

**BEFORE THE DEPARTMENT OF
NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA**

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IN THE MATTER OF APPLICATION FOR)	
BENEFICIAL WATER USE PERMIT)	
NO.76LJ-30025385 BY BUFFALO)	FINAL ORDER
MOUNTAIN, LLC)	

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Pursuant to its authority under Montana Code Annotated §§ 2-4-601 *et seq.*, and 85-2-310, and Mont. Admin. R. 36.12.201 *et. seq.*, and 36.12.501 *et seq.*, and upon the request of Applicant Buffalo Mountain, LLC, the Department of Natural Resources and Conservation (Department) conducted a show cause hearing in this matter on March 12, 2009, to allow Buffalo Mountain, LLC, hereinafter referred to as “Applicant” for the above application, to show cause why the Application For Beneficial Water Use Permit should not be denied under the terms specified in the Statement of Opinion, (SOP), issued by the Department on January 8, 2009. The show cause hearing provided the Applicant an opportunity to present additional written and/or oral evidence and argument. This Final Order must be read in conjunction with the January 8, 2009 SOP. The Application proposes to divert water from January 1 to December 31 at 120 gallons per minute (gpm) up to 146.45 acre-feet (af) from two ground water wells. The water from these wells is to be used for multiple domestic and lawn and garden use for the Buffalo Mountain Subdivision. Water for domestic use would be 101 acre-feet, January 1 through December 31, and 45.45 acre-feet for lawn and garden, May 1 through September 30.

APPEARANCES

Applicant Buffalo Mountain, LLC appeared at the hearing by and through counsel, Mr. Ross Miller, Carlo Arendt and Gary Andres consultants representing PBS & J Inc. and Tim Hinderman of Buffalo Mountain, LLC.

EXHIBITS

Applicants offered two exhibits, SC A1 and SC A2, for the record. The Hearing Examiner accepted and admitted into evidence Applicant’s Exhibits SCA1 and SC A2.

EXHIBIT #s	EXHIBIT DESCRIPTION	AUDIO TRACK
SC A-1	Public Water Supply Wells Application for Beneficial Water Use Permit – Supplement Show Cause Analyses	14:00
SC A-2	Letter, March 9, 2009 reducing the requested volumes be reduced to meet requirements of the Water Conservation Agreement dated October 28, 2008	42:25

PRELIMINARY MATTERS

All of the testimony offered by the Applicant was accepted into the record. This must be read in conjunction with the January 8, 2009 SOP as the show cause hearing was held to address the denial of the Application for the reasons set forth in the SOP. This decision considers the new evidence and arguments information presented by Applicant at the hearing and constitutes the Final Order on this Application. The Application was denied in a SOP from Kalispell Unit Office Manger Marc Pitman on January 8, 2009, the contents of which is hereby incorporated by reference. The Application was proposed to be denied based on failure to prove the criteria of Physical Availability, Legal Availability, Adverse Effect and Beneficial Use, Mont. Code Ann. §85-2-311 (a)(i & ii)(b)(d). Criteria related to Adequacy of Diversion, Possessory Interest and Water Quality were addressed in the Statement of Opinion and were not part of this hearing, Mont. Code Ann 85-2-311(c)(e) and (f). The Applicant on January 20, 2009 requested a show cause hearing and a show cause hearing was held on March 12, 2009. The issues at the hearing to be addressed were Physical Availability, Legal Availability, Adverse Effect and Beneficial Use.

The Hearing Examiner, having reviewed the full record in this matter and being fully advised in the premises, does hereby respond as follows to the Applicant’s arguments presented at the Show Cause Hearing held March 12, 2009.

Hearing Procedure

The overall summary of the SOP stated that in the opinion of the Department the Applicant did not adequately address the criteria of physical availability, legal availability, adverse effect, and beneficial use. The Show Cause Hearing was conducted in such a manner that each criteria were addressed in the order that they are discussed in the Department’s Statement of Opinion denying the application. Set out below are specific details from the

Statement of Opinion denying the application followed by the Applicant's argument on the respective criteria at the show cause hearing, the Hearing Officer's Findings of Fact on that criteria after the show cause hearing, and the Hearing Examiner's Conclusions of Law for each of the respective criteria following the show cause hearing.

Physical Availability

1. **Statement of Opinion:** Inconsistencies in drawdown data undermine the validity of the Applicant's argument that water is physically available. The Department also contends that testing may need to be performed longer than the minimum 72-hour duration to adequately address long-term sustainability. At a minimum, the Applicant needs to show that drawdown does not exceed the available column of water in the well. This may be accomplished by the use of aquifer properties from the second test and an average pumping rate for the period of diversion to calculate the drawdown in PW2 over the period of diversion.

2. **Applicant Show Cause Argument and Evidence:** Applicant's consultant, Gary Andres, testified at the show cause hearing that by extending the drawdown curve for the 2008 test shows that after pumping continuously for 163.8 days at 80.4 gpm the water in the well would still be above the pump. This is shown in Figure 3-3, page 12 of Exhibit SC A-1. Andres testified that at a pumping rate of 80.4 gpm the annual appropriation would occur after 163.8 days. Andres further testified that this would be a conservative estimate of total drawdown since actual pumping would never occur at a constant rate over the 163.8 days. 2.3 feet of water would remain above the pump based upon this analysis. Andres continued his testimony on physical availability by showing that if a more realistic scenario is modeled over 365 days using an average irrigation pumping rate in well PW-1 of 25.3 gpm and in well PW-2 of 50.7 gpm for a combined total of 76 gpm, using calibrated aquifer properties and computer modeling code THWELLS that there would be 135 and 107 feet of available drawdown remaining in PW-1 and PW-2 respectively. This was done to demonstrate the criterion of physical availability. The description of the test and results of the test are found in Exhibit SC A-1, section 3-1, pages 11-14.

3. **Hearings Examiner Finding of Fact:** Based upon testimony and the contents of Exhibit SC A-1, Section 3.1 the Applicant reevaluated the drawdown that would occur in wells PW-1 and PW-2 over the period of diversion of 365 days. This was done in order to complete

the demonstration of the criterion of physical availability. The Applicant addressed long-term physical availability for both production wells by estimating drawdown using aquifer properties that were calibrated in THWELLS software. Transmissivity values were calibrated by adjusting calculated values obtained from the analysis of drawdown data collected from 72-hour aquifer tests downward until modeling results in THWELLS closely matched measured results recorded in the two observation wells. Considering both wells, well PW-2's maximum projected drawdown for 365 days results in a 135-foot column of water above the pump. Well PW-2's maximum projected drawdown after 365 days results in a 107-foot column of water above the pump. The Applicant demonstrated that water will remain above the pumps in both wells by calculating drawdown in each well over the entire 365-day period of diversion with a combined pumping rate for both wells equivalent to the average rate during the irrigation season. The testing data and analysis supplied through testimony and Exhibits for both production wells demonstrate that the criterion of physical availability is adequately addressed.

4. **Conclusion of Law:** The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate, and in the amount requested. Mont. Code Ann. § 85-2-311(1)(a)(i).

Legal Availability of Water

1. **Statement of Opinion:** Applicant as to both ground water and surface water did not adequately identify existing legal demands on the source of supply throughout the area of potential impact by the proposed use, and did not provide an adequate 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.

2. **Applicant Show Cause Argument and Evidence:** The Applicant through consultant testimony and submission of Exhibit SC A-1 pages 14-15 discussed legal availability of ground water. The Applicant provided a revised Zone of Influence which is calculated based upon the results of the 72-hour aquifer test conducted on PW-2 in 2008 and the aquifer properties obtained from that test. A revised Zone of Influence is shown in Figure 3-6 of Exhibit SC A-1. This Zone of Influence was determined by modeling wells PW-1 and PW-2 pumping at estimated average irrigation season rates of 25.3 gpm and 50.7 gpm, respectively for the entire

365-day period of diversion using THWELLS software. The Applicant then calculated the total aquifer flux through the revised Zone of Influence by using Darcy's law with the calibrated transmissivity value of 100 feet squared per day, a Zone of Influence width of 20,729 feet and a hydraulic gradient of 0.073 feet per feet. The annual volume of water passing through the zone of influence was calculated to be 151,322 cubic feet per year or 1,268.1 acre-feet per year. The Applicant then identified all existing ground water appropriations within the Zone of Influence and determined that the existing demands were equal to 483.9 acre-feet per year. The Applicant states that if there are 784.2 acre-feet per year available for additional appropriations after the existing demands of 483.9 acre-feet per year is subtracted from the available volume of 1,268.1 acre-feet per year. The Applicant concludes that if 784.2 acre-feet per year are available for further appropriations then there are 86.86 acre feet legally available for their requested appropriation. The Applicant provided additional information regarding surface water legal availability under the adverse effect criteria. This information includes both measured flows and appropriations in Ashley Creek.

3. **Hearings Examiner Finding of Fact:** The Applicant addressed ground water physical availability by first calculating the Zone of Influence and then an estimate of the annual flux through the Zone of Influence. After calculating the available volume of ground water available in the Zone of Influence the Applicant then compared that amount to the existing demands within the Zone of Influence to the total volume of appropriations within the Zone of Influence listed in the Department's data base. Testing methods and analysis are in conformance with Department standards. This comparison shows that there is a volume of ground water legally available for appropriation from the ground water source. A comparison of the gauged flow data in Ashley Creek, the amount of water appropriated by senior users and the potential depletion of surface water by the proposed ground water diversion, presented by the Applicant under the adverse effect criteria, shows that surface water is available for any depletions caused to Ashley Creek from the ground water diversion.

4. **Conclusion of Law:** In regard to senior hydropower water rights, the facts in this application are distinguishable from those in *In the Matter of Application for Beneficial Water Use Permit No. 76N30010429 by Thompson River Lumber Co (2006) (TRLIC)* concerning the Avista Company's water rights for Noxon Reservoir. Thompson River Company's proposed diversion on the Clark Fork was surface water immediately upstream of Avista's Noxon Reservoir that had an immediate calculable adverse impact on Avista's water rights and power

production. The proposed appropriation in this case is a ground water appropriation more than 100 miles upstream of Noxon Reservoir and is located above Flathead Lake and Kerr Dam, and below the inflows from the Bureau of Reclamation's Hungry Horse Dam. Section §85-2-401, MCA, makes clear that an appropriator is not entitled under the prior appropriation doctrine to protect itself from all changes in condition of water occurrence. In this basin, which is not closed to surface or ground water appropriations, priority of appropriation for a large hydropower right that may otherwise prohibit future upstream development in the basin, does not, pursuant to §85-2-401, MCA, include the right to prevent the decrease of stream flow or the lowering of a water table or water level if the prior appropriator can reasonably exercise their water right under the new conditions. Here, the Department finds that Avista's prior appropriation in this basin which has not been closed to appropriation by the Legislature does not include the right to prevent this appropriation where Avista can reasonably exercise its hydropower water right. The application shows that water is reasonably legally available at the proposed point of diversion in the amount the Applicant seeks to appropriate, and in the amount requested, Mont. Code Ann. § 85-2-311 (1)(a)(ii).

Adverse Effect

1. **Statement of Opinion:** The Department contends that the magnitude of the drawdown in OW and the acceleration of drawdown late in the second test of PW-2 indicate that other wells might be affected by the requested appropriation. The Applicant did not extrapolate pumping effects beyond the period of the pumping test or to greater distances than wells with observed drawdown to evaluate potential for adverse effects. The application lacks evidence showing that there are no potential adverse effects to ground water or surface waters. The Applicant did not provide a plan showing the diversion, use of water and operation of the proposed project can be implemented and properly regulated during times of water shortage so that water rights of prior appropriators will be satisfied.

2. **Applicant Show Cause Argument and Evidence:** The Applicant through consultant testimony and submission of Exhibit SC A-1 pages 17-19 discussed potential adverse effect on both surface and ground water senior appropriators. This was done by analyzing information from aquifer pump tests, the results of the distance-drawdown analysis, and the analysis of a conceptual model of the aquifer and nearby surface waters. The Applicant

calculated drawdown effects on wells within the zone of influence. For the majority of these wells, (212 of 226) the impact is less than one foot of predicted drawdown. The Applicant states that this drawdown is so small that it will not impair the ability to pump the well and cannot be considered an adverse impact. For the remaining 14 wells there are 11 wells not owned by the Applicant. Of those 11 wells the estimated drawdown is predicted to be less than 3% of the available column of water. The Applicant states that the predicted drawdown in those wells will not impair the ability to pump the well and is not an adverse impact. A summary of the predicted impacts to existing ground water users is provided in Table 3-1 of Exhibit SC A-1. The Applicant states that wells to the east of the proposed diversions in the Foy's Lake area do not have any predicted drawdown. Well owners in that area that had objected to the proposed appropriation have reached an agreement with the Applicant. The agreement with prior objectors to the application is known as the Water Conservation Agreement, Buffalo Mountain and Lakeshore Heights and Eagle Ridge and Gwenda and Keith Jonas. The agreement is contained in the application file.

In the Applicant's analysis of adverse effects to surface waters the Applicant states that the bedrock aquifer, as described by the Montana Bureau of Mines and Geology (LaFave, 2004), is in hydraulic connection to the deep sand and gravel deposits of the valley. The Applicant provides a conceptual model of the bedrock aquifer and sand and gravel aquifers based upon two transects from the proposed wells, PW-1 and PW-2, the Watne Well and a third well, Hanna Well, located adjacent to Ashley Creek. These conceptual models are shown on pages 9 and 10 of Exhibit SC A-1 in figures 2-3 and 2-4. The Applicant contends that the ground water wells near Ashley Creek are well below the base of Ashley Creek. The Applicant stated that the separation between the ground water in wells and the base of Ashley Creek indicates that any further lowering of the ground water level would not increase stream depletion. The Applicant evaluated worst case potential impacts to Ashley Creek assuming that a hydraulic connection did exist between the surface water and deeper units using a model developed by Hunt (2003). The model simulation shows depletion ranging from 0.009 to 0.03 cfs after 10 years of pumping, increasing to 0.04 to 0.06 after 100 years. The Applicant further stated that the predicted depletion after 100 years represents 0.8 to 1.2% of the minimum flow and 0.14 to 0.21% of the annual discharge of Ashley Creek. The Applicant determined that there were no records of calls being made by appropriators on Ashley Creek and that a water commissioner has not been appointed on Ashley Creek which indicates that no water shortages have occurred.

The Applicant then discussed impacts on Flathead Lake. The Applicant used the total

calculated consumptive amount of 58.38 Acre-feet with an average annual rate of 0.08 cfs in analyzing the impacts to Flathead Lake. The Applicant calculated that the surface water depletion to Flathead Lake attributed to the proposed Buffalo Mountain appropriation would deplete Flathead Lake by 0.00031% of the volume and 0.00070 percent of the average yearly flow. The Applicant further states that by applying the surface water depletion for the entire year instantaneously to Flathead Lake the lake level would be lowered by approximately 0.00047 foot. The Applicant contends that this is less than the 0.01 foot accuracy required by the DNRC when reporting Zone of Influence impacts to senior water right holders. The Applicant concludes that there will not be any senior water right users that will be adversely impacted.

Upon questioning by the Hearing Examiner the Applicant provided that the plan showing the diversion use of water and operation of the proposed project can be implemented and properly regulated during times of water shortage so that water rights of prior appropriators will be satisfied. The Applicant stated that in addition to the measures described in the water and Conservation Agreement, Buffalo Mountain and Lakeshore Hills and Eagle Ridge and Gwenda and Kenneth Jonas, the diversion of water from wells PW-1 and PW-2 can be stopped by disconnecting the well pumps from their power supply if a valid call on water is made by a senior appropriator.

3. **Hearing Examiners Finding of Fact:** The Applicant addressed the criterion of adverse effects on both ground and surface water senior appropriators and found that no adverse effect was based upon observation during testing period including recovery, available well logs and reference to Montana Bureau of Mines and Geology Ground Water Atlas (LaFave 2004) which provides evidence that this appropriation is from a rock aquifer connected to deep sand and gravel aquifers in the Kalispell Valley. Due to the nature of the connection of the bedrock aquifer to the valley sand and gravel aquifer, there is no indication that a hydraulic connection exists between the aquifer and Ashley Creek and thus no impact to flow in Ashley Creek within the zone of influence is anticipated during the period of diversion. The Applicant does however acknowledge that water pumped by the proposed appropriation represents an impact at some future time and place within the hydrologic system. The Applicant did a consumptive use analysis which indicated that for the period of diversion, 58.38 acre-feet per year of consumptive use will occur. A surface water depletion analysis evaluates the volume and time required for depletion to develop to the full volume of the consumptive use. The Applicant conducted numerical computer simulations to assess whether pumping from the bedrock aquifer would adversely impact senior surface water users. The Department concludes

that no immediate or discernible diminishment of surface water is expected in Flathead Lake. It is reasonable to expect that surface water depletion from net consumption will begin to develop within years and will require several decades to develop to the full consumptive use volume of 58.38 acre feet per year. Any depletion will not have an adverse effect on the ability of surface water users to reasonably exercise their water rights. Based upon the Applicants testimony and Exhibits the proposed project indicates that there will not be adverse effect to senior surface or ground water appropriators. This evaluation of senior users and any adverse effects as described in the Statement of Opinion has been satisfied through the testimony and Exhibit submitted. Applicant has proven that the water rights of a prior appropriation under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Adverse affect determination is based on a consideration of an Applicant's plan for the exercise of the permit that demonstrates that the Applicant's use of water will be controlled so the water rights of a prior appropriator will be satisfied.

4. **Conclusions of Law:** In regard to senior hydropower water rights, the facts in this application are distinguishable from those in *In the Matter of Application for Beneficial Water Use Permit No. 76N30010429 by Thompson River Lumber Co (2006) (TRLIC)* concerning the Avista Company's water rights for Noxon Reservoir. Thompson River Company's proposed diversion on the Clark Fork was surface water immediately upstream of Avista's Noxon Reservoir that had an immediate calculable adverse impact on Avista's water rights and power production. The proposed appropriation in this case is a ground water appropriation more than 100 miles upstream of Noxon Reservoir and is located above Flathead Lake and Kerr Dam, and below the inflows from the Bureau of Reclamation's Hungry Horse Dam. Section §85-2-401, MCA, makes clear that an appropriator is not entitled under the prior appropriation doctrine to protect itself from all changes in condition of water occurrence. In this basin, which is not closed to surface or ground water appropriations, priority of appropriation for a large hydropower right that may otherwise prohibit future upstream development in the basin, does not, pursuant to §85-2-401, MCA, include the right to prevent the decrease of stream flow or the lowering of a water table or water level if the prior appropriator can reasonably exercise their water right under the new conditions. Here, the Department finds that Avista's prior appropriation in this basin which has not been closed to appropriation by the Legislature does not include the right to prevent this appropriation where Avista can reasonably exercise its hydropower water right. The Applicant has proven that the water rights of a prior appropriator under an existing water right, a certificate, permit, or a state water reservation will not be adversely affected. Mont.

Beneficial Use

1. **Statement of Opinion:** The Applicant must submit to the Department amendments to its application to change the volume of water to be appropriated. Furthermore the Applicant must justify the requested pumping rate for the reduced volume to be appropriated and show that the requested volume meets DNRC standards.

2. **Applicant Show Cause Argument and Evidence:** The Applicant submitted Exhibit SC A-2 that request that the volume of water under the application be amended to reduced amounts of 36.36 acre-feet per year, 0.36 acre-feet per year per lot, for lawn and garden irrigation use and 50.5 acre-feet per year, 0.5 acre-feet per year per lot, for domestic use. The Applicant stated that subdivision Declaration of Conditions, Covenants and Restrictions allow for a total of 14.54 irrigated acres on the 101 lots. The average square footage of irrigated landscape is 6,272.64 square feet. Based on the allotment of 2.5 acre-feet per season for 1 acre of lawn and garden a total of 36.36 acre-feet is requested for irrigation. The Applicant requests 0.5 acre-feet per year per household based upon DEQ Standards that estimate usage at 100 gallons per day per person. 0.5 acre-feet per year is equal to 446.34 gallons per day. The Applicant stated that each lot will be metered for water use at the service connection.

3. **Hearing Examiners Finding of Fact:** The Applicant addressed the criterion of beneficial use by showing that the reduced volume of 86.86 acre-feet per year is an amount that is needed to sustain the proposed use. The requested amount for lawn and garden use is 0.36 acre-feet per year per lot, 36.36 acre-feet per year for all 101 lots. This amount is less than the DNRC standard, ARM 36.12.115(2)(b), of 2.5 acre-feet per lot. The Applicants proposal to require lot owners to use drought tolerant plants and to keep irrigated landscape to 6,272.64 square feet is an adequate means to limit lawn and garden irrigation to the requested amount. The requested amount for domestic use is 0.5 acre-feet per year per lot, 50.5 acre-feet per year for all 101 lots. 0.5 acre-feet per year per lot is less than the DNRC standard, ARM 36.12.115(2)(a), of 1.0 acre feet per lot but is reasonable considering the DEQ standard of 100 gallons per day per person. The public water supply for the Buffalo Mountain subdivision was designed and approved using this DEQ standard for both volume and pumping rate. The

Applicant has shown that both the rate of diversion and the volume requested are needed for the stated beneficial uses.

4. **Conclusion of Law:** The proposed uses of domestic and lawn and garden irrigation are recognized as beneficial uses in the Montana Water Use Act § 85-2-102(4)(a) MCA. The Applicant has proven the proposed use of water is a beneficial use and the amounts of water are needed to sustain the proposed beneficial use. Mont. Code Ann. § 85-2-311(1)(d) and are less than the DNRC standards at ARM 36.12.115(2)(a,b).

I FIND: The Applicant at the show cause hearing on March 12, 2009 did through additional written and oral evidence and argument show cause why the Application for Beneficial Water User Permit should not be denied under the terms specified in the SOP issued by the Department on January 8, 2009.

Therefore, Application for Beneficial Water Use Permit No. 30025385-76LJ by Buffalo Mountain, LLC be **GRANTED** for the reasons specified above and in the SOP.

FINAL ORDER

Application for Beneficial Water Use Permit NO.76LJ-30025385 is **GRANTED** to Buffalo Mountain, LLC to divert water from January 1 to December 31 at 40 gallons per minute (gpm) from a ground water well located West Southwest of Kalispell approximately 3.5 miles in the SW1/4SE1/4,SW1/4 Section 22, Township 28N, Range 22W, Flathead County and 80 gallons per minute (gpm) from a ground water well located in the SE1/4NE1/4,SW1/4 Section 22, Township 28N, Range 22W, Flathead County for a combine volume of up to 86.86 acre-feet (af). The water is to be used for multiple domestic and lawn and garden use for Buffalo Mountain Subdivision. The amount of water for domestic use will be 50.5 acre-feet from January 1 through December 31, and 36.36 acre-feet for lawn and garden from March 1 through September 30. The terms of the granting of this permit are based upon the Applicant's ability to shutdown the pumps if there is a valid call for water. The Appropriator shall install a Department approved in-line flow meter at a point in the delivery line approved by the Department. Water must not be diverted until the required device is in place and operating. On a form provided by the Department, the Appropriator shall keep a written monthly record of the flow rate and volume of all water diverted, including the period of time. Records shall be submitted by November 30 of each year and upon request at other times during the year. Failure to submit

reports may be cause for revocation of a permit or change. The Appropriator shall maintain the measuring device so it always operates properly and measures the flow rate and volume accurately.

NOTICE

A person who has exhausted all administrative remedies available within the agency and who is aggrieved by a final decision is entitled to judicial review under the Montana Administrative Procedure Act (Title 2, Chapter 4, MCA). A petition for judicial review under this chapter must be filed in the appropriate district court within 30 days after service of the final order. (§ 2-4-702 MCA)

If a petition for judicial review is filed and a party to the proceeding elects to have a written transcript prepared as part of the record of the administrative hearing for certification to the reviewing district court, the requesting party must make arrangements for preparation of the written transcript. If no request for a written transcript is made, the Department will transmit only a copy of the audio recording of the oral proceedings to the district court.

Dated this 23rd day of March, 2009.

/Original signed by Marc Pitman by e-
signature/

Marc Pitman, Hearings Officer
Water Resources Division
Department of Natural Resources
and Conservation
109 Cooperative Way, Suite 110
Kalispell, MT 59901

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the **FINAL ORDER** was served upon all parties listed below on this 23rd day of March 2009, by first-class United States mail.

JOHN CHVILICEK
BUFFALO MOUNTAIN
C/O TIM HINDERMAN
PO BOX 4848
WHITEFISH, MT 59937

CARLO ARENDT- CONSULTANT
PBS&J-KALISPELL
206 LUPFER AVE
WHITEFISH, MT 59937 2448

ROSS D MILLER - ATTORNEY
MILLER LAW OFFICE PLLC
PO BOX 7637
MISSOULA, MT 59807

/Original signed by Jamie Price/
Jamie Price, Hearings Assistant
Hearings Unit, 406-444-6615

PERMIT APPLICATION STATEMENT OF OPINION

Application No.: 30025385-76LJ, Buffalo Mountain, LLC
 Date: January 8, 2009
 Final Decision Maker: Marc Pitman P.E., Kalispell Unit Manager

- GRANT APPLICATION: The findings and conclusions show that the criteria have been met.
- DENY APPLICATION: The findings and conclusions do not show that the criteria have been met.
- MODIFY APPLICATION: The findings and conclusions show the criteria have been met, however application modifications are required.

The following criteria must be met by an applicant. Complete this form if no objections were received to an application or if the objections were settled.

Application Details: The applicant requests 120 gallons-per-minute (gpm) up to 146.45 acre-feet (AF) per year from two ground water wells to be operated to provide water to the Buffalo Mountain Subdivision. Buffalo Mountain Subdivision is located approximately 3.5 miles west southwest of Kalispell. Beneficial use is to consist of 101 AF per year for domestic use on 101 residential lots and 45.45 AF for lawn and garden uses on 18.18 Acres. The wells are designated as PW-1 and PW-2. PW-1 (GWIC Id: 242158) is constructed with 8-inch diameter well casing completed to a depth of 38-feet below ground surface (bgs) and 6-inch diameter well casing from 38-feet bgs to 900-feet bgs. 3/8-inch X 1-inch slots were perforated from 532 to 551-feet bgs, 585 to 598-feet bgs and 633 to 642-feet bgs. PW2 (GWIC Id: 242162) is constructed with 8-inch diameter well casing completed to a depth of 58.4-feet bgs and 6-inch well casing from 42 to 564-feet bgs. 160 - 1/4-inch X 6-inch slots were torch cut between 384 to 424-feet bgs. PW-1 and PW-2 are expected to pump 40 gpm and 80 gpm respectively to a 224,000 gallon water storage tank. Water will be mixed in the storage tank and then distributed throughout the subdivision by means of an 8-inch PVC water main.

After initial review of the application the Department Hydrogeologist, Russell Levens, concluded in a letter dated December 27, 2006 that, "Longer duration testing and/or monitoring of water levels in the applicant's and nearby wells are needed to evaluate the applicant's conclusions regarding connection to other wells and 311 criteria."

The Applicant was informed by the Kalispell Regional Office in a letter signed by Water Resource Specialist, Wes McAlpin, on January 3, 2007 that because of the response by Levens that the Applicant had to make one of three choices:

1. You can withdraw the application until the additional testing as required by the WMB hydrologists can be conducted and I will refund your filing fee;
2. We can move forward with processing which would include sending the application to public notice if it is found to be correct and complete, but if the criteria still cannot be met after notice, we would be forced to deny the permit;
3. Or we can hold the application until you can get adequate data to us which would satisfy the criteria if you can do it within 90 days and then it would go to public notice. However, at the end of the 90 day period if the data was not sufficient to satisfy the criteria, the application would simply be terminated and the filing fee forfeited.

The Applicant choose option 3 to allow them 90 days to respond to Russell Levens' comments and provide adequate information within the 90-day time period in a letter from the Applicant's consultant, PBSJ Hydrologist Carlo Arendt. The Applicant subsequently submitted a technical memorandum dated February 23, 2007 addressing comments made by Department Hydrogeologist Russell Levens in his December 27, 2006 letter.

The Department prepared an Application Review Form on August 10, 2007 and the application was noticed for public comment. Five objections to the application were received through the public notice process. The Applicant issued a Technical Memorandum, dated January 16, 2008, proposing additional testing in coordination with the Objectors' consultant, RLK Hydro.

The Applicant performed additional aquifer testing on March 17th through March 20th, 2008. A report, dated April 2008, was prepared by the Applicant and presented to the Objectors. The Applicant and Objectors reached an agreement on October 28, 2008. In the agreement, known as Water Conservation

Agreement, Buffalo Mountain and Lakeshore Hills and Lakeshore Heights and Eagle Ridge and Gwenda and Kenneth Jonas stipulate conservation practices, long-term monitoring requirements and procedures in event of shortage. The Applicant specifically agreed to reduce the irrigation of lawn and gardens to 0.36 AF per year per lot and domestic use to 0.5 AF per year per lot.

Physical Availability: The Applicant must prove that there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate.

FINDINGS OF FACT: The Applicant produced and maintained a discharge of 60 gpm out of PW-1 for a 24-hour period from July 12th to July 14th, 2006. The drawdown curve flattened after 70 minutes of pumping. Physical availability is shown by the applicant by extrapolating the drawdown curve through the period of diversion. The Applicant extrapolated pumping drawdown data to show that at a pumping rate of 60 gpm, pumped continuously for the 365-day period of diversion, there would be 9.37 feet of water above the pump. The Applicant produced and maintained a discharge of 80 gpm out of PW2 for a 72-hour period from August 15th to August 18th, 2006. The Applicant extrapolated pumping drawdown data to show that at a pumping rate of 80 gpm, pumped continuously for the 365-day period of diversion, there would be 18.46 feet of water above the pump.

The Applicant asserted that by extrapolating a pumping rate, equal to or greater than an expected average pumping rate, over the entire period of diversion that physical availability in PW1 and PW2 is proven.

Mr. Russell Levens, DNRC hydrogeologist, reviewed the aquifer tests conducted by the applicant and presented his review in a memorandum dated December 27, 2006. Mr. Levens disagreed with the Applicants argument on the basis that the Applicant did not show interference between the two wells pumping simultaneously at the requested pumping rate of 120 gpm. Mr. Levens also stated in his memorandum that the test was not adequate to make an evaluation of well interference.

The Applicant further argued in a Technical Memorandum dated February 23, 2007 that during both 24-hour tests and the 72-hour test no drawdown in one well resulted from pumping in the other well. In e-mail correspondence dated November 18, 2008, Mr. Levens agreed with the Applicant's interpretation of the data.

After public notice and the receipt of public objections to the application the Applicant performed additional testing. A second 72-hour test was conducted on PW2 from March 17th to March 20th, 2008 at a constant pumping rate of 80.4 gpm. Drawdown data from this test is not consistent and conflicts with the earlier test performed on April 15th to April 18th, 2006, because while the Applicant showed that the earlier test had stabilized this later test did not show drawdown stabilizing after 72 hours of pumping. Drawdown appears to be continuing at a rate in excess of 20 feet during the last 24 hours of the test.

Mr. Russell Levens, DNRC hydrogeologist, reviewed the aquifer tests conducted in March 2008 and presented his review in a memorandum dated December 4, 2008. Mr. Levens commented that the second test of PW2 did not flatten out but is actually greater than the Theis Model prediction for an infinite homogenous aquifer suggesting that drawdown during the first test was effected by reduced discharge or other external influence. Mr. Levens concluded that if extrapolated, drawdown almost certainly would be greater than predicted from the previous test. In addition, Mr. Levens observed that the water level in PW-2 was still approximately 20 feet lower than the pre-test level after 9 ½ days of recovery, bringing into question fracture continuity and long-term sustainability.

Inconsistencies in drawdown data undermine the validity of the Applicant's argument that water is physically available. The Department also contends that testing may need to be performed longer than the minimum 72-hour duration to adequately address long-term sustainability. At a minimum, the Applicant needs to show that drawdown does not exceed the available column of water in the well. This may be accomplished by the use of aquifer properties from the second test and an average pumping rate for the period of diversion to calculate the drawdown in PW2 over the period of diversion.

CONCLUSIONS OF LAW: The Applicant must prove that there is water physically available in the source of supply at the proposed point of diversion in the amount and during the time period that the Applicant seeks to appropriate. *E.g., In the Matter of Application for Beneficial Water use Permit No. 40C-92024 by Erika and Keith Nelson (1995); In the Matter of Application for Beneficial Water Use Permit No. 41G-63796 by Carl and Glenda Ohs (1995)*(water availability is clearly an essential part of applicants case.) It is the Applicant's burden to produce the required evidence, and not doing so constitutes a failure of proof. *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., DNRC Proposal for Decision, adopted by DNRC Final Order (2005).* The Applicant has not proven by a preponderance of the evidence that water is physically available at the proposed

point of diversion in the amount Applicant seeks to appropriate, and in the amount requested. Mont. Code Ann. § 85-2-311(1)(a)(i).

Legal Availability: The Applicant must prove water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested and based on the records of the department and other evidence provided to the department.

FINDINGS OF FACT: The Applicant attempts to show that water is legally available by estimating that the zone of influence is believed to be elongated along the fracture zone beneath the site. The Applicant asserts that pumping in both PW-1 and PW-2 did not cause drawdown effects in the Foy Lake area wells to the east and the Watne well to west. The Applicant incorrectly argues that since the Foy Lake area wells and the Watne well are wells within the immediate area for which there are senior water rights, and since there was no drawdown measured in the wells, then the wells are outside the zone of influence of wells PW-1 and PW-2 and that there are no legal demands on the ground water source for PW-1 and PW-2. Based upon the results of the March 17, 2008, aquifer test the Department found that physical availability is not proven. The Applicant showed that during the second test there are measurable drawdown effects in the Watne well when PW-2 is pumped at 80.4 GPM over a 72-hour period. The Applicant incorrectly concludes that water is physically available and since there are no water rights within the zone of influence then water is legally available.

Based upon the results of the March 17, 2008 aquifer test the Department does not accept the Applicant's assertion that physical availability is proven. The Applicant showed that during the second test there are measurable drawdown effects in the Watne well when PW-2 is pumped at 80.4 GPM over a 72-hour period. The March 2008 test clearly indicated drawdown in the Watne well. The original calculation of the zone of influence was incorrect and needed to be revised based on the March test. The two asserted facts, namely physical availability and that there are no legal demands on ground water within the zone of influence, used to support the Applicant's argument of legal availability are no longer true based on the Applicant's own data.

Applicant as to both ground water and surface water did not adequately identify existing legal demands on the source of supply throughout the area of potential impact by the proposed use, and did not provide an adequate 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.

CONCLUSIONS OF LAW: In regard to proving "legal availability," Mont. Code Ann. § 85-2-311 states the Applicant must prove the following by a preponderance of evidence:

"(ii) water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) 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." Here the Applicant did not prove physical availability and did not adequately identify existing legal demands, as to both ground water and surface water (see A.R.M. 36.12.1705), on the source of supply throughout the area of potential impact by the proposed use, and did not adequately analyze 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 Montana Supreme Court's decision in Montana Trout Unlimited v. Department of Natural Resources and Conservation (2006), 331 Mont. 483, 133 P.3d 224 clearly recognizes potential interconnectivity of ground and surface water and the potential surface water effect of pre-stream capture by ground water appropriations. Applicant has an affirmative burden to meet the required criteria and prove that water is legally available. A failure to meet that affirmative burden does not mean the criterion is met for lack of contrary evidence. It is the applicant's burden to produce the required evidence, and not doing so constitutes a failure of proof. *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, DNRC Proposal for Decision, adopted by DNRC Final Order (2005). The application has not shown that water is legally available at the proposed point of diversion in the amount the applicant seeks to appropriate, and in the amount requested, Mont. Code Ann. § 85-2-311 (1)(a)(ii)

Adverse Effect: The Applicant must prove the water rights of a prior appropriation under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of water will be controlled so the water rights of a prior appropriator will be satisfied.

FINDINGS OF FACT: The Applicant analyzed the potential effects of pumping PW-1 and PW-2 on existing groundwater appropriations by assessing monitoring data collected during the initial testing of PW-1 and PW-2 conducted in July and August 2006. The Applicant argues that since wells within a potential zone of influence in the Foy Lake area did not display any influence from the pumping of PW-1 and PW-2 then there will be no adverse impact to senior ground water users in the Foy Lake area.

The Applicant argues that subsequent 72-hour aquifer testing performed in March 2008 was evaluated to determine potential for adverse effects by using trend analysis of the background, pumping, and post-pumping portions of the data. The Applicant concludes that there was relatively minor drawdown attributable to pumping PW-2 in only one well other than the observation well, OW, and the pumping well.

The Department contends that the magnitude of the drawdown in OW and the acceleration of drawdown late in the second test of PW-2 indicate other wells might be affected by the requested appropriation. The Applicant did not extrapolate pumping effects beyond the period of the pumping test or to greater distances than wells with observed drawdown to evaluate potential for adverse effects.

The Applicant states that the source of water is derived from a deep confined aquifer. The Applicant then argues that since there was no observed connection between the pumped well and the Watne well that the shallow aquifer is not connected to the deep confined aquifer and that induced surface water infiltration will not occur. The Applicant showed that during the second aquifer test, conducted on March 17, 2008, that there are measurable drawdown effects in the Watne well when PW-2 is pumped at 80.4 GPM over a 72-hour period. The Applicant's argument that there is no connection between the shallow and deep aquifers and that no induced surface water infiltration can occur is therefore invalidated. The application lacks evidence showing that there are no potential adverse effects to ground water or surface waters.

The Applicant did not provide a plan showing the diversion, use of water and operation of the proposed project can be implemented and properly regulated during times of water shortage so that water rights of prior appropriators will be satisfied.

CONCLUSIONS OF LAW: The applicant bears the affirmative burden of demonstrating the applicable criteria, Mont. Code Ann. §85-2-311(1) are met, including the criterion that prior appropriators under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. *E.g., In the Matter of Application for Beneficial Water Use Permit No. 25170-g41B by East Bench Grain & Machinery, Inc.*, DNRC Proposal for Decision, Final Order (1983) (the evidence must support a finding of no adverse effect, and it is applicant's burden to provide it. If he does not, the permit cannot issue). As the Montana Supreme Court recognized in *Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starnier* (1996), 278 Mont. 50, 60-61, 923 P.2d 1073, 1079, 1080, superseded by legislation on another issue:

Nothing in that section [85-2-313], however, relieves an applicant of his burden to meet the statutory requirements of § 85-2-311, MCA, before DNRC may issue that provisional permit. Instead of resolving doubts in favor of appropriation, the Montana Water Use Act requires an applicant to make explicit statutory showings that there are unappropriated waters in the source of supply, that the water rights of a prior appropriator will not be adversely affected, and that the proposed use will not unreasonably interfere with a planned use for which water has been reserved.

The Court has likewise explained that:

.... unambiguous language of the legislature promotes the understanding that the Water Use Act was designed to protect senior water rights holders from encroachment by junior appropriators adversely affecting those senior rights.

Montana Power Co. v. Carey (1984), 211 Mont. 91, 97-98, 685 P.2d 336, 340; see also Mont. Const. art. IX §3(1).

Pursuant to Mont. Code Ann. §85-2-311(1)(b), adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied. It is the applicant's burden to produce the required evidence, and not doing so constitutes a failure of proof. *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, Proposal for Decision, adopted by DNRC Final Order (2005); *East Bench*, *supra*. The Montana Supreme Court's decision in Montana Trout Unlimited v. Department of Natural Resources and Conservation (2006), 331 Mont. 483, 133 P.3d 224 clearly recognizes potential interconnectivity of ground and surface water and the potential surface water effect of pre-stream capture by ground water appropriations. The Applicant has not proven that the water rights of a prior appropriator under an existing water right, a certificate, permit, or a state water reservation will not be adversely affected. Mont. Code Ann. § 85-2-311(1)(b).

Adequacy Of Diversion: The Applicant must prove the proposed means of diversion, construction, and operation of the appropriation works are adequate.

FINDINGS OF FACT: Plans and specifications for the Buffalo Mountain PWS wells were prepared and submitted to the MDEQ by Carver Engineering Inc. The plans are approved by MDEQ. Buffalo Mountain wells are constructed in compliance to specifications required by the Montana Board of Water Well Contractors, the Department of Natural Resources and Conservation (DNRC), and the MDEQ for a public water supply system. A Copy of the well log report is provided in the application.

CONCLUSIONS OF LAW: The Applicant has proven that the proposed means of diversion, construction, and operation of the appropriation works are adequate. Mont. Code Ann. § 85-2-311(1)(c).

Beneficial Use: The Applicant must prove the proposed use of water is a beneficial use and that the flow rate and volume are the amounts of water needed to sustain the proposed beneficial use.

FINDINGS OF FACT: The proposed uses of domestic and lawn and garden irrigation are recognized as beneficial uses in the Montana Water Use Act § 85-2-102(4)(a) MCA. The Applicant states that the requested flow rate of 120 gpm is based on the capacity of the wells as they exist. A DEQ letter dated February 7, 2007 approves the use of two wells producing 40 and 80 gpm and a 224,000 gal storage tank to serve 36 residential lots. The DEQ approval for 36 residential lots from wells requires that the smallest well, PW1 at 40 gpm, operating alone, can service 36 lots at peak and three service connections to a club house area. The Applicant states that the flow rate is reasonable based on well no. 1 and no. 2 combined flow rate. ARM 36.12.1801(2) requires the Applicant to explain that the requested flow rate and volume is reasonably needed. The Applicant did not provide any analysis or rationale supporting the requested flow rate. The Applicant cites the use of standards as noted in ARM 36.12.115 (2)(a,b) to support the requested volume.

The total appropriation volume requested by the Applicant requires modification if it is to be consistent as stipulated in the Water Conservation Agreement, Buffalo Mountain and Lakeshore Hills and Lakeshore Heights and Eagle Ridge and Gwenda and Kenneth Jonas. Although, in order to remove objections to the application the Applicant agreed on October 28, 2008 that the volume of water to be appropriated is to be reduced to 0.36 AF per year per lot for irrigation of lawn and garden use and 0.5 AF per year per lot for in house domestic use, the Department has received no such amendment to the application. The Applicant must submit to the Department amendments to its application to change the volume of water to be appropriated. Furthermore, the Applicant must justify the requested pumping rate for the reduced volume to be appropriated and show that the requested volume meets DNRC new permit standards.

CONCLUSIONS OF LAW: The Applicant has not proven the proposed use of water is a beneficial use and the amounts of water are needed to sustain the proposed beneficial use. Mont. Code Ann. § 85-2-311(1)(d).

Possessory Interest: The Applicant must prove 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.

FINDINGS OF FACT: John Chivilicek, an officer of Buffalo Mountain, LLC, signed the application. Buffalo Mountain, LLC has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.

CONCLUSIONS OF LAW: The Applicant has proven a possessory interest in the property where water is to be put to beneficial use. Mont. Code Ann. § 85-2-311(1)(e). See also ARM, 36.12.1802

Water Quality Issues: The Applicant must prove that the water quality criteria have been met only if a valid objection is filed. The water quality of a prior appropriator will not be adversely affected; the proposed use will be substantially in accordance with the classification of water set for the source of supply pursuant to 75-5-301 (1); and the ability of a discharge permit holder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

No objections relative to water quality were filed against this Application. There were no objections relative to water classification or to the ability of a discharge permit holder to satisfy effluent limitations of the permit holder.

Public Notice: The Application was properly noticed pursuant to Mont. Code Ann. §85-2-307. Objections were received and subsequently withdrawn under the Water Conservation Agreement, Buffalo Mountain and Lakeshore Hills and Lakeshore Heights and Eagle Ridge and Gwenda and Kenneth Jonas.

Environmental Assessment: The Environmental Assessment prepared by the Department for this Application was reviewed and is included in the application file.