Water Right Application Process

IN AND OUTSIDE CLOSED BASINS

Application for Beneficial Water Use Permit (Form 600)

- Acceptance minimums [ARM 36.12.1301]
  - Name and address
  - Source of water
  - Point of diversion
  - Place of use
  - Purpose
  - Flow rate(gpm) and volume(af)
  - Notarized signature
  - Filing fee

HB 831 Groundwater Applications
(closed basins)

- Hydrogeologic Assessment (85-2-360)
  - Analysis and Prediction of Net Depletion (ND) to surface water
  - Analysis of potential for ND to cause adverse affect

- Mitigation or Aquifer Recharge Plan, if ND results in adverse affect (85-2-362)

Form 600

Form No. 600 R8/03

AMENDED

APPLICATION FOR BENEFICIAL WATER USE PERMIT

Use for groundwater in excess of 35 GPM or 10 Acre-Feet per year and all surface water.

INSTRUCTIONS

Use one application for each source of supply or each development. Check all appropriate boxes and fill in each blank. If more space is needed, attach additional sheets. **The information required in the Form 600 A or B Criteria Addendum must be submitted with this application.**

Complete the application and submit it with the filing fee, payable to DNRC, to the Water Resources Regional Office nearest you. Their addresses are listed on the back. The estimated processing time after an application is correct and complete is 210 days.

FILING FEE: $400.00

or $200 for a ground water well with a maximum appropriation of 35 GPM, not to exceed 10 AF filed in pursuant to the US National Park Service Compact or located within the boundaries of a temporary controlled groundwater area.

RECEIVED
AUG 17 2007
DNRC-HRO

FOR DEPARTMENT USE ONLY

Application No. 30028560 Basin 41I
Priority Date
Time 2:51 AM (PM)
Rec'd By
Fee Rec'd $
Check No.
Refund ______ Date
Priority Date Changed to C&C date 10/19/2007

1. NAME OF APPLICANT Glacier Point Home Owners & Water Users Association Inc
Mailing address PO Box 7045
City Helena State MT Zip 59604
Phone: Home 458-8907 Other ______ E-mail address Criley@montanacapitalgroup.com

2. SOURCE OF WATER SUPPLY
☒ Well Estimated Depth in Feet 167' ☐ Developed Spring Name ______
☐ Lake Name ______ Tributary to ______
☐ Stream Name ______
☐ Unnamed Source - Tributary to ______
☐ Closed Basin (A closed basin results when water drains into a depression, lake, etc. from which water escapes only by evaporation.)
☐ Other ______

3. POINT OF DIVERSION (Describe the location to the nearest 10 acres)
(1) SE 1/4 NE 1/4 SW 1/4 Section 5 Township 10N N/S Range 3W E/W Lewis & Clark County
Lot 87 Block ______ Tract No. ______ Subdivision Name Glacier Point Subdivision
Government Lot ______
(2) SE 1/4 NE 1/4 SW 1/4 Section 5 Township 10N N/S Range 3W E/W Lewis & Clark County
Lot 87 Block ______ Tract No. ______ Subdivision Name Glacier Point Subdivision
Government Lot ______

4. MEANS OF DIVERSION
☐ Headgate ☒ Pump
☐ Pipeline ______ Size ______ 60 Rated Capacity (GPM or CFS)
☐ Dam (Complete item 5) 5 Horsepower
☐ Pit (Complete item 5) 150 Lift in Feet
☐ Other ______
Describe your plans, if any, for measuring your water use: A water meter will be located in the pump house.

AMENDED

5. RESERVOIR Check the boxes that pertain to your development. (See formulas below for computing capacity.)
☐ Proposed New Capacity ______ acre-feet Name (if any) ______
☐ Existing Reservoir Capacity ______ acre-feet Name (if any) ______
☐ Enlargement of Existing Reservoir Water Right # ______
Existing Reservoir Capacity ______ acre-feet Name (if any) ______
Proposed Enlarged Reservoir Capacity ______ acre-feet
☐ Drainage device will be installed
☐ Reservoir located on the source ☐ Reservoir located away from the source
Location of impoundment structure (dam or pit):
______ 1/4 ______ 1/4 ______ 1/4 Section ______ TWP ______ N/S RGE ______ E/W ______ County
PIT: Surface Area ______ (Acres) x Maximum Depth ______ (Feet) x 0.5 = ______ (Capacity) Acre-Feet
DAM: Surface Area ______ (Acres) x Maximum Depth ______ (Feet) x 0.4 = ______ (Capacity) Acre-Feet

6. PERIOD OF APPROPRIATION (The period during the year when the water will be diverted, impounded, or withdrawn from the source.)
January 1 (Month / Day) to December 31 (Month / Day) Inclusive Each Year

7. PROPOSED BENEFICIAL USE Check the boxes that pertain to your development.
☒ Domestic: Number of Homes to be Supplied 85
☒ Lawn & Garden: Maximum size in acres 0.08 = 6.83 Ac
☐ Stock: Maximum Number and Type ______
☐ Other: ______
☐ Irrigation: ☐ Sprinkler - Type ______ ☐ Contour Ditch ☐ Other ______
☐ Border Dike ☐ Waterspreading/Spreader Dike
Crops to be grown: ______
If this water will be used on land already irrigated, indicate the water right numbers applicable to the existing irrigation.

8. PLACE OF USE
County Lewis & Clark Subdivision Name Glacier Point Subdivision
Irrigation / Lawn & Garden Based on maps & the area KA 10/24/07 **New (N) or Supplemental (S)**

Acres	Lot	Block	1/4	1/4	1/4	Section	TWP	N/S	RGE	E/W	N-S
6.83			~~SE~~	NE	SW	5	10N		3W		(N)

6.83 TOTAL ACRES

Form 600

8. (Cont.) **Place of Use Non-Irrigation** AMENDED

Purpose of use Domestic Place of use same as Point of Diversion, CHECK ☐

Based on map as Surveyed 10/24/07 KA

1/4 NE 1/4 SW 1/4 Section 5 TWP 10 N/S RGE 3 E/W County Lewis & Clark

Lot ____ Block ____ Tract No. ____ Government Lot ____

Purpose of use ____ Place of use same as Point of Diversion, CHECK ☐

____ 1/4 ____ 1/4 ____ 1/4 Section ____ TWP ____ N/S RGE ____ E/W County ____

Lot ____ Block ____ Tract No. ____ Government Lot ____

Purpose of use ____ Place of use same as Point of Diversion, CHECK ☐

____ 1/4 ____ 1/4 ____ 1/4 Section ____ TWP ____ N/S RGE ____ E/W County ____

Lot ____ Block ____ Tract No. ____ Government Lot ____

9. FLOW RATE, VOLUME, PURPOSE OF USE, AND PERIOD OF USE

KA 10/24/07

60 CFS / 30 GPM up to 26.06 Acre-Feet for domestic Purpose of Use from January 1 Month/Day to December 31 Month/Day

60 CFS / 30 GPM up to 16.11 Acre-Feet for lawn & garden Purpose of Use from April 1 Month/Day to October 31 Month/Day

____ CFS / GPM up to ____ Acre-Feet for ____ Purpose of Use from ____ Month/Day to ____ Month/Day

____ CFS / GPM up to ____ Acre-Feet for ____ Purpose of Use from ____ Month/Day to ____ Month/Day

TOTAL AMOUNT REQUESTED 60 CFS / GPM UP TO 42.17 ACRE-FEET PER YEAR.

10. PROPOSED COMPLETION PERIOD

10 Years How many years will be needed to complete the project and put the water to use **after** the permit is received? (NOTE: The water use must not begin until a permit is received.)

11. LOCATION MAP (Must be included)

A map showing the following items **must** accompany this application. An ASCS aerial photo or USGS topographic map may be used.

a) Section Corners and Numbers
b) Township and Range Numbers
c) Point of Diversion
d) Place of Use (Irrigated Acres, Stock Tanks, etc.)
e) Location of Conveyance Ditch, Pipeline, etc.

12. REMARKS (Provide any additional information to explain the proposed appropriation.)

13. CONTACT PERSON

• If a contact person is identified as legal counsel, all communication will be sent only to the attorney unless the attorney provides written instruction to the contrary.

• If a contact person is identified as a consultant, employee, or lessee, the individual filing the water right form or objection form will receive all corresondence and a copy may be sent to the contact person.

Name of Contact Faron Henderson Title Engineer

Address 1617 Euclid Ave Suite 5

City/State/Zip Helena, MT 59601 Phone 406-449-7799 office

E-mail address fhenderson@dbecinc.com 406-202-3368 cell

14. AFFIDAVIT AMENDED

I affirm that statements appearing here are to the best of my knowledge true and correct. I also affirm I have possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use and if applicable, exclusive property rights in the groundwater development or the written consent of the person with those rights.

Applicant's Signature X _____ Date 8/14/07

Print Signature Craig Riley

Subscribed and sworn before me this 14th day of August 2007

SEAL

Notary's Signature _____

Notary for the State of ____ JUNE HENDERSON NOTARY PUBLIC for the State of Montana

Residing at ____ Residing at Helena, Montana

My commission expires ____ My Commission Expires January 4, 2010

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Form 600

RESOLUTION OF
BOARD OF DIRECTORS
WITHOUT A MEETING

Pursuant to the provisions of § 35-1-431, MCA, the following resolutions were adopted by the Board of Directors of Montana Capital Group Inc., effective the 30th day of October, 2007:

BE IT RESOLVED:

"That Craig Riley or Cheryl Riley individually are authorized to act on behalf of the Corporation in the management of Glacier Point Subdivision, LLC."

Director

Director


C1/4
HWY R/W
I-15 R/W
I-15 R/W
1/16 SECTION LINE
LEGEND
GLACIER POINT
DBEC
Design, Build, Engineering and Consulting, Inc.
STATE
MT
PROJECT NO.
4600505

Criteria (MCA 85-2-311)

Part III – Criteria Addendum Evaluation

3a. Physical Availability

PWS1 was pump tested at a constant rate of 130 gpm for 72 hours. Drawdown stabilized at 15 feet (35 feet bgs) at 720 minutes until the conclusion of the test. Discharge from the production well was produced and maintained at a rate greater than that requested in the application. Production well discharge data are tabulated in Table 1c(1) and graphically displayed in Figure 1(d) The rate of change in drawdown during the pump test was 0.58 feet per log cycle of time, which can be used to project drawdown after pumping continuously for one year (525,600 minutes):

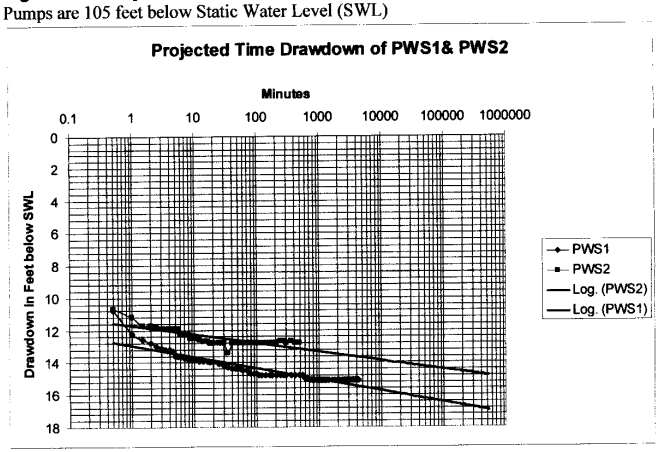
Drawdown (s) = 15 feet + (0.58 foot per log cycle)(3.473 log cycles) = 17 feet

The projected drawdown after pumping 130 gpm continuously for one year is 17 feet, or about 88 feet above the pump intake. This analysis is conservative because actual pumping will be at rates considerably lower than the 125-130 gpm at which the wells were test pumped and pumping will be cyclic rather than continuous as shown in Figure 3a. The actual drawdown from PWS1 and PWS2 would be considerably less than projected in Figure 3a. Actual drawdown of PWS1 during the period of diversion would be 23.4 feet bgs, and would be more than 100 feet above the pump intake.

Production well PWS2 was pump tested 2 June 2006 at a constant rate of 125 gpm for 8 hours. Discharge rate is illustrated in Table 1c (2) and Figure (1d) and drawdown measurements were recorded as described in the methodology for the 72-hour pump test of PWS1.

Total drawdown of 12.8 feet and stabilization of the pumping water level during the 8 hour pump test of PWS2 demonstrates the aquifer response for both wells is similar, and the water is physically available at the point of diversion. Figure 3a demonstrates the long term physical availability of water by projecting the maximum drawdown that could occur in each well if pumped continuously at their tested rates for one year:

Figure 3a – Projected Time-Drawdown of PWS1 and PWS2
Pumps are 105 feet below Static Water Level (SWL)



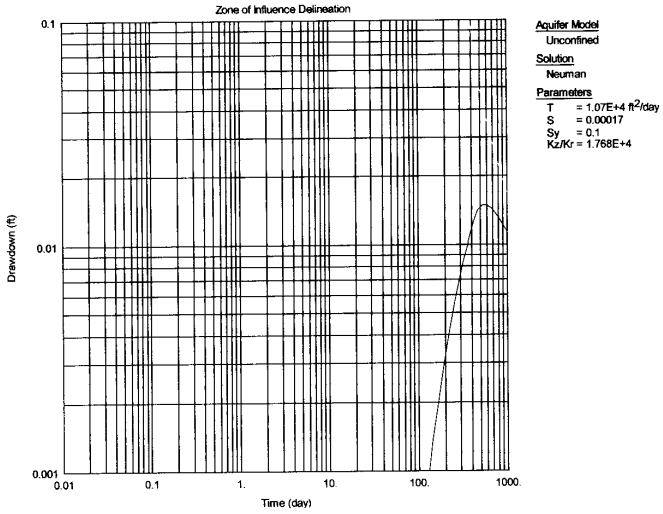
3b. Legal Availability

The legal availability of water is addressed at Montana Codes Annotated, 85 -2-311 by "identification of existing legal demands on the source of supply throughout the area of potential impact" and "analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water".

The anticipated radius of influence was determined using the Neuman Unconfined forward projection model and Aqtesolv [2] software. The results indicate drawdown of .01 feet at a distance of 11,700 feet after pumping 26 gpm continuously for 365 days, as shown in 3b(1):

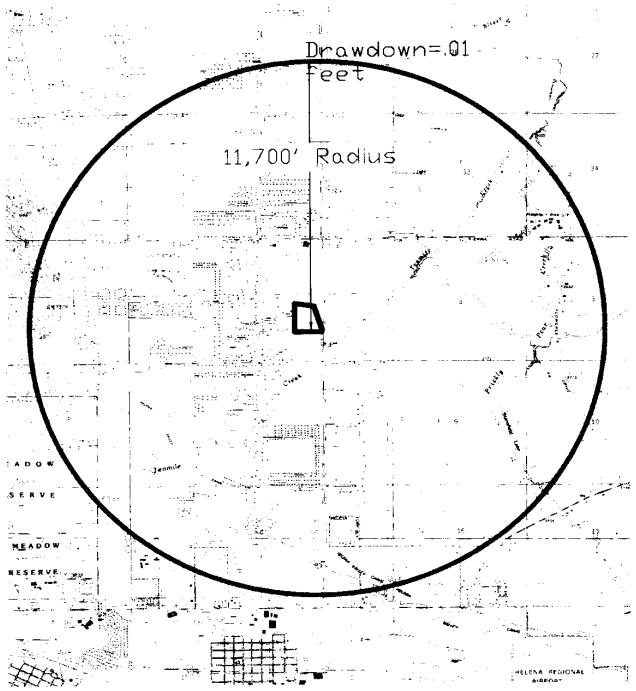
Criteria

Figure 3b(1) Zone of Influence Delineation



The drawdown of 0.01 feet at a radius of 11,700 feet from the pumping wells defines the zone of influence for the period of diversion, and is shown on Figure 3b(2):

Figure 3b(2) – Zone of Influence of Glacier Point Wells



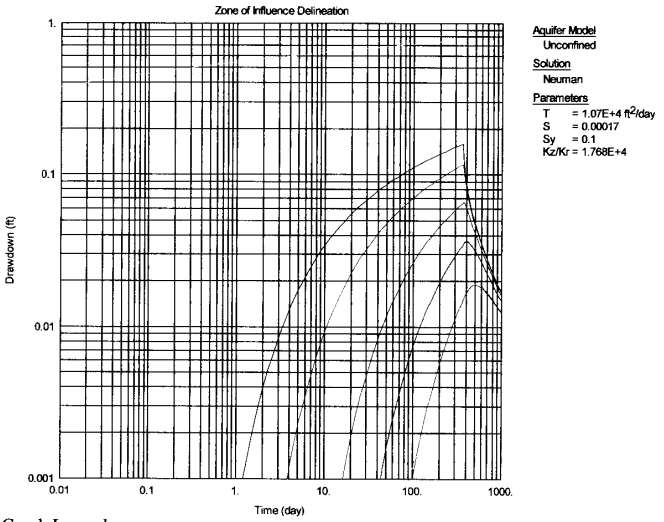
Criteria

Table 3c(1) - Shallow Wells (less than 40 feet) within the Zone of Influence for the Glacier Point Subdivision

Depth (feet)	SWL (feet)	Yield(gpm)	Water Rights number	Distance to Well(feet)	Interference (feet)	Landowner
23	5	30	52845	10,000	0.016	Floyd Finnegan
34	3	15	17968	9000	0.024	Elmer Nettleton
18	2	20	30604	10250	0.015	Greg Egbert
28	4	20	91551	10000	0.016	Floyd Finnegan
25	7	8	31720	2000	0.125	Elizabeth Cobb
35	5	30	29872	1875	0.13	Errol Gustafson
39	25	20	74683	1125	0.17	Phyllis Holmes
39	13	30	79755	1875	0.13	Florence Jerome
38	20	15	89452	4125	0.078	Donald Keller
38	15	20	92734	6000	0.05	Elmer Speer
38	30	15	75302	6750	0.045	William Warren
38	12	30	44910	4250	0.075	Ann Carpenter
35	10	25	15244	2750	0.105	James Owens
37	7	20	6119	5750	0.055	Clara Reissfelder
38	6	20	86064	4375	0.07	James Dusenberry
35	10	20	65140	4750	0.065	Davis Haile
39	10	15	207	6000	0.05	Hilda Davies
34	14	20	10959	9000	0.016	Mt. Board of Land Co.
34	18	40	2873	8750	0.025	C. Watts

The Neuman Unconfined Model was used to verify the projected interference drawdown on the six shallow wells with a saturated column of less than 20 feet. The results of the model are shown on Figure 3c(3):

Figure 3c(3) – Projected Interference Drawdown on Shallow Wells with a Saturated Column of less than 20 feet



Graph Legend

Phyllis Holmes Well (1125 ft)
Elizabeth Cobb Well (2000 ft)
Donald Keller Well (4125 ft)
William Warren Well (6750 ft)

Greg Egbert Well (10,250 ft)

Interference drawdown on shallow wells within the zone of influence would range from a maximum of 2 inches (at 1,125 feet) to a minimum of 3/16 inch (at 10,250 feet). Interference drawdown on all wells within the zone of influence would be insignificant, and senior well owners can continue to reasonably exercise their water rights.

Hydrogeologic Assessment
(groundwater in closed basins)

Potential Adverse Impact to Surface Water

The closest surface water is Tenmile Creek which is approximately 600 feet to the south. At this location, Tenmile Creek no longer exhibits surface flows during irrigation season and exists primarily as unconnected small pools. The static water level in the wells is more than 20 feet below the bed of Tenmile Creek. There is no hydraulic connection between the aquifer and Tenmile Creek, and no induced surface water infiltration occurs.

The wells will be withdrawing groundwater from a locally confined aquifer that is 60 to 100 feet lower than Tenmile Creek. Confining clay layers recorded in the well logs document a consistent impervious barrier about 40 feet thick in both wells.

Groundwater levels throughout the majority of the study area and on both sides of Tenmile Creek adjacent to the project site are about 20 feet below ground surface (Plate 1, Exhibit 2). Seasonal fluctuations in groundwater levels can vary as much as three feet, but do not significantly alter the shape of potentiometric contours, hydraulic gradient or flow direction [3]. Although Tenmile Creek loses water to the ground along the four mile stretch below Sevenmile Creek, there appears to be limited seepage near the Glacier Point project. The low vertical permeability of geologic materials beneath Tenmile Creek can be observed by the presence of stagnant pools in the streambed throughout the irrigation season, which appear to diminish only by evaporation. In addition, water levels measured in Glacier Point wells indicate no direct correlation with stream flow in Tenmile Creek.

A determination of no hydraulic connection with Tenmile Creek within the zone of influence does not preclude a future occurrence of stream depletion from the proposed appropriation. The applicant acknowledges that the proposed use of groundwater will eventually result in a reduction of groundwater flow (i.e. pre-stream capture) to downstream surface water sources. The principal groundwater discharge point of the Helena Valley aquifer is Lake Helena, and the Glacier Point wells are located on the boundary of where the vertical component of hydraulic conductivity begins to display an upward gradient.[3] The groundwater potentiometric surface approaches land and stream elevations near the confluence of Prickly Pear and Tenmile creeks. The closest point at which surface water could potentially be gaining from groundwater is on Tenmile Creek, about 4500 feet northeast and downgradient of the Glacier Point wells (i.e., the NW1/4, Section 4, T10N, R3W, MPM).

The volumes of groundwater diversion are 26.06 acre-feet for domestic use and 16.11 acre-feet for lawn and garden irrigation for a 214 day period from April 1 through October 31. Consumptive use is the portion of the water withdrawn that does not return to the aquifer. Consumptive use quantifies the eventual reduction of groundwater flow to downstream surface water resources.

To calculate the consumptive use it is conservatively estimated that 90% of the annual domestic use will eventually return to the aquifer. The domestic rate of consumptive use is 2.61 ac-ft that translates to an average continuous discharge of 1.62 gpm for the year. The volume of domestic use water that returns to the aquifer is from treated wastewater. The applicant has received approval of Level Two treatment technology from the Department of Environmental Quality. A copy of the Montana Groundwater Pollution Control System Permit #MTX000178 (Discharge Permit) is included with the application submittal materials.

The lawn and garden consumptive loss is determined from the Montana Irrigation Guide [7]. Water requirements for pasture grass (i.e. turf grass or Kentucky Blue Grass) and a conservative credit for dry year effective precipitation in the climatic zone for Lewis and Clark County are provided in Appendix B of the NRCS Montana Irrigation Guide (Exhibit 12). The water requirement for the irrigated crop is converted from inches to feet and multiplied by the number of acres to be irrigated. The monthly consumptive use requirement and dry year monthly precipitation are tabulated below. The total consumptive loss is the sum of the monthly consumptive losses for domestic and lawn and garden uses. The monthly lawn and garden irrigation consumptive losses are shown in Table 3c(2) and are added to the domestic losses to determine the total consumptive use and net pumping rates shown in Table 3c(3):

Table 3c(2) - Consumptive Use of Applied Irrigation – Dry Year

month & days	consum. use (inches)		dry-year effect. precip. (inches)	mod. consum. use (inches)	convert to feet x acres irrigated		ac-ft consumed	consum. rate (gpm)
Apr (30)	0.50	-	0.12	= 0.38	+ 12 x 6.83 ac	=	0.216	1.63
May (31)	2.88	-	0.60	= 2.28	+ 12 x 6.83 ac	=	1.298	9.47
Jun (30)	4.24	-	0.76	= 3.48	+ 12 x 6.83 ac	=	1.981	14.94
Jul (31)	5.74	-	0.43	= 5.31	+ 12 x 6.83 ac	=	3.022	22.06
Aug (31)	4.83	-	0.48	= 4.35	+ 12 x 6.83 ac	=	2.476	18.07
Sep (30)	2.63	-	0.28	= 2.35	+ 12 x 6.83 ac	=	1.338	10.09
Oct (31)	0.65	-	0.12	= 0.53	+ 12 x 6.83 ac	=	0.302	2.20
				18.68 in	+ 12 x 6.83 ac	=	10.632 ac-ft	

Table 3c(3) – Consumptive Use During The Dry Year Period of Diversion

Month (days)	Net Pumping Rate (gpm)	Volume (ac-ft)	∑ Volume (ac-ft)
Jan (31)	1.62	.222	.22
Feb (28)	1.62	.20	.42
Mar (31)	1.62	.222	.64
Apr (30)	3.25	.431	1.07
May (31)	11.09	1.519	2.59
Jun (30)	16.55	2.196	4.79
Jul (30)	23.68	3.244	8.03
Aug (31)	19.69	2.698	10.73
Sep (30)	11.7	1.554	12.28
Oct (31)	3.82	.523	12.80
Nov (30)	1.62	.215	13.02
Dec (31)	1.62	.222	13.24

The dry year consumptive use is conservatively projected to be 13.2 4 acre-feet.

Hydrogeologic Assessment

The Colorado stream depletion model applying analyses developed by Schroeder [5] was used to approximate potential stream depletion to downstream surface water sources. The evaluation parameters included:

A = 4,500 feet; the distance from the wells to where groundwater levels approach the elevation of Tenmile Creek,

T = 80,000 gallons per day per foot; the transmissivity of the aquifer,

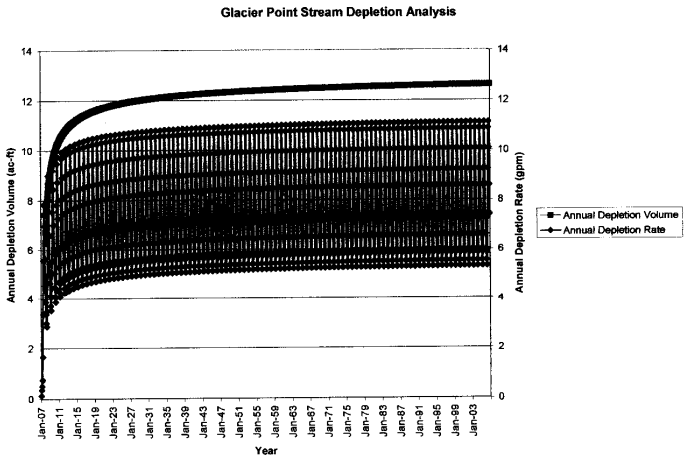
S = 0.10; the specific yield of the aquifer,

t = 1200 months; assuming 100 years as the total time of pumping,

Q = the monthly net pumping rate of consumptive use shown in Table 3c(3).

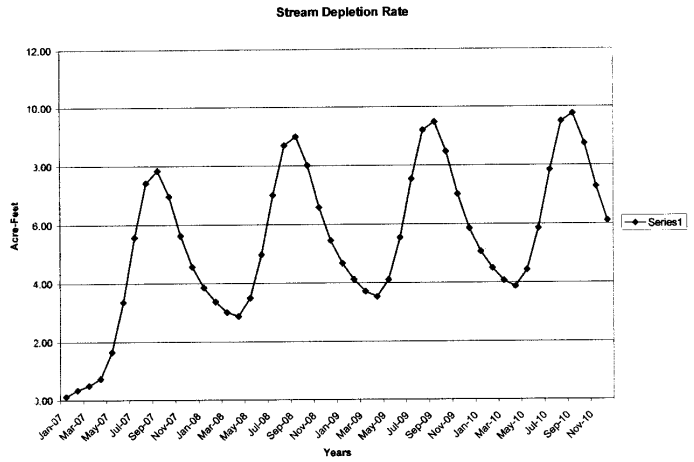
The results of the stream depletion model are plotted on Figure 3c(4):

Figure 3c(4) – Potential Stream Depletion



The seasonal variation in the stream depletion rate is shown on Figure 3c(5):

Figure 3c(5) – Stream Depletion Rate



The consumptive use calculations and stream depletion model demonstrate that a net stream depletion will occur. The stream depletion model calculates that the annual stream depletion approaches a volume of 12.62 acre-feet per year after 100 years of full development of the project, or 95% of the annual consumptive use. The net stream depletion is conservatively considered to be equal to the consumptive use volume of 13.24 acre-feet per year, which is equivalent to .0183 cubic feet per second (cfs) of stream flow. Two surface water appropriations exist within the area of Tenmile Creek potentially affected by the net stream depletion:

WR #411 214540 00 Statement of Claim, Montana State Board of Land Commissioners, 3.93 cfs for seasonal irrigation of 135 acres

WR #411 30017596 Water Reservation, Montana Department of Fish, Wildlife & Parks, 12 cfs year-round and 8,687 acre-feet per year

Neither of the existing appropriations would be adversely affected by the proposed groundwater appropriation and subsequent net stream depletion of .0183 cfs. The final determination of adverse impact on prior appropriators from net stream depletion can only be made by DNRC. Therefore, a mitigation plan is proposed pending a determination.

Hydrogeologic Assessment (DEQ Discharge Permit)

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

AUTHORIZATION TO DISCHARGE UNDER THE
MONTANA GROUND WATER POLLUTION CONTROL SYSTEM

In compliance with Montana Code Annotated (MCA) Section 75-5-101 *et seq.*, MCA, and the Administrative Rules of Montana (ARM) 17.30.1042, and ARM 17.30.1341, *et seq.*,

Glacier Point Homeowners & Water Users Association Inc.

is authorized to discharge from the **Glacier Point Major Subdivision** to its sub-surface disposal system,

located in the **SW ¼ Section 5, Township 10 North, Range 3 West in Lewis and Clark County,**

to receiving waters, **Class I ground water,**

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to the outfall specifically listed in the permit.

This permit shall become effective: March 1, 2007.

This permit and the authorization to discharge shall expire at midnight, February 28, 2012.

FOR THE MONTANA DEPARTMENT OF
ENVIRONMENTAL QUALITY

Bonnie Lovelace

Bonnie Lovelace, Chief
Water Protection Bureau
Permitting & Compliance Division

Issued: January 11, 2007

Mitigation Plan

Mitigation Plan

Augmentation of the annual consumptive use of 13.24 acre-feet per year is proposed to mitigate net stream depletion. Augmentation through retirement of existing water rights will eliminate any potential adverse impact to a senior surface water right appropriation.

The applicant currently owns the property with an existing appropriation:

Certificate of Water Right # 43223-G411
Source Groundwater well
14.00 ac-ft for commercial
5.50 ac-ft for domestic
.15 ac-ft for stock
60.00 gpm up to 19.65 Ac-ft.

The majority of the existing appropriation water use occurred during the summer, with commercial use of water serving the former Valley Speedway. The majority of consumptive use associated with the proposed development would also be during the summer, given irrigation accounts for more than 80% of the projected consumptive use. The rate, volume and timing of existing water rights for commercial use to be retired are equivalent and proportionate to the anticipated consumptive use.

A completed change of appropriation right Form 606 is included with the application submittal. The change of appropriation right will retire 13.24 acre-feet of commercial appropriation to mitigate net stream depletion and potential adverse impact to existing senior surface water appropriations.

3d. Adequacy of Means of Diversion

The public water supply wells are completed to depths of 167 feet, with perforated intervals between 134 feet and 160 feet. Pumping water levels will be more than 100 feet above the perforated intervals and pump intake. The available drawdown will be more than adequate to account for worst case combinations of seasonal groundwater fluctuations, operational drawdown and interference drawdown from other wells.

Each well will be installed with a 5 horsepower submersible pump capable of producing 60 gpm against 150 feet of head. Although the wells will alternate during normal operation, each well is designed to produce peak demand if the other well is temporarily out of service. The means of diversion is adequate for the proposed use.

3e. Beneficial Use

The appropriation request is for the beneficial use of 85 single family homes. The system will be operated as a public water supply in accordance with the regulations and primacy of the Montana Department of Environmental Quality. The centralized water system will be a more efficient and controlled beneficial use of the natural resource than individual wells.

Review for Correct and Complete (C&C)

- Does the application meet the requirements in rule? [ARM, 36.12.1601]
- Are all the parts of the application form filled in and correct (including a map)?
- Has all of the criteria in 85-2-311 been addressed?
- Does the information conform to the standard of substantial credible information?

Form Checklist

Form 600-CHK R10/04

FORM 600 CHECKLIST

NA 30028560 411	GLACIER POINT HOME OWNERS & WATER USERS ASSN	Kathy Arndt
APPLICATION NUMBER	APPLICANT'S NAME	REVIEWED BY

BASIN CLOSURE CHECK

Is the application in a basin closure area? ☐ NO ☒ YES If yes, which one? Upper Missouri Basin Closure

Does the application fall under an exception? ☐ NO ☒ YES If yes, which one? Groundwater

Ground Water Exceptions: Complete the following for ground water applications located in a basin closure where an exception is allowed for ground water that is not immediately or directly connected to the source. If you have not already done so, inform the Applicant that they need to provide information to show groundwater is not immediately or directly connected to surface water in the area of their proposed source before the application can go forward. The Department interprets immediately or directly connected to mean ground water that does not induce surface water directly from surface water. For further information, see the "How to Test for Immediate or Direct Hydraulic Connection" document. This information must be evaluated and accepted before moving on to the correct and complete determination.

Is the exception for ground water? ☐ NO ☒ YES If yes, complete the information below.

Explain how you know that the water sought by this application is not immediately or directly connected to a surface water source.
See Memorandum from Bill Uthman, Hydrogeologist. Applicant submitted information concerning aquifer testing, net stream depletion and submitted information concerning House Bill 831 issues. All documents are contained in the file. On October 19, 2007, Mr. Uthman approved all information submitted.

FORM CHECK

	OK	NOK	
1.	☒	☐	
2.	☒	☐	
3.	☒	☐	
4.	☒	☐	Applicant stated a water meter will be located in the pump house
5.	☒	☐	NA
6.	☒	☐	
7.	☒	☐	
8.	☒	☐	Made minor adjustment in the quarter sections based on the map of Glacier Point Subd added pou for multiple domestic
9.	☒	☐	
10.	☒	☐	Ten years to completion
11.	☒	☐	
12.	☒	☐	
13.	☒	☐	Consulting Firm - DBEC - Faron Henderson
14.	☒	☐	
15.	☐	☐	NA

PROCESSING CHECK

OK	NOK		
☒	☐	600 APPLICATION FEE	
☒	☐	OWNER NAME/ADDRESS STANDARDIZED	
☐	☐	ASSOCIATED RIGHTS – COPIES IN FILE—FLAGS PREPARED—REMARKS CODED	
☒	☐	NOTICE AREA MAP COMPLETED	
☒	☐	EA COMPLETED	DATE 11/26/2007
☒	☐	EA E-MAILED TO EQC AND DNRC	DATE 11/26/2007

ACTIONS TAKEN

YES	NO	NA			
☐	☒	☐	612 SENT DATE	SIGNED 612	DATE
☒	☐	☐	DEFICIENCY ADDRESSED		DATE 08/02/2007
☒	☐	☐	DEFICIENCY RESPONSE RECEIVED		DATE 10/18/2007
☒	☐	☐	APPLICATION FOUND CORRECT & COMPLETE		DATE 10/19/2007
☐	☐	☐	PRELIMINARY CRITERIA ASSESSMENT COMPLETED		
☒	☐	☐	FILE REVIEWED BY WATER MANAGEMENT BUREAU		
☐	☐	☐	PUBLIC NOTICE WAIVED		
☐	☐	☐	APPLICATION PUBLISHED	OBJECTION DEADLINE	
☐	☐	☐	OBJECTIONS RECEIVED		
☐	☐	☐	FINAL CRITERIA ASSESSMENT SIGNED		
☐	☐	☐	PERMIT ISSUED		DATE

Form 600-CHK R10/04

FORM 600 CHECKLIST

CORRECT & COMPLETE CRITERIA CHECK

Criteria 1: THERE IS WATER PHYSICALLY AND LEGALLY AVAILABLE.

☒ The applicant provided information discussing physical water availability at the proposed point of diversion in the amount needed.

☒ The applicant identified existing legal demands on the source.

☒ The applicant provided a discussion comparing the physical water availability and the legal demands.

Criteria 2: THE WATER RIGHTS OF A PRIOR APPROPRIATOR WILL NOT BE ADVERSELY AFFECTED.

☒ The applicant provided information showing how he can exercise and control the project to ensure prior appropriators will be satisfied.

Criteria 3: THE PROPOSED MEANS OF DIVERSION, CONSTRUCTION, AND OPERATION OF THE APPROPRIATION WORKS ARE ADEQUATE.

☒ The applicant provided information on the proposed means of diversion, construction, and operation of the diversion works.

Criteria 4: THE PROPOSED USE OF WATER IS A BENEFICIAL USE.

☒ The applicant provided information and data showing the proposed use is beneficial and the flow rate and volume requested are reasonable.

Criteria 5: THE APPLICANT HAS A POSSESSORY INTEREST, OR THE WRITTEN CONSENT OF THE PERSON WITH THE POSSESSORY INTEREST, IN THE PROPERTY WHERE THE WATER IS TO BE PUT TO BENEFICIAL USE.

☒ The applicant signed the statement on the application form, Section 14.

COMMENTS:

Priority Date will be changed to date information was received and application deemed correct and complete. The priority will be change to October 19, 2007

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
1424 9TH AVENUE P.O. BOX 201601
HELENA MT 59620-1601 406-444-6610
Web Site: http://www.dnrc.state.mt.us/wrd/home.htm

Potential Affected Area for Notice

MJ # 1366

NOTICE AREA

Application No. NA 30028560 41I — Regional Office #5

Applicant's Name GLACIER POINT HOMEOWNERS & WATER USERS ASSN INC

SB Decree [X] Yes [ ] No

Non – SB Decree [ ] Yes [X] No If yes, Case # _____

Indian Reservation [ ] Yes [X] No If yes, Reservation _____

Irrigation District [X] Yes [ ] No If yes, District HELENA VALLEY IRRIGATIN DIST

Specialist KATHY ARNDT Date October 11, 2007

Attach a USGS or Resource Survey map identifying area of possible adverse affect.

Water Right Owner	Water Right # (Basin, ID, and Number)
Applicant—GLACIER POINT HOMEOWNERS & WATER USERS ASSN INC	NA 30028560 41I
1BIA	
1PPL	
1FWP	
2FWP	
1FWS	
1WQB	
1DSL	
1TUL	
1MWT	
5FWS	
5HLN	
#11492 – City of Helena	
1SCH	
5WQD	
5MEI	
5HVI	
5JBL	
5DMA	
5SMW	
5TEN	
SEE ATTACHED LIST FOR INDIVIDUAL OWNERS	
Consultant: DBEC	
% FARON HENDERSON	
1617 EUCLID AVE STE 5	
HELENA MT 59601	

PUBLISHED IN: INDEPENDENT RECORD

Remarks:

Water Right Review Area:

Twp 10N, Rge 3W, Secs. 5, 6, 8

Hydrogeologic Assessment Review

- Staff hydrogeologist reviews assessment
- All statutory and administrative rule requirements are met
- The information, data and analysis are substantial credible and conform to accepted scientific standards
- If not, hydrogeologist prepares discussion memo on issues needing further information, data or clarification

Hydrogeologic Memo

DEPA .MENT OF NATURAL RE:)URCES
AND CONSERVATION

BRIAN SCHWEITZER
GOVERNOR

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

STATE OF MONTANA

WATER RESOURCES DIVISION (406) 444-6601
TELEFAX NUMBERS (406) 444-0533 / (406) 444-5918
http://www.dnrc.mt.gov

1424 9TH AVENUE
PO BOX 201601
HELENA, MONTANA 59620-1601

To: Jan Langel, Regional Manager
Helena Water Resources Regional Office

From: Bill Uthman, Hydrogeologist
Water Management Bureau

Date: July 26, 2007

Re: Glacier Point Subdivision Application #41I-30028560

Introduction

The application under review is a re-submittal of a previous application that was terminated earlier in 2007. Glacier Point Home Owners and Water Users Association, Inc., applicant for a Water Use Permit, requests a ground-water appropriation at the rate of 60 gallons per minute (gpm) and a volume of 42 acre-feet (ac-ft) from January 1 to December 31, inclusive each year. The proposed appropriation will be for domestic (26.06 ac-ft year-long) and lawn/garden (16.11 ac-ft from April 1 to October 31) uses in the proposed subdivision located in Section 5 of Township 10 North, Range 3 West in the Helena Valley of Lewis and Clark County. The appropriation will be obtained from two wells completed to depths of 160 and 167 feet in valley-fill alluvium. The Helena Water Resources Regional Office requests an evaluation of the adequacy of the aquifer test requirements, criteria addendum, and requirements of House Bill 831.

Discussion

General. The applicant is requested to **submit a corrected and revised technical report due to numerous errors and omissions contained in the current report.**

The volumes requested for domestic and lawn/garden uses exceed the total requested volume of 42 ac-ft in the application. In the Background section of the technical report, the applicant uses "average" irrigation and "domestic" demands to calculate "average" discharge rates. "Average" discharge rates can only be calculated from the actual volumes requested. Actual volumes requested also do not correspond to volumes used in the water supply calculations. Values determined in the water supply calculations should equal the rates and volumes requested in the application. The applicant is requested to rectify discrepancies in the water supply calculations with those in the application.

STATE WATER PROJECTS BUREAU (406) 444-6646 | WATER MANAGEMENT BUREAU (406) 444-6637 | WATER OPERATIONS BUREAU (406) 444-0860 | WATER RIGHTS BUREAU (406) 444-6610

Aquifer Testing. The New Appropriations Rules of January 1, 2005 specify aquifer testing requirements at ARM 36.12.121. The aquifer-testing descriptions in the technical report partially meet the specified Rules requirements. Procedural discrepancies are described as follows: 1) failure to collect 48 hours of pre-test water levels; measurements of static water-levels on January 24 and February 7, 2006 do not comply with the specified pre-test measurement intervals, 2) failure to measure water levels at a precision of 0.01 foot, 3) failure to measure discharge at specified intervals, and 4) failure to submit a complete data set on department form 633 (note: an applicant is not permitted to modify the structure of the form; worksheets are to remain blank if data are not available. The applicant is requested to re-submit form 633 in its entirety. The remaining specified testing procedures comply with the Rules. In particular, the length of the aquifer test exceeded department specifications (i.e. 72 hours instead of 24 hours), discharge from production wells were maintained "constant" at 125-130 gpm (i.e. at rates twice the requested rate), and the analytical results of aquifer properties were similar to the results from other credible tests conducted in the Helena Valley. In spite of some procedural shortcomings, the applicant is not required to re-conduct the aquifer testing because there will be no significant differences in testing results and interpretations.

Net Stream Depletion. The applicant is requested to delete Part II-Basin Closure Compliance from the technical report because that analysis was eliminated with the passage of House Bill 831. House Bill 831 specifically requires an applicant "*to predict whether the proposed appropriation will result in a net depletion of surface water*". The applicant acknowledges that their use of ground water will result in an eventual depletion of surface water down-valley in Tenmile Creek and/or Lake Helena. The applicant has addressed net stream depletion by providing a quantitative evaluation of volume and rate of consumptive use (i.e. that portion of the total appropriation that does not return to the aquifer) and which therefore equates to net annual stream depletion of 12.91 ac-ft. This value will change because the net stream depletion analysis must be re-evaluated for reasons provided below. The applicant also presents a model that estimates volume, rate, and timing of net stream depletion over a 100-year time period. The applicant does not explicitly state that predicted net stream depletion will constitute an adverse impact, but infers that interpretation because they have submitted a change application for a mitigation plan (i.e. aquifer recharge plan), as required by House Bill 831. The mitigation plan must also be modified to reflect the re-evaluated annual net stream depletion.

The volumes requested in the re-submitted application for domestic and lawn/garden uses do not correspond to volumes stated on page 20 of the technical report. The applicant cannot use stream depletion analytical results for the volumes and rates of consumptive use from the terminated application if new volumes and rates are requested in this re-submitted application. The applicant is requested to re-evaluate the consumptive-use volumes and rates for both the domestic and lawn/garden components based on the current requested appropriation volumes. Further, this re-submitted application specifies a total irrigated acreage of 7.75 acres. The applicant used a value of 6.83 acres from the terminated application report. The applicant is requested to use 7.75 irrigated acres in a re-evaluation of net stream depletion. Last, in addition to a calculated annual volume of

Hydrogeologic Memo

consumptive use, the applicant calculated a consumptive-use rate in monthly intervals, but failed to use these rates in the model. As a alternative, the applicant incorrectly used an average 8-gpm consumptive rate in the model. The applicant is requested to use re-evaluated monthly consumptive-use rates in the net stream depletion model. House Bill 831 also requires an applicant who uses treated wastewater to provide a copy of a discharge permit from the Department of Environmental Quality. A copy of this permit cannot be located in the application materials after numerous page-by-page searches and a file search of the attached compact disk; the applicant is requested to either provide this permit copy or clearly explain where it may be found in the application materials.

Other House Bill 831 Issues. The applicant is required to address all statutory requirements of House Bill 831, but has failed to address requirements specified in Section 15 1b(ii) and (iii) and Section 15 2b(i) and (iii).

Criteria Addendum. The applicant addressed the ***physical availability of water*** according to specified testing procedures and reporting standards. The applicant provided text and graphs that demonstrate that discharges greater than the requested rate were produced and maintained throughout the testing periods. Tests also show that either production well is capable of producing and maintaining the requested discharge. In order to address the long-term physical availability of water, drawdowns observed in the production wells were extrapolated for the period of diversion. The analyses are conservative because the actual discharge rate will be less than the observed rates and pumping will be cyclic, rather than continuous as applied in the analyses. The drawdown projections show that, for the period of diversion, adequate drawdown will remain above the pump intakes and will be sufficient to maintain the requested discharge rate.

The applicant addressed the **legal availability of water** by using department procedures to delineate a zone of influence and calculate the annual volumetric aquifer flux (i.e. ground-water flow through the aquifer) through the impacted area. The applicant estimated aquifer flux flowing through the zone of influence and compared the flux with the combined existing and proposed annual volumetric ground-water appropriation to demonstrate that aquifer flux exceeds the existing plus proposed legal water demands.

The applicant addressed the **potential for adverse impact to senior ground-water users** by providing a drawdown-contour map and a distance-drawdown graph to project drawdown interference for the period of diversion. Drawdown projections show that drawdown interference will be 0.2 foot at a radial distance of 637 feet from the either production well. The nearest existing wells are about 1,000 feet from the proposed wells. Senior ground-water users will experience less than 0.2 foot of drawdown interference because drawdown decreases as the distance from a pumping well increases. Drawdown interference of 5 feet or less does not typically prevent a senior ground-water user from reasonably exercising their water right.

The applicant addressed the **potential for adverse impact to senior surface-water users** in the net stream depletion section. The applicant acknowledges that the ground-water

appropriation will result in net stream depletion, but does not explicitly state that it will represent adverse impact. The applicant, however, has submitted a change application for a mitigation plan (i.e. aquifer recharge plan). The plan submitted must be modified to reflect the re-evaluated net stream depletion.

Deficiency Letter

- All rule or criteria (311) deficiencies in the application & hydrogeologic assessment identified in a letter to the applicant
- Applicant given 30 days to submit missing or additional information or data or clarification
- If received untimely, priority date changed to date information is received
- Application must be terminated after 90 days if application is not made C&C

Deficiency Letter

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
HELENA WATER RESOURCES REGIONAL OFFICE

BRIAN SCHWEITZER
GOVERNOR

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

STATE OF MONTANA

HELENA REGIONAL OFFICE PHONE: (406) 444-6999
TELEFAX NUMBER: (406) 444-9317

1424 9TH AVENUE
PO BOX 201601
HELENA, MT 59620-1601

August 2, 2007

Faron Henderson
1617 Euclid Ave Ste 5
Helena MT 59601-2048

SUBJECT: Application No. 30028560-41I (Glacier Point Homeowners & Water Users)

Dear Water Right Applicant,

The Department of Natural Resources and Conservation (DNRC) has begun reviewing your application. An applicant is required to submit a correct and complete application. An application deemed correct and complete can advance to the next stage of the application process, but does not entitle an applicant to a provisional permit or change authorization. Providing correct and complete information is not necessarily the same as proving the statutory criteria. The department, with or without receipt of objections can only grant an application if the criteria for issuance of a permit or change application are met.

The DNRC determines if the application is correct and complete based on adopted rules. As required by 85-2-302, MCA, this letter is to notify the applicant of any defects in the application and to identify the rule that has not been met.

The volume of 26.06 for domestic use and 16.11 for lawn & garden use totals 42.17 instead of 42.00. This has been changed on the application, if it is not correct let me know.

The problems remaining with the application concern the hydrologic report. I am enclosing a copy of Bill Uthman's Memorandum dated July 26, 2007. He has outlined in the memo the concerns that will keep the application from progressing to public notice. If you have any questions regarding this memo, please contact Mr. Uthman directly at 444-6720 to discuss the problems and solutions.

This is the only deficiency letter that will be sent.

Sincerely,

Kathy Arndt, Water Resources Specialist
Helena Water Resources Regional Office

Phone 406-444-6862
Fax 406-444-9317
E-mail karndt@mt.gov

Response to Deficiency Letter

DBEC INC.
Design, Build, Engineering & Consulting

15 August 2007

Montana Department of Natural Resources & Conservation
Helena Water Resources Regional Office
Attn: Kathy Aarndt
1424 9th Avenue South, P.O. Box 201601
Helena, MT 59601-1601

Subj: Application No. 30028560-411
Glacier Point Homeowners and Water Users

Dear Ms. Aarndt,

We have reviewed your comments of 2 August 2007 and Bill Uthman's comments of 26 July 2007 to Jan Langel. The technical report, Application Form 600, and Change Application Form 606 have been revised to address the comments and concerns.

The following narrative addresses the comments provided by Mr. Uthman. Revisions are specified by page number and Form number to facilitate your review.

General

The requested appropriation is for 26.06 acre-feet per year for domestic use and 16.11 acre-feet per year for irrigation use for a total of 42.17 acre-feet per year. The technical report has been revised on pages 1, 2, 20 and 21; Application Form 600 has also been revised to specify 42.17 acre-feet per year, with an irrigated volume of 16.11 acre-feet and an irrigated area of 6.83 acres.

Aquifer Testing

Form 633 has been resubmitted in Exhibit 11 of the technical report.

Net Stream Depletion

Part II – Basin Closure Compliance has been deleted from page 10 of the technical report.

Annual net stream depletion has been re-evaluated and applicable revisions to the technical report are on pages 20, 21, 22 and 23. The annual consumptive use is based on monthly rates for domestic and irrigation use. The Colorado Stream Depletion model indicates the net stream depletion volume would approach 95% of the annual consumptive use after 100 years, assuming dry year consumptive use for irrigation and 10% consumptive use of domestic water. The net

1617 Euclid Ave., Suite #5 · Helena, MT 59601 · Phone: 406-449-7299 · Fax: 406-449-0034

stream depletion is subsequently assumed to be equal to the consumptive use rate of 13.24 acre-feet per year.

A copy of the groundwater discharge permit is resubmitted, and specifically referenced on page 20 of the technical report.

Other House Bill 831 Issues

Section 15 1(b) (ii) and (iii): Engineering calculations of water use are based on accepted methods. Water use calculations were increased by 15% to account for distribution losses over time, which is within the range of national averages. Conveyance losses would be from the buried pressurized distribution system and would return to the aquifer through direct percolation into the vadose zone and aquifer.

Consumptive use of domestic water conservatively included the 15% assumed loss in the re-evaluation of net stream depletion. Revisions to the technical report are included on pages 20 and 21.

Domestic use water will return all but an assumed 10% of the requested 26.06 acre-feet per year to the aquifer. The return flow will be through approved Level 2 treatment of wastewater, as specified on page 20 of the technical report.

Section 15 2b (i) and (iii): No documented hazards (i.e., subsidence) exist within the study area, as indicated on page 4 of the technical report.

Approved Level 2 treatment of wastewater will be accomplished with Eliminite denitrification systems and discharged through a pressure-dosed drainfield. Complete specifications are included with the groundwater discharge permit. A copy of the discharge permit is resubmitted, and specifically referenced on page 20 of the technical report.

Criteria Addendum

A mitigation plan for stream depletion has been revised on page 24 of the technical report, and on Change Application Form 606. Retirement of 13.24 acre-feet per year of existing water rights is proposed to mitigate any adverse impacts to downstream surface water appropriations that may result from stream depletion.

Please feel free to contact me if I can provide any additional information or clarification regarding the application for beneficial use permit.

Respectfully submitted,

Faron S. Henderson, P.E.
DBEC, Inc.

Environmental Review

EA Form R 1/2001

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: **Glacier Point Home Owners & Water Users Association Inc.**
PO Box 7045
Helena MT 59604-7045

2. Type of action: **Application for Beneficial Water Use Permit No. 30028560-41I**

3. Water source name: **Groundwater Wells**

4. Location affected by action: **SENESW, Sec 5, Twp 10N, Rge 3W, Lewis and Clark County**

5. Narrative summary of the proposed project, purpose, action to be taken, and objectives:
The application proposes to appropriate groundwater from two wells. The wells are located in the SENESW of Sec 5, Twp 10N, Rge 3W, Lewis and Clark County. The wells are referred to PWS 1 and PWS 2. Lindsay Drilling, a licensed well driller drilled PWS 1 in January of 2006 to a depth of 167 feet. PSW 2 was drilled in February of 2006 to a depth of 167 feet. The applicant is requesting 60 gpm up to 42.17 acre-feet per. The water would be used for multiple domestic (85 households) from January 1 to December 31, and lawn and garden on 6.83 acres from April 1 to October 31 of each year. There is a 200,000 gallon concrete storage tank. The place of use the Glacier Point Subdivision located in the NESW of Sec 5, Twp 10N, Rge 3W, Lewis and Clark County.

The DNRC shall issue a water use permit to the applicant if the criteria in 85-2-311, MCA are met.

Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Montana Natural Heritage Program (MTNHP)
Montana Department of Environmental Quality (DEQ)
Bill Uthman – DNRC Hydrogeologist
Helena Valley Soil Survey, Lewis and Clark County

Part II. Environmental Review

1. **Environmental Impact Checklist:**

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

Determination: **No significant adverse impact.**
The proposed project would not affect chronically or periodically dewater streams as identified by the Department of Fish, Wildlife & Parks. The water to be diverted is from groundwater wells.

Water quality - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

Determination: **No significant adverse impact.**
The proposed project would not affect water quality in perennial streams. The water to be diverted is from groundwater wells.

Groundwater - Assess if the proposed project impacts ground water quality or supply.
If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

Determination: **No significant adverse impact.**
The applicant has demonstrated that the water for the proposed project is physically and legally available according to DNRC evaluation procedures. The nearest surface water is Tenmile Creek, which is approximately 600 feet to the south and east of the wells. This application is subject to House Bill 831, which requires a hydrogeologic assessment that predicts whether the proposed appropriation will result in a net depletion of surface water. The applicant acknowledges a potential stream depletion impact of 13.24 acre-feet per year to nearby Tenmile Creek. The applicant therefore proposes to mitigate potential impacts through mitigation. An application for mitigation has been received by the Department. See Application to Change a Water Right No. 30028566-41I

DIVERSION WORKS - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

Determination: **No significant adverse impact.**
The project would not affect streams or riparian areas. Two wells were drilled for the proposed subdivision by Lindsay Drilling, a licensed well driller. They were drilled in accordance with the Montana Board of Water Well Contractors and the Administrative Rules of Montana and subject to DEQ requirements. The well referred to as PWS 1 was drilled in January of 2006 to a depth of 167 feet. PWS 1 has an 8⅝" steel casing from +2 to 166 feet and is perforated from 136 to 154 feet. The well referred to as PSW 2 was drilled in February of 2006 to a depth of 167 feet. The well has an 8⅝" steel casing from +2 to 166 feet and is perforated from 134 to 160 feet. Both of the wells were grouted with a continuous feed of bentonite clay during installation to prevent well contamination. The pumps will be stainless steel Baron high capacity pumps powered by Franklin Electric 5 HP motors.

Application Review

- Complete Application Review Form (ARF) to document applicant's information which supports permit criteria (311)
- Identify for each criteria whether additional evidence is still needed to meet criteria
- ARF and prepared public notice mailed to applicant at the same time
- Deadline for submitting additional information is the same as deadline for receipt of objections

ARF

Application Review Form

Date: November 26, 2007
Application No. 30028560-41I by Glacier Point Home Owners & Water Users Association, Inc.
Reviewed By: Kathy Arndt, Water Resources Specialist

Complete a review of the application and document issues that may need to be resolved.

Application Details
This application is to divert water from January 1 to December 31 at 60 gpm up to 42.17 af from two groundwater wells to be used for multiple domestic for 85 homes and lawn and garden on 6.83 acres.

Physical Availability
The applicant addressed the physical availability of water according to specified testing procedures and reporting standards. The applicant provided tests and graphs that demonstrate discharges greater than the requested rate were produced and maintained throughout the testing periods. A 72-hour constant rate aquifer test was conducted. Drawdown was measured with a Powers Well Sounder. The drawdown was recorded manually on evenly spaced measurements per log cycle of time. Tests also show that either production well is capable of producing and maintaining the requested discharge of 60 gpm. The applicant calculated the long term physical availability of water, based on drawdowns observed in the production wells. The drawdown projections by calculated by the applicant show that for the period of diversion, adequate drawdown will remain above the pump intakes and will be sufficient to maintain the requested discharge rate.

Legal Availability
Using Department procedures the applicant delineated a zone of influence and calculated the annual groundwater flow through the aquifer in the impacted area. The applicant provided information estimating aquifer flux flowing through the zone of influence and compared the flux with the combined existing and proposed annual volumetric groundwater appropriation. The information provided by the applicant calculates the aquifer flux exceeds the existing plus proposed legal water demands.

Adverse Affect
The applicant provided a drawdown contour map and a distance drawdown graph to project drawndown interference for the period of diversion. The applicant calculated the drawdown projection interference will be 0.2 foot at a radial distance of 637 feet from either of the production wells. The applicant researched the proposed area of impact and calculated there is approximately 1000 feet between the nearest existing wells and the proposed production wells. Therefore the applicant calculated senior water users in the area would experience less than 0.2 foot of drawdown interference.

The applicant is requesting 42.17 acre-feet per year for multiple domestic and lawn and garden uses. The applicant calculated a consumptive use evaluation and stream depletion analysis. The applicant has provided a mitigation plan (aquifer recharge plan) and calculated a volume of 13.24 acre-feet per year that will offset their estimated annual net stream depletion. The Application for Change has been received by the Department (see CHG 30028566-41I).

Diversion Works
The groundwater wells were drilled for the proposed subdivision by Lindsay Drilling, a licensed well driller. They were drilled in accordance with the Montana Board of Water Well Contractors and the Administrative Rules of Montana and subject to DEQ requirements for public water supply wells. The well referred to as PWS 1 was drilled in January of 2006 to a depth of 167 feet. PWS 1 has an 8¾" steel casing from +2 to 166 feet and is perforated from 136 to 154 feet. The well referred to as PSW 2 was drilled in February of 2006 to a depth of 167 feet. The well has an 8¾" steel casing from +2 to 166 feet and is perforated from 134 to 160 feet. Both of the wells were grouted with a continuous feed of bentonite clay during installation to prevent well contamination. DBEC, Inc., designed the system and measuring devices will be installed on the main system and for each household.
The pumps will be stainless steel Baron high capacity pumps powered by Franklin Electric 5 HP motors. The applicant provided information about the pumps and motors. The submersible pumps are capable of producing 60 gpm against 150 feet of head. The wells are designed to alternate during normal operation. Each well is designed to produce peak demand if the if the other well is temporarily out of service. There is a 200,000 gallon concrete storage tank included in the system.

Beneficial Use
The applicant submitted an application for multiple domestic on 85 households and and lawn and garden use on 6.83 acres. The applicant has calculated the flow rate and volume as follows: 60 gpm with 26.06 acre-feet for multiple domestic and 16.11 acre-feet for lawn and garden. The total appropriation requested in 60 gpm up to 42.17 acre-feet per year.

Possessory Interest
The applicant signed and had the affidavit on the application form notarized affirming the applicant has possessory interest in the property where the water is to be put to beneficial use.

Public Notice

- DNRC prepares notice and mailing list and sends to applicant
- Applicant publishes notice in paper
- Application must be published in local paper for 1 week
- Existing water right owners of record sent public notice of application
- Objection deadline set 30 days from publication date

Public Notice

PUBLIC NOTICE
NOTICE TO WATER RIGHT USERS
(Pursuant to Section 85-2-307 MCA)

The following application has been submitted to appropriate water in the State of Montana.

Application Number: 411 30028560

Owners: GLACIER POINT HOME OWNERS & WATER USERS ASSN INC
PO BOX 7045
HELENA, MT 59604 7045

Priority Date: JULY 2, 2007 at 03:52 P.M.
Purpose (use): MULTIPLE DOMESTIC
LAWN AND GARDEN
Maximum Flow Rate: 60.00 GPM
Maximum Volume: 42.17 AC-FT
Maximum Acres: 6.83
Source Name: GROUNDWATER
Source Type: GROUNDWATER

Point of Diversion and Means of Diversion:

ID	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1		SENESW	5	10N	3W	LEWIS AND CLARK

Flow Rate: 60.00 GPM
Period of Diversion: JANUARY 1 TO DECEMBER 31
Diversion Means: WELL
Subdivision: GLACIER POINT SUBD TRACT/LOT: 87
Well Depth: 167.00 FEET
Static Water Level: 19.50 FEET
Casing Diameter: 8.63 INCHES
Flowing: NO
Pump Size: 5.00 HP

ID	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
2		SENESW	5	10N	3W	LEWIS AND CLARK

Flow Rate: 60.00 GPM
Period of Diversion: JANUARY 1 TO DECEMBER 31
Diversion Means: WELL
Subdivision: GLACIER POINT SUBD TRACT/LOT: 87
Well Depth: 160.00 FEET
Static Water Level: 20.00 FEET
Casing Diameter: 8.63 INCHES
Flowing: NO
Pump Size: 5.00 HP

Purpose (Use): MULTIPLE DOMESTIC
Households: 85
Volume: 26.06 AC-FT
Period of Use: JANUARY 1 to DECEMBER 31
Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1			NESW	5	10N	3W	LEWIS AND CLARK

Subdivision: GLACIER POINT SUBD TRACT/LOT: BLOCK:

Purpose (Use): LAWN AND GARDEN
Volume: 16.11 AC-FT
Period of Use: APRIL 1 to OCTOBER 31
Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1	6.83		NESW	5	10N	3W	LEWIS AND CLARK

Subdivision: GLACIER POINT SUBD TRACT/LOT: BLOCK:
Total: 6.83

IF ISSUED, THE RIGHT WILL BE SUBJECT TO PRIOR EXISTING WATER RIGHTS.

OBJECTIONS TO THIS APPLICATION MUST BE FILED ON AN OBJECTION TO APPLICATION, FORM NO. 611. MAIL THE COMPLETED OBJECTION FORM AND $25.00 FILING FEE TO THE DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION, PO BOX 201601, HELENA, MT 59620-1601. **OBJECTIONS MUST BE POSTMARKED ON OR BEFORE** January 12, 2008. THE OBJECTION TO APPLICATION FORM IS AVAILABLE FROM THIS DEPARTMENT OR CAN BE OBTAINED FROM THE INTERNET AT http://www.dnrc.mt.gov/wrd/. DIRECT ANY QUESTIONS REGARDING THIS APPLICATION TO THE WATER

RESOURCES REGIONAL OFFICE,
1424 9TH AVENUE, PO BOX 201601, HELENA, MT 59620-1601 PHONE: 406-444-6999 FAX: 406-444-9317.

PUBLISHED IN: INDEPENDENT RECORD ON December November 13, 2007.

Criteria Assessment

- **If <u>no</u> objections and,**
- **Criteria in 85-2-311 are met**
  - Mitigation plan approved (closed basins)
  - Criteria Assessment is prepared to document information and evidence submitted by the applicant proving the criteria in 85-2-311 has been met
  - Permit issued

Statement of Opinion

- **If no objections and,**
- **Evidence on criteria (85-2-311) not sufficient to prove by a preponderance of evidence**
  - Statement of Opinion is prepared to document information and evidence submitted by applicant on criteria that have been met
  - Identify and document why a criteria has not been met
  - Propose to modify or deny
  - Applicant may request show-cause hearing within 30 days

Hearing

- Objections received and copies sent to applicant
- Regional office may help with mitigation
- Application submitted to hearings unit for scheduling
- Examiner appointed and hearing date set
- Hearing held, Proposal for Decision issued
- Exceptions may be filed with a request for Oral Argument
- Oral Argument hearing held (if requested)
- Final Order issued

Ground Water Application in Closed Basins – Mitigation Plan

- If Hydrogeologic Assessment identifies a net depletion to surface water that results in adverse affect, the groundwater permit application must include a mitigation or aquifer recharge plan
- Where an applicant chooses to change an existing water right for mitigation purposes, an Application to Change a Water Right, form 606 is required

Application to Change a Water Right Form 606

- Acceptance minimums [ARM 36.12.1301]
  - Abstract of the water right reflecting how the water right will be changed
  - Notarized signature
  - Filing fee

Form 606

Form No. 606 R09/2006

APPLICATION TO CHANGE A WATER RIGHT

FILING FEE:
- Replacement Well or Reservoir: $100.00
- Stock Tanks: $100.00
- All Others: $400.00

Use this form
- To apply for replacement wells when the use exceeds 35 gpm or 10 acre-feet of water.
- To apply to move or add stock tanks to an existing delivery system.
- To apply to change the point of diversion, place of use, purpose of use, or place of storage of a water right.

263546

See the back page for additional information.

RECEIVED
JUL 02 2007
DNRC-HRO
For Department Use Only

Application No. 30028566 Basin 41I
Date Received 7/2/07
Time 9:50 pm
5 ec'd by
Fee 5 ec'd $400.00 of $400
Check No. 2062
Refund $ _____ Date _____

1. Applicant Name: Glacier Point Homeowners + Water Users Association, Inc
   Mailing Address: PO Box 7045 City Helena State MT Zip 59604
   Phone Numbers: eome _____ Work 449-7299 Cell _____
   bmail Address: _____

2. Contact Person: ☐ Check, if same as applicant ☐ Check, if contact is an attorney
   Contact Name: Faron Henderson
   Mailing Address: 1619 Euclid Ave Suite 5 City Helena State MT Zip 59601
   Phone Numbers: eome _____ Work 449-7299 Cell 202-3368
   bmail Address: fhenderson@DBECInc.com
   NOTE: IF A CONTACT PERSON IS IDENTIFIED AS AN ATTORNEY, ALL COMMUNICATION WILL BE SENT ONLY TO THE ATTORNEY UNLESS THE ATTORNEY PROVIDES WRITTEN INSTRUCTION TO THE CONTRARY

3. Project Completion: 0.2 Years - bstimate how long it will take to complete the change, if the application is granted, to the point that water can be used according to the change. Information must be included in the application materials that justify the requested time. The justification must include information that would lead a person unfamiliar with the project to conclude the period requested is reasonable and needed to complete the change and put the changed water right(sFto use.

4. Affidavit
   I affirm the information provided for this application is to the best of my knowledge true and correct. I also affirm I have possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use.

Glacier Pt. Subdivision BY:
Applicant Signature: _____ Date 7/2/07
Print Signature: Craig Riley
Subscribed and sworn before me this 2nd day of July, 2007

Notary's Signature _____
(Typed, Stamped, or Printed Name of NotaryF
Notary for the State of _____
Residing at _____
My commission expires _____

JUNE HENDERSON
~~NOTARY PUBLIC for the State of Montana~~
~~Residing~~ at Helena, Montana
My Commission Expires January 4, 2010

RESOLUTION OF
BOARD OF DIRECTORS
WITHOUT A MEETING

Pursuant to the provisions of § 35-1-431, MCA, the following resolutions were adopted by the Board of Directors of Montana Capital Group Inc., effective the 30th day of October, 2007:

BE IT RESOLVED:

"That Craig Riley or Cheryl Riley individually are authorized to act on behalf of the Corporation in the management of Glacier Point Subdivision, LLC."

Director

Director

Form 606 Information Requirements

- 5. Provide a brief narrative explaining the general nature of the requested change(s) to the water right and why it is being requested. A current DNRC generated water right abstract of each water right being changed must be submitted with proposed changes noted on each abstract. Each abstract should reflect how the water right would appear if the change application was granted. To receive DNRC generated water right abstracts, email the DNRC at the following Web address: waterabstract@mt.gov, or contact the regional office serving your area.

- 6. Historic Use: Administrative rule 36.12.1902 requires the following information for each water right to be changed.
  - Provide written documentation explaining the historic use and how the information was acquired to substantiate the following elements of each water right to be changed:
    - point of diversion;
    - period of diversion;
    - volume used for each purpose;
    - period of use for each purpose;
    - place of use for each purpose;
    - maximum number of acres historically irrigated;
    - means of conveyance;
    - location of reservoir;
    - maximum volume in acre-feet of water stored;
    - maximum number of times a reservoir was filled during a year; and
    - maximum period of time when water was collected for storage.
  - Provide a narrative of the historic use of each water right being changed. The description must be based on actual physical measurements when available and use commonly accepted hydraulic principles. The narrative must contain the following:
    - the maximum flow rate diverted from each point of diversion listed on the water right during the period of diversion;
    - total volume of water consumed for each water right during the period of diversion;
    - a description of how and when unconsumed water returns to a ground or surface water source and how that return flow volume was calculated; and
    - documentation of the basis of all data used in the analysis, methods of analysis and calculations.
  - Provide a narrative explaining the historic operation of the right, including flow rate, volume, period of diversion, period of use, and period of storage are reasonable and typical of the purpose for which the historic right was used.
  - Historic Irrigation Water Rights: If the application is to change irrigation water rights, the application must include a comparison of the historical acres irrigated to acres identified as irrigated in the Water Resources Survey, if available for the place of use. If the Water Resources Survey does not support the historical irrigation alleged in the application, explain why.

- 7. Map
  - A USGS quadrangle map or USDA aerial photo must be included with the application and the following items must be clearly identified on the map: (a) north arrow; (b) scale; (c) section corners and numbers; (d) township and range numbers; (e) all past and proposed points of diversion; (f) all past and proposed places of use; (g) past and proposed reservoir locations; and (h) past and proposed ditch or pipeline locations.
  - Maps must reflect the place of use of all overlapping water rights owned by the applicant.
  - Additional maps must be submitted if one map cannot convey the required information clearly and must be of the same scale so that they can be overlain.
  - In addition to the map required above, a copy of the Water Resources Survey map, if available for the land affected by the change, shall be submitted with the historically irrigated acreage identified.
  - All historically irrigated acreage must be identified on an aerial photograph that shows the date the aerial photo was taken.

Form 606 Information Requirements

ADDENDUM TO
APPLICATION TO CHANGE A WATER RIGHT

- To deem the application correct and complete, an application must include the required information found in ARM, 36.12.1801 and 1802 and 36.12.1903 and 1904. To grant an application, per Section 85-2-402, MCA, the appropriator must prove by a preponderance of evidence the criteria are met. It is the Applicant's responsibility to provide credible, relevant, and factual information upon which the Department may rely to support granting a change authorization.

<u>Criteria for Issuance of Authorization to Change</u>

- A) Provide substantial, credible information proving the proposed change will not adversely affect the use of existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued.
- B) Describe the proposed means of diversion, construction, and operation of the diversion works and provide substantial credible information proving the diversion, construction and operation are adequate.
- C) Provide substantial credible information to prove the proposed change is a beneficial use of water and that the amounts are reasonable for the purpose intended.

Application

Application to Change a Water Right

Question #5

Provide a brief narrative explaining the general nature of the requested change(s) to the water right and why it is being requested. A current DNRC generated water right abstract of each water right being changed must be submitted with proposed changes noted on each abstract. Each abstract should reflect how the water right would appear if the change application was granted. To receive DNRC generated water right abstracts, email the DNRC at the following Web address: waterabstract@mt.gov, or contact the regional office serving your area.

The existing appropriation of 19.65 acre feet of groundwater use defines the volumes used for each purpose:

14.00 acre feet for commercial
5.50 acre feet for domestic
0.15 acre feet for stock

The applicant is proposing to retire 13.24 acre-feet of the commercial water right to mitigate the potential impacts identified in the July 2007 Application for Beneficial use permit for the Glacier Point Subdivision. The proposed change is indicated in red ink on the attached abstract.

Question #6

Historic Use: Administrative rule 36.12.1902 requires the following information for each water right to be changed.

ARM 36.12.1902 Change Application – Historic Use Narrative

Historic use information and narrative is based on the following attached documentation:

March 1982 Affidavit of Water Use, Paul Lehmann

March 1982 Notice of Completion of Groundwater Development

June 1982 Certificate of Water Right 43223-G411

November 2004 General Abstract Ownership Update ID #19330

September 2007 Affidavit of Historic Water Use, Joe Glass

The Valley Speedway Corporation purchased the 40 acre property in August 1958. The previous land use was irrigated hay, and the 40 acres were split from the agricultural tract by establishment of the interstate right-of-way. Construction of the race track and facilities started in 1958, and included a shallow well. By 1962, the well was deepened to 65 feet below ground surface, and a centrifugal pump was installed in a well pit in the center of the track oval.

Joe Glass was an original shareholder who was involved with the business and property until it was sold in November of 2004. Joe said the centrifugal pump was purchased from a dairy farmer, and states in his affidavit that the pump was 50 horsepower (HP), which would have produced a flow rate of 2400 gpm and a flow velocity of 60 feet per second. He also stated that the pump could fill a 1,000 gallon water truck "in a couple of minutes". Energy and flow calculations can demonstrate a 5 HP pump would be capable of producing the flow described by Mr. Glass; that is, 5 HP against 50 feet of head could produce a flow rate of 300 gallons per minute (gpm) and a flow velocity of 7.6 feet per second, both of which are feasible engineering values. It is believed the pump was 5 HP with a maximum flow rate of 300 gpm.

The total volume of water consumed during the period of diversion was 19.65 acre-feet:

14 acre-feet for commercial use from 1 April to 31 October

5.5 acre-feet for domestic use from 1 January to 31 January

.15 acre-feet for livestock from 1 January to 31 January

Commercial water use is listed as primarily for dust abatement. The race track required conditioning for each event that included ripping, grading and compaction. The Valley Speedway Corporation also used water for maintenance and dust control in the parking lot and the right-of-way access road into the property. The commercial use of water can be assumed to result in a very high consumptive use, given scarification and grading averaged about 3 times per week during the summer. It is conservatively estimated that 10% of the commercial water use eventually returned to the aquifer through infiltration into the foundation and vadose zone. Therefore, consumptive use of commercial can be shown to be:

Commercial Water Consumptive Use = (90%)(14 acre-feet) = 12.6 acre-feet

Domestic water use included irrigation of 2 acres on the property. Consumptive use of 2 irrigated acres can be estimated using values from Appendix B of the NRCS Montana Irrigation Guide for the 214 day period of April through October:

April Consumptive Use = 0.38 inches = .063 acre-feet
May = 2.28 inches = 0.38 acre-feet
June = 3.48 inches = 0.58 acre-feet
July = 5.31 inches = 0.885 acre-feet
August = 4.35 inches = 0.725 acre-feet
September = 2.35 inches = 0.392 acre-feet
October = 0.53 inches = .088 acre-feet

Historic Use [ARM 36.12.1902]

AFFIDAVIT OF HISTORIC WATER USE: T10N, R3W, NE ¼ SW ¼ SECTION 5, MPM

Groundwater Certificate #411 43223-00

The Valley Speedway Corporation purchased the 40 acre property from John Rummel in August 1958. The previous land use was irrigated hay. The agricultural land was divided by the right-of-way purchase and design of the freeway.

Construction on the Valley Speedway property started in 1958, and included a groundwater well. The well depth was eventually increased to 65 feet to accommodate volumes needed for construction and maintenance and to ensure good quality water for domestic use. Water was pumped from a 50 HP centrifugal pump installed in a well pit located in the middle of the track oval.

Commercial water use was primarily to condition and maintain the race track between events and for dust control. The Valley Speedway Corporation was also responsible for grading, maintenance and dust control on the right-of-way access road connection to Montana Highway 287 (currently Montana Avenue).

The Valley Speedway property was sold by partners Joe Glass and Phyllis Marshall to Thomas and Kimberly Cohn in November 2004.

SIGNATURE Joe M Glass

DATE Sept 26 / 2007

AFFIANT JOE GLASS

9/26/07
State of Montana
at Helena
Lorri S. Mullen
my commission expires
10/18/2008
Lori S. Mullen

To Whom it May Conern:

This is to state that Valley Speedway, Inc. used the water from its pump at 1480 Valley Speedway Road, Helena, Montana, from 1962 to the present time.

I know this to be true as I was the accountant for said corporation, from 1962 to the present and whitnessed the fact that said well was used for the business.

Paul M. Lehmann

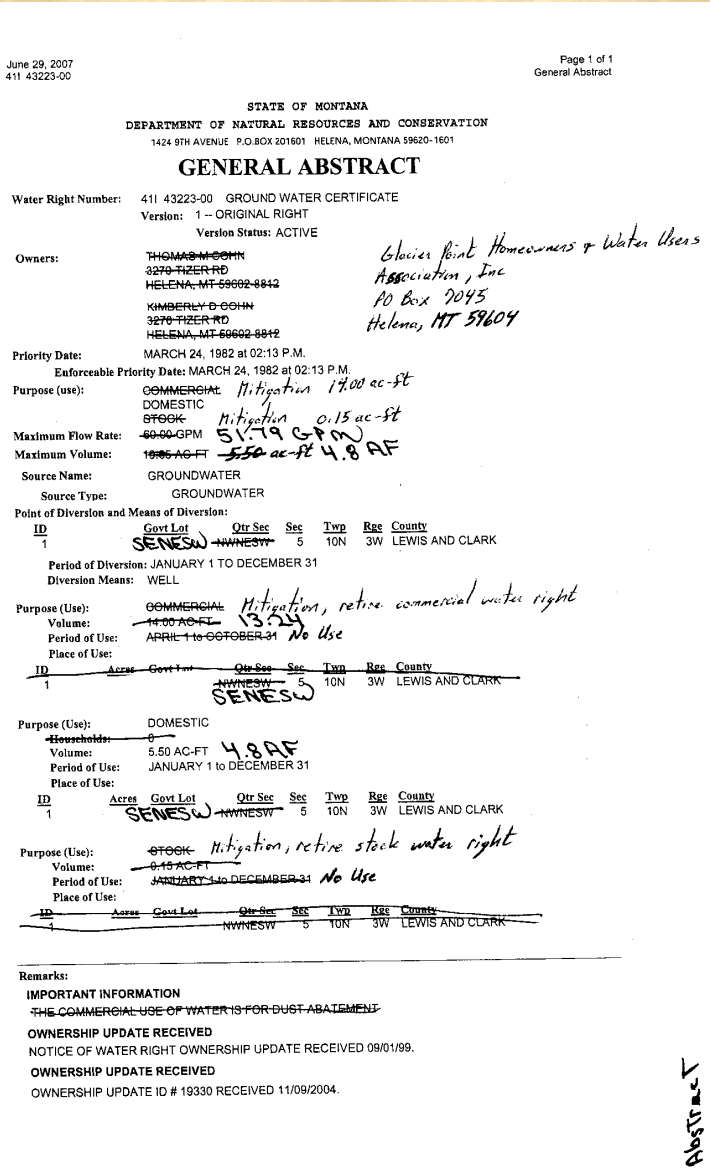
State of Montana)
(
County of Lewis & Clark)

Subscribed and sworn before me this 18th day of March, 1982

Notary Public

NOTARY PUBLIC for the State of Montana
Residing at Helena, Montana
My Commission Expires January 25, 1985

Abstract of Water Right



June 29, 2007
411 43223-00

Page 1 of 1
General Abstract

STATE OF MONTANA
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
1424 9TH AVENUE P.O.BOX 201601 HELENA, MONTANA 59620-1601

GENERAL ABSTRACT

Water Right Number: 411 43223-00 GROUND WATER CERTIFICATE
Version: 1 -- ORIGINAL RIGHT
Version Status: ACTIVE

Owners: ~~THOMAS M COHN~~
~~3270 TIZER RD~~
~~HELENA, MT 59602-8812~~
~~KIMBERLY D COHN~~
~~3270 TIZER RD~~
~~HELENA, MT 59602-8812~~
Glacier Point Homeowners & Water Users Association, Inc
PO Box 7045
Helena, MT 59604

Priority Date: MARCH 24, 1982 at 02:13 P.M.
Enforceable Priority Date: MARCH 24, 1982 at 02:13 P.M.

Purpose (use): ~~COMMERCIAL~~ Mitigation 17.00 ac-ft
DOMESTIC
~~STOCK~~ Mitigation 0.15 ac-ft
Maximum Flow Rate: ~~60.00 GPM~~ 51.79 GPM
Maximum Volume: ~~18.85 AC-FT~~ ~~5.50 ac-ft~~ 4.8 AF

Source Name: GROUNDWATER
Source Type: GROUNDWATER

Point of Diversion and Means of Diversion:

ID	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1	SENESW	~~NWNESW~~	5	10N	3W	LEWIS AND CLARK

Period of Diversion: JANUARY 1 TO DECEMBER 31
Diversion Means: WELL

Purpose (Use): ~~COMMERCIAL~~ Mitigation, retire commercial water right
Volume: ~~14.00 AC-FT~~ 13.29
Period of Use: ~~APRIL 1 to OCTOBER 31~~ No Use
Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1			~~NWNESW~~ SENESW	5	10N	3W	LEWIS AND CLARK

Purpose (Use): DOMESTIC
~~**Households:** 0~~
Volume: 5.50 AC-FT 4.8AF
Period of Use: JANUARY 1 to DECEMBER 31
Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1		SENESW	~~NWNESW~~	5	10N	3W	LEWIS AND CLARK

Purpose (Use): ~~STOCK~~ Mitigation, retire stock water right
Volume: ~~0.15 AC-FT~~
Period of Use: ~~JANUARY 1 to DECEMBER 31~~ No Use
Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
~~1~~			NWNESW	5	10N	3W	LEWIS AND CLARK

Remarks:

IMPORTANT INFORMATION
~~THE COMMERCIAL USE OF WATER IS FOR DUST ABATEMENT~~

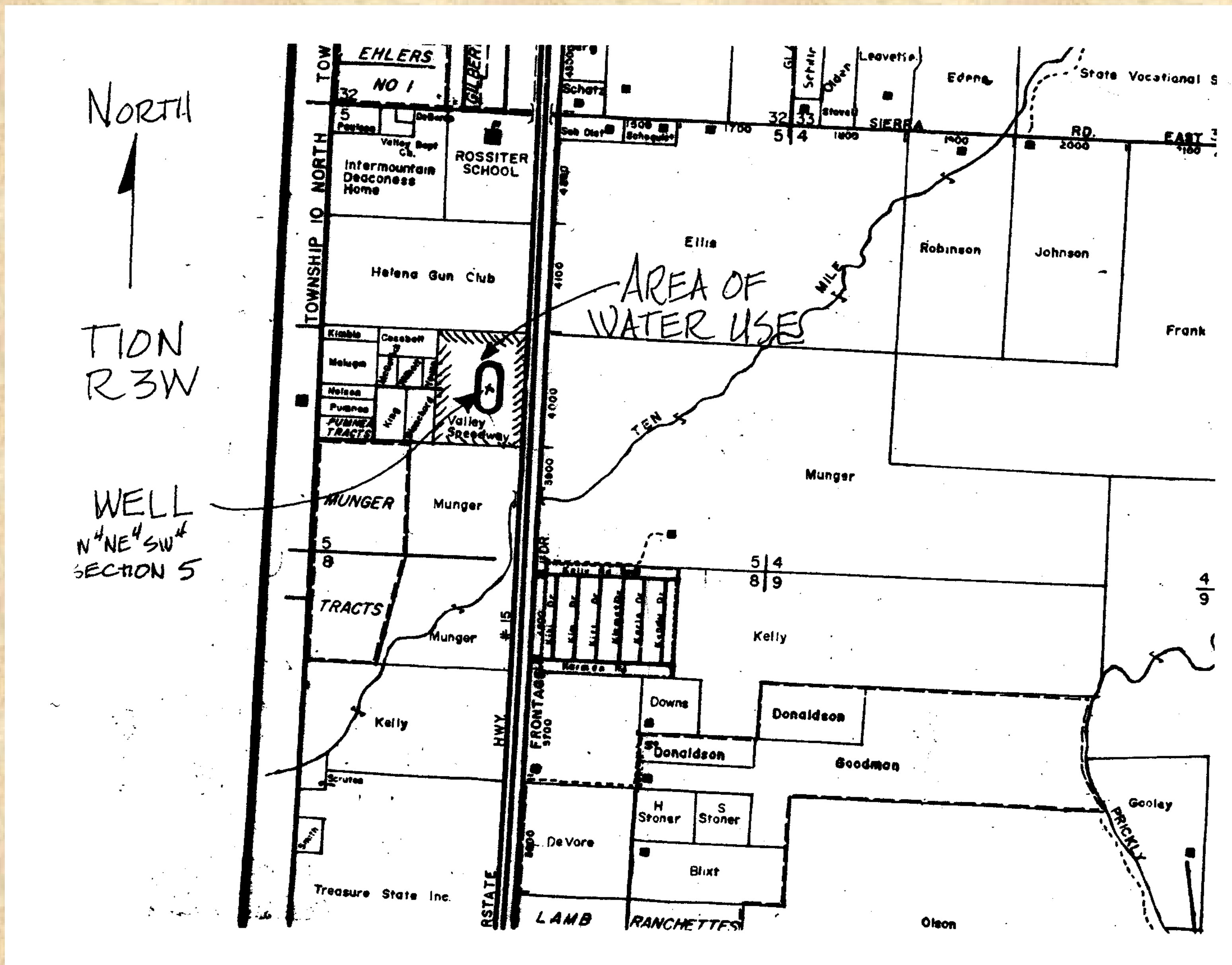
OWNERSHIP UPDATE RECEIVED
NOTICE OF WATER RIGHT OWNERSHIP UPDATE RECEIVED 09/01/99.

OWNERSHIP UPDATE RECEIVED
OWNERSHIP UPDATE ID # 19330 RECEIVED 11/09/2004.

Abstract

- Abstract modified to show how the water right will be if the change were approved

Map



NORTH
TION
R3W
WELL
N¼ NE¼ SW¼
SECTION 5
AREA OF
WATER USE
EHLERS
NO 1
TOWNSHIP 10 NORTH
Intermountain Deaconess Home
ROSSITER SCHOOL
Helena Gun Club
Valley Speedway
MUNGER
Munger
TRACTS
Kelly
Treasure State Inc.
INTERSTATE HWY # 15
FRONTAGE RD.
Ellis
Robinson
Johnson
Frank
TEN MILE
SIERRA RD. EAST
State Vocational S
Edens
Leavetie
Schatz
Downs
Donaldson
Goodman
H Stoner
S Stoner
Gooley
PRICKLY
DeVore
Bluxt
Olson
LAMB RANCHETTES

Change Criteria Addendum

ADDENDUM TO
APPLICATION TO CHANGE A WATER RIGHT

To deem the application correct and complete, an application must include the required information found in ARM, 36.12.1801 and 1802 and 36.12.1903 and 1904. To grant an application, per Section 85-2-402, MCA, the appropriator must prove by a preponderance of evidence the criteria are met. It is the Applicant's responsibility to provide credible, relevant, and factual information upon which the Department may rely to support granting a change authorization.

Criteria for Issuance of Authorization to Change

A) Provide substantial, credible information proving the proposed change will not adversely affect the use of existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued.

The total consumptive use determined by the hydrogeologic assessment of the proposed Glacier Point Subdivision is 13.24 acre-feet. The consumptive use will result in a net stream depletion of lower Tenmile Creek that approaches the total consumptive use after 100 years following full development of the project.

Existing surface water appropriations that could potentially be affected by net stream depletion include WR #411 214540 00 (Statement of Claim, Montana State Board of Land Commissioners, 3.93 cfs for seasonal irrigation of 135 acres) and WR #411 30017596 (Water Reservation, Montana Department of Fish, Wildlife and Parks, 12 cfs year-round and 8,687 acre-feet per year). Neither appropriation would be adversely affected by the proposed groundwater appropriation and subsequent net stream depletion of .0183 cfs.

The change application would retire existing water rights equivalent to the maximum possible net stream depletion resulting from the Glacier Point use of groundwater in order to mitigate any potential impacts, however insignificant, to Tenmile Creek or existing appropriations. The change application would not result in any adverse impacts, but would lessen the long term affects of historical over appropriation of water use in Tenmile Creek.

The radius of influence of the Glacier Point wells has been determined to be 11,700 feet, and existing groundwater rights within the zone of influence are potentially affected by the proposed withdrawal. Groundwater drawdown contours within the zone of influence project drawdown of 0.1 feet at a distance of 2,500 feet, 0.2 feet at a distance of 637 feet, and 0.3 feet at a distance of 237 feet from the Glacier Point wells.

The nearest existing wells are about 1,000 feet from the proposed diversion. Interference drawdown at these wells would be about two inches as a result of the Glacier Point withdrawal.

Retirement of 13.24 acre-feet of the #411 43223-00 Groundwater Certificate to mitigate impacts of the Glacier Point proposal would reduce projected interference drawdown on existing appropriations within the zone of influence by about 32%. There would be no adverse impacts to senior groundwater users from the Glacier Point proposal, and the retirement of 13.24 acre-feet proposed in the change application would lessen potential impacts.

Attached maps show the Area of Existing Appropriations within the Zone of Influence of Glacier Point Wells and Drawdown Contours within the Zone of Influence of Glacier Point Wells.

B) Describe the proposed means of diversion, construction, and operation of the diversion works and provide substantial credible information proving the diversion, construction and operation are adequate.

The change application will retire existing water rights appropriated with Groundwater Certificate #43223-G411 to mitigate potential impacts of the proposed Glacier Point Subdivision. Therefore, the means of diversion will not be applicable to the requested change.

C) Provide substantial credible information to prove the proposed change is a beneficial use of water and that the amounts are reasonable for the purpose intended.

The change application will retire existing water rights appropriated with Groundwater Certificate #43223-G411 to mitigate potential impacts of the proposed Glacier Point Subdivision. Retirement of the water rights will be beneficial to assisting the overall recovery of water resources damaged by years of over appropriation of surface water in Tenmile Creek, and will reduce impacts resulting from interference drawdown on senior groundwater users.

NOTICE

Additional information is required if the proposed change in purpose of use or place of use involves 4,000 acre-feet or more and 5.5 cubic feet per second or more of water per year; the proposed change is for withdrawal and transportation for use outside the state; or the application is for salvaged water. See 85-2-402, MCA.

Review for Correct and Complete (C&C)

- Does the application meet the requirements in rule? [ARM, 36.12.1601]
- Are all the parts of the application form filled in and correct (including a map & abstract)?
- Have all of the criteria in 85-2-402 been addressed?
- Does the information conform to the standard of substantial credible information?

Form Checklist

FORM 606 CHECKLIST

CHG30028566-411 Application Number | **Glacier Point Homeowners** Applicant's Name | **Kathy Arndt** Reviewed By

FORM CHECK - Information must meet the rule requirements.

	OK	NOK	NA	
1.	☒	☒		Water Right was transferred
2.	☒	☐		
3.	☒	☐		
4.	☒	☐		
5.	☒	☐		
6.A.(a)	☒	☐	☐	Very little historic information is available
6.A.(b)	☒	☐	☐	
6.A.(c)	☒	☐	☐	
6.A.(d)	☒	☐	☐	
6.A.(e)	☒	☐	☐	
6.A.(f)	☒	☐	☐	
6.A.(g)	☒	☐	☐	
6.A.(h)	☐	☐	☒	
6.A.(i)	☐	☐	☒	
6.A.(j)	☐	☐	☒	
6.A.(k)	☐	☐	☒	
6.B.(a)	☒	☐	☐	
6.B.(b)	☒	☐	☐	
6.B.(c)	☒	☐	☐	
6.B.(d)	☒	☐	☐	
6.C.	☒	☐	☐	
6.D.	☐	☐	☒	
7.A.	☒	☐	☐	
7.B.	☒	☐	☐	
7.C.	☒	☐	☐	
7.D.	☒	☐	☐	
7.E.	☐	☐	☒	

Comments: The water right was used at the Valley Speedway for dust abatement, drinking water, lawn and garden irrigation and stock use.

PROCESSING CHECK

OK	NOK	NA		
☒	☐		606 APPLICATION FEE	
☒	☐		OWNER NAME/ADDRESS STANDARDIZED	
☒	☐		CHANGE APPLICANT IS OWNER OF RECORD	
☐	☐	☒	ASSOCIATED RIGHTS – COPIES IN FILE—FLAGS PREPARED—REMARKS CODED	
☒	☐		NOTICE AREA MAP COMPLETED	
☒	☐		EA COMPLETED	DATE 11/28/07
☒	☐		EA EMAILED TO EQC AND DNRC	DATE 11/28/07
☐	☐	☒	EXEMPT FORM 627 REQUIRED ☐ EXEMPT FILE MADE	☐ EXEMPT RECORD CODED

ACTIONS TAKEN - Events Coded in Oracle

YES	NO	NA		
☐	☒	☐	612 SENT DATE _____	SIGNED 612 RETURNED DATE _____
☒	☐	☐	RULES DEFICIENCY LETTER SENT	DATE 08/14/2007
☒	☐	☐	DEFICIENCY RESPONSE RECEIVED	DATE 10/26/2007
☒	☐	☐	APPLICATION DEEMED CORRECT & COMPLETE	DATE 10/26/2007
☐	☐	☐	PRELIMINARY CRITERIA ASSESSMENT COMPLETED	
☐	☐	☐	FILE REVIEWED BY WATER MANAGEMENT BUREAU	
☐	☐	☐	PUBLIC NOTICE WAIVED—AUTHORIZATION ISSUED	
☐	☐	☐	APPLICATION PUBLISHED _____	OBJECTION DEADLINE _____
☐	☐	☐	FINAL CRITERIA ASSESSMENT SIGNED	
☐	☐	☐	AUTHORIZATION ISSUED	

FORM 606 CHECKLIST

36.12.1902 *Change Application - Historic Use*

Yes	No	NA	
☒	☐	☐	(2) The amount of water being changed for each water right cannot exceed or increase the flow rate historically diverted under the historic use, nor exceed or increase the historic volume consumptively used under the existing use.
☐	☐	☒	(3) An applicant shall compare historical acres irrigated to acres identified as irrigated in the Water Resources Survey, if available for the place of use. If the Water Resources Survey does not support the historical irrigation alleged in the application, the applicant shall explain why. Information from irrigation journals or logs or old aerial photographs can be submitted for consideration.
☐	☐	☒	(4) If an applicant provides a "best available estimate" to any element or requirement in (5) through (7), an explanation of how the estimate was derived must be included. For example, best available estimates might be based on the following: (a) aerial photographs depicting irrigated land; (b) aerial or other photographs showing diversion or conveyance structures; (c) Water Resources Survey book information; (d) Water Resources Survey field notes; (e) water commissioner field notes; (f) natural resources conservation service information; (g) affidavits from persons with first-hand knowledge of historic use; (h) calculation of historic ditch capacities; (i) log books or diaries of previous irrigators; or (j) other information that provides independent corroboration of the historic use that allows reasonable estimates of historic diversion and historic consumption.
☒	☐	☐	(5) The applicant shall provide a narrative of the historic use of each water right being changed. The description must be based on actual physical measurements when available and use commonly accepted hydraulic principles. The narrative must contain the following: (a) the maximum flow rate diverted from each point of diversion listed on the water right during the period of diversion; (b) total volume of water consumed for each water right during the period of diversion; (c) a description of how and when unconsumed water returns to a ground or surface water source and how that return flow volume was calculated; and (d) documentation of the basis of all data used in the analysis, methods of analysis and calculations.
☒	☐	☐	(6) The applicant shall provide written documentation explaining the historic use and how the information was acquired to substantiate the following elements of each water right proposed to be changed: (a) point of diversion; (b) period of diversion; (c) volume used for each purpose; (d) period of use for each purpose; (e) place of use for each purpose; (f) maximum number of acres historically irrigated; (g) means of conveyance; (h) location of reservoir; (i) maximum volume in acre-feet of water stored; (j) maximum number of times a reservoir was filled during a year; and (k) maximum period of time when water was collected for storage.
☒	☐	☐	(7) A narrative must be included in the application materials explaining the historic operation of the right, including flow rate, volume, period of diversion, period of use, and period of storage are reasonable and typical of the purpose for which the historic right was used.

Correct & Complete Criteria Check

36.12.1903 CHANGE APPLICATION - ADVERSE EFFECT

☒ (1) The applicant must identify the water rights which the applicant determines may be affected by the changes the applicant is proposing to make and must provide a department general abstract of the water rights identified.

☒ (2) The applicant must identify, analyze, and document the effects to the other water rights including, but not limited to, the following:
- (a) water rights using the existing or proposed point of diversion;
- (b) other ditch users;
- (c) down-slope water users;
- (d) the effect to water rights dependent on the return flow;
- (e) the effects of changing the historic diversion pattern including rate and timing of depletions;
- (f) for ground water applications, the applicant shall explain how the changed water right will affect water levels in wells of junior and senior water rights and the rate and timing of depletions from hydraulically connected surface waters, and what effect those changes will have on those water rights within the notice area.

☒ (3) A comparison between the historic consumptive use of the water rights being changed and the consumptive use if the change application was granted must be included with the application.

☒ (4) After an application is deemed correct and complete, for public notice purposes, the department shall, independent of the information provided by the applicant under this chapter, identify existing water right owners that may be affected by the proposed application.

36.12.1904 CHANGE APPLICATION CRITERIA - ADEQUATE DIVERSION MEANS AND OPERATION

☒ (1) The diversion works must be capable of diverting the amount of water requested to accomplish the proposed use without unreasonable loss through design or operation.

☒ (2) Preliminary design plans and specifications for the current and/or proposed diversion and conveyance facilities and the equipment used to put the water to beneficial use must be submitted with the application including the following:
- (a) a description of the historical operation, including the typical diversion schedule from the point of diversion to the place of use;
- (b) a description of how the proposed water right will be operated, from point of diversion through the place of use and on through the discharge of water, if any;
- (c) the historic and proposed flow rate and volume design capacity;
- (d) the historic efficiency and the projected overall efficiency, including diversion, conveyance, and system efficiencies.

☒ (3) The diversion works must conform to current design, construction, and operation standards.

FORM 606 CHECKLIST

36.12.1801 PERMIT AND CHANGE APPLICATIONS – BENEFICIAL USE

☒ (2) The applicant must explain the following:
(a) how the purpose for the water benefits the applicant; and

☒ (3) An application to change must contain information explaining why the requested flow rate and volume to be changed are reasonable for the intended purpose.

36.12.1802 PERMIT AND CHANGE APPLICATIONS – POSSESSORY INTEREST

☒ The applicant signed the statement on the application form, Section 4.

REMINDERS – ALL CHANGES (if answered NO, explain)

YES	NO		
☒	☐	The period of diversion will remain the same.	
☒	☐	The change is for in-state use.	
☐	☐	If multiple water rights are being changed, will the diversion, place of use, purpose, or storage information be exactly the same upon completion of the project?	NA

REPLACEMENT WELLS – Greater than 35 GPM

☐	☐	Copies of old and new well logs are included.	NA
☐	☐	Both wells are in the same aquifer.	NA
☐	☐	Old well is abandoned.	NA

FOR REPLACEMENT or NEW RESERVOIRS

☐	☐	Dam is under 50 AF? If not, remind the applicant of the dam safety requirements.	NA
☐	☐	Period of diversion is same as original right.	NA

COMMENTS:

This is an application for mitigation (aquifer recharge).

Potential Affected Area for Notice

NOTICE AREA

Application No. **CHG 30028566-41I** Regional Office #5

Applicant's Name **Glacier Point Homeowners & Water Users Assn, Inc**

SB Decree [X] Yes [ ] No

Non – SB Decree [ ] Yes [X] No If yes, Case # _____

Indian Reservation [ ] Yes [X] No If yes, Reservation _____

Irrigation District [X] Yes [ ] No If yes, District **Helena Valley Irrigation Dist**

Specialist **Kathy Arndt** Date **October 16, 2007**

Attach a USGS or Resource Survey map identifying area of possible adverse affect.

Water Right Owner	Water Right # (Basin, ID, and Number)
Applicant—Glacier Point Homeowners & Water Users Assn, Inc	**CHG 30028566-41I**
1BIA	
1PPL	
1FWP	
2FWP	
1FWS	
1WQB	
1DSL	
1TUL	
1MWT	
5FWS	
5HLN	
#11492 – City of Helena	
1SCH	
5WQD	
5MEI	
5HVI	
5JBL	
5DMA	
5SMW	
5TEN	
SEE ATTACHED LIST FOR INDIVIDUAL OWNERS	
Consultant: DBEC 279837	
% Faron Henderson	
1617 Euclid Ave Ste 5	
Helena MT 59601-2048	

PUBLISHED IN: Independent Record

Remarks:

Water Right Review Area:

Twp 10N, Rge 3W, Secs. 5, 6, 8

Deficiency Letter

- All rule or criteria (402) deficiencies in the application identified in a letter to the applicant
- Applicant given 30 days to submit missing or additional information or data or clarification
- If received untimely, application date changed to date information is received
- Application must be terminated after 90 days if application is not made C&C

Deficiency Letter

D' 'ARTMENT OF NATUR .
RESOURCES AND CONSERVATION
HELENA WATER RESOURCES REGIONAL OFFICE

BRIAN SCHWEITZER
GOVERNOR

DIRECTOR'S OFFICE (406) 444- 2074
TELEFAX NUMBER (406) 444-2684

STATE OF MONTANA

HELENA REGIONAL OFFICE PHONE: (406) 444-6999
TELEFAX NUMBER: (406) 444-9317

1424 9TH AVENUE
PO BOX 201601
HELENA, MT 59620-1601

August 14, 2007

Faron Henderson
1617 Euclid Ave Ste 5
Helena MT 59601-2048

SUBJECT: Application To Change No. 30028566-41I (Glacier Point Homeowners)

Dear Water Right Applicant,

The Department of Natural Resources and Conservation (DNRC) has begun reviewing your application. An applicant is required to submit a correct and complete application. An application deemed correct and complete can advance to the next stage of the application process, but does not entitle an applicant to a change authorization. Providing correct and complete information is not necessarily the same as proving the statutory criteria. The department, with or without receipt of objections can only grant an application if the criteria for issuance of a permit or change application are met.

The DNRC determines if the application is correct and complete based on adopted rules. As required by 85-2-302, MCA, this letter is to notify the applicant of any defects in the application and to identify the rule that has not been met. The defects in your application are listed below.

36.12.1801 CHANGE APPLICATIONS - BENEFICIAL USE

(3) Application to change must contain information explaining why the requested flow rate and volume to be changed are reasonable for the intended purpose.

36.12.1802 CHANGE APPLICATIONS - POSSESSORY INTEREST

(2) If a representative of the applicant signs the application form affidavit, the representative shall state the relationship of the representative to the applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.

(3) The department may require a copy of the written consent of the person having the possessory interest.

(6) Only an owner of record, as shown in the department's water right records, can apply to change a water right, except if a change application is for a water right lease pursuant to 85-2-436, MCA, the change applicant must be the state of Montana, department of fish, wildlife, and parks.

36.12.1901 FILING A CHANGE APPLICATION

(1) An application to change a water right (form no. 606) and applicable addendum must be filed when an applicant desires to change the point of diversion, place of use, purpose of use, or place of storage of a water right.

(2) A change application must contain sufficient factual documentation to constitute probable believable facts sufficient to support a reasonable legal theory upon which the department should proceed with the application.

(4) Form no. 606 and applicable addendum must be filled in with the required information.

(7) A current detailed water right abstract of each water right being changed must be submitted with proposed changes noted on the abstract. The abstract should reflect how the water right would appear if the change application was granted.

(10) Calculations showing how the historic and proposed flow rate, volume, and capacity were determined must be included in the application materials and the methodology employed must be described.

(12) The proposed diverted and consumed volume of water must be identified for each changed right. The diverted volume will likely be greater than the consumed volume. The consumed volume may include plant use, seepage water, wastewater, and deep percolation water. The consumed volume cannot include return flow.

(13) The time needed to complete and put the changed project into operation must be identified. Information must be included in the application materials that justify the requested time. The justification must include information that would lead a person not familiar with the project to conclude the period requested is reasonable and needed to complete the change and put the changed water right to use.

(b) a current department generated water right abstract of each water right being changed must be submitted. The proposed changes must be noted on the abstract. The abstract should reflect how the water right would appear if the change application was granted.

(c) the applicant must show that each water right to be changed has been used and must explain the extent of the historic use including the flow rate and volume.

36.12.1902 CHANGE APPLICATION - HISTORIC USE

The department must consider historical use in determining whether changing the water right would constitute an enlargement in historic use of the original water right.

(5) The applicant shall provide a narrative of the historic use of each water right being changed. The description must be based on actual physical measurements when available and use commonly accepted hydraulic principles. The narrative must contain the following:

(a) the maximum flow rate diverted from each point of diversion listed on the water right during the period of diversion;

Deficiency Letter

Comments: We need an explanation of the historic flow rate. How was it determined? Is there a well log or other information relating to the flow rate? How deep was the well? What was the make and model of the pump and the horse power of the motor?

(b) total volume of water consumed for each water right during the period of diversion;

(c) a description of how and when unconsumed water returns to a ground or surface water source and how that return flow volume was calculated; and

(c) volume used for each purpose;

(d) period of use for each purpose;

(e) place of use for each purpose;

(f) maximum number of acres historically irrigated

36.12.1904 CHANGE APPLICATION CRITERIA - ADEQUATE DIVERSION MEANS AND OPERATION

(1) The diversion works must be capable of diverting the amount of water requested to accomplish the proposed use without unreasonable loss through design or operation.

(a) a description of the historical operation, including the typical diversion schedule from the point of diversion to the place of use;

(b) a description of how the proposed water right will be operated, from point of diversion through the place of use and on through the discharge of water, if any;

(c) the historic and proposed flow rate and volume design capacity;

(d) the historic efficiency and the projected overall efficiency, including diversion, conveyance, and system efficiencies.

36.12.1903 CHANGE APPLICATION - ADVERSE EFFECT

(f) for ground water applications, the applicant shall explain how the changed water right will affect water levels in wells of junior and senior water rights and the rate and timing of depletions from hydraulically connected surface waters, and what effect those changes will have on those water rights within the notice area.

(1) The applicant must identify the water rights which the applicant determines may be affected by the changes the applicant is proposing to make and must provide a department general abstract of the water rights identified.

(f) for ground water applications, the applicant shall explain how the changed water right will affect water levels in wells of junior and senior water rights and the rate and timing of depletions from hydraulically connected surface waters, and what effect those changes will have on those water rights within the notice area.

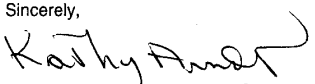
(3) A comparison between the historic consumptive use of the water rights being changed and the consumptive use if the change application was granted must be included with the application.

(4) After an application is deemed correct and complete, for public notice purposes, the department shall, independent of the information provided by the applicant under this chapter, identify existing water right owners that may be affected by the proposed application.

Comments: This application must be able to stand alone. You must provide the information required on the Addendum for this Application to Change a Water Right, whether or not it has been previously submitted.

This is the only deficiency letter that will be sent. If you have any questions, please call me.

Sincerely,



Kathy Arndt, Water Resources Specialist
Helena Water Resources Regional Office

Phone 406-444-6862
Fax 406-444-9317
E-mail karndt@mt.gov

Copy to: Glacier Point Homeowners & Water Users Assoc, Inc
PO Box 7045
Helena MT 59604-7045

IMPORTANT INFORMATION: If all of the requested information in the deficiency letter is postmarked and submitted to the department within **30 days (September 14, 2007)** of the date of the deficiency letter or an extension of time of no more than 15 days, the priority date on a permit application will not be changed, or for change applications, the date received will not be changed. A request for extension of time must be submitted in writing. If all of the requested information in the deficiency letter is postmarked or submitted within 31 to **90 days (November 14, 2007)** of the date of the deficiency letter unless extended, the permit application priority date will be changed to the date when the department receives all of the requested information, or for a change application, the date received will be changed. If all of the requested information in the deficiency letter is not postmarked or submitted within 90 days of the date of the deficiency letter, the permit or change application will be terminated and the application fee will not be refunded.

Response to Deficiencies

DBEC INC.
Design, Build, Engineering & Consulting

RECEIVED
OCT 26 2007
DNRC-HRO

18 October 2007

Department of Natural Resources and Conservation
Helena Water Resources Regional Office
Attn: Kathy Arndt, Water Resources Specialist
1424 9th Avenue, P.O. Box 200901
Helena, MT 59620-1601

Application to Change No. 30028566-411 (Glacier Point Homeowners)

Dear Kathy,

This submittal is in response to your letter of 14 August 2007 regarding defects in our change application, and the results of our meeting of 17 October. Per your comments, ARM 36.12.1902 Change Application – Historic Use is addressed, and applicable sections of the original submittal are revised. In addition, the Addendum to Application to Change a Water Right is resubmitted, and has been revised to include potential adverse impacts to senior groundwater appropriations.

ARM 36.12.1902 Change Application – Historic Use

Historic use information and narrative is based on the following attached documentation:

March 1982 Affidavit of Water Use, Paul Lehmann

March 1982 Notice of Completion of Groundwater Development

June 1982 Certificate of Water Right 43223-G411

November 2004 General Abstract Ownership Update ID #19330

September 2007 Affidavit of Historic Water Use, Joe Glass

The Valley Speedway Corporation purchased the 40 acre property in August 1958. The previous land use was irrigated hay, and the 40 acres were split from the agricultural tract by establishment of the interstate right-of-way. Construction of the race track and facilities started in 1958, and included a shallow well. By 1962, the well was deepened to 65 feet below ground surface, and a centrifugal pump was installed in a well pit in the center of the track oval.

Joe Glass was an original shareholder who was involved with the business and property until it was sold in November of 2004. Joe said the centrifugal pump was purchased from a dairy farmer, and states in his affidavit that the pump was 50 horsepower (HP), which would have produced a flow rate of 2400 gpm and velocity of 60 feet per second. He also stated that the pump could fill a 1,000 gallon water truck "in a couple of minutes". Energy and flow calculations can demonstrate a 5 HP pump would be capable of producing the flow described by Mr. Glass; that is, 5 HP against 50 feet of head could produce a flow rate of 300 gallons per minute (gpm) and a flow velocity of 7.6 feet per second, both of which are feasible values. It is believed the pump was 5 HP with a maximum flow rate of 300 gpm.

Historic Use

The total volume of water diverted ~~consumed~~ during the period of diversion was 19.65 acre-feet:

14 acre-feet for commercial use from 1 April to 31 October

5.5 acre-feet for domestic use from 1 January to 31 January

.15 acre-feet for livestock from 1 January to 31 January

Commercial water use is listed as primarily for dust abatement. The race track required conditioning for each event that included ripping, grading and compaction. The Valley Speedway Corporation also used water for maintenance and dust control in the parking lot and the right-of-way access road into the property. The commercial use of water can be assumed to result in a very high consumptive use, given scarification and grading averaged about 3 times per week during the summer. It is conservatively estimated that 10% of the commercial water use eventually returned to the aquifer through infiltration into the foundation and vadose zone. Therefore consumptive use of commercial can be shown to be:

Commercial Water Consumptive Use = (90%)(14 acre-feet) = 12.6 acre-feet

Domestic water use included irrigation of 2 acres on the property. Consumptive use of 2 irrigated acres can be estimated using values from Appendix B of the NRCS Montana Irrigation Guide for the 214 day period of April through October:

April Consumptive Use	= 0.38 inches = .063 acre-feet
May	= 2.28 inches = 0.38 acre-feet
June	= 3.48 inches = 0.58 acre-feet
July	= 5.31 inches = 0.885 acre-feet
August	= 4.35 inches = 0.725 acre-feet
September	= 2.35 inches = 0.392 acre-feet
October	= 0.53 inches = .088 acre-feet

Total Irrigation Consumptive Use = 3.11 acre-feet

Consumptive Use

Environmental Review

EA Form R 1/2001

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: **Glacier Point Home Owners & Water Users Association Inc.**
PO Box 7045
Helena MT 59604-7045

2. Type of action: **Application for Beneficial Water Use Permit No. 30028560-41I**

3. Water source name: **Groundwater Wells**

4. Location affected by action: **SENESW, Sec 5, Twp 10N, Rge 3W, Lewis and Clark County**

5. Narrative summary of the proposed project, purpose, action to be taken, and objectives:
The application proposes to appropriate groundwater from two wells. The wells are located in the SENESW of Sec 5, Twp 10N, Rge 3W, Lewis and Clark County. The wells are referred to PWS 1 and PWS 2. Lindsay Drilling, a licensed well driller drilled PWS 1 in January of 2006 to a depth of 167 feet. PSW 2 was drilled in February of 2006 to a depth of 167 feet. The applicant is requesting 60 gpm up to 42.17 acre-feet per. The water would be used for multiple domestic (85 households) from January 1 to December 31, and lawn and garden on 6.83 acres from April 1 to October 31 of each year. There is a 200,000 gallon concrete storage tank. The place of use the Glacier Point Subdivision located in the NESW of Sec 5, Twp 10N, Rge 3W, Lewis and Clark County.

The DNRC shall issue a water use permit to the applicant if the criteria in 85-2-311, MCA are met.

Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Montana Natural Heritage Program (MTNHP)
Montana Department of Environmental Quality (DEQ)
Bill Uthman – DNRC Hydrogeologist
Helena Valley Soil Survey, Lewis and Clark County

Part II. Environmental Review

1. **Environmental Impact Checklist:**

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

Determination: **No significant adverse impact.**
The proposed project would not affect chronically or periodically dewater streams as identified by the Department of Fish, Wildlife & Parks. The water to be diverted is from groundwater wells.

Water quality - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

Determination: **No significant adverse impact.**
The proposed project would not affect water quality in perennial streams. The water to be diverted is from groundwater wells.

Groundwater - Assess if the proposed project impacts ground water quality or supply.
If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

Determination: **No significant adverse impact.**
The applicant has demonstrated that the water for the proposed project is physically and legally available according to DNRC evaluation procedures. The nearest surface water is Tenmile Creek, which is approximately 600 feet to the south and east of the wells. This application is subject to House Bill 831, which requires a hydrogeologic assessment that predicts whether the proposed appropriation will result in a net depletion of surface water. The applicant acknowledges a potential stream depletion impact of 13.24 acre-feet per year to nearby Tenmile Creek. The applicant therefore proposes to mitigate potential impacts through mitigation. An application for mitigation has been received by the Department. See Application to Change a Water Right No. 30028566-41I

DIVERSION WORKS - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

Determination: **No significant adverse impact.**
The project would not affect streams or riparian areas. Two wells were drilled for the proposed subdivision by Lindsay Drilling, a licensed well driller. They were drilled in accordance with the Montana Board of Water Well Contractors and the Administrative Rules of Montana and subject to DEQ requirements. The well referred to as PWS 1 was drilled in January of 2006 to a depth of 167 feet. PWS 1 has an 8⅝" steel casing from +2 to 166 feet and is perforated from 136 to 154 feet. The well referred to as PSW 2 was drilled in February of 2006 to a depth of 167 feet. The well has an 8⅝" steel casing from +2 to 166 feet and is perforated from 134 to 160 feet. Both of the wells were grouted with a continuous feed of bentonite clay during installation to prevent well contamination. The pumps will be stainless steel Baron high capacity pumps powered by Franklin Electric 5 HP motors.

Application Review

- Complete Application Review Form (ARF) to document applicant's information which supports change criteria (402)
- Identify for each criteria whether additional evidence is still needed to meet criteria
- ARF and prepared public notice mailed to applicant at the same time
- Deadline for submitting additional information is the same as deadline for receipt of objections

ARF

Application Review Form

Date: November 29, 2007
Application No. CHG 30028566-41I by Glacier Point Homeowners & Water Users Assn (GWCT 43223-41I)
Reviewed By: Kathy Arndt, Water Resources Specialist

Complete a review of the application and document issues that may need to be resolved.

Application Details
This application proposes to change a portion of the flow rate, volume, purpose, point of diversion and place of use of Certificate of Water Right No. 43223-41I. The proposed change is being used to mitigate possible surface water depletion of Ten Mile Creek, due to the pumping of the public water supply wells for the Glacier Point Subdivision (Application No. 30028560-41I). The flow rate would be 8.21 gpm up to 13.24 acre-feet per year. The new purpose is mitigation. The commercial and stock water uses would be removed from this water right to supply water for aquifer recharge, a portion of the domestic purpose remains. The proposed new point of diversion and place of use of this water right will now be in the SENESW, Sec 5, Twp 10N, Rge 3W, Lewis and Clark County.

Historic Use

Water Right No.	Priority Date	Historic Flow Rate	Diverted Volume	Consumptive Volume
GWCT 43223-41I	March 24, 1982	60 gpm	19.65	
Commercial Use			14.00	12.6
Domestic			5.5	3.35
Stock			.15	.15
				16.1

The previous land use was irrigation. In August of 1958 the Valley Speedway Corporation purchased 40 acres of the agricultural tract that was divided by the right-of-way purchase and freeway. Construction of the race track and facilities started in 1958 and included a shallow well. By 1962, the well had been deepened to 65 feet and a centrifugal pump was installed in a well pit in the center of the track oval. An affidavit was submitted from Joe Glass, an original shareholder in the property. Mr. Glass stated the water was used primarily to condition and maintain the race track between events and for dust control. Information included in the file stated the well was also used for drinking water, and irrigation on approximately two acres of picnic area and parkland on the Valley Speedway property. In 1982, the well was filed on for Commercial (dust abatement), Domestic and Stock water.

The applicant provided conflicting information concerning the flow rate historically diverted. The affidavit from Mr. Glass states the horsepower of the motor was 50 hp. The applicant submitted calculations stating a 5 hp motor could produce a rate of 300 gpm. The Certificate of Water Right shows a flow rate of 60 gpm.

The applicant included calculations showing the amount of water estimated to be historically consumed. The commercial use was estimated to return 10% of the water to the aquifer, the consumptive domestic use assumed a 90% return and 100% of the stock water was assumed to be lost. The calculated consumptive volume is 16.1 acre-feet and the amount needed for mitigation is 13.24 acre-feet.

Adverse Affect
Change Application No. 30028566 was submitted to mitigate the possible affects of the Glacier Point Subdivision Public Water Supply wells on Ten Mile Creek. The amounts being changed will not be diverted but remain in the aquifer. The applicant has determined the amounts to be changed will be 8.21 gpm up to 13.24 acre-feet per year. Bill Uthman, DNRC Hydrogeologist, agreed with the net stream depletion amount in his memorandum to permit no. 30028560-41I. The commercial and stock water purposes will be retired from the water right. A portion of the domestic use will be retired but some will remain. The maximum flow rate and volume remaining on the water right would be 51.79 gpm up to 4.8 acre-feet per year for domestic purposes.

Diversion Works
There will not be a diversion of water associated to this change. The change is to be used to mitigate possible surface water depletion of Ten Mile Creek due to the pumping of the public water supply wells for the Glacier Point Subdivision. A portion of the water right will be retired and the water will remain in the aquifer.

Beneficial Use
The change is to be used to mitigate possible surface water depletion of Ten Mile Creek due to the pumping of the public water supply wells for Glacier Point Subdivision.

Possessory Interest
The applicant signed and had the affidavit on the application form notarized affirming the applicant has possessory interest in the property where the water is being used.

Public Notice

- DNRC prepares notice and mailing list and sends to applicant
- Applicant publishes notice in paper
- Application must be published in local paper for 1 week
- Existing water right owners of record sent notice of application
- Objection deadline set 30 days from publication date

Public Notice

RECEIVED
DEC 10 2007
D.N.R.C.

PUBLIC NOTICE

Notice to Water Users
(Pursuant to Section 85-2-307, MCA)
The following application has been submitted to change a water right in the State of Montana.

Application Number : 41I 30028566

Applicant : GLACIER POINT HOME OWNERS & WATER USERS ASSN INC

WATER RIGHT NUMBER(S) BEING CHANGED

Water Right Type	Water Right Number	Priority Date
GROUND WATER CERTIFICATE	41I-43223	MARCH 24, 1982

PAST USE OF WATER

THE WATER IS DIVERTED FROM A GROUNDWATER WELL AT A POINT IN THE NWNESW, OF SEC 5, TWP 10N, RGE 3W, LEWIS AND CLARK CO. DIVERSION OCCURS FROM JANUARY 1 TO DECEMBER 31 AT A RATE OF 60 GPM UP TO 19.65 ACRE-FEET PER YEAR. THE WATER IS USED FOR COMMERCIAL (DUST ABATEMENT) DOMESTIC AND STOCK WATER. THIS WAS THE SITE OF THE VALLEY SPEEDWAY. THE PLACE OF USE IS THE NESW OF SEC 5, TWP 10N, RGE 3W, LEWIS AND CLARK COUNTY.

PROPOSED CHANGE

FLOW RATE: 8.21 GPM **VOLUME:** 13.24 AC-FT

THIS APPLICATION PROPOSES TO CHANGE A PORTION OF THE FLOW RATE, VOLUME, PURPOSE, POINT OF DIVERSION AND PLACE OF USE OF CERTIFICATE OF WATER RIGHT NO. 43223-41I. THE PROPOSED CHANGE IS BEING USED TO MITIGATE POSSIBLE SURFACE WATER DEPLETION OF TEN MILE CREEK, DUE TO THE PUMPING OF THE PUBLIC WATER SUPPLY WELLS FOR THE GLACIER POINT SUBDIVISION (APPLICATION NO. 30028560-41I). THE NEW PURPOSE IS MITIGATION. THE COMMERCIAL AND STOCKWATER USES WILL BE REMOVED FROM THIS WATER RIGHT TO SUPPLY WATER FOR AQUIFER RECHARGE, A PORTION OF THE DOMESTIC PURPOSE REMAINS. THE PROPOSED NEW POINT OF DIVERSION AND PLACE OF USE OF THIS WATER RIGHT WILL NOW BE IN THE SENESW, SEC 5, TWP 10N, RGE 3W, LEWIS AND CLARK COUNTY.

OBJECTIONS TO THIS APPLICATION MUST BE FILED ON AN OBJECTION TO APPLICATION, FORM NO. 611. MAIL THE COMPLETED OBJECTION FORM AND $25.00 FILING FEE TO THE DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION, PO BOX 201601, HELENA, MT 59620-1601. **OBJECTIONS MUST BE POSTMARKED ON OR BEFORE** January 12, 2008. THE OBJECTION TO APPLICATION FORM IS AVAILABLE FROM THIS DEPARTMENT OR CAN BE OBTAINED FROM THE INTERNET AT http://www.dnrc.mt.gov/wrd. ANY QUESTIONS REGARDING THIS APPLICATION SHOULD BE DIRECTED TO THE WATER RESOURCES REGIONAL OFFICE,
1424 9TH AVENUE, PO BOX 201601, HELENA, MT 59620-1601 FAX: 406-444-9317 PHONE: 406-444-6999

PUBLISHED IN: INDEPENDENT RECORD ON ~~November~~ December 13, 2007

Criteria Assessment

- **If <u>no</u> objections and,**
- **Criteria in 85-2-402 are met**
  - Criteria Assessment is prepared to document information and evidence submitted by the applicant proving the criteria in 85-2-402 has been met
  - Change Authorization issued

Statement of Opinion

- **If no objections and,**
- **Evidence on criteria (85-2-402) not sufficient to prove by a preponderance of evidence**
  - Statement of Opinion prepared to document information and evidence submitted by applicant on criteria that have been met
  - Identify and document why a criteria has not been met
  - Propose to modify or deny
  - Applicant may request show-cause hearing within 30 days

Hearing

- Objections received and copies sent to applicant
- Regional office may help with mitigation
- Application submitted to hearings unit for scheduling
- Examiner appointed and hearing date set
- Hearing held, Proposal for Decision issued
- Exceptions may be filed with a request for Oral Argument
- Oral Argument hearing held (if requested)
- Final Order issued

DNRC
Water Resources Division
Water Rights Website

http://dnrc.mt.gov/wrd/default.asp

Forms

Administrative Rules

Hearing Information

Regional Office contact info

Terri McLaughlin – tmclaughlin@mt.gov – 406-444-6631