

**Water Right Conditions
Tracking Slip**

Groundwater/Hydrology Section

FILE ## LL-1160

ROUTED TO: Water Rights

TOWNSHIP/

RANGE-SECTION: 12S/43E-1166

CONDITIONS ATTACHED? yes no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Mike Zwart

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date August 15, 2008
 FROM: Ground Water/Hydrology Section Michael Zwart
Reviewer's Name
 SUBJECT: Application LL- 1160 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: Ash Grove Cement Co. County: Baker

A1. Applicant(s) seek(s) 0.86 cfs from two well(s) in the Powder Basin,
Burnt River subbasin Quad Map: Durkee

A2. Proposed use: Ind./Mining Seasonality: Year round

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	BAKE 2137	1	Alluvium	0.86	12S/43E-11 NW-NW	350'S, 1030' fr NW cor S 11
2	BAKE 50684	2	Alluvium	0.86	12S/43E-11 NW-NW	380'S, 1150' fr NW cor S 11
3						
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	2560	30	17	5/9/95	65	0-26	0-35		33-63	460	45	P
2	2560	17	17	11/23/99	65	0-24	0-35	22-35	35-65	310	35	P

Use data from application for proposed wells.

A4. **Comments: These wells are also the subject of transfer T-10235, which is in the process of being modified or corrected. This file is intended to ensure that water is legally used until that is finalized.**

A5. **Provisions of the Powder** 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) _____;
 - 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: _____

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
1,2	Quaternary alluvium (sand and gravel)	<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"/>

Basis for aquifer confinement evaluation: The wells develop the shallowest water-bearing zone encountered and the static water level is at or near the depth that ground water was first encountered.

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	Burnt River	2543	2530	200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	1	Burnt River	2543	2530	150	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	<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"/>

Basis for aquifer hydraulic connection evaluation: Division 9 rules require this finding within one-quarter mile of the affected surface water source if the wells develop an unconfined aquifer, which includes the subject wells.

Water Availability Basin the well(s) are located within: Burnt River > Snake River at mouth (72168).

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	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	72168	25	<input checked="" type="checkbox"/>	39.4	<input checked="" type="checkbox"/>	<25%	<input checked="" type="checkbox"/>
2	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	72168	25	<input checked="" type="checkbox"/>	39.4	<input type="checkbox"/>	<25%	<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"/>
		<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													
		%	%	%	%	%	%	%	%	%	%	%	%
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.

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).**

**OREGON WATER RESOURCES DEPARTMENT
INTEROFFICE MEMO**

To: Ground Water files

Date: January 30, 2007

From: Michael J. Zwart

Subject: Application Review: T-10235, Ash Grove Cement Co.

This application proposes a change in place of use and two additional POAs to replace the authorized wells. The authorized wells (#1: BAKE 1472, #2: no log in file, but reportedly 53 feet deep) and the proposed wells (Plant #1: BAKE 2137, Plant #2: BAKE 50684) all produce water from a shallow alluvial aquifer. The proposed wells have been constructed in the 1990's and are about ten feet from the authorized wells.

I find that the proposed change may be made without injury provided the following: the rights are valid and the Watermaster can approve the proposal.

Water Availability Analysis

BURNT R> SNAKE R- AT MOUTH
POWDER BASIN

Water Availability as of 8/15/2008

Watershed ID #: 72168

Exceedance Level: 80%

Date: 8/15/2008

Time: 1:18 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	72168	BURNT R> SNAKE R- AT MOUTH	No	No	No	Yes	Yes	No	No	No	No	Yes	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	72168	BURNT R> SNAKE R- AT MOUTH	No	-72.80
Feb	72168	BURNT R> SNAKE R- AT MOUTH	No	-70.20
Mar	72168	BURNT R> SNAKE R- AT MOUTH	No	-131.00
Apr	72168	BURNT R> SNAKE R- AT MOUTH	Yes	111.00
May	72168	BURNT R> SNAKE R- AT MOUTH	Yes	1.21
Jun	72168	BURNT R> SNAKE R- AT MOUTH	No	-113.00
Jul	72168	BURNT R> SNAKE R- AT MOUTH	No	-60.40
Aug	72168	BURNT R> SNAKE R- AT MOUTH	No	-31.60
Sep	72168	BURNT R> SNAKE R- AT MOUTH	No	-17.90
Oct	72168	BURNT R> SNAKE R- AT MOUTH	Yes	1.83
Nov	72168	BURNT R> SNAKE R- AT MOUTH	No	-83.90
Dec	72168	BURNT R> SNAKE R- AT MOUTH	No	-81.10
Storage Acre-Feet at 50%	72168	BURNT R> SNAKE R- AT MOUTH	Yes	51,100.00

Detailed Reports for Watershed ID #72168

BURNT R> SNAKE R- AT MOUTH
POWDER BASIN

Water Availability as of 8/15/2008

Watershed ID #: 72168

Exceedance Level: 80%

Date: 8/15/2008

Time: 1:18 PM

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	71.70	46.50	25.20	78.60	25.00	-72.80
Feb	123.00	58.30	64.70	137.00	40.00	-70.20
Mar	166.00	116.00	50.30	279.00	50.00	-131.00
Apr	370.00	209.00	161.00	638.00	50.00	111.00
May	335.00	284.00	51.20	449.00	50.00	1.21
Jun	168.00	231.00	-62.60	9.42	50.00	-113.00
Jul	63.50	98.90	-35.40	0.00	25.00	-60.40
Aug	44.90	51.50	-6.61	0.00	25.00	-31.60
Sep	39.40	32.30	7.07	0.00	25.00	-17.90
Oct	40.40	13.60	26.80	19.30	25.00	1.83
Nov	51.40	41.10	10.30	73.10	25.00	-83.90
Dec	59.80	45.70	14.10	74.00	25.00	-81.10
Storage Acre-Feet at 50%	167,000.00	74,100.00	92,800.00	106,000.00	25,000.00	51,100.00

Detailed Report of Consumptive Uses and Storages

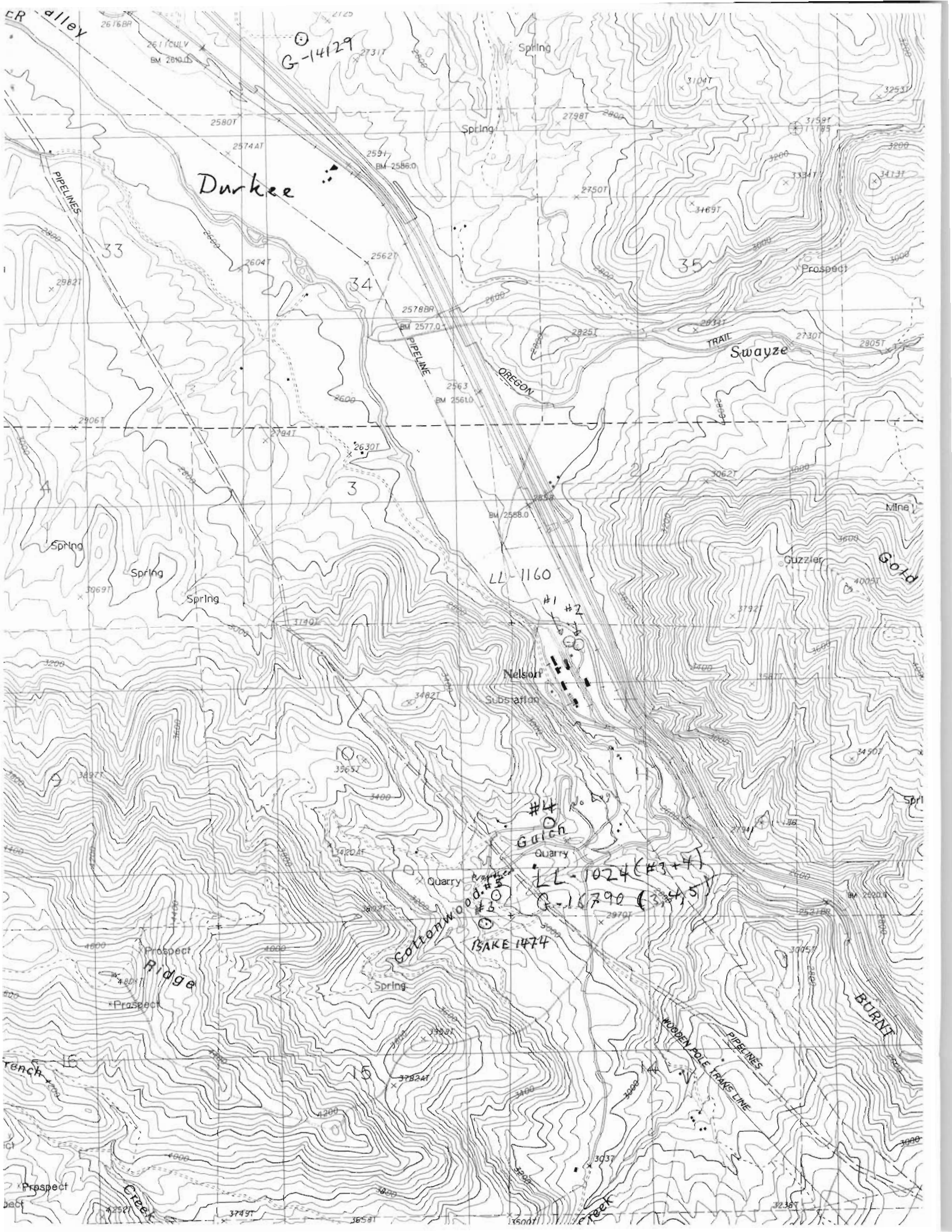
Consumptive Uses and Storages in Cubic Feet per Second

Month	Storage	Irrigation	Municipal	Industrial	Commercial	Domestic	Agricultural	Other	Total
Jan	45.20	0.00	0.03	0.37	0.00	0.44	0.42	0.00	46.50
Feb	57.00	0.00	0.03	0.37	0.00	0.44	0.42	0.00	58.30
Mar	93.10	21.40	0.03	0.37	0.00	0.44	0.42	0.00	116.00
Apr	99.10	109.00	0.03	0.37	0.00	0.44	0.42	0.00	209.00
May	15.10	267.00	0.03	0.37	0.00	0.44	0.42	0.00	284.00
Jun	6.87	222.00	0.05	0.37	0.00	0.44	0.42	0.00	231.00
Jul	2.34	95.30	0.05	0.37	0.00	0.44	0.41	0.00	98.90
Aug	1.37	48.90	0.05	0.37	0.00	0.44	0.41	0.00	51.50
Sep	1.16	29.90	0.05	0.37	0.00	0.44	0.41	0.00	32.30
Oct	12.30	0.00	0.03	0.37	0.00	0.44	0.42	0.00	13.60
Nov	39.80	0.00	0.03	0.37	0.00	0.44	0.42	0.00	41.10
Dec	44.40	0.00	0.03	0.37	0.00	0.44	0.42	0.00	45.70

Detailed Report of Reservations for Consumptive Use

Reserved Streamflow in Cubic Feet per Second

Application #	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RN80903A	63.50	69.30	37.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.00	63.10
RN80901A	0.30	6.73	26.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.00	63.10
RN80902A	9.17	18.80	67.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.25	7.14
Total	72.97	94.83	131.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	133.25	133.34



G-14129

Durkee

Swayze

LL-1160

Nelson

Gulch

LL-1024 (#3+4)

G-16790 (#3+4, 5)

BAKE 1474

Cottonwood

Ridge

BURNET

WOODEN POLE TRAIL LINE

PIPELINES

33

34

35

3

35

CR alley

PIPELINES

ORIGON

TRAIL

Mine

Gold

Guzzler

Substation

Quarry

Quarry

Prospect

Prospect

Prospect

Creek

Creek

Spring

Spring

Spring

Spring

Spring

Spring

Spring

Spring

2616BR

2617CULV

BM 2890.0

25801

2574AT

2591

BM 2586.0

2731T

2562T

2578BR

BM 2577.0

2563

BM 2560.0

2794T

2630T

BM 2588.0

3190T

3482T

3365T

3420T

3420T

3392T

37824T

37824T

3500T

3749T

3658T

3037

3238T

3104T

3159T

3334T

3413T

3469T

2831T

2730T

2805T

3062T

3792T

3587T

3490T

3741T

3440T

3521BR

3005T

3005T

3005T

3005T

3005T