

[illegible]

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date August 27, 2013

FROM: Groundwater Section Mike Zwart
Reviewer's Name

SUBJECT: Application G- 17704 Supersedes review of _____
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 ground water 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: Richard L. Fly County: Harney

A1. Applicant(s) seek(s) 9.67 cfs from four well(s) in the Malheur Lake Basin,
_____subbasin Quad Map: Ninemile Slough

A2. Proposed use Irrigation, 580 acres Seasonality: April 1 to 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	HARN 1895	1	Valley Fill	2.67	23S/32.5E-17 SW-NW	1760' S, 1200' E fr NW cor S 17
2	Proposed	2	Valley Fill	2.67	23S/32.5E-17 NW-NE	1200' S, 1400' E fr NE cor S 17
3	Proposed	3	Valley Fill	2.67	23S/32.5E-17 NW-SW	1400' N, 1200' E fr SW cor S 17
4	Proposed	4	Valley Fill	1.67	23S/32.5E-17 NW-SE	1400' N, 1400' W fr SE cor S 17
5						

* 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	4124	13	17	9/17/91	113.5	0-18	0-80	None	70-80	500	40	?
2	4125					0-18						
3	4122					0-18						
4	4121					0-18						

Use data from application for proposed wells.

A4. **Comments:** HARN 1895 is an owner-drilled well. Other than the seal depth and casing diameter, there was no other proposed construction information provided for wells 2-4.

A5. ☒ **Provisions of the Malheur Lake** Basin rules relative to the development, classification and/or management of ground water 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: _____
Comments: _____

B. GROUND WATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

B1. Based upon available data, I have determined that ground water* 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 ground water 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 ground water 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 ground water resource; or
- d. ☒ will, if properly conditioned, avoid injury to existing ground water rights or to the ground water resource:
 - i. ☒ The permit should contain condition #(s) 7N;
 - 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 ground water production from no deeper than _____ ft. below land surface;
 - b. ☐ Condition to allow ground water production from no shallower than _____ ft. below land surface;
 - c. ☐ Condition to allow ground water production only from the _____ ground water reservoir between approximately _____ ft. and _____ ft. below land surface;
 - d. ☐ 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 Ground Water 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. Ground water availability remarks: Condition 7N is typically used in this part of the Malheur Lake Basin. There are no reasonably close wells with sufficient water-level records. This application is in an area where there has not been a great deal of recent development of the groundwater resource. Therefore, the positive findings here are appropriate. However, based on recent applications received, it appears that this area will also be subject to additional proposed development. Given the documented water-level declines elsewhere in the basin, it is possible that the proposed use here will also result in water level declines that may exceed one or more of the triggers in the measurement condition that is being recommended.

Special Permit Condition: The permittee shall construct one minimum six-inch diameter observation well to penetrate the same aquifer as the production wells. 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 water-level monitoring equipment. The landowner or 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 water levels. The well shall be completed prior to water use under the terms of any permit issued.

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
All	Basin-fill sediments (Qal and Tvs of GW Report #16)	☐	☒
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Groundwater in the basin fill is generally unconfined and hydraulically connected to surface water, including Malheur and Harney Lakes.

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
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Groundwater likely is discharging to lower reaches of Ninemile Slough, Malheur Slough and/or Malheur Lake. Ninemile Slough and Malheur Slough are dry in most years and therefore not considered for Division 9 reviews, per memo by Ivan Gall, January 15, 2008.

Water Availability Basin the well(s) are located within: Rattlesnake Cr > Ninemile Sl at mouth (31200104).

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?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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?
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments: This section does not apply.

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													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)													
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

Basis for impact evaluation: _____

[illegible]

C5. ☐ **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or ground water use under this permit can be regulated if it is found to substantially interfere with surface water:

- i. ☐ The permit should contain condition #(s) _____;
- ii. ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

[illegible]

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: HARN 1895

D2. **THE WELL does not appear to 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 or other comment is described as follows:** _____

D4. ☐ Route to the Well Construction and Compliance Section for a review of existing well construction.

Water Availability Tables

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

SEP 28 1991

DEC - 3 1991 235/32 1/2 - 17b

26457

(1) OWNER: Name Richard L. Fly Well Number: _____
Address P.O. Box 1050
City BURNS State OR Zip 97720

(2) TYPE OF WORK:
☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

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

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

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes ☐ No ☒ Depth of Completed Well 113 1/2 ft.
Explosives used Yes ☐ No ☒ Type _____ Amount _____

HOLE SEAL
Diameter From To Material From To Amount
16" 0' 18' Bentonite 18' 15' sacks or pounds
12" 18' 113 1/2'

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other TAMPED GRANULAR BENTONITE
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:
Diameter From To Gauge Steel Plastic Welded Threaded
Casing: 12" 18' 113 1/2' 80 250 ☒ ☐ ☒ ☐
Liner: _____ ☐ ☐ ☐ ☐

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:
☒ Perforations Method CUTTING TORCH
☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
70'	80'	1/4"	420	6"	LONG PIPE	☒	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian
Yield gal/min 500 Drawdown 40' Drill stem at _____ Time 1 hr.

Temperature of water 48 Depth Artesian Flow Found _____
Was a water analysis done? ☐ Yes By whom _____
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County HARNEY Latitude _____ Longitude _____
Township 23 Nor S. Range 32 1/2 E or W. W.M.
Section 17 SW 1/4 NW 1/4
Tax Lot 400 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:
17' ft. below land surface. Date 9-17-91
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 13'

From	To	Estimated Flow Rate	SWL
13'	113 1/2'		13'

(12) WELL LOG: Ground elevation 4132 FT

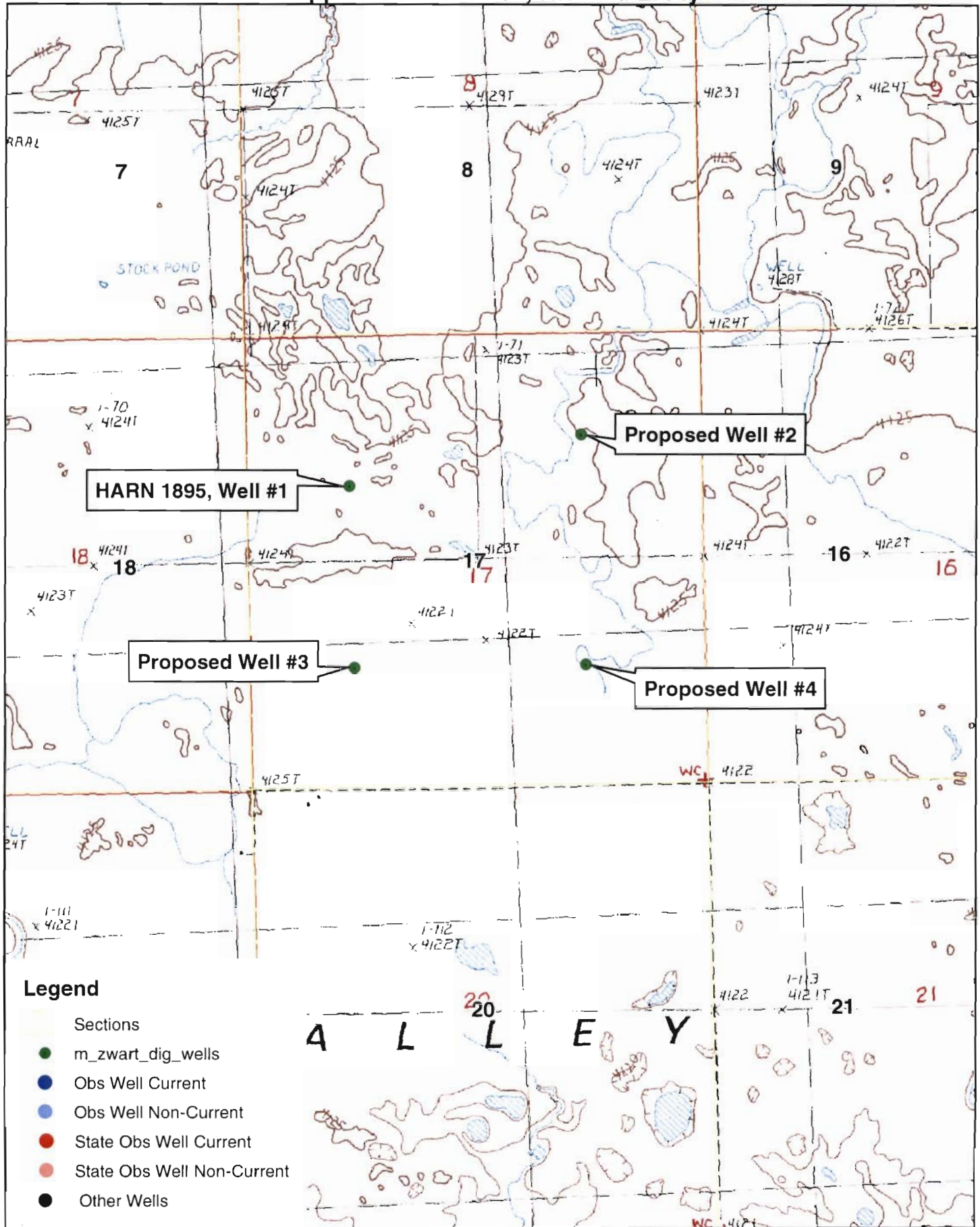
Material	From	To	SWL
SANDY SOIL	0	4'	0
SOFT CLAY BLUE	4'	18'	13'
CLAY GRAY	18'	23'	13'
GRAY CLAY & CORSE SAND	23'	35'	13'
BLACK SAND CORSE	35'	40'	13'
BLACK SAND FINE	40'	42'	13'
GRAY CLAY	42'	50'	13'
GRAY CLAY & MEDIUM SAND	50'	55'	13'
GRAY CLAY	55'	65'	13'
GRAY CLAY & FINE SAND	65'	70'	13'
GRAY CLAY	70'	90'	13'
BLACK CLAY	90'	95'	13'
CORSE SAND & GRAVEL	95'	100'	13'
WHITE PUMICE MATERIAL	100'	113 1/2'	13'
GRAY CLAY	113 1/2'	-	13'

Date started 11-30 1990 Completed 9-17 1991

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

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
Signed Richard L. Fly WWC Number _____
Date 9-18-91

Application G-17704, Richard L. Fly



Legend

- Sections
- m_zwart_dig_wells
 - Obs Well Current
 - Obs Well Non-Current
 - State Obs Well Current
 - State Obs Well Non-Current
 - Other Wells



0

0.5

1

1 Miles