NE¼ Sec 10 T. 13 N. R. 19 W

Bearing and distance from section or subdivision corner

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

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 10/8/6 inches.
Drilled 340 ft. Depth of completed well 340 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 10" Diam. from 0 ft. to 18 ft.
Threaded ☐ 8" Diam. from 150 ft. to 187 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 1820 ft.
Static level 96 ft. below top of well Date 12/19/75
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water 68 Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
SWAMPY SOIL BR.	0	3
RED BURNED CLAY & POROUS BASALT	3	16
POROUS BASALT ANDESITIC	16	62
BLK BASALT	62	72
GRAY BASALT CREV.	72	77
POR.BASALT,GREEN & BR. CONGLOMERATE	77	80
GRAY BASALT	80	97
BRITTLE GRAY BASALT ANDESITIC	97	108
BLK.POROUS BASALT & SHALE	108	112
BRITTLE GRAY BASALT (AND.) HD.	112	165
YELLOW CLAY & SHALE ROCK(CAVING,WTR	165	187
BLK BASALT V. HD.	187	230
CREV, BRES,BASALT (INTERFLOW,WATER	230.	245
GRAY BASALT CREV. V.HD.	245	249
BLK.FAULTED SCOREA WATER	249	252
GRAY BROKEN BASALT	252	270
GRAY FRACT. & FAULTED BASALT V.HD.	270	307
BADLY FRACT. & CREV. BLK & GRAY BASALT (V.BAD 307-333)(WATER	307	340

NOTE**
1st water 18'-62'-72'-77'- STATIC. 3'
108'-165 to 187' (60 GPM) " 6'
218-225 150 GP,. 63'
249 - 252 NOW 200 GPM 66'
270 - 272 " 93
280 - 285 - 307 - 308 -& EVERY 96'
CRACK & CREV. TO 338'(EST. 600 GPM + @ 340')
10" HOLE TO 187' - 8" TO 278' - 6" TO 340'
WATER COMING IN SO FAST HAMMER WOULD NOT RUN.
(MEGADRILL) & ONLY 62' OF 6" HOLE)
WOULD LIKE TO HAVE ELECT. LOG,FLOW METER TEST
WILL HAVE TO OPEN 6" HOLE TO 8" & ROLLER CONE
TO GO DEEPER.(PRESSURE 150# TO KEEP WATER MOVI

Work started 11/25/75 19 Completed 12/22/75 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME RIEBE WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address YAKIMA, WASHINGTON.

[Signed] John C. Riebe
(Well Driller)

License No. 3601 Date 12/22/75 19

RECEIVED
SEP 28 1978

S. F. No. 7356—OS—(Rev. 5-69)—5-69.

(USE ADDITIONAL SHEETS IF NECESSARY)

Original and First Copy — Division of Water
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

well #2

Application No. [redacted]
Permit No. 9.43[redacted]

(1) OWNER: Name J. E. [redacted] BUTNER Address 33 crest circle yak

(2) LOCATION OF WELL: County YAKIMA SW¼ NW¼ Sec 14 T 13 N., R 19 W.M. E

Give location and distance from section or subdivision corner

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

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 12 inches.
Drilled 1072 ft. Depth of completed well 1072 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 808 " Diam. from ____ ft. to ____ ft.
Threaded ☐ 12 " Diam. from +2 ft. to 806 ft.
Welded ☒ 16 " Diam. from 0 ft. to 21 ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 21 ft.
Material used in seal CLAY
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 1455 ft.
Static level 360 ft. below top of well Date 4/15/78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom?
gal./min. with ft. drawdown after hrs.
" " "
" " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
BROKEN ROCK & BLDRS (LGE)	0	18
SANDY CLAY, ROCK & BLDRS	18	35
SANDY CLAY	35	65
BLK BROKEN BASALT	65	85
RD. FM. CLAY	85	105
FM. CLAY, SNDSTN & GRAVEL	105	135
FRACT. BASALT & CLAY	135	190
BLK BROKEN BASALT	190	213
BRN. ROCK & BLDRS. CEMENTED	213	233
SNDSTN, CLAY & GRAVEL	233	265
CEMENT GRAVEL & BLDRS	265	302
FM. CLAY & BLDRS	302	345
BRN. ROCK & BLDRS (CEMENTED	345	355
BROKEN BROWN BASALT	355	435
FM. SHALE & CLAY	435	440
BADLY BROKEN & CREVACED BASALT	440	454
HARD SANDSTONE & BLDRS	454	478
BADLY CREVACED GRAY BASALT	478	538
TR. WATER IN SNDSTN, BLDRS, CL. SHALE	538	602
PINK ELK SANDSTONE (*TR. WATER)	602	617
SNDSTN, GRAVEL, PINK CLAY CONG.	617	640
CLAY SHALE & BLDRS (*150#)	640	728
CLAY SHALE & SNDSTN LENSES *	728	780
RD SNDSTN & GRAVEL *	780	794
CLAY SHALE & SD. SNDSTN. *	794	804
SNDSTN & GRAVEL RD. *	804	816
SHALE, SNDSTN & GRAVEL *	816	868
RD. BLU GRAY SANDSTONE *	868	957
RD. SNDSTN & ROCK *	957	972
BLU & GRAY SNDSTN. *	972	986
STR. SNDSTN LENS & BASALT *	986	997
BLU & GRAY SANDSTONE *	997	1018
LAYRD BLU SNDSTN, SHALE *	1018	1072
AIR TR. 150 CFM SHUT OFF @ 700-710		
SHOULD THE WELL BE BORDERLINE IT		
COULD BE PERFORATED THERE & DEVELOPED.		

Well started 1/3/78 19 Completed 4/21/78 19

(11) WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME [redacted] WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address YAKIMA, WASH.

[Signed] John C. Riela
(Well Driller)

License No. 421 Date 5/30/78, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

F. No. 7356—OS—(Rev. 5-69)—5-69.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W36177
UNIQUE WELL I.D. # AAL 529
Water Right Permit No. G4-_.494 P

(1) **OWNER:** Name YAKIMA C NTY Address COUNTY COURTHOUSE / MA WA

(2) **LOCATION OF WELL:** County YAKIMA . SW 1/4 SW 1/4 Sec 16 T. 13 N., R 19 W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) TERRACE HEIGHTS AVE

(3) **PROPOSED USE:** ☐ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☒ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) #3

Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 30X24X185X14 inches
Drilled 2421 feet. Depth of completed well 2421 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 28" Diam. from 0 ft. to 78' ft.
Welded ☒ 20" Diam. from 0 ft. to 350 ft.
Liner installed ☒ 16" Diam. from +3 ft. to 996 ft.
Threaded ☐ 12" Diam. from 980 ft. to 1725 ft.
10" 1703 2421

Perforations: Yes ☒ No ☐
Type of perforator used MILL CUT 12 ROWS/FT
SIZE of perforations 1/4 + 3/8 in. by 3 in.
1/4 960 perforations from 1725 ft. to 1805 ft.
3/8 1140 perforations from 1805 ft. to 1900 ft.
3/8 540 perforations from 1935 ft. to 1980 ft.
3/8 4680 2010 2400

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 1725 ft.
Material used in seal NEAT CEMENT GROUT
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) **PUMP:** Manufacturer's Name N/A
Type: ____ H.P. ____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ____ ft.
Static level ____ ft. below top of well Date DEC 4/93
Artesian pressure 18 lbs. per square inch Date ____
Artesian water is controlled by 16" FLANGE & 8" VALVE (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? DRILLER
Yield: 380 gal./min. with ____ ft. drawdown after 4 hrs.
" 420 " " 75 "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
0	40				
4R Stm	0				

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.
Artesian flow 130 g.p.m. Date 12/13/93
Temperature of water 88 Was a chemical analysis made? Yes ☒ No ☐
314.7

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SAND, GRAVEL 12 MINUS	0	78
SAND, GRAVEL + CLAY	78	
SANDY CLAY AN	141	78
SAND COARSE	178	
TAN CLAY / SAND + GRAVEL	202	
TAN CLAY / BLACK SAND	452	491
TAN CLAY / SAND	491	
GREY CLAY	550	595
GREY CLAY SANDY	595	780
GREY CLAY	780	813
SANDY CLAY / GRN + GREY	813	1452
GREY CLAY / BLK BASALT	1452	1470
CLAY / GRN + GREY	1470	1642
CLAY / RED + GRN / GREY BASALT	1642	1683
BASALT GREY	1683	1729
★ BASALT GREY FRAC.	1729	1754
BASALT GREY	1754	1808
★ BASALT BLK / GRN CLAY	1808	1874
BASALT GREY FRAC	1874	1900
CLAY GREY	1900	1934
BASALT GREY / GREY CLAY	1934	1989
★ SAND, GRAVEL / GRN CLAY	1989	2073
★ BASALT BLK / GRN CLAY	2073	2194
BASALT BLK / SILICA	2194	2208
★ BASALT BLK / GRN CLAY	2208	2302
CLAY GRN	2302	2306
★ BASALT BLK / GRN CLAY	2306	2391
BASALT GREY / GREY CLAY	2391	2421
★ INDICATES WATER ZONE		
26", 20", 16" & 12" CASINGS		
CEMENT FROM 1725 FT TO		
SURFACE (1389 cu/FT CEMENT)		

Work Started 9/6/93, 19__. Completed 12/15, 1993

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HOLMAN DRILLING CORP (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address E3410 7TH AVE SPO
(Signed) Ronald E Holman (WELL DRILLER) License No ____
Contractor's Registration No. UBI 328044462 Date 12/29, 19__

(USE ADDITIONAL SHEETS IF NECESSARY)

PERFORATED CASINGS OR SCREENS:

20 feet 8" Pipe 840 1/4x2" slots from 400 to 420
(Number per foot and size of perforations, or describe screen)

from to

from to

from to

LOG OF WELL: (Describe each stratum or formation clearly, indicate if water bearing, and give thickness and depth as indicated.)

MATERIAL	Thickness (Feet)	Depth to Bottom (Feet)
76 feet alternate strata gravel and hard pan	76	76
189 Hard Yellow clay	189	265
Water bearing quick sand	15	280
Clay	120	400
Sand and Gravel	20	420
Well #4		
clean		

(b) INFILTRATION TRENCH: Covered or open.

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

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

(c) TUNNEL: Type of lining

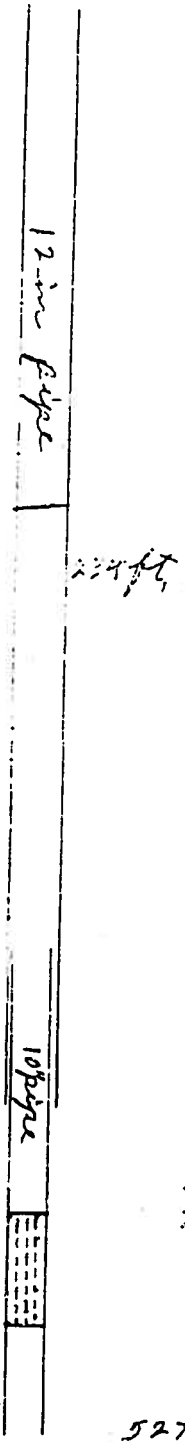
Dimensions:
(Length, course, and cross sectional size)

Position of water bearing stratum with reference to portal of tunnel

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

Log of Weisberger No 2 Well

			Total
15	ft	gray sand stone	15 ft.
5	"	gravel	20 "
20	"	Clay	40 "
1	"	gravel	41 "
7	"	Clay	48 "
11	"	Cement gravel	59 "
44	"	Clay	103 "
2	"	Cement gravel	105 "
65	"	Clay	170 "
52	"	Clay with sand streaks	222 "
2	"	Caving Clay	224 "
32	"	Tite stickey Clay	256 "
14	"	Caving Clay & gravel	270 "
20	"	caving Clay with sand streaks Put in 12 in pipe	290 "
87	"	sandy Clay	377 "
11	"	Hard sand stone	388 "
15	"	Clay gravel streaks little Water	403 "
40	"	sandy shale	443 "
50	"	shale Hard streaks	493 "
22	"	Clay with Muddy sand streaks	515 "
5	"	Clay	520 "
3	"	fine sand	523 "
8	"	Clay	531 "
21	"	Large Boulders	552 "
2	"	Blue Clay	554 "
14	"	sand & gravel streaks Water. 24 ft screen	568 "
22	"	sandy shale	590 "



527 ft of 12 in pipe
91 ft of 10 in liner in cluding 24 ft screen
Pumpted 165 gal per m. at 20 ft. drawn down

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

PART (1)

WATER WELL REPORT

STATE OF WASHINGTON

Application No. GH-27699

Permit No. G-427699P

(1) OWNER: Name COUNTRY CLUB DISTRICT WATER CO Address PO BOX 795 YAKIMA WA 98907

(2) LOCATION OF WELL: County YAKIMA SE¼ SE¼ SE¼ Sec. 16 T. 13 N., R. 19E W.M.

Bearing and distance from section or subdivision corner 153 FT N AND 54' W FROM SE CORNER OF SEC 16

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☑
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 12 x 10 inches.
Drilled 1495 ft. Depth of completed well 1495 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 12" Diam. from 0 ft. to 405 ft.
Threaded ☐ 10" Diam. from 380 ft. to 1495 ft.
Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☑ No ☐
Manufacturer's Name JOHNSON
Type Model No.
Diam. 10 Slot size 016 from 440 ft. to 450 ft.
Diam. 10 Slot size 020 from 490 ft. to 500 ft.
10 016 520 530

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from 030 ft. to 580 ft. to 540 ft.
20 040 750 770

Surface seal: Yes ☑ No ☐ To what depth? 405 ft.
Material used in seal CEMENT
Did any strata contain unusable water? Yes ☑ No ☐
Type of water? ? Depth of strata ?
Method of sealing strata off CASING CEMENT

(7) PUMP: Manufacturer's Name N/A
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 90.6 ft. below top of well Date 8-15-83
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☑ No ☐ If yes, by whom? AKLAND
Yield: 450 gal./min. with 33 ft. drawdown after 8 hrs.
" 1260 " 120 " 5 "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
4:15:30	171.3	4:18	96.11	4:30	96
4:1	97.6	4:19:10	96.6	11:21	95.10
4:1	90.0	4-19	96-11	4:12	95.8

Date of test 8-16-83
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil + Boulders	0	3
Hard Pan w/ Large Boulders	3	32
Clay Sand Stone Boulders	32	50
Shale Sand Stone + boulders	50	70
Sand Stone Clay Gravel Boulders	70	145
Clay + Boulders	145	295
Sand Stone w/ St of Clay	295	315
Clay Sand Stone Gravel Boulders	315	405
Sand Stone w/ St of Clay Shale	405	453
Sticky Clay Sandy	453	465
Sand Stone w/ St of Shale	465	510
Sticky Clay	510	520
Sand Stone Gravel w/ St of Clay	520	540
Clay + Shale	540	570
Layers of Sand Stone Gravel	570	600
Hard Sand Stone w/ St of Clay	600	650
Sand Stone Shale Sticky Clay	650	670
Blue Clay w/ St of Sand	670	701
Sand Stone Gravel	701	702
Blue Clay w/ St of Sand	702	710
Sand Sand Stone w/ St of Clay	710	740
Brown + Blue Sand Stone w/ Clay	740	810
Cemented Gravel Sand Stone Clay	810	830
Sand Stone Gravel Clay Boulders	830	895
Cement Gravel	895	908
Clay	908	912
Layers of Clay Gravel Boulders	912	935
Decomposed Rock Gravel w/ St Shale	935	963
Gravel Boulders Basalt w/ Gray Shale	963	982
Decomposed Rock Black Brown	982	
Green and Gray Shale		990
Decomposed Rock	990	997
Blue Shale w/ St of Gravel	997	1040
Soft Gray Clay w/ St of Sand	1040	1053
Shale Gravel & Boulders	1053	1068
Boulders Rock + Shale	1068	1072

Work started 4-6, 19 83 Completed 8-19, 19 83

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME RIEBE WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address 1503 EAST NOB HILL

[Signed] Bob Britton
(Well Driller)

License No. 421 Date 9-7, 19 83

(USE ADDITIONAL SHEETS IF NECESSARY)

PART (2)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. G4-27699

Permit No G4-27699P

(1) OWNER: Name Country Club District Water Co Address

(2) LOCATION OF WELL: County SE 1/4 SE 1/4 SE 1/4 Sec. 16 T. 13 N., R. 19E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....

New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well ..... inches.
Drilled ..... ft. Depth of completed well ..... ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ....." Diam. from ..... ft. to ..... ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☐ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☐
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☐
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☐ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☐ No ☐ To what depth? ..... ft.
Material used in seal .....
Did any strata contain unusable water? Yes ☐ ; No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ..... ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
BLUE CLAY AND SHALE	1072	1103
LAYERS OF BLUE CLAY & SAND	1103	1150
BLUE SHALE	1150	1172
BLUE SHALE W/ SOME SAND	1172	1205
GREEN BLUE SHALE	1205	1225
BLUE SHALE W/ ST OF SAND	1225	1250
BLUE GREEN SHALE	1250	1282
HARD GRAVEL AND SHALE	1282	1283
BLUE SHALE	1283	1285
LAYERS OF GRAY CLAY AND SAND	1285	1325
SOFT GRAY CLAY	1325	1337
SANDY GRAY CLAY	1337	1345
GRAY & BLUE SANDY CLAY	1345	1365
LAYERS OF BLUE CLAY & SAND	1365	1403
HARD SAND GRAVEL & SHALE	1403	1406
LAYERS OF CLAY SAND & SHALE	1406	1433
THIN LAYERS OF CLAY & SAND	1433	1465
LAYERS SHALE & SAND STONE	1465	1495
" " " "	1495	1498
SAND & PUMICE + WATER	1498	1503

Work started ....., 19..... Completed ....., 19.....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ..... (Person, firm, or corporation) (Type or print)

Address .....

[Signed] ..... (Well Driller)

License No. ..... Date ....., 19.....

(USE ADDITIONAL SHEETS IF NECESSARY)

Appendix O

Coliform Monitoring Plan

Coliform Monitoring Plan for: Terrace Heights

A. System Information

Plan Date: 6-10-16

Water System Name **Yak CO – Terrace Heights**	**County** Yakima	**System I.D. Number** 06029J
Name of Plan Preparer **Bill Trout**	**Position** Utility Supervisor	**Daytime Phone** **509-574-2300**
Sources: DOH Source Number, Source Name, Well Depth, Pumping Capacity	Depth to first open interval SO1 Coyote Spgs 1 Inactive 318 deep 100 gpm SO2 Well 2 806 deep 330 gpm SO3 Well 3 1725 deep 1500 gpm SO4 Well 4 367 deep 400 gpm SO5 Well 5 541 deep 320 gpm SO6 Well 6 440 deep 340 gpm	
Storage: List and Describe	Reservoir 1 – 1.5 million Reservoir 2 – 150,000 Reservoir 3 – 88,000 Currently not in use Reservoir 4 – 1.5 million	
Treatment: Source Number & Process	All sources are chlorinated for disinfection	
Pressure Zones: Number and name	Pressure zone 1 Pressure zone 1A Pressure zone 2 Pressure zone 2A Pressure zone 3 Pressure zone 4	
Population by Pressure Zone	Population Pressure zone 1 790 Pressure zone 1A ? Pressure zone 2 820 Pressure zone 2A 340 Pressure zone 3 820 Pressure zone 4 40	

Number of Routine Samples Required Monthly by Regulation:	7
Number of Sample Sites Needed to Represent the Distribution System:	7
***Request DOH Approval of Triggered Source Monitoring Plan?**	**Yes** ☐ **No** ☒

*If approval is requested a fee will be charged for the review.

B. Laboratory Information

Laboratory Name Cascade Analytical	**Office Phone 509-452-7707** **After Hours Phone 509-668-1969**
Address 1008 W Ahtanum Rd. Ste 2, Yakima, WA 98903	**Cell Phone - -** **Email office@cascadeanalytical.com**
Hours of Operation Monday through Friday 8 am to 5 pm	
Contact Name Andy Schut	
Emergency Laboratory Name Ag Health Laboratories, Inc	**Office Phone 509-836-2020** **After Hours Phone - -**
Address 445 Barnard Boulevard Sunnyside, WA 98944	**Cell Phone - -** **Email** _____
Hours of Operation Monday through Friday 8 am to 5 pm	
Contact Name _____	

C. Wholesaling of Groundwater

	Yes	No
We are a consecutive system and purchase groundwater from another water system.	☐	☒
If yes, Water System Name: Contact Name: Telephone Numbers		
We sell groundwater to other public water systems.	☐	☒
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -		

If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -	
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -	
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -	
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -	

D. Routine, Repeat, and Triggered Source Sample Locations*

Location/Address for **Routine Sample Sites**	Location/Address for **Repeat Sample Sites**	Groundwater Sources for **Triggered Sample Sites****
X1. 505 Santa Roza Dr.	**1-1. 505 Santa Roza Dr.**	**S Well 2**
	1-2. 502 Canyon Rd	**S Well 3**
	1-3. 511 Santa Roza Dr.	**S Well 4**
		S Well 5
		S Well 6
X2. 4911 Sycamore Dr. (booster)	**2-1. 4911 Sycamore Dr. (booster)**	**S Well 2**
	2-2. 5101 Sycamore Dr	**S Well 3**
	2-3. 4406 Maple Ave	**S Well 4**
		S Well 5
		S Well 6
X3. 153 Terrace Park DR.	**3-1. 153 Terrace Park Dr.**	**S Well 2**
	3-2. 168 Terrace Park Dr.	**S Well 3**
	3-3. 141 Terrace Park Dr.	**S Well 4**
		S Well 5
		S Well 6

Location/Address for **Routine Sample Sites**	Location/Address for **Repeat Sample Sites**	Groundwater Sources for **Triggered Sample Sites****
X4. 2412 Terrace Heights Dr.	**4-1 2412 Terrace Heights Dr.**	**S Well 2**
	4-2 2608 Terrace Heights Dr.	**S Well 3**
	4-3 2209 Terrace Heights Dr.	**S Well 4**
		S Well 5
		S Well 6
X5. 3608 Royale Court	**5-1 3608 Royale Court**	**S Well 2**
	5-2 3601 Royale Court	**S Well 3**
	5-3 650 University Parkway	**S Well 4**
		S Well 5
		S Well 6
X6. 5214 Morningside Dr. (well 4)	**6-1. 5214 Morningside Dr. (well 4)**	**S Well 2**
	6-2. 5203 Sunset Dr.	**S Well 3**
	6-3. 5403 Morningside Dr.	**S Well 4**
		S Well 5
		S Well 6
X7. 6406 Hilltop	**7-1. 6406 Hilltop Dr.**	**S Well 2**
	7-2. 6400 Hilltop Dr.	**S Well 3**
	7-3. 123 Top Court	**S Well 4**
		S Well 5
		S Well 6

*NOTE: If you need more than three routine samples to cover the distribution system, attach additional sheets as needed.

**** When you collect the repeats, you must sample every groundwater source that was in use when the original routine sample was collected.**

Important Notes for Sample Collector: Samples shall be taken on Monday or Tuesday. A total of three repeat samples must be taken for each routine unsatisfactory sample taken. A sample must be taken at the source during repeat samples. Only the well's that were running during the routine sample need a sample taken. These samples need to be taken before the chlorine injection point.

E. Reduced Triggered Source Monitoring Justification (add sheets as needed):

F. Routine Sample Rotation Schedule

Month	Routine Site(s)	Month	Routine Site(s)
January	X1 through X7	July	X1 through X7
February	X1 through X7	August	X1 through X7
March	X1 through X7	September	X1 through X7
April	X1 through X7	October	X1 through X7
May	X1 through X7	November	X1 through X7
June	X1 through X7	December	X1 through X7

G. Level 1 and Level 2 Assessment Contact Information

Name Joe Stump Bill Trout	Office Phone 509-574-2300 After Hours Phone 509-574-2300
Address Yakima County Public Service 128 N. 2nd St. Fourth Floor Yakima, WA 98901	Email joe.stump@co.yakima.wa.us bill.trout@co.yakima.wa.us
Name Joe Stump Bill Trout	Office Phone 509-574-2300 After Hours Phone 509-574-2300
Address Yakima County Public Service 128 N. 2nd St. Fourth Floor Yakima, WA 98901	Email joe.stump@co.yakima.wa.us bill.trout@co.yakima.wa.us

H. *E. coli*-Present Sample Response

Distribution System *E. coli* Response Checklist				
Background Information	**Yes**	**No**	**N/A**	**To Do List**
We inform staff members about activities within the distribution system that could affect water quality.	☒	☐	☐	☐
We document all water main breaks, construction & repair activities, and low pressure and outage incidents.	☐	☐	☐	☒
We can easily access and review documentation on water main breaks, construction & repair activities, and low pressure and outage incidents.	☐	☐	☐	☒
Our Cross-Connection Control Program is up-to-date.	☒	☐	☐	☐
We test all cross-connection control devices annually as required, with easy access to the proper documentation.	☒	☐	☐	☐
We routinely inspect all treatment facilities for proper operation.	☒	☐	☐	☐
We identified one or more qualified individuals who are able to conduct a Level 2 assessment of our water system.	☒	☐	☐	☐
We have procedures in place for disinfecting and flushing the water system if it becomes necessary.	☒	☐	☐	☐
We can activate an emergency intertie with an adjacent water system in an emergency.	☐	☒	☐	☐
We have a map of our service area boundaries.	☒	☐	☐	☐
We have consumers who may not have access to bottled or boiled water.	☐	☒	☐	☐
There is a sufficient supply of bottled water immediately available to our customers who are unable to boil their water.	☐	☐	☐	☒
We have identified the contact person at each day care, school, medical facility, food service, and other customers who may have difficulty responding to a Health Advisory.	☐	☐	☐	☒
We have messages prepared and translated into different languages to ensure our consumers will understand them.	☐	☐	☐	☒
We have the capacity to print and distribute the required number of notices in a short time period.	☒	☐	☐	☐
Policy Direction	**Yes**	**No**	**N/A**	**To Do List**
We have discussed the issue of *E. coli*-present sample results with our policy makers.	☐	☐	☐	☒
If we find *E. coli* in a routine distribution sample, the policy makers want to wait until repeat test results are available before issuing advice to water system customers.	☐	☐	☐	☒
(Cont.)				

Distribution System *E. coli* Response Checklist				
Potential Public Notice Delivery Methods	**Yes**	**No**	**N/A**	**To Do List**
It is feasible to deliver a notice going door-to-door.	☐	☒	☐	☐
We have a list of all of our customers' addresses.	☒	☐	☐	☐
We have a list of customer telephone numbers or access to a Reverse 9-1-1 system.	☐	☒	☐	☐
We have a list of customer email addresses.	☐	☒	☐	☐
We encourage our customers to remain in contact with us using social media.	☐	☒	☐	☐
We have an active website we can quickly update to include important messages.	☒	☐	☐	☐
Our customers drive by a single location where we could post an advisory and expect everyone to see it.	☐	☒	☐	☐
We need a news release to supplement our public notification process.	☒	☐	☐	☐

Distribution System *E. coli* Response Plan

If we have *E. coli* in our distribution system we will immediately:

1. Call DOH.
2. Collect repeat and triggered source samples per Part D. Collect additional investigative samples as necessary.
3. Complete level 2 assessment form
4. Follow up and repair any contaminant source found during the assessment in a timely manner.
5. Submit assessment form to DOH
6. Discuss with DOH whether to issue a Health Advisory based on the findings of steps 3-5.

E. coli-Present Triggered Source Sample Response Checklist – All Sources

Background Information	Yes	No	N/A	To Do List
We review our sanitary survey results and respond to any recommendations affecting the microbial quality of our water supply.	☒	☐	☐	☐
We address any significant deficiencies identified during a sanitary survey.	☒	☒	☐	☐
There are contaminant sources within our Wellhead Protection Area that could affect the microbial quality of our source water, and	☐	☐	☐	☐
If yes, we can eliminate them.	☐	☐	☐	☒
We routinely inspect our well site(s).	☒	☐	☐	☐
We have a good raw water sample tap installed at each source.	☒	☐	☐	☐
After we complete work on a source, we disinfect the source, flush, and collect an investigative sample.	☒	☐	☐	☐
Public Notice	**Yes**	**No**	**N/A**	**To Do List**
We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our water system's governing body (board of directors or commissioners) and received direction from them on our response plan.	☐	☐	☐	☒
We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our wholesale customers and encouraged them to develop a response plan.	☐	☐	☒	☐
We have prepared templates and a communications plan that will help us quickly distribute our messages.	☐	☐	☐	☒

***E. coli*-Present Triggered Source Sample Response Checklist – Source SO2**				
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☒	☐	☐
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☐	☒
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☒	☐	☐
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☐
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐

*NOTE: If your system has multiple sources, you may want to complete a separate checklist for each source.

E. coli-Present Triggered Source Sample Response Plan – Source SO2

If we have *E. coli* in Source 2 water we will immediately:

1. Call DOH.
2. Take source off line until proper disinfection has been completed.
3. Take follow up samples to insure water is safe.
4. Begin compliance monitoring per DOH directions.

***E. coli*-Present Triggered Source Sample Response Checklist – Source SO3**				
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☒	☐	☐
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☐	☒
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☒	☐	☐
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☒	☐	☐
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐

*NOTE: If your system has multiple sources, you may want to complete a separate checklist for each source.

E. coli-Present Triggered Source Sample Response Plan – Source SO3

If we have *E. coli* in Source 3 water we will immediately:

1. Call DOH.
2. Take source off line until proper disinfection has been completed.
3. Take follow up samples to insure water is safe.
4. Begin compliance monitoring per DOH directions.

E. coli-Present Triggered Source Sample Response Checklist – Source SO4				
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☒	☐	☐
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☐	☒
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☒	☐	☐
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☒	☐	☐
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐

*NOTE: If your system has multiple sources, you may want to complete a separate checklist for each source.

E. coli-Present Triggered Source Sample Response Plan – Source SO4

If we have *E. coli* in Source 4 water we will immediately:

1. Call DOH.
2. Take source off line until proper disinfection has been completed.
3. Take follow up samples to insure water is safe.
4. Begin compliance monitoring per DOH directions.

E. coli-Present Triggered Source Sample Response Checklist – Source SO5				
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☒	☐	☐
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☐	☒
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☒	☐	☐
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☒	☐	☐
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐

*NOTE: If your system has multiple sources, you may want to complete a separate checklist for each source.

E. coli-Present Triggered Source Sample Response Plan – Source SO5

If we have *E. coli* in Source 5 water we will immediately:

1. Call DOH.
2. Take source off line until proper disinfection has been completed.
3. Take follow up samples to insure water is safe.
4. Begin compliance monitoring per DOH directions

E. coli-Present Triggered Source Sample Response Checklist – Source SO6				
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☒	☐	☐
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☐	☒
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☒	☐	☐
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☒	☐	☐
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐

*NOTE: If your system has multiple sources, you may want to complete a separate checklist for each source.

E. coli-Present Triggered Source Sample Response Plan – Source SO6

If we have *E. coli* in Source 6 water we will immediately:

1. Call DOH.
2. Take source off line until proper disinfection has been completed.
3. Take follow up samples to insure water is safe.
4. Begin compliance monitoring per DOH directions

Yakima County Comprehensive Water System Plan

FIGURE O-1

Terrace Heights Water System Coliform Monitoring Plan

- Booster Stations
- Pressure Reducing Stations
- Storage Reservoirs
- Supply Wells
- Coliform Monitoring Site
- Water Lines
- Zone 1
- Zone 1a
- Zone 2
- Zone 2a
- Zone 3
- Zone 3a
- Zone 4
- Service Area & Retail Service Area Boundary
- Urban Growth Area Boundary

1 inch = 1,800 feet

Locator Map

Date: September 2017

Document Path: R:\disk_5\projects\county\pw\waterplan\t_heights\watersystemsplan_17\fig01_waterplan.mxd

Appendix P

Water Facilities Inventory and Operating Permit

WATER FACILITIES INVENTORY (WFI) FORM

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

ONE FORM PER SYSTEM

Quarter: 1
Updated: 03/27/2019
Printed: 4/22/2019
WFI Printed For: On-Demand
Submission Reason: Source Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06029 J	YAK CO - TERRACE HEIGHTS	YAKIMA	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS	7. OWNER NAME & MAILING ADDRESS	8. OWNER NUMBER: 008594
JOE STUMP [UTILITIES MANAGER] YAKIMA CO PUBLIC SERVICES DEPT 128 N 2ND ST - 4TH FLOOR COURTHOUSE YAKIMA, WA 98901	YAKIMA COUNTY PUBLIC SERVICES JOE STUMP 128 N 2ND ST - 4TH FLOOR COURTHOUSE YAKIMA, WA 98901	UTILITIES MANAGER
STREET ADDRESS IF DIFFERENT FROM ABOVE ATTN ADDRESS CITY STATE ZIP	**STREET ADDRESS IF DIFFERENT FROM ABOVE** ATTN ADDRESS CITY STATE ZIP	

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: xxx xxx-xxxx		Owner Daytime Phone: (509) 574-2300	
Primary Contact Mobile/Cell Phone: xxx xxxx-xxxx		Owner Mobile/Cell Phone: (509) 961-3707	
Primary Contact Evening Phone: xxx xxx-xxxx		Owner Evening Phone:	
Fax: (509) 574-2301	E-mail: xxxxxxxxxxxxxxxxxxx	Fax: (509) 574-2301	E-mail: xxxxxxxxxxxxxxxxxxx

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- ☐ Not applicable (Skip to #12)
- ☒ Owned and Managed — SMA NAME: YAKIMA COUNTY PUBLIC SERVICES — SMA Number: 117
- ☐ Managed Only
- ☐ Owned Only

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

☐ Agricultural	☐ Hospital/Clinic	☒ Residential
☒ Commercial / Business	☒ Industrial	☒ School
☒ Day Care	☐ Licensed Residential Facility	☐ Temporary Farm Worker
☒ Food Service/Food Permit	☐ Lodging	☒ Other (church, fire station, etc.):
☐ 1,000 or more person event for 2 or more days per year	☒ Recreational / RV Park	

13. WATER SYSTEM OWNERSHIP (mark only one)				14. STORAGE CAPACITY (gallons)
☐ Association	☒ County	☐ Investor	☐ Special District	
☐ City / Town	☐ Federal	☐ Private	☐ State	3,150,000

- SEE NEXT PAGE FOR A COMPLETE LIST OF SOURCES -

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06029 J	YAK CO - TERRACE HEIGHTS	YAKIMA	A	Comm

15	16	17	18										19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	COYOTE SPGS 1		X												X	Y	X						318	100	SE NE	10	13N	19E
S02	WELL 2 - ABR567		X										X			Y		X					806	270	SW NW	14	13N	19E
S03	WELL 3 - AAL529		X											X		Y		X					1725	1500	SW SW	16	13N	19E
S04	WELL 4		X										X			Y		X					267	400	NE NE	22	13N	19E
S05	WELL 5		X										X			Y		X					541	270	NE NE	22	13N	19E
S06	WELL 6		X										X			Y		X					440	340	SE SE	16	13N	19E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06029 J	YAK CO - TERRACE HEIGHTS	YAKIMA	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)		2326	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	1521		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	53		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	805		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	95	95	
28. TOTAL SERVICE CONNECTIONS		2421	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per year? 5630

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												
31. TEMPORARY & TRANSIENT USERS	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?			8209	14120	22999	24828	25998	22687	22800	13100	3691	
B. How many days per month is water accessible to the public?			31	30	31	30	31	31	30	31	30	
32. REGULAR NON-RESIDENTIAL USERS	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?	1310	1310	1310	1310	1310	540	540	540	1310	1310	1310	1310
B. How many days per month are they present?	22	22	22	22	22	22	22	22	22	22	22	22
33. ROUTINE COLIFORM SCHEDULE	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
* Requirement is exception from WAC 246-290	8	8	8	8	9	8	8	8	9	8	8	8

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

STATE OF WASHINGTON
Public Water System
Operating Permit

The Department of Health Office of Drinking Water issues a permit to operate:

YAK CO - TERRACE HEIGHTS (ID# 06029 J)

to owner: YAKIMA COUNTY PUBLIC SERVICES County: YAKIMA

YAKIMA COUNTY PUBLIC SERVICES
128 N 2nd St - 4th Floor Courthouse
Yakima, WA 98901

This Permit is valid through: May 2019

PERMIT CATEGORY: **** Green ****

The permit category may be modified or the permit revoked subject to water system compliance with applicable State of Washington drinking water rules and regulations and the following statements.

The system operating permit color category is based on information on file with the Department at the time this permit was printed.

System is substantially in compliance with applicable drinking water requirements.

Washington State Department of Health

Explanation of Permit Categories

1. **Green** - This category means your system is substantially in compliance with applicable drinking water requirements. Placement in this category indicates the system is adequate for growth up to approved number and existing uses.

2. **Yellow** - This category means your system is substantially in compliance except water system notified to submit water system plan, but has not satisfied planning requirement and/or is under a compliance agreement for a state significant non-complier (SSNC) violation. Placement in this category indicates the system is adequate for growth up to approved number unless otherwise limited by compliance agreement and adequate for existing uses.

3. **Blue** - This category means your system is substantially in compliance except water system does not meet design approval or has exceeded number of approved connections. Placement in this category means the system is adequate for existing uses, but not adequate for growth.

4. **Red** - This category means your system is in substantial non-compliance with applicable drinking water requirements. Placement in this category indicates the system is not adequate for growth or existing uses. **This could result in building permits, on-site sewage disposal permits, food service permits, liquor licenses and other pemits and licenses being denied for properties connected to or to be connected to the water system. In addition, lending institutions may choose not to finance loans associated with these properties.**

If you have questions about your operating permit or wish to formally appeal the permit category through an adjudicative proceeding, contact the appropriate Drinking Water Regional Office;

Northwest Regional Office
Kent
(253) 395-6750

Southwest Regional Office
Tumwater
(360) 236-3030

Eastern Regional Office
Spokane
(509) 329-2100

Appendix Q

Customer Contact Form

Yakima County Utilities Division
Customer Contact Form

❑ Complaint ❑ Comment ❑ Request ❑ Suggestion

Customer Name: _____

Address: _____

Phone Number: _____

Nature of Complaint, Comment, Request or Suggestion: _____

_____

_____

_____

_____

_____

Received By: _____ Date: _____

Results of Investigation: _____

_____

_____

_____

_____

_____

Investigated / Responded By: _____ Date: _____

Action Taken: _____

_____

_____

_____

_____

Action Taken By: _____ Date: _____

Appendix R

Disinfectant Byproducts Monitoring Plan

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water
DOH 331-464
Updated July 2012

Stage 2 DBP Monitoring Plan - Groundwater (Reduced Monitoring)

System Name	Yakima County Terrace Heights Water Sy
PWSID#	06029j
Date	7/22/2013
Completed by	Joe Stump
Population	4000

Initial Stage 2 Sampling Period First sampling period following **October 1, 2013**

Number of Samples Required 1 TTHM and 1 HAA5 per Year

Samples must be collected at the location and during the quarter with the highest TTHM single measurement and one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per sample period if the highest TTHM and HAA5 measurements ocurred at the same location and quarter.

	Stage 2 Compliance Monitoring Site ID	Projected Sampling Date
Highest TTHM Site	721 Keys Road	Aug-14
Highest HAA5 Site	721 Keys Road	Aug-14

If any annual or triennial sample exceeds the MCL (0.080 mg/l for TTHM or 0.060 mg/l for HAA5) you must begin quarterly monitoring for both TTHM and HAA5 for at least four consecutive quarters to determine if you exceed the MCL.

To remain on reduced monitoring:

The TTHM LRAA must be less than or equal to 0.060 mg/l AND the HAA LRAA must be less than or equal to 0.045 mg/l at each monitoring location.

What happens if you exceed any of the above levels?

You must return to routine monitoring.

Determining Compliance

Our system is required to monitor annually (or triennially). For compliance, we will determine that each sample taken is less than the MCL. If any sample exceeds the MCL, we must increase monitoring to dual sample sets once per quarter (taken every 90 days) at all locations. If the locational running annual average (LRAA) exceeds the MCL for either TTHM (0.080 mg/l) or HAA5 (0.060 mg/l), an MCL violation will have occurred. The LRAA is calculated based on four consecutive quarters of monitoring. Compliance will then be achieved if the TTHM and the HAA5 LRAA at each monitoring location for the four most recent quarters is less than or equal to 0.080 mg/l for TTHM and less than or equal to 0.060 mg/l for HAA5.

Disinfectant Monitoring for TTHM and HAA5

Chlorine residuals must be measured at the same time and place as routine or repeat coliform samples
MRDL for chlorine and chloramines = 4.0 mg/l as Cl_2

Determining Compliance for disinfectant residuals

Compliance is based on the running annual average (RAA) of 12 consecutive months
Daily residual measurements will / will not be included in the compliance calculations (circle one)

Attach a distribution map with sample locations

Comments

You will need to print a hard copy for your records and make it available upon request. You do not need to submit a copy to DOH.

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD call (800) 833-6388.

YAKIMA COUNTY

GEOGRPHIC INFORMATION SERVICES

D/DBP Monitoring Plan

Terrace Heights Water System

- Sampling Locations
- Wells
- Water Lines
- Parcels

ZONES

- 1
- 1a
- 2
- 2a
- 3
- 3a
- 4

Parcel Lot lines are for visual display only. Do not use for legal purposes.

0 485 970 1,940 2,910 3,880 Feet

1 inch = 1,950 feet

N

Document Path: R:\disk_5\projects\county\pw\waterplan\t_heights\watersystemsplan_17\monitoringplan.mxd

Date: September 2017

Appendix S

WSP Checklist and Capacity Table

Interties/Consolidations

Department of Health, Office of Drinking Water
Eastern Regional Office
Pre-Plan Agreement

Water System Name:	Yak Co – Terrace Heights	**Initial/Update:**	Update
Public Water System ID Number:	06029	**Number of Connections:**	1718
Preplan Date:	April 23, 2015	**Planning Purpose:**	Large System WAC 246-290-100(2)(a)
Existing WSP expiration date:	January 26, 2016	**Operating Permit Color:**	Green
WSP Submittal Due Date:	April 23, 2016		

WAC 246-290-100 requires purveyors of any new water systems, a system in a water coordination act area, a system serving 1,000 or more service connections, or a system that is growing or experiencing problems to submit a Water System Plan (WSP). The purpose of this preplan meeting is to determine the scope and level of detail of the WSP and establish a schedule for submittal of the document. This agreement is valid until the WSP submittal due date above. After this date, the agreement will need to be renegotiated. The operating permit color will change to yellow for planning purposes if the WSP is not received by the WSP submittal due date noted above.

Pre-Plan Attendees:

Andres Cervantes, PE, DOH
Brian A. Sayrs, DOH
Joe Stump, PE, Yakima County

Water System Plan (WSP) Checklist for Municipal Systems (DRAFT)

Include in plan	Content Description	WSP Page #
(√)	**Water System Plan Submittal Form**	
Chapter 1	**Description of Water System**	
(√)	Ownership and management (updated/current WFI)	1-1
( )	System history and background	1-2
( )	Brief inventory of existing facilities	Chap 2
( )	Description of and discussion about related plans: CWSP, ground water management, basin and City/County land use plans & zoning. Include land use maps for 6 & 20-years– ***include if service areas changed***	3-18, 12-1
( )	Service area characteristics, agreements, & policies including conditions of service and how new service will be provided in the retail service area. Include maps for existing water rights place of use service area & for existing, future, retail and expanded water rights place of use service areas – ***include if service areas changed***	1-3
( )	Duty to serve statement for the retail service area – ***include if service areas changed***	1-7
( )	Satellite Management Agency information	1-4
(√)	Local Government Consistency from planning agencies	12-1
( )	ODW will obtain a "not-inconsistent" statement from Ecology for Water Resource Inventory Area # 37 .	

Chapter 2 — Basic Planning Data

(√) **Current data:** population, service connections & ERUs — 3-1

(√) **Data Collection:** — 3-5

Monthly and annual production totals per source ~~including purchased water~~

Annual usage by customer class

~~Annual usage for water supplied to other systems~~

≥ 1000 connections – description of seasonal variations in use by customer class

(√) **6 & 20 year service area projections for:** — 3-4, 3-18

At least 2022 and 2036

Land use (Comprehensive Plan) — 3-21

Zoning

Population, service connections & ERUs

Water demand - use WAC 246-290-221 and include demands with and without expected efficiency savings

(√) DSL percentage and volume (provide discussion in Chapter 4) — 3-17

(√) ≥ 1000 connections - include demand forecast if all measures deemed cost-effective were implemented — 3-21

Chapter 3 — System Analysis

(√) System design standards (fire flow, system pressures, etc.) — Chap 4

(√) System inventory, description and analysis — Chap 2 +5

(√) Source — 2-8, 5-1

(√) Storage — 2-14, 5-7

(√) Distribution system/hydraulics (with equalization & FFS depleted) — 2-16, 5-15

(√) Add pressure zones added a zone — 2-1, 2-12

(√) Treatment evaluate capacity — N/A

(√) Written legal & physical system capacity analysis & DOH ERU Determinations (WSDM 6-1) form — Chap 5+6, Append 5

(√) Water quality analysis in compliance? what issues do you foresee? — 5-19

(√) Summary of system deficiencies — 10-2

(√) Analysis of possible improvement projects — 5-5, 5-11

Chapter 4 — Water Resource Analysis & Water Use Efficiency (WUE)

(√) **Metering Program** — 6-3, 8-4

- Description of all source meters (existing and new sources)
- Description of service meter program include how all meters are operated, calibrated, & maintained, ~~if not fully metered submit installation schedule & include in the budget~~
- ~~Description of permanent & seasonal intertie meter program, if not fully metered submit meter installation schedule & include in the budget~~
- ~~Describe activities to minimize leakage if not fully service & intertie metered~~

For WUE, provide a complete program update.

(√) **Water Use Efficiency Program (WUE)** [redacted] 6-1

A WUE program should be designed to achieve the WUE goal by implementing cost effective measures per WAC 246-290-810

1. Describe the current conservation (WUE) program
2. Describe WUE goal & document public adoption process (include signed minutes)
3. Describe measures that will be implemented to achieve the goal & include schedule & costs in the budget include 5 additional measures beyond the required measures
4. Describe process used to evaluate the WUE measures you did not implement (see below)
5. Describe yearly consumer education an example would suffice
6. Estimate projected water savings from selected measures
7. Describe process that will be used to determine effectiveness of the program what data? Who decides?

(√) ≥ 1000 Connections 6-4

For measures evaluated NOT implemented

- Estimate water saved from efficiency measures over the past 6 years
- Quantitative evaluation of measures to determine if they are cost-effective, include marginal costs of water production
- Evaluate measures for cost-effectiveness if shared with other systems
- Quantitative or qualitative evaluation of measures to determine if they are cost-effective from the societal perspective

(√) **Distribution System Leakage (DSL)** – 20.5% in 2011-2013 6-5

Evaluate and report DSL - WAC 246-290-820(2)

(√) **Water loss control action plan (WLCAP)** ***- if DSL is > 10%*** 6-5

Submit the WLCAP as required by WAC 246-290-820(4)

Address:
1. data accuracy; data collection and
2. field activities performed within 12 months

(√) **Source of supply analysis:** 6-6

- ~~Evaluate water supply alternatives if additional water rights will be pursued within 20 years~~
- Describe water supply characteristics & discuss any foreseeable impact (quantity & quality) to the resource (WAC 246-290-100 (4)(f) (ii) (B)) provide depth to water (static and dynamic) data. Discuss trends.

(√) **Water rights self-assessment: Consult with Ecology regarding water rights prior to plan submittal.** 6-7

Put all water right information together in Chapter 4, including water right self-assessment forms for existing, 6 & 20 year. – at least 2022 and 2036. Match with dates in your projections.

(√) Water supply reliability analysis ***– depth to water over time (and other studies or reports) if available*** 2-6, 6-6

( ) ~~Interties – descriptions and agreements~~

(√) ≥ 1000 connections - explore reclaimed water opportunities 6-6

Chapter 5 **Source Water Protection (Check One or Both)**

(√) Wellhead protection program or 2 year update (updated inventory, letters, and map) per WAC 246-290-135 7-2

( ) ~~Watershed control program (surface water systems) – if applicable~~

Chapter 6 **Operation and Maintenance Program**

(√) Water system management and personnel 8-1

(√) Operator certification 8-2

(√) Routine operating procedures and preventive maintenance 8-4

(√) Water quality sampling procedures & program DBP, LCR 8-6

(√) Coliform monitoring plan and map Groundwater Rule 8-14

(√) Emergency program, service reliability requirements & water shortage plan per WAC 246-290-420 [redacted] 8-8
( ) ~~Address sanitary survey findings~~ address drought response
(√) Cross-connection control program (> 1000 connections provide copies of annual summary report form) 8-13
-provide a status report, or provide complete program if not in previous plan.
(√) Recordkeeping, reporting, and customer complaint program 8-14
(√) Summary of O&M deficiencies, include cost in budget 8-16

Chapter 7 Distribution Facilities Design and Construction Standards

(√) Standard construction specifications for distribution mains Optional, if water system wants this Appendix A
( ) Design and construction standards for distribution-related projects Chap 9

Chapter 8 Improvement Program

(√) Capital improvement program including 6-year CIP schedule 2017-2022, at least. Chap 10

Chapter 9 Financial Program (See Financial Viability Manual)

A financial program to demonstrate financial viability: budget cannot assume substantial connection growth
(√) Summary of past income and expenses 11-4
(√) > 1000 connections – Balanced 1-year operational budget 11-4
(√) Plan for collecting the revenue necessary to maintain cash flow stability and to fund capital and emergency improvements 11-5
( ) ~~Rate structure evaluation that considers the feasibility of implementing rate structure that encourages water demand efficiency~~

Chapter 10 Miscellaneous Documents

(√) Informational meeting for the consumers, include notification and signed minutes
(√) Attach notice to adjacent utilities that WSP is available for review & comment. Attach comments received.
(√) >1000 connections - completed SEPA process with signed Determination Append I
( ) Agreements: franchise, wheeling, mutual aid, inter-local and other agreements ***– if applicable*** covenants? N/A
( ) ~~Satellite Management Contract and Water User Agreement~~
(√) When DOH is ready to approve the final WSP, the plan must be adopted by the governing body; include meeting minutes or resolution

***All maps should be a minimum of 11"x17"**
***If requesting source approval with WSP include all source documents in a separate section**

Please send 2 copies. We will send one to Ecology.
$3,705 for the review of the 1st and 2nd drafts. There is an additional 25% charge for each subsequent draft.

WORKSHEET 6-1: ERU Determinations

Water System Physical Capacity Documentation based on MDD

Note: *Capacity determinations are only for existing facilities that are operational for the water system.*

Specific Single-Family Residential Connection Criteria (measured or estimated demands) (see Chapter 5):

Average Day Demand (ADD): Terraced Estates = 539 gpd/ERU (1)(2)
Average Day Demand (ADD): Country Club = 247 gpd/ERU (1)(2)

Maximum Day Demand (MDD): Terraced Estates = 1,099 gpd/ERU (1)(3)
Maximum Day Demand (MDD): Country Club = 385 gpd/ERU (1)(3)

Water System Service Connections correlated to ERUs			
Service Classification	**Total MDD for the classification, gpd**	**Total # Connections in the classification**	**ERUs**
Residential			
Single-family (Terraced Estates)	873,000	794	794
Single-family (Country Club)	261,000	678	678
Multifamily	773,000	51	703
Nonresidential			
Industrial	56,000	3	51
Commercial	181,000	67	165
Governmental	41,000	10	37
Agricultural	0	0	0
Recreational	0	0	0
Other (specify) Education	66,000	7	60
DSL	86,000	N/A	78
Other (identify)			
Total existing ERUs (Residential + Nonresidential + Non-revenue + Other) = 2,566			

Notes:

1. Country Club customers generally have separate irrigation, while Terrace Estates customers do not.
2. Average day demands are based on 2015 demands from Table 3-5.
3. Maximum day demands are based on 2015 Peak Month demands from Table 3-6.
4. Number of existing ERUs and connections are based on Table 3-2. The number of ERU's are based on the 2015 annual consumption for each customer class divided by 539 gpd, which is he 2015 average day demand for Terraced Estates single-family customers in 2015. The number of existing ERUs would be less

for non single-family customers if it was based on maximum day demands, since outside irrigation makes up a lower percentage of the consumption for non single-family customers. This results in a calculated MDD of 2.34 mg, which is slightly higher than an actual MDD of 2.07 mg.

5. DSL is based on 10% leakage from Table 3-13 for 2015.

Physical Capacity as ERUs	
Water System Component (Facility)	**Calculated Capacity in ERUs for each component**
Source(s) (1)	3,600
Treatment (2)	>3,600
Equalizing Storage (3)	3,730
Standby Storage (3)	3,730
Distribution (4)	3,100
Transmission	N/A
Other (specify) Water Rights	6,480
Water System Physical Capacity (ERUs) = 3,100 **(based on the limiting water system component shown above)**	

Note:

1. *Source capacity is based on all wells in service and does not include level of service criteria. See Table 5-2 of WSP for details.*
2. *Treatment consists of chlorination systems at each well. Each system is capable of treating more water than the source pumping capacity.*
3. *Total storage capacity, including equalizing and standby storage, is capable of serving an estimated 3,730 ERU's. This does not include level of service criteria. See page 5-11 and Appendix D for details.*
4. *Distribution system capacity is limited by the 10-inch waterline west of Maple Ct. Velocities are approaching 5 fps with all wells running and demands less than peak hour. Capacity is estimated at approximately 3,100 ERUs. Rehabilitating the Country Club Tower and operating the Well 5 Booster will reduce these velocities.*
5. *Physical capacity as ERUs is based on a 2014 peak day demand of 2.07 mg, which includes distribution system leakage. When determining capacity for additional ERUs, the DSL should not be included from the first table since it is already included with the numbers in the second table.*

Appendix T

Operator Certifications

Operator Certifications

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATERWORKS OPERATOR CERTIFICATION
VALIDATION CARD
FOR CERTIFICATE OF COMPETENCY

CERTIFICATE NUMBER: **8282**

VALID FOR YEAR: **2019**

BE IT KNOWN THAT THE WASHINGTON STATE DEPARTMENT OF HEALTH HAS RECOGNIZED:

Joe Stump

AS A CERTIFIED WATERWORKS OPERATOR

CLASSIFICATION:

CCS, WDM 2

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATERWORKS OPERATOR CERTIFICATION
VALIDATION CARD
FOR CERTIFICATE OF COMPETENCY

CERTIFICATE NUMBER: **3959**

VALID FOR YEAR: **2019**

BE IT KNOWN THAT THE WASHINGTON STATE DEPARTMENT OF HEALTH HAS RECOGNIZED:

William Trout

AS A CERTIFIED WATERWORKS OPERATOR

CLASSIFICATION:

CCS, WDM 3, WDS

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATERWORKS OPERATOR CERTIFICATION
VALIDATION CARD
FOR CERTIFICATE OF COMPETENCY

CERTIFICATE NUMBER: **12441**

VALID FOR YEAR: **2019**

BE IT KNOWN THAT THE WASHINGTON STATE DEPARTMENT OF HEALTH HAS RECOGNIZED:

Jose Campos

AS A CERTIFIED WATERWORKS OPERATOR

CLASSIFICATION:

CCS, WDM 2

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATERWORKS OPERATOR CERTIFICATION
VALIDATION CARD
FOR CERTIFICATE OF COMPETENCY

CERTIFICATE NUMBER: **12479**

VALID FOR YEAR: **2019**

BE IT KNOWN THAT THE WASHINGTON STATE DEPARTMENT OF HEALTH HAS RECOGNIZED:

Donald Campbell

AS A CERTIFIED WATERWORKS OPERATOR

CLASSIFICATION:

CCS, WDM 1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATERWORKS OPERATOR CERTIFICATION
VALIDATION CARD
FOR CERTIFICATE OF COMPETENCY

CERTIFICATE NUMBER: **13098**

VALID FOR YEAR: **2019**

BE IT KNOWN THAT THE WASHINGTON STATE DEPARTMENT OF HEALTH HAS RECOGNIZED:

Jack Wells

AS A CERTIFIED WATERWORKS OPERATOR

CLASSIFICATION:

CCS, WDM 1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATERWORKS OPERATOR CERTIFICATION
VALIDATION CARD
FOR CERTIFICATE OF COMPETENCY

CERTIFICATE NUMBER: **13781**

VALID FOR YEAR: **2019**

BE IT KNOWN THAT THE WASHINGTON STATE DEPARTMENT OF HEALTH HAS RECOGNIZED:

Eugene Buermann

AS A CERTIFIED WATERWORKS OPERATOR

CLASSIFICATION:

WDM-IT 1, CCS

Appendix U

Example Water Conservation Tips

Account
Statement

ACCOUNT INFORMATION

ACCOUNT:
SERVICE ADDRESS:
SERVICE PERIOD: 12/29/2018 to 1/28/2019
BILLING DATE: 2/5/2019

DUE DATE: **2/26/2019**

METER READING

	Previous Reading		Current Reading		
Serial No	Date	Reading	Date	Reading	Cons
U61126	12/20/2018	145369	1/28/2019	146669	1300

YAKIMA, WA 98901

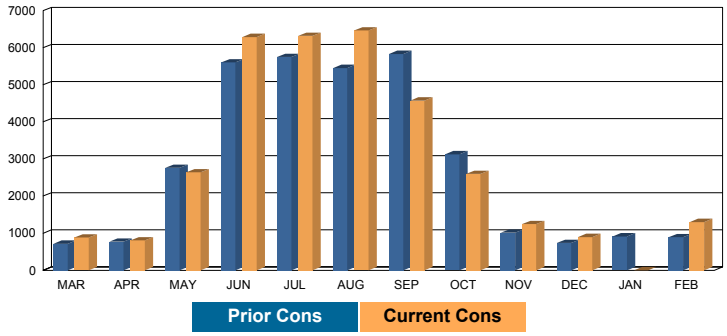
SPECIAL MESSAGE

HOURS OF OPERATION 8:00 AM - 4:00 PM
BILLING QUESTIONS (509)574-2290
UTILITY EMERGENCIES (509)574-2300
WATER CONSERVATION TIP: Adjust your watering schedule each month to match seasonal weather conditions and landscape requirements.

CURRENT CHARGES

WATER - READY TO SERVE Consumption	21.05
WATER - READY TO SERVE Flat	19.20
	40.25

USAGE HISTORY



BILL SUMMARY

PREVIOUS BALANCE	71.87
PAYMENT - THANK YOU!	-71.87
ADJUSTMENTS	-3.50
ADDITIONAL BILLING	0.00
CURRENT CHARGES	40.25
TOTAL AMOUNT DUE	**36.75**

Payment
Coupon

AMOUNT DUE

TOTAL AMOUNT DUE BY **2/26/2019** **36.75**

ACCOUNT INFORMATION

PLEASE RETURN THIS PORTION ALONG WITH YOUR PAYMENT
PLEASE MAKE CHECK PAYABLE TO:

YAKIMA COUNTY PUBLIC SERVICES

ACCOUNT:
SERVICE ADDRESS:
SERVICE PERIOD: 12/29/2018 to 1/28/2019
BILLING DATE: 2/5/2019

DUE DATE: **2/26/2019**

YAKIMA, WA 98901

AMOUNT ENCLOSED

REMIT PAYMENT TO:

Yakima County Public Services - Utility Division
128 N. 2nd St. 4th Floor
Yakima, WA 98901

2018 Yakima County Public Services Water Quality Report

Contaminants that may be present in source water before we treat it include:

- *Microbial contaminants,* such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our Board of Yakima County Commissioners meet Tuesdays at 10:00 am at 129 N. 2nd St. Yakima city hall council chambers. Please feel free to participate in these meetings.

Is Our Water System Meeting Other Rules That Govern Our Operation?

The State and EPA require us to test our water on a regular basis to ensure its safety. In 2017, we collected all required samples at the required times.

Cross Connection Control

One of the many threats to our drinking water supply is known as a cross-connection (CC). A CC is the point at which a non-drinking water substance can possibly come in contact with drinking water. Connections as seemingly innocent as a sprinkler system, hot tub or ornamental pond can easily enable contaminants to enter potable (drinking) water lines via backflow. Customers install potential CCs like these and other water-using equipment every day, but they are often unaware of the potential danger that lurks in the pipes as a result. Some Terrace Heights Water Customers have access to irrigation water. If the irrigation water piping is connected with the drinking water piping the drinking water system could easily be contaminated. Irrigation water piping can be connected with drinking water piping with the proper backflow assembly if it is installed properly and tested annually by a certified backflow assembly tester.

For more information about cross-connections, contact Bill Trout at Yakima County Public Services 574-2300.

Other Information

Yakima County and seven other water purveyors in the Upper Yakima Valley have developed a regional wellhead protection plan. The goal of the plan is to prevent contamination of drinking water supplies. For more information regarding the wellhead protection plan, please visit the Regional Wellhead Protection

Committee website at
http://www.yakimacounty.us/584/Wellhead-Protection

Water Use Efficiency

The water use efficiency goal for Terrace Heights is to reduce water production and consumption by 3% in a six year period and to keep unaccounted for water below 10%. In 2016 we produced 305 million gallons and sold 274 million gallons of water leaving 10.1% unaccounted for water. In 2017 we produced 313.9 million gallons and sold 272.6 million gallons leaving 13.1% unaccounted for water.

Conservation Tip

Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks. Make sure your home is leak-free. When you are certain that no water is being used, take a reading of the water meter. Wait 30 minutes and then take a second reading. If the meter readings change, you have a leak!

Fluoride In Your Drinking Water

Your dentist may ask you "is your drinking water fluoridated?" When developing a fluoride treatment plan, your dentist will consider all the ways you might be getting fluoride. This can include the water you drink. Some water systems add fluoride to the water with a goal of maintaining 0.80 to 1.3 parts per million. Fluoride can also occur naturally in ground water. Most of the fluoride found in groundwater is naturally occurring from the breakdown of rocks and soils. When your dentist asks you if you have fluoride in your water you can say; yes, our water comes from wells with natural occurring fluoride with a average concentration of 0.54 parts per million.

How Hard Is My Water?

Water described as "hard" is high in dissolved minerals, specifically calcium and magnesium. Hard water is not a health risk, but is a nuisance because of mineral buildup on fixtures and poor soap and/or detergent performance. Hardness is measured in either parts per million or grains per gallon. Terrace Heights water has five wells ranging from soft to hard. On average the water is considered moderately hard.

Appendix V

Public Process

BOARD OF YAKIMA COUNTY COMMISSIONERS

IN THE MATTER OF ADOPTING THE TERRACE HEIGHTS WATER SYSTEM PLAN)

RESOLUTION 404 -2019

WHEREAS, the Washington State Department of Health requires all expanding "Group A" water systems to prepare a water system plan in accordance with WAC 246-290-100; and,

WHEREAS, the purpose of the plan is to evaluate the water system facilities and operations, and describe improvements needed to meet future system needs; and,

WHEREAS, the County has prepared a water system plan for the County's Terrace Heights Water System; and,

WHEREAS, pursuant to the State Environmental Policy Act, an environmental checklist has been prepared and a "Determination of Non-Significance" has been issued in conjunction with the Terrace Heights Water System Plan; and,

WHEREAS, a public meeting was held on May 16, 2019 to receive public comment on the Terrace Heights Water System Plan; and,

WHEREAS, a Public Hearing was held on June 18, 2019 to consider adoption of the Terrace Heights Water System Plan; and,

WHEREAS, appropriate changes and modifications have been made to the Terrace Heights Water System Plan in response to review comments received during the public process and during review by the Yakima County Planning Department, the Washington State Department of Ecology, and the Washington State Department of Health; now therefore,

BE IT HEREBY RESOLVED by the Board of County Commissioners of Yakima County, Washington that the Terrace Heights Water System Plan is hereby approved and adopted.

BE IT FURTHER RESOLVED that the Director of Public Services is directed to implement the Terrace Heights Water System Plan.

DONE this 19th day of November 2019

Michael D. Leita, Chairman

Attest: Melissa Paul, Clerk of the Board

Norm Childress, Commissioner

Ron Anderson, Commissioner

Constituting the Board of County Commissioners for Yakima County, Washington

Public Services

128 North Second Street • Fourth Floor Courthouse • Yakima, Washington 98901
(509) 574-2300 • 1-800-572-7354 • FAX (509) 574-2301 • *www.co.yakima.wa.us*

LISA H. FREUND – Director

April 24, 2019

RE: Water System Plan

Dear Terrace Heights Water System Customer:

Yakima County will be holding an informational meeting at 6:00 p.m. on Thursday May 16, 2019 to discuss the County's draft Terrace Heights Water System Plan. The meeting will be held at the Terrace Heights Community Center located at 4011 Commonwealth Road in Terrace Heights.

The purpose of the plan is to evaluate the water system facilities and operations, and provide a schedule for future system improvements. The plan includes:

- An estimation of existing and future water system demands.
- An assessment of the capability of the existing water system to meet existing and future demands in terms of supply, storage and distribution.
- Development of system improvements needed to meet existing and future demands.
- Evaluation of the financial impact of the improvements.

Also included in the plan are proposed water use efficiency goals. These goals are intended to help conserve water for future generations and meet the State's distribution system leakage standard.

For additional information regarding the draft water system plan and proposed water use efficiency goals, see http://www.yakimacounty.us/440//Utilities. Customers interested in providing input or in learning more about the draft Water System Plan and water use efficiency goals are encouraged to attend the meeting. Written comments may also be submitted to Yakima County Public Services before June 18, 2019.

If you have any questions regarding the meeting, please call me at (509) 574-2425.

Sincerely,

Joe Stump, P.E.
Utilities Manager

Public Meeting
Terrace Heights Water System Plan & Water Use Efficiency Goals
May 16, 2019

David Haws and I (Joe Stump) held a public meeting on May 16th at the Terrace Heights Civic Center. 13 people attended the meeting.

I had handouts of Figure 1-1 and 2-1, Chapter 10, Water Use Efficiency and an agenda.

Comments:

1. The meeting went well and those present asked good questions. Some of the questions centered around development and having the development pay for the improvements needed to serve the development. Some thought 30 homes per year was a low projection.
2. Two or more people felt we needed to be more current in our payment methods by allowing people to pay on-line, with credit cards or automatic withdrawals. They commented that they can pay property taxes on-line so they felt they should be able to pay utility bills on line. They also commented that they would like to be able to pay for multiple accounts with one email name. Some utilities evidently have some limitations with their on-line payment for customers that own multiple homes. Auto deduction from bank accounts and including an envelope with our bills was mentioned.
3. They suggested contacting Perry Trade to see if we could partner with them on meter calibration or other work.
4. One customer suggested a mailer reminding people not to water in the heat of the day. We could add a conservation tip to the water bill reminding people to avoid watering in the head of the day when possible.
5. They asked if there has been consideration of saving the water for only in-house use. I told them not at this time.
6. A couple on Beacon said they may contact me regarding the extension of a water line to serve a parcel they own to the east 191322-44402.
7. One person attending lives in the Coyote Springs area. He was concerned about declining water levels in their well. I commented that Well 2 is lower than when drilled but appears to be relatively stable now.
8. A second person living in the Coyote Springs area expressed an interest in the County assuming ownership of their system.
9. One asked that we avoid driving on Morningside Drive between Hillcrest and the Tower. It creates dust, and wears on the road which is not maintained by the County. He said there is also not a maintenance association so maintenance is difficult. He asked what it would take for the County to maintain the road?
10. They asked how our rates compared to other systems. I told them an average water bill for a Terraced Estates customer using the water for irrigation is $54/month. For the same consumption, the City of Yakima rates would be $47 per month for inside City Limits and $70 for outside City Limits.
11. I asked if people had any other suggestions for water use efficiency goals. None were mentioned. One thought a 3% reduction was too easy.

Note:
For public meeting we should mention proposed changes to design standards, particularly C900 versus DI pipe.

YAKIMA HERALD-REPUBLIC
WE TELL YOUR STORIES YAKIMAHERALD.COM

El Sol de Yakima

Affidavit of Publication

STATE OF WASHINGTON,)
)
COUNTY OF YAKIMA)

Jackie Chapman, being first duly sworn on oath deposes and says that she/he is the Accounting clerk of Yakima Herald-Republic, Inc., a daily newspaper. Said newspaper is a legal newspaper approved by the Superior Court of the State of Washington for Yakima County under an order made and entered on the 13th day of February, 1968, and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a daily newspaper in Yakima, Yakima County, Washington. Said newspaper is now and has been during all of said time printed in an office maintained at the aforesaid place of publication of said newspaper.

That the annexed is a true copy of a:
Yakima County Notice of Public Heari

it was published in regular issues (and not in supplement form) of said newspaper once each day and for a period of 1 times, the first insertion being on 05/31/2019 and the last insertion being on 05/31/2019

Yakima Herald-Republic 05/31/19

and the such newspaper was regularly distributed to its subscribers during all of the said period. That the full amount of the fee charged for the foregoing publication is the sum of $168.96

Jackie Chapman
Accounting Clerk

LISA M DRIPPS NOTARY PUBLIC STATE OF WASHINGTON My Comm. Expires April 05, 2021

Sworn to before me this 31st day of, May 2019

Lisa M. Dripps
Notary Public in and for the
State of Washington,
residing at Yakima

Yakima County
Notice of Public Hearing

NOTICE IS HEREBY GIVEN that a public hearing will be held by the Board of Yakima County Commissioners in the Yakima City Hall Council Chambers, 129 North Second Street, Yakima, on Tuesday, June 18th, 2019 at 10:00 AM, or as soon as possible thereafter.

One purpose of the public hearing is to inform citizens of the recommendations in the Terrace Heights Water System Plan and provide them with the opportunity to comment on the plan. Included in the plan are:

- An assessment of the capability of the existing water system to meet existing and future demands in terms of supply, storage and distribution.
- A development schedule of system improvements needed to meet existing and future demands.
- An evaluation of the financial impact of the improvements.

A second purpose of the hearing is to receive comments on proposed water use efficiency goals for the County's Terrace Heights water system. These goals include:

- Reduce or maintain distribution system leakage to less than 10 percent within the next 6-year planning period.
- Reduce single-family residential demands by 3 percent over the next 6-year planning period.

Written comments may also be submitted to Yakima County: 1) at the hearing, or 2) by mail, fax, or delivering to the contact person in the last paragraph. Comments must be received by June 14th, 2019.

The hearing room is handicap accessible. Additional arrangements to reasonably accommodate special needs will be made upon receiving 24-hour advance notice. Contact Joe Stump at 509-574-2300, Department of Public Services, 4th floor County Courthouse, 128 North Second Street, Yakima; fax: 509-574-2301.

Done this 28th day of May 2019.

Melissa Paul
Clerk of the Board

(887916) May 31, 2019

Courtesy of Yakima Herald-Republic

BOARD OF YAKIMA COUNTY COMMISSIONERS
PUBLIC HEARING

Date: June 18, 2019
Re: Public Hearing Recommendations in the Terrace Heights Water System Plan
Time: 10:00 A.M.
Location: City Council Chambers, 129 North Second St, Yakima, Washington
Present: Chairman Mike Leita, Commissioner Ron Anderson, Commissioner Norm Childress, Legal Counsel Paul McIlrath, Clerk of the Board Melissa Paul

Record of Proceedings

David Hawes, Yakima County Public Services Environmental Services Director and Joe Stump, Yakima County Public Services Utility Divisions Manager presented proposed updates to the Terrace Heights Water System Plan:
Rehabilitate Country Club Water Tank
Increase Well 6 Pumping Capacity
Paint Reservoir #1
Butterfield Road Waterline Improvements
Future Well

Total Improvement Cost $2,900,000 to be funded by $350,000 DWSRF loan, $500,000 SIED Grant, and system reserves.

No public comment was received in advance of the hearing. No public comment was offered at the hearing.

Commissioner Leita instructed staff to move forward with the plan.

Approved this 27th day of August 2019.

Michael D. Leita, Chairman

Norm Childress, Commissioner

Ron Anderson, Commissioner

Melissa Paul, Clerk of the Board

Audio/Video transcription of this hearing accompanies this Record of Proceedings

BOARD OF YAKIMA COUNTY COMMISSIONERS
PUBLIC HEARING

Date: June 18, 2019
Re: Public Hearing:
Receive Comment on Proposed Water Use Efficiency Goals for Terrace Heights Water System
Time: 10:00 A.M.
Location: City Council Chambers, 129 North Second St, Yakima, Washington
Present: Chairman Mike Leita, Commissioner Ron Anderson, Commissioner Norm Childress, Legal Counsel Paul McIlrath, Clerk of the Board Melissa Paul

Record of Proceedings

David Hawes, Yakima County Public Services Environmental Services Director and Joe Stump, Yakima County Public Services Utility Divisions Manager presented proposed water use efficiency goals for the Terrace Heights Water System:

Reduce or maintain distribution system leakage to less than 10% within the next six-year planning period
Reduce single-family residential demands by 3% over the next six-year planning period.
Average Day Demands – 6% actual reduction
Peak Month Demands – 10% actual reduction
Estimated water savings – 9 million gallons per year

No public comment was received in advance of the hearing. No public comment was offered at the hearing.

Commissioner Leita instructed staff to move forward with the Water Use Efficiency Goals for the Terrace Heights Water System.

Approved this 27th day of August 2019.

Michael D. Leita, Chairman

Norm Childress, Commissioner

Ron Anderson, Commissioner

Melissa Paul, Clerk of the Board

Audio/Video transcription of this hearing accompanies this Record of Proceedings

BOARD OF YAKIMA COUNTY COMMISSIONERS

IN THE MATTER OF ADOPTING THE TERRACE HEIGHTS WATER SYSTEM WATER USE EFFICIENCY GOALS))))

RESOLUTION 256-2019

WHEREAS, the Washington State Department of Health requires all municipal water suppliers to develop and implement a Water Use Efficiency Program meeting the requirements of WAC 246-290-810; and,

WHEREAS, the County has prepared a Water Use Efficiency Program for the Terrace Heights Water System as part of its Terrace Heights Water System Plan; and,

WHEREAS, the Water Use Efficiency Program includes water use efficiency goals intended to help conserve water for future generations and to meet the State's distribution system leakage standard; and,

WHEREAS, a public meeting was held on May 16, 2019 to receive public comment on the Terrace Heights Water System Plan and water use efficiency goals; and,

WHEREAS, a Public Hearing was held on June 18, 2019 to consider adoption of the Terrace Heights Water System Plan and Water Use Efficiency Goals; and,

WHEREAS, no comments were received regarding the Water Use Efficiency Goals; now therefore,

BE IT HEREBY RESOLVED by the Board of County Commissioners of Yakima County, Washington that the Terrace Heights Water use efficiency goals are hereby approved and adopted.

BE IT FURTHER RESOLVED that adoption of the Terrace Heights Water System Plan will be considered at a later date following further review by the Washington State Department of Health.

DONE this 20th day of August 2019

EXCUSED

Michael D. Leita, Chairman

Norm Childress, Commissioner

Ron Anderson, Commissioner

Constituting the Board of County Commissioners for Yakima County, Washington

Attest: Melissa Paul, Clerk of the Board

Appendix W

Lead and Copper Monitoring Plan

Lead and Copper Monitoring Plan for: Terrace Heights Water System

A. System Information **Plan Date:** 6-10-16

Water System Name **Yak CO – Terrace Heights**	**County** Yakima	**System I.D. Number** 06029J
Monitoring Frequency by Regulation:		**Standard three years**
Number of Sample Sites Needed to Represent the Distribution System:		**20**

B. Laboratory Information

Laboratory Name Cascade Analytical	**Office Phone 509-452-7707** **After Hours Phone 509-668-1969**
Address 1008 W Ahtanum Rd. Ste 2, Yakima, WA 98903	**Cell Phone - -** **Email office@cascadeanalytical.com**
Hours of Operation Monday through Friday 8 am to 5 pm	
Contact Name Andy Schut	
Emergency Laboratory Name Ag Health Laboratories, Inc	**Office Phone 509-836-2020** **After Hours Phone - -**
Address 445 Barnard Boulevard Sunnyside, WA 98944	**Cell Phone - -** **Email** _____
Hours of Operation Monday through Friday 8 am to 5 pm	
Contact Name _____	

C. Wholesaling of Groundwater

	Yes	No
We are a consecutive system and purchase groundwater from another water system.	☐	☒
If yes, Water System Name: Contact Name: Telephone Numbers		
We sell groundwater to other public water systems.	☐	☒

D. Selection Sample Site Locations.

Establish and maintain a sampling pool of homes large enough to satisfy the number of sample sites required for standard monitoring.

Identify sample sites that are most vulnerable to lead and copper corrosion. Generally, these are homes with lead service lines or homes built between 1982 and 1986 with copper pipes joined by lead/tin solder.

E. Alternate Sites

As homeowners opt out of the sampling pool, the Terrace Heights Water System will replace the sites with new sites so that we maintain a sample pool large enough to accommodate the full number of samples required under standard monitoring

F. Sample Collection Procedures

The sample pool will receive a sample bottle and written instructions on how to take the lead and copper sample. Example of instructions attached.

G. Action Levels

The action levels are: 0.015 milligrams per liter (mg/L) for lead 1.3 mg/L for copper.

H. Exceeding an Action Level

An exceedance occurs when the concentration of lead or copper in more than 10 percent of the water samples exceeds an action level. If an exceedance occurs, the Terrace Heights Water System will contact the State Department of Health immediately and proceed with follow-up investigations.

I. Provide Sample Results to Each Homeowner in the sample pool.

The Terrace Heights Water System will give the homeowners in the sampling program the results of the tests within 30 days after receiving the results from the testing laboratory. Example of result letter attached. One copy of the homeowner result letter and a signed certification letter will also be sent to the State Department of Health within 90 days after the end of the monitoring period.

J. Routine Sample Locations

Copper Action Level 1.3 SRL 0.02 Lead Action Level 0.015 SRL 0.001

Sample Site Number	Sample Location	Last Date Tested	Year Built	Results Copper mg/L	Results Lead mg/L
1	302 Santa Roza	7/21/2017	1964	0.0243	0.000320
2	205 Observation	7/21/2017	1950	0.0158	0.000350
3	5103 Manor Dr.	7/21/2017	1987	0.0475	0.000310
4	168 Terrace Park Dr.	7/21/2017	2001	0.0587	<0.0001
5	401 N. 41st.	7/21/2017	1960	0.0195	0.000100
6	204 Panorama	7/21/2017	1969	0.0141	0.000230
7	4511 Maple Ave.	7/21/2017	1935	0.00253	0.000280
8	4403 N. Roza Lee	7/21/2017	1945	0.0177	0.000630
9	5601 Hilltop	7/21/2017	1960	0.0649	0.000360
10	714 Fairway Dr.	7/28/2017	1984	0.0931	0.002190
11	709 Fairway Dr.	7/28/2017	1987	0.0316	0.000330
12	717 Beacon Ave.	7/28/2017	1987	0.0386	0.000390
13	718 Beacon Ave	7/28/2017	1985	0.0692	0.000220
14	622 Country Club Dr.	7/28/2017	1984	0.0226	0.000260
15	710 Country Club Dr.	7/28/2017	1965	0.506	0.000260
16	716 Country Club Dr.	7/28/2017	1978	0.0801	0.000330
17	717 Country Club Dr.	7/28/2017	1988	0.102	0.003750
18	806 Country Club Dr.	7/28/2017	1977	0.0409	0.001700
19	808 Country Club Dr.	7/31/2017	1976	0.103	0.000560
20	4403 Terrace Heights Dr.	7/25/2017	1945	0.00585	0.000200

Contact Information

Name **Joe Stump, P.E Utilities Manager** **Bill Trout, Utilities Supervisor**	**Office Phone 509-574-2300** **After Hours Phone 509-574-2300**
Address **Yakima County Public Service** **128 N. 2nd St. Fourth Floor** **Yakima, WA 98901**	**Email joe.stump@co.yakima.wa.us** **bill.trout@co.yakima.wa.us**

Yakima County Comprehensive Water System Plan

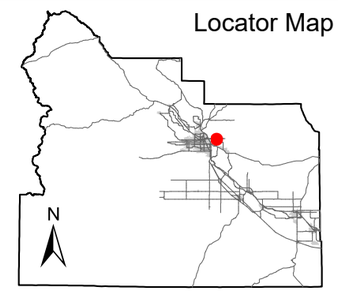
FIGURE O-1

Terrace Heights Water System Lead and Copper Monitoring Plan

- Supply Wells
- Lead and Copper Test Sites
- Water Lines
- Service Area & Retail Service Area Boundary
- parcels

1:21,600

Locator Map



Date: November 2019

Layout Name: fig01_waterplan

Document Path: R:\disk_5\projects\county\pw\waterplan\other_systems\Treneer_System\TreneerWaterSystem.aprx

July 2017

Terrace Heights Water Customer
[Address]
Yakima, WA 98901

Re: Lead and Copper Testing

Dear Water Customer:

A few years ago your residence was included in Lead and Copper testing for our Terrace Heights Water System. State Department of Health is requiring us to perform another round of Lead and Copper sampling to determine if the Lead and Copper concentrations are consistent with our last test results. Results from the previous testing indicate that no samples exceeded the Maximum Contaminant Level. Most samples had no detectable or very low levels of lead or copper.

Before sampling, there must be a minimum of a six-hour period during which there is no water use but no longer than twelve hours. Because the sample must be taken after the water has been sitting in the pipes for an extended period of time it is very difficult for us to take the sample. We are hoping that you can help us perform another round of Lead and Copper testing.

We would like to conduct the testing on the ___ of July. If acceptable to you a sample bottle will be dropped off at your house on the ___ and picked up on the morning of the ___. There is no cost to you for the test. If this does not fit your schedule or is inconvenient, please contact us so we may reschedule your test.

I have attached procedures that we would like you to follow for the testing.

Please contact me at 509-574-2300 or bill.trout@co.yakima.wa.us if you have any questions.

Sincerely,

Bill Trout
Utilities Supervisor

Enclosure

LEAD AND COPPER
SAMPLING PROCEDURES

Thank you for your assistance in our lead and copper monitoring. The sampling procedure is simple and contains the following four steps:

1. Before sampling, there must be a minimum of a six-hour period during which there is no water use and no longer than twelve hours. Either early morning or evenings upon returning home are the best sampling times to ensure that inactive water conditions exist. Because the sample must be taken after the water has been sitting in the pipes for an extended period of time, it is necessary for the home owner to collect the sample.

2. A kitchen or bathroom cold-water faucet is to be used for sampling. Place the open bottle below the faucet and gently open the cold water tap. Fill the bottle with the first water that comes from the faucet and turn the tap off.

3. Tightly cap the sample bottle and fill in the date and time on the sample bottle label.

4. Place the sample bottle outside your door on July _____, 2017 before 10:00 a. m. so we can pick it up. If you are unable to collect the sample on this date please call and let me know so we can schedule a new pick up time.

Please call Bill Trout at 574-2300 if you have questions about these instructions.

Water System
CONSUMER NOTICE
Lead and Copper Water Sample Results

The Terrace Heights Water System, I.D. 06029 J is providing you with the lead and copper test results on the water sample collected at your location. Please share this notice with everyone who uses or drinks the water.

The results at _____ are: **lead _____ mg/L and copper _____ mg/L.**

The maximum contaminant level goal (MCLG) is the level of a contaminant in drinking water below which there are no known or expected risks to health. MCLGs allow for a margin of safety. The regulatory limits for lead and copper are called action levels. An exceedance occurs when the concentration of the lead or copper in more than 10 percent of the tap water samples exceeds an action level.

- The MCLG for lead is "0" and the action level is 15 ppb (or .015 mg/L).
- The MCLG and action level for copper is 1,300 ppb (or 1.3 mg/L).

Lead or copper action level exceedances will trigger corrosion control treatment or other requirements. We will notify all water users if our system exceeds the lead action level.

For more information, please contact:

Bill Trout
Yakima County
Utilities Supervisor
509-574-2300

This notice is sent to you by Yakima County Terrace Heights Water System on 8-8-17

August 8, 2017

Washington State department of Health
Office of Drinking Water
Water Quality Section
P.O. Box 47822
Olympia, WA 98504-7822

RE: Lead and Copper Results: Consumer Notification

Office of Drinking Water,

Lead and Copper Results: Consumer Notification Certification Form
The water system must complete this section. The signature below certifies that the notice contains all required elements.
Complete the following items (check all that apply):
I mailed/delivered all Consumer Notices to the water users at all of the lead and copper sampling locations within 30 days of receiving the lead and copper results from the laboratory.

(**For NTNC systems ONLY**) Notice posted at _____ on ___ / ___ / ____ within 30 days of receiving the lead and copper results from the laboratory. (***Only By Department Approval***)

Lead and Copper Results: Consumer Notification Certification Form

Yak CO – Terrace Heights _PWS I.D. 06029 J_____
Water System PWS ID

_____ _Utility Supervisor_____August 8, 2017
Signature of owner or operator Position Date

Please contact me at 509-574-2485 or bill.trout@co.yakima.wa.us if you have any questions.

Sincerely,

Bill Trout
Utilities Supervisor

Enclosures