

**PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS**

TO: Water Rights Section Date October 6, 2014  
 FROM: Groundwater Section Jen Woody  
 SUBJECT: Application G- 17604 Reviewer's Name Supersedes review of: 6/3/2014, 7/10/2013 (by Marc Norton)  
 Date of Review(s)

**PUBLIC INTEREST PRESUMPTION; GROUNDWATER**

OAR 690-310-130 (1) *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525. Department staff review groundwater applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. This review is based upon available information and agency policies in place at the time of evaluation.*

A. **GENERAL INFORMATION:** Applicant's Name: NF Land LLC County: Umatilla

A1. Applicant(s) seek(s) 6.47 cfs from 15 well(s) in the Walla Walla River Basin,  
North Fork Walla Walla River subbasin Quad Map: Bowlus Hill & Peterson Ridge

A2. Proposed use Irrigation of 517.7 acres - primary Seasonality: March 1 – November 30

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	Proposed	1	CRBG	6.47	05N/36E-24 SE NW	1060' N, 885' W fr C of S 24
2	Proposed	2	CRBG	6.47	05N/36E-24 NE NW	620' S, 60' W fr N ¼ cor S 24
3	Proposed	3	CRBG	6.47	05N/36E-13 SW SW	45' N, 1200' E fr SW cor S 13
4	Proposed	4	CRBG	6.47	05N/36E-13 SW SE	1200' N, 900' E fr S ¼ cor S 13
5	Proposed	5	CRBG	6.47	05N/36E-13 SE SW	470' N, 250' W fr S ¼ cor S 13
6	Proposed	6	CRBG	6.47	05N/36E-24 NW NE	360' S, 1270' E fr N ¼ cor S 24
7	Proposed	7	CRBG	6.47	05N/36E-13 SE SW	1240' N, 300' W fr S ¼ cor S 13
8	Proposed	8	CRBG	6.47	05N/36E-23 SW NE	695' S, 125' E fr ¼ N cor S 23
9	Proposed	9	CRBG	6.47	05N/36E-24 NW NW	1250' S, 260' E fr NW cor S 24
10	Proposed	10	CRBG	6.47	05N/36E-23 NW NW	720' S, 215' E fr NW cor S 23
11	Proposed	11	CRBG	6.47	05N/36E-24 NW NW	375' S, 825' E fr NW cor S 24
12	Proposed	12	CRBG	6.47	05N/36E-23 NW NE	725' S, 1190' E fr N ¼ cor S 23
13	Proposed	13	CRBG	6.47	05N/36E-23 NE NW	585' N, 580' E fr S ¼ cor S 14
14	Proposed	14	CRBG	6.47	05N/36E-23 SE NE	895' S, 370' W fr NE cor S 23
15	Proposed	15	CRBG	6.47	05N/36E-23 NE NW	250' N, 343' E fr S ¼ cor S 14

\* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	1627				500	0 - 300	0 - 500		300 - 500			
2	1773				625	0 - 400	0 - 625		400 - 625			
3	1807				625	0 - 400	0 - 625		400 - 625			
4	2032				900	0 - 400	0 - 900		600 - 900			
5	2056				900	0 - 400	0 - 900		600 - 900			
6	2094				950	0 - 400	0 - 950		650 - 950			
7	2185				1000	0 - 400	0 - 1000		700 - 1000			
8	1540				350	0 - 50	0 - 50		50 - 350			
9	1590				410	0 - 50	0 - 50		50 - 410			
10	1520				320	0 - 50	0 - 50		50 - 320			
11	1720				520	0 - 50	0 - 50		50 - 520			
12	1560				380	0 - 50	0 - 50		50 - 380			
13	1700				510	0 - 50	0 - 50		50 - 510			
14	1580				410	0 - 50	0 - 50		50 - 410			
15	1660				305	0 - 20	+1 - 20	-----	-----		-----	

Use data from application for proposed wells.

A4. **Comments:** The proposed well construction will need to be modified such that each well is continuously cased and continuously sealed so that no more than 100 feet of open borehole exists in each well, unless additional work is done to show that there is only one aquifer being developed. Requested discharge rate is 2,904 gpm = 6.47 cfs. Requested total duty reduced 9/29/2014 from 545 AF to 300 AF. This re-review assumes the rates are unchanged.

A5.  Provisions of the \_\_\_\_\_ Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water  are, or  are not, activated by this application. (Not all basin rules contain such provisions.)  
 Comments: \_\_\_\_\_

A6.  Well(s) # \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, tap(s) an aquifer limited by an administrative restriction. Name of administrative area: Umatilla Basin – Walla Walla River Subbasin five-mile radius for wells in basalt aquifers  
 Comments: **ALL WELLS ARE PROPOSED. Wells 1 - 7 are located outside of the five-mile radius from City of Milton-Freewater wells. Wells 8 – 15 are within the five-mile radius from City of Milton-Freewater wells. Proposed wells have open intervals that are vertically separated from the City Wells, indicating they will access a different aquifer. See Figure 4. Proposed wells’ bottom of open interval should be above 1100 feet msl to maintain separation from City wells.**

Per OAR 690-507-0030 (3)(a): Ground water from the basalt reservoir in a five-mile radius around any municipal well of the cities of Athena, Helix, Milton-Freewater, and Weston is classified for municipal, group domestic and statutorily exempt ground water uses (see definition) only. Other uses may be permitted if it is documented that a barrier to ground water movement separates a proposed well from municipal wells and there will be no interference with municipal wells. Applications for other uses of ground water within a five-mile radius of a municipal well shall automatically be referred to the Commission for review and consideration of public interest unless the affected city affirms that is in favor of the proposed appropriation. This classification applies only when the affected city(ies) have a full-time conservation program in effect.

**B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070**

- B1. Based upon available data, I have determined that groundwater\* for the proposed use:
- a.  is over appropriated,  is not over appropriated, or  cannot be determined to be over appropriated during any period of the proposed use. \* This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
  - b.  will not or  will likely be available in the amounts requested without injury to prior water rights. \* This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
  - c.  will not or  will likely to be available within the capacity of the groundwater resource; or
  - d.  will, if properly conditioned, avoid injury to existing groundwater rights or to the groundwater resource:
    - i.  The permit should contain condition #(s) **7B – Interference, Annual WL (February/March- see below for wording), 7P – Well Tag, 7T – Measuring Tube, Large measuring and reporting with flow meter on each well**;
    - ii.  The permit should be conditioned as indicated in item 2 below.
    - iii.  The permit should contain special condition(s) as indicated in item 3 below;
- B2.
- a.  Condition to allow groundwater production from no deeper than a bottom hole elevation of 1,100 feet.;
  - b.  Condition to allow groundwater production from no shallower than \_\_\_\_\_ ft. below land surface;
  - c.  Condition to allow groundwater production only from the \_\_\_\_\_ groundwater reservoir between approximately \_\_\_\_\_ ft. and \_\_\_\_\_ ft. below land surface;
  - d.  Condition to allow production only from a single aquifer in the Columbia River Basalt groundwater reservoir;
  - e.  Well reconstruction is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): \_\_\_\_\_

- B3. **Groundwater availability remarks: The applicant is requesting 6.47 cfs (2900 gpm) from 15 wells for irrigation of 517.7 acres. Wells 1 – 15 are PROPOSED. Wells 1 - 7 are located outside of the five-mile radius from City of Milton-Freewater wells and wells 8 – 15 are within the five-mile radius. Aquifers within the Columbia River Basalt Group are capable of producing 2,900 gallons per minute in many areas of the Umatilla Basin. However, these same aquifers often cannot sustain that amount of development without persistent groundwater level declines occurring. Declines have been documented in basalt aquifers in the Umatilla Basin and in the Walla Walla sub-basin. An example would be UMAT 55891, a well located about 6 miles to the north, that develops water from an aquifer in the Columbia River Basalts. See attached map and hydrograph. UMAT 55891 is the POA for permits G-15862 and G-16445. The permits are for irrigation of 104.7 and 104.9 acres respectively. Use of the well began in 2008. From February 2008 to February 2013, the groundwater level has declined 24 feet. Average pumpage was 1.7 acre-feet per acre for the first couple of years as only half of the land was irrigated. The groundwater resource may not sustain the requested duty requested by this application, so decreased total duty is being suggested. This downward trend is not unique to UMAT 55891; groundwater levels in many other wells in the area also show significant decline.**

The following permit conditions related to the expected limited capacity of the resource are recommended:

The permittee shall construct one minimum four-inch diameter observation well to penetrate the same aquifer as the production wells prior to groundwater use authorized by this permit. The well shall meet the Department's minimum well construction standards and shall be cased and sealed to the same depth as the production wells. The well shall be constructed at a location approved by the Department for the purpose of instrumentation with continuous groundwater-level monitoring equipment. The landowner and permittee shall provide access to Department staff to install and maintain the monitoring equipment. The well shall not be used for any other purpose while the Department is monitoring groundwater levels.

Wells shall be open to a single aquifer in the Columbia River Basalt Group and shall meet applicable well construction standards (e.g., OAR 690-200 and OAR 690-210). Following well completion, the wells shall be thoroughly developed to remove cuttings and drilling fluids. A video log of the wells shall be collected to demonstrate to the satisfaction of the Department that each well is only open to a single aquifer. Additional data that help characterize the water bearing zone characteristics, including water quality and temperature, may also be provided to the Department.

Dedicated Measuring Tube: All wells with pumps shall be equipped with an unobstructed, dedicated measuring tube pursuant to figure 200-5 in OAR 690-200 before use begins.

Upon reasonable notice, the permittee shall allow Department staff access to the observation and production wells. OWRD staff will periodically measure water levels in the observation and production wells for the purpose of evaluating the appropriation's impact to the resource.

#### Annual Measurement Condition

The Department requires the water user to measure and report annual static water levels for each well on the permit. The static water level shall be measured in the month of March. Reports shall be submitted to the Department within 30 days of measurement.

The permittee shall submit an initial February or March static water-level measurement once well construction is complete and annual measurements thereafter. Annual measurements are required whether or not the well is used. The first annual measurement will establish a reference level against which future measurements will be compared. However, the Director may establish the reference level based on an analysis of other water-level data. The Director may require the user to measure and report additional water levels each year if more data are needed to evaluate the aquifer system.

All measurements shall be made by a certified water rights examiner, registered professional geologist, registered professional engineer, licensed well constructor or pump installer licensed by the Construction Contractors Board. Measurements shall be submitted on forms provided by, or specified by, the Department. Measurements shall be made with equipment that is accurate to at least the standards specified in OAR 690-217-0045. The Department requires the individual performing the measurement to:

- A. Associate each measurement with an owner's well name or number and a Department well log ID; and
- B. Report water levels to at least the nearest tenth of a foot as depth-to-water below ground surface; and
- C. Specify the method of measurement; and
- D. Certify the accuracy of all measurements and calculations submitted to the Department.

The Department may require the discontinuance of groundwater use, or reduce the rate or volume of withdrawal from, the well(s) if any of the following events occur:

- A. Annual water-level measurements reveal an average water-level decline of three or more feet per year for five consecutive years; or
- B. Annual water-level measurements reveal a water-level decline of 15 or more feet in fewer than five consecutive years; or
- C. Annual water-level measurements reveal a water-level decline of 25 or more feet; or
- D. Hydraulic interference leads to a decline of 25 or more feet in any neighboring well with senior priority.

The period of restricted use shall continue until the water level rises above the decline level which triggered the action or the Department determines, based on the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or causing substantial interference with senior water rights. The water user shall not allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this permit. If more than one well is involved, the water user may submit an alternative measurement and reporting plan for review and approval by the Department.

**Aquifer/Well information for Groundwater Application G-17604 - Proposed**

Well #	Well Head Elevation	Well Depth	Seal Depth	Top of Open Interval	Bottom of Open Interval
1	1627	500	300	300	500
2	1773	625	400	400	625
3	1807	625	400	400	625
4	2032	900	400	400	900
5	2056	900	400	400	900
6	2094	950	400	400	950
7	2185	1000	400	400	1000
8	1540	350	50	50	350
9	1590	410	50	50	410
10	1520	320	50	50	320
11	1720	520	50	50	520
12	1560	380	50	50	330
13	1700	510	50	50	460
14	1580	410	50	50	360
15	1660	305	20	20	305

Well #	Elevation	Seal Depth	Elev. At Top Open Interval	Open Interval	Elev. At Bottom
1	1627	300	1327	200	1127
2	1773	400	1373	225	1148
3	1807	400	1407	225	1182
4	2032	400	1632	500	1132
5	2056	400	1656	500	1156
6	2094	400	1694	550	1144
7	2185	400	1785	600	1185
8	1540	50	1490	300	1190
9	1590	50	1540	360	1200
10	1520	50	1470	270	1200
11	1720	50	1670	470	1180
12	1560	50	1510	280	1180
13	1700	50	1650	410	1190
14	1580	50	1530	310	1170
15	1660	20	1640	285	1355

**C. GROUND WATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040**

**C1. 690-09-040 (1): Evaluation of aquifer confinement:**

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation:** According to the well log for UMAT 57199 , water was encountered at 265' and rose to a level of 185'. This indicates a confined aquifer typical of the Columbia River Basalt Group.

**C2. 690-09-040 (2) (3): Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.**

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	North Fork Walla Walla River	1450	1565	700	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	North Fork Walla Walla River	1450	1565	2170	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	North Fork Walla Walla River	1450	1545	2220	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	1	North Fork Walla Walla River	1450	1560	4100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	1	North Fork Walla Walla River	1450	1565	3000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	1	North Fork Walla Walla River	1450	1595	2950	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	1	North Fork Walla Walla River	1450	1570	3700	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	1	North Fork Walla Walla River	1450	1490	580	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	1	North Fork Walla Walla River	1450	1550	550	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	1	North Fork Walla Walla River	1450	1470	600	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	1	North Fork Walla Walla River	1450	1570	1650	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	1	North Fork Walla Walla River	1450	1510	920	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	1	North Fork Walla Walla River	1450	1495	2050	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	1	North Fork Walla Walla River	1450	1520	850	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	1	North Fork Walla Walla River	1450	1495	1580	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Basis for aquifer hydraulic connection evaluation:** Exact groundwater elevations are unknown at the proposed wells, so they are assumed to be similar to UMAT 57199. Groundwater elevations are below surface water elevations, with water bearing zones located at greater depth. This vertical difference indicates significant hydraulic separation between the creek and the targeted aquifer within one mile of the proposed wells.

**Water Availability Basin the well(s) are located within:** \_\_\_\_\_

**C3a. 690-09-040 (4): Evaluation of stream impacts for each well that has been determined or assumed to be hydraulically connected and less than 1 mile from a surface water source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% natural flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked  box indicates the well is assumed to have the potential to cause PSI.**

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be hydraulically connected and less than 1 mile from a surface water source. Complete only if Q is distributed among wells. Otherwise same evaluation and limitations apply as in C3a above.

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: \_\_\_\_\_

C4a. **690-09-040 (5):** Estimated impacts on hydraulically connected surface water sources greater than one mile as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													





**D. WELL CONSTRUCTION, OAR 690-200**

D1. Well #: \_\_\_\_\_ Logid: \_\_\_\_\_

D2. THE WELL does not meet current well construction standards based upon:

- a.  review of the well log;
- b.  field inspection by \_\_\_\_\_;
- c.  report of CWRE \_\_\_\_\_;
- d.  other: (specify) \_\_\_\_\_

D3. THE WELL construction deficiency:

- a.  constitutes a health threat under Division 200 rules;
- b.  commingles water from more than one groundwater reservoir;
- c.  permits the loss of artesian head;
- d.  permits the de-watering of one or more groundwater reservoirs;
- e.  other: (specify) \_\_\_\_\_

D4. THE WELL construction deficiency is described as follows: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

D5. THE WELL a.  was, or  was not constructed according to the standards in effect at the time of original construction or most recent modification.

b.  I don't know if it met standards at the time of construction.

D6.  Route to the Enforcement Section. I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Enforcement Section and the Groundwater Section.

**THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL**

D7.  Well construction deficiency has been corrected by the following actions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_, 200\_\_\_\_\_  
(Enforcement Section Signature)

D8.  Route to Water Rights Section (attach well reconstruction logs to this page).

\_\_\_\_\_

\_\_\_\_\_

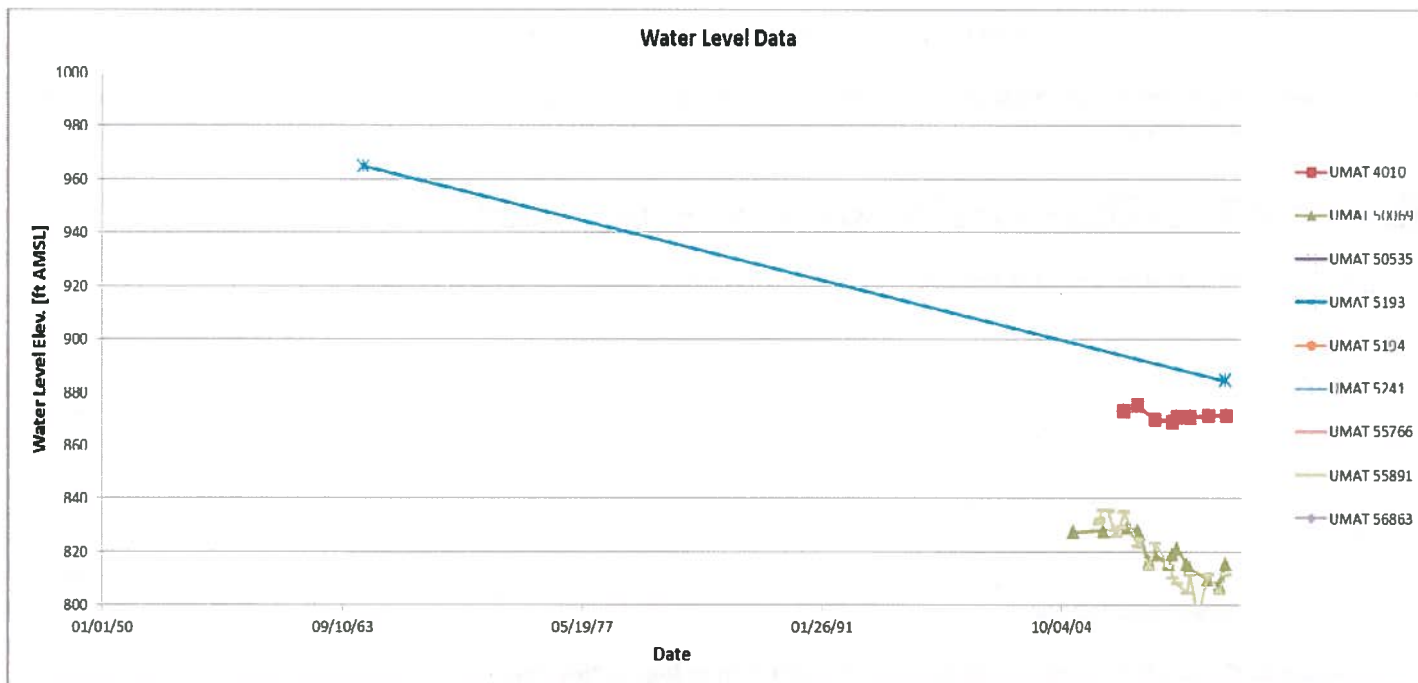
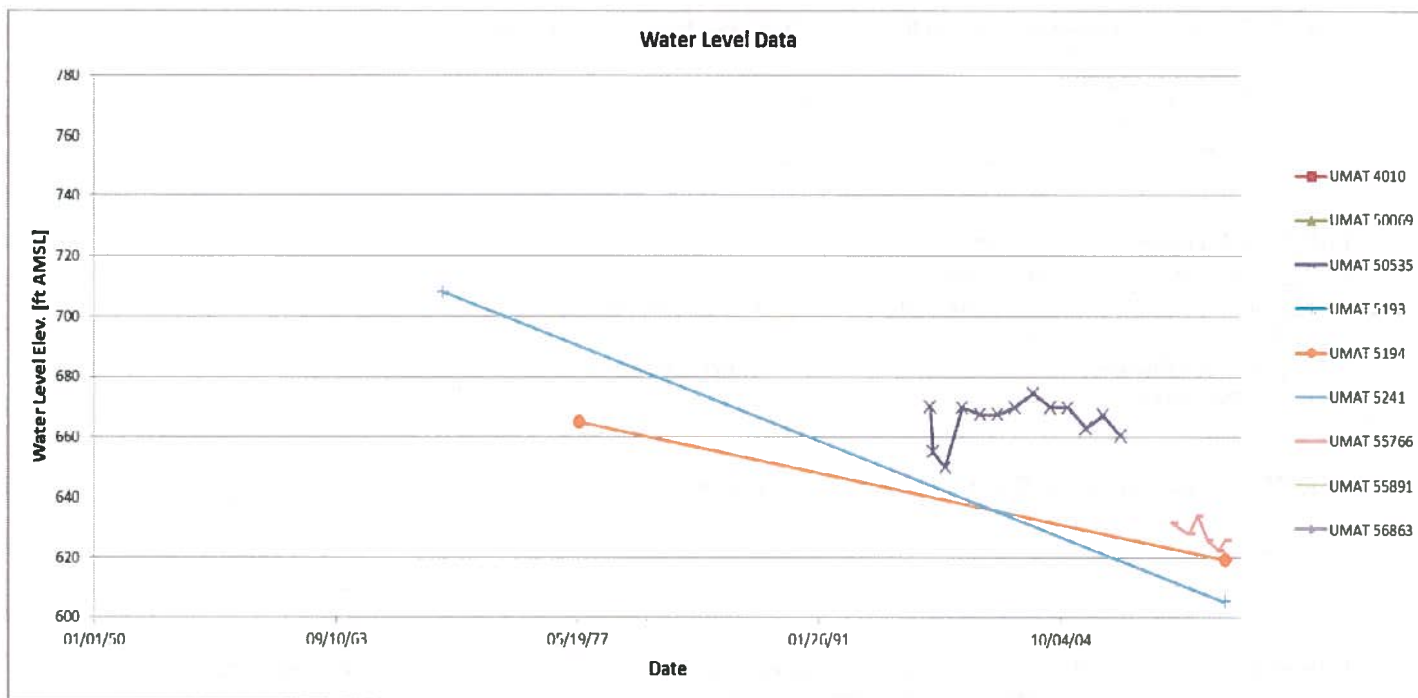


Figure 1. Hydrographs of nearby wells in the Columbia River Basalt. Most show a downward trend.

### G-17604 Nearby Wells

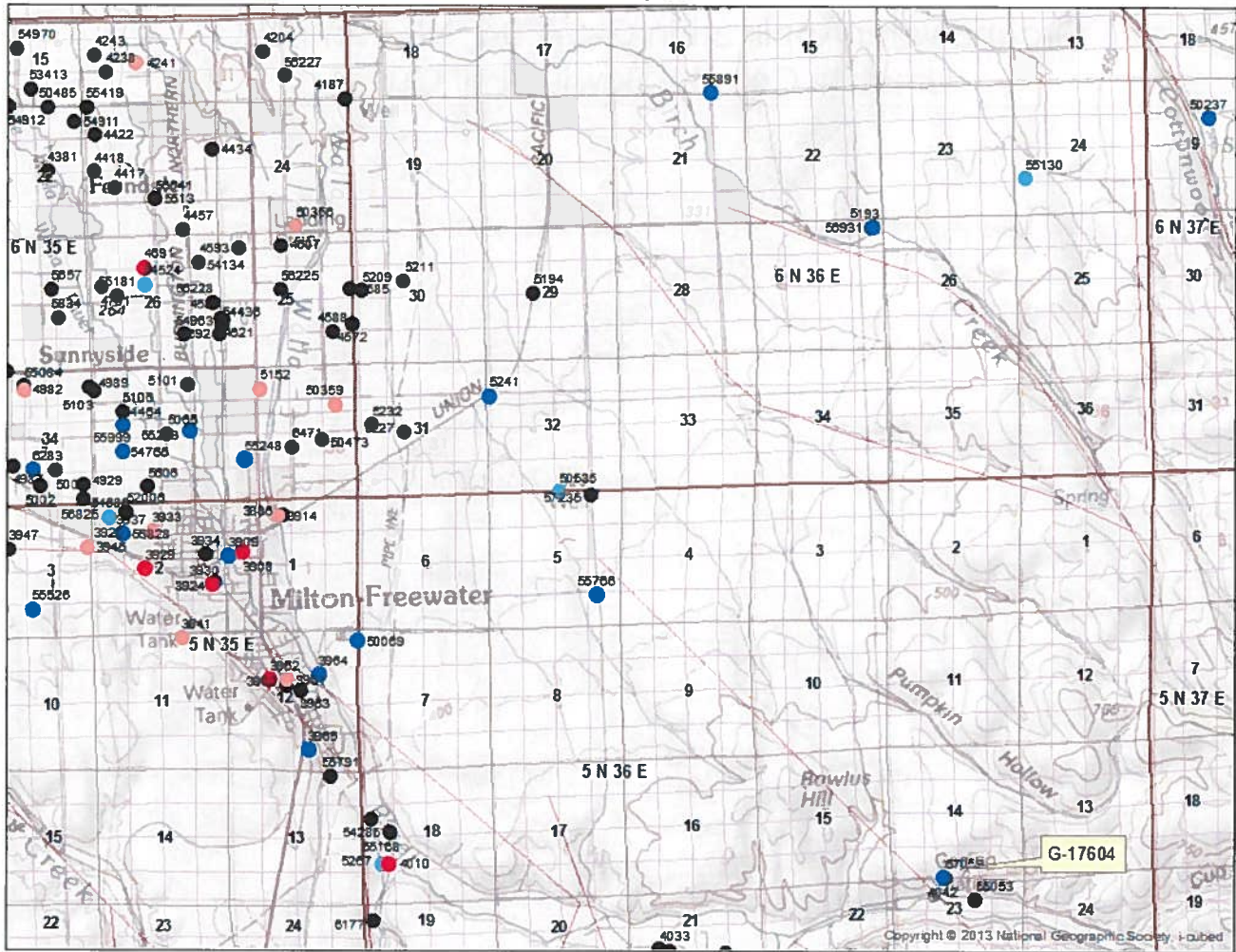


Figure 2. Located wells, Dark blue indicates wells with recent water level measurement data.



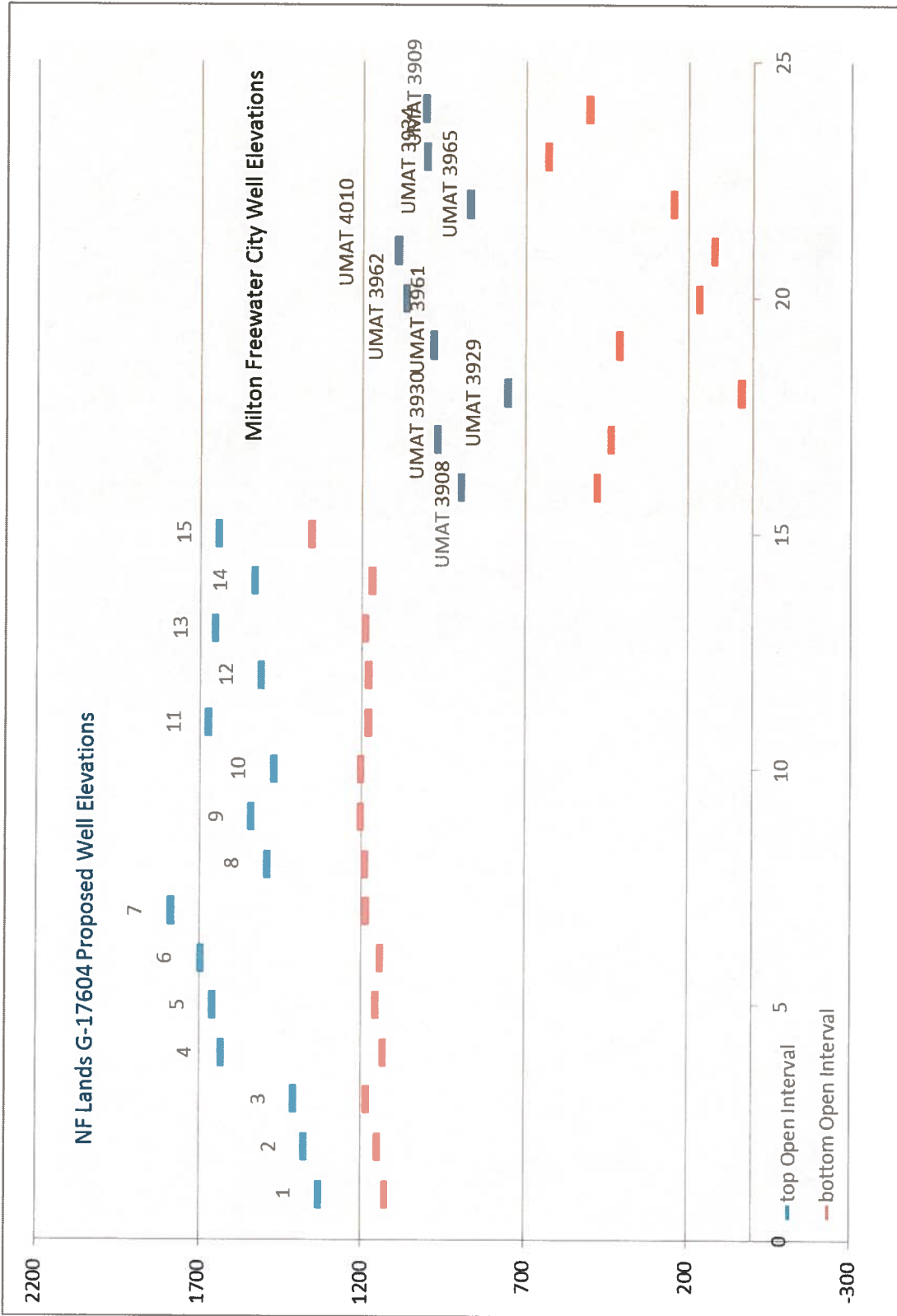


Figure 4. City wells' open intervals are separated vertically by at least 100 feet from the proposed wells.

