

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date November 4, 2008

FROM: Ground Water/Hydrology Section Marc Norton
Reviewer's Name

SUBJECT: Application G- 17097 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: Camp Morrow Bible Conf. County: _____

A1. Applicant(s) seek(s) 0.24 cfs from 3 well(s) in the Deschutes River Basin,
Three Mile Creek – White River subbasin Quad Map: Friend & Wamic

A2. Proposed use: Camp use, domestic, irrigation Seasonality: 3/1 – 10/31 irrigation + year round domestic & camp use

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

Well 1	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	WASC 3558	1	Alluvium	0.047	04S/12E-04 NW SE	625' S, 920' E fr C ¼ S 4
2	WASC50956	2	basalt	0.051	04S/12E-04 NW SE	1245' S, 230' E fr C ¼ S 4
3	WASC51229	3	Alluvium	0.145	04S/12E-04 NE SW	1160' S, 560' E fr C ¼ S 4
4						
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	1882	-----	259	8/14/61	330	0 – 38	0 – 38	-----	-----	11.8	4	bail
2	1935	380	325	2/1/2001	430	0 – 39	+1 – 39	30 – 430	390 – 430	35	-----	Air
3	1950	350	318	10/28/03	438	0 – 329	+2 – 329	-----	-----	40	-----	Air

Use data from application for proposed wells.

A4. **Comments: The geology is mapped as The Dalles Formation. Two of the wells report sandstones/conglomerates with some basalt flows while well #2 is predominantly basalt.**

Requested discharge rate is 109 gpm = 0.24 cfs. (Well 1 is 21 gpm = 0.047 cfs; well 2 is 23 gpm = 0.051; well 3 is 65 gpm = 0.145)

A5. **Provisions of the Deschutes River** _____ 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: The Deschutes River Basin does not have a rule outside of the Deschutes Ground Water Study Area.

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
 Name of administrative area: NA
 Comments: _____

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	conglomerate	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	basalt	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	sandstone	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: In well #1, the ground water level is reported at level where encountered – unconfined. Well #2 & #3; ground water levels rose above where water was encountered – confined.

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	Pine Hollow Lake	1623	1850	465	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2	Threemile Creek		1600	20,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Pine Hollow Lake	1610	1850	1420	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2	Threemile Creek		1600	20,100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Pine Hollow Lake	1632	1850	2100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2	Threemile Creek		1600	20,500	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

Basis for aquifer hydraulic connection evaluation: Streams that are within one mile of the three wells are shown on the quad map to be intermittent. Ground water levels in all three wells are well below nearby streams and Pine Hollow Lake. Threemile Creek is deeply incised about 3.9 miles southeast of Camp Morrow. Threemile Creek is mapped as a perennial stream.

Water Availability Basin the well(s) are located within: WHITE R> DESCHUTES R- AT MOUTH

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?
1	2	<input type="checkbox"/>	<input type="checkbox"/>		60	<input type="checkbox"/>	148	<input type="checkbox"/>	< 25%	<input type="checkbox"/>
2	2	<input type="checkbox"/>	<input type="checkbox"/>		60	<input type="checkbox"/>	148	<input type="checkbox"/>	< 25%	<input type="checkbox"/>
3	2	<input type="checkbox"/>	<input type="checkbox"/>		60	<input type="checkbox"/>	148	<input type="checkbox"/>	< 25%	<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"/>
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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?
	2	<input type="checkbox"/>		60	<input type="checkbox"/>	148	<input type="checkbox"/>	< 25%	<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: The amount of water requested is well below 1% of the 80% value of natural flow and 1% of the in-stream water right.

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		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation: _____

C4b. 690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.

- 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;

C6. SW / GW Remarks and Conditions _____

References Used: _____

Sherrod, David R. and Scott, William E., Preliminary Geologic Map of the Mount Hood 30- by 60- Minute Quadrangle, Northern Cascade Range, Oregon, Open File Report 95-219, 1995.

Grady, Stephen J., Ground Water Resources in the Hood Basin, Oregon, U.S. Geological Survey Water Resources Investigations Report 81-1108, 1983.

Swanson, D. A. and Others, 1981, Reconnaissance Geologic Map of the Columbia River Basalt Group, Northern Oregon and Western Idaho: U.S. Geological Survey Open-File Report 81-797.

Waters, A.C., 1968, Reconnaissance Geologic Map of the Dufur Quadrangle Hood River, Sherman, and Wasco Counties, Oregon, Miscellaneous Geologic Investigations Map, I-556.

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 ground water reservoir;
- c. permits the loss of artesian head;
- d. permits the de-watering of one or more ground water 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 Ground Water 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).**

Water Availability Analysis

WHITE R> DESCHUTES R- AT MOUTH
DESCHUTES BASIN

Water Availability as of 11/5/2008

Watershed ID #: 70088

Exceedance Level: 80%

Date: 11/5/2008

Time: 1:43 PM

Water Availability

Select any Watershed for Details

Nesting Order	Watershed ID #	Stream Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sto
1	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	No	Yes	Yes	Yes	No	No	No	No	No	No	No	Yes
2	70088	WHITE R> DESCHUTES R- AT MOUTH	No	No	Yes	Yes	Yes	No	No	No	No	No	No	No	Yes

Limiting Watersheds

Monthly Streamflows in Cubic Feet per Second
Storage at 50% Exceedance in Acre-Feet

Month	Limiting Watershed ID #	Stream Name	Water Available?	Net Water Available
Jan	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-648.00
Feb	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-166.00
Mar	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	Yes	178.00
Apr	70088	WHITE R> DESCHUTES R- AT MOUTH	Yes	245.00
May	70088	WHITE R> DESCHUTES R- AT MOUTH	Yes	219.00
Jun	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-108.00
Jul	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-797.00
Aug	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-493.00
Sep	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-587.00
Oct	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-523.00
Nov	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-485.00
Dec	70087	DESCHUTES R> COLUMBIA R- AB MOUTH AT GAGE 14103000	No	-901.00
Storage Acre-Feet at 50%	70088	WHITE R> DESCHUTES R- AT MOUTH	Yes	124,000.00

Detailed Reports

WHITE R> DESCHUTES R- AT MOUTH DESCHUTES BASIN

Water Availability as of 11/5/2008

Watershed ID #: 70088

Exceedance Level: ▼

Date: 11/5/2008

Time: 11:20 AM

Water Availability Calculation	Consumptive Uses and Storages	Instream Requirements	Reservations	Water Rights
Watershed Characteristics				

Water Availability Calculation

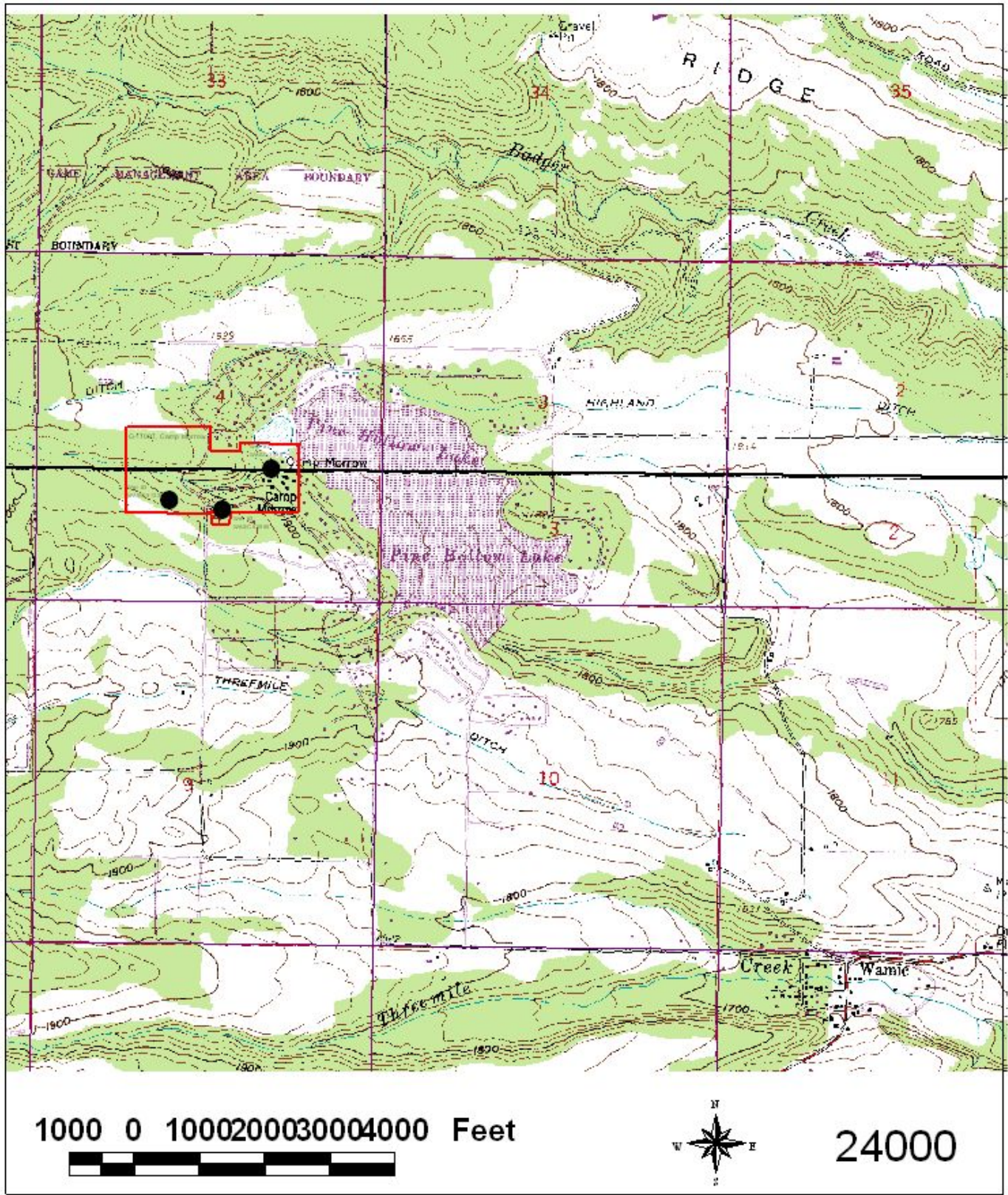
Monthly Streamflows in Cubic Feet per Second

Storage at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirement	Net Water Available
Jan	250.00	20.40	230.00	0.00	60.00	170.00
Feb	366.00	35.30	331.00	0.00	100.00	231.00
Mar	376.00	39.60	336.00	0.00	145.00	191.00
Apr	452.00	61.50	390.00	0.00	145.00	245.00
May	477.00	113.00	364.00	0.00	145.00	219.00
Jun	290.00	121.00	169.00	0.00	100.00	68.80
Jul	192.00	89.60	102.00	0.00	60.00	42.40
Aug	159.00	72.40	86.60	0.00	60.00	26.60
Sep	148.00	64.60	83.40	0.00	60.00	23.40
Oct	149.00	52.00	97.00	0.00	60.00	37.00
Nov	151.00	5.82	145.00	0.00	60.00	85.20
Dec	211.00	8.59	202.00	0.00	60.00	142.00
Storage Acre-Feet at 50%	276,000.00	41,300.00	235,000.00	0.00	63,600.00	171,000.00



GROUND WATER APPLICATION G-17097 - CAMP MORROW
WASCO COUNTY, FRIEND & WAMIC QUADS



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WASCO COUNTY, FRIEND & WAMIC QUADS