

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

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IN THE MATTER OF THE APPLICATION )  
FOR BENEFICIAL WATER USE PERMIT ) FINAL ORDER  
78402-g76M BY STATE OF MONTANA, )  
DEPARTMENT OF EDUCATION, )  
FACILITIES SERVICES DEPARTMENT )

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The time period for filing exceptions, objections, or comments to the Proposal for Decision in this matter has expired. No timely written exceptions were received. Therefore, having given the matter full consideration, the Department of Natural Resources and Conservation hereby accepts and adopts the Findings of Fact and Conclusions of Law as contained in the September 29, 1992, Proposal for Decision, and incorporates them herein by reference.

WHEREFORE, based upon the record herein, the Department makes the following:

ORDER

Subject to the terms, conditions, restrictions, and limitations specified below, Beneficial Water Use Permit 78402-g76M is hereby granted to the State of Montana, Department of Education, Facilities Services Department, to appropriate groundwater by means of up to 22 pumped wells in the S½S½ of Section 22 and the N½ of Section 27 of Township 13 North, Range 19 West, Missoula County, Montana, at a total flow rate of up to 8,462 gallons per minute up to a total volume of 748.99 acre-feet per year for

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institutional and irrigation purposes. The priority date shall be 3:30 p.m. June 26, 1991.

The institutional purpose shall be for the heating and cooling of buildings on the campus of the University of Montana in the S $\frac{1}{2}$ S $\frac{1}{2}$  of Section 22 and the N $\frac{1}{2}$  of Section 27 of Township 13 North, Range 19 West, Missoula County, Montana. The maximum total appropriation for institutional purposes shall be 8,462 gpm up to 748.99 AF per year. The period of appropriation for institutional purposes shall be January 1 through December 31 of each year.

The maximum total appropriation for irrigation purposes shall be 8,462 gpm up to 340.55 AF per year. The place of use for irrigation shall be on the campus of the University of Montana and is specifically described as 6 acres in the E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  and 35 acres in the S $\frac{1}{2}$ SE $\frac{1}{4}$  of Section 22, and 21 acres in the E $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$  and 58 acres in the NE $\frac{1}{4}$  of Section 27, all in Township 13 North, Range 19 West, Missoula County, Montana. The period of appropriation for irrigation purposes shall be April 15 through October 15 of each year. Of the total irrigation use, 70 acres will be supplemental irrigation of the following parcels in Township 13 North, Range 19 West, Missoula County, Montana: 12 acres in the SW $\frac{1}{4}$ SE $\frac{1}{4}$  and 5 acres in the W $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 22, and 2 acres in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  and 1 acre in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 27 presently permitted under Permit 62519-g76M; and, 50 acres in the W $\frac{1}{2}$ NE $\frac{1}{4}$  of Section 27 presently permitted under Permit 74259-g76M.

The flow rate and volume of water used for irrigation purposes shall be recycled water from the institutional heating and cooling system use. All water used for institutional heating and cooling which is not recycled to irrigation purposes shall be injected back into the groundwater source of supply. There shall be 22 injection wells, one paired with each diversion well.

A. This Permit is subject to all prior and existing water rights, and to any final determination of such rights as provided by Montana Law. Nothing herein shall be construed to authorize appropriations by the Permittee to the detriment of any prior appropriator.

B. This Permit is used in conjunction with Permit 74259-g76M. When used for institutional heating and cooling purposes, the combined appropriations shall not exceed 8,700 gallons per minute up to 770 acre-feet per year.

C. This Permit is supplemental to Permit 62519-g76M and Permit 74259-g76M which means they have overlapping places of use for irrigation purposes.

D. The Permittee shall submit a progress report of the work completed under this permit by November 30 of each year<sup>1</sup> until completion of the project. Submit reports to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation.

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<sup>1</sup> Except 1992

E. This Permit is subject to § 85-2-505, MCA, requiring that all wells be constructed so they will not allow water to be wasted, or contaminate other supplies or sources, and all flowing wells shall be capped or equipped so the flow of water may be stopped when not being put to beneficial use. The final completion of the well must include an access port of at least .50 inch so that the static water level in the well may be accurately measured.

F. No chemical or fertilizer distribution system shall be connected to any irrigation system which is connected to a conveyance leading to an injection well operated as part of the appropriation authorized by this Permit or operated in conjunction with this Permit.

G. The Permittee shall maintain an adequate flow metering device on each diversion and each injection well throughout the diversion system in order to allow the recording of the flow rate and volume of all water diverted from the source and all water injected back into the source. The Permittee shall keep a written record of the flow rate and volume of all such waters, including the period of time, and shall submit said records by November 30 of each year<sup>2</sup> to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation.

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<sup>2</sup> Except 1992

H. Each diversion well must be constructed and maintained to allow samples of water to be taken, for water quality testing, prior to it leaving or immediately after it leaves the well. Each injection well must be constructed and maintained to allow samples of water to be taken, for water quality testing, immediately prior to it entering the well.

I. Upon completion of each injection well attached to a heating and cooling loop, a sample of water that has run through the loop shall be collected at the well head of the injection well, another sample of water shall be collected at the well head of the diversion well. Both samples shall be tested for their chemical composition and organic contaminants. Permittee shall submit written certification, accompanied by documentation of the testing, to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation prior to operating the paired wells for the permitted institutional use stating that the test results show the water will enter the injection well substantially undiminished in quality from what it was when diverted.

J. Upon completion of each injection well, Permittee shall submit written certification by a hydrogeologist that the water being injected at each injection well is actually recharging the source aquifer from which the water was diverted. The certification shall be in writing, shall be accompanied by documentation of any testing or analysis used to complete the certification, and shall be submitted to the Missoula Water

Resources Regional Office of the Department of Natural Resources and Conservation prior to operation of the paired diversion well for the permitted institutional use.

K. Upon completion of each of the four phases of the permitted project, Permittee shall submit a written certification of the maximum flow rates and volumes to be diverted by each well completed in the phase. The certification shall identify the separate winter and summer amounts, and the separate amounts to be diverted for institutional and irrigation uses from each well. The certification must be submitted to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation within one year of completion of the respective phase, but not to exceed, for the final phase, the deadline for notice of completion of the entire permitted appropriation.

L. Issuance of this permit shall not reduce the Permittee's liability for damages caused by exercise of this permit, nor does the Department, in issuing this permit, acknowledge any liability for damages caused by exercise of this permit, even if such damage is a necessary and unavoidable consequence of the same.

M. Upon a change in ownership of all or any portion of this permit, the parties to the transfer shall file with the Department of Natural Resources and Conservation a Water Right Transfer Certificate, Form 608, pursuant to Section 85-2-424, MCA.

**NOTICE**

The Department's Final Order may be appealed in accordance with the Montana Administrative Procedure Act by filing a peti-

tion in the appropriate court within 30 days after service of the Final Order.

Dated this 26 day of October, 1992.

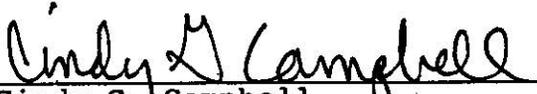
  
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Gary Fritz, Administrator  
Department of Natural Resources  
and Conservation  
Water Resources Division  
1520 East 6th Avenue  
Helena, Montana 59620-2301  
(406) 444-6605

CERTIFICATE OF SERVICE

This is to certify that a true and correct copy of the foregoing Final Order was duly served upon all parties of record at their address or addresses this 27<sup>th</sup> day of October, 1992, as follows:

State of Montana  
Department of Education  
Facilities Services Dept.  
& Glendon Thieszen  
University of Montana  
Missoula, MT 59812  
  
William Uthman,  
Hydrogeologist  
Department of Natural  
Resources & Conservation  
1520 E. 6th Ave.  
Helena, MT 59620-2301  
(for notification only)

Joan B. Newman  
Legal Counsel  
University of Montana  
Missoula, MT 59812  
  
Michael P. McLane, Manager  
Missoula Water Resources  
Regional Office  
P.O. Box 5004  
Missoula, MT 59806  
(via electronic mail)  
  
John E. Stults, Hearing  
Examiner  
Department of Natural  
Resources & Conservation  
1520 E. 6th Avenue  
Helena, MT 50620-2301

  
\_\_\_\_\_  
Cindy G. Campbell  
Hearings Unit Legal Secretary

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

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|                                  |   |          |
|----------------------------------|---|----------|
| IN THE MATTER OF THE APPLICATION | ) |          |
| FOR BENEFICIAL WATER USE PERMIT  | ) | PROPOSAL |
| 78402-g76M BY STATE OF MONTANA,  | ) | FOR      |
| DEPARTMENT OF EDUCATION,         | ) | DECISION |
| FACILITIES SERVICES DEPARTMENT   | ) |          |

\* \* \* \* \*

Pursuant to Mont. Code Ann. §§ 85-2-121 and 85-2-309 (1991), a hearing was held in the above matter on September 10, 1992, in Missoula, Montana, to determine whether a Permit to Appropriate Water based on the above Application should be granted to the State of Montana, Department of Education, Facilities Services Department, under the criteria in Mont. Code Ann. § 85-2-311(1) (1991).

APPEARANCES

Applicant appeared at the hearing by and through Joan Newman, attorney at law. Glendon R. Thieszen, P.E., Mechanical Engineer with the Facilities Services Department, appeared as witness in behalf of Applicant. Larry Schock, Civil Engineering Specialist with the Missoula Water Resources Division Regional Office of the Department of Natural Resources and Conservation (Department), appeared as spokesperson for the Department.

Objector David J. Maclay failed to appear at the hearing. The record shows a properly constituted Notice of Hearing was properly served on all parties August 11, 1992, by certified mail, return receipt requested. See Mont. Admin. R. 36.12.204(1)

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(1984). A signed return receipt was received by the Department indicating that the Notice had been received by Mr. Maclay on August 13, 1992. The Notice of Hearing set the hearing for Thursday, September 10, 1992, beginning at 10:30 a.m. The Hearing Examiner, Applicant, and Department spokesman were present at the appointed time and place. Prior to beginning the hearing the premises were canvassed which determined Mr. Maclay was not on the premises. At 10:45 a.m. the Hearing Examiner opened the hearing on the record. The hearing record was closed at 11:50 a.m. During that time, Mr. Maclay did not appear at the hearing. The Hearing Examiner received no communication from Mr. Maclay prior to the hearing or subsequent to the close of the record.

The Hearing Examiner ruled at the hearing that Objector David J. Maclay is in default and that his objection be stricken. That ruling is hereby confirmed. The objection of the defaulted objector in this matter is stricken. Mont. Admin. R. 36.12.208 (1991).

#### EXHIBITS

The Applicant offered the following exhibit which was accepted into the record.

Applicant's Exhibit 1 is a single page photocopy of a spreadsheet entitled "University of Montana, Ten-Year Geo-Thermal Cooling and Irrigation Plan, June, 24, 1991, Revised December 2, 1991."

Immediately prior to the hearing Applicant was given the opportunity to review the Department's file on this Application. No objection was expressed against any part of the file being made a part of the record. At the beginning of the hearing, the Hearing Examiner entered the Department's file into the record in its entirety.

In the course of reaching a decision in this matter, the Hearing Examiner took official notice of records maintained by the Department on water rights in the vicinity of the proposed appropriation. Facts in this Proposal for Decision which have been derived from the noticed records are identified as such.

#### FINDINGS OF FACT

1. Application for Beneficial Water Use Permit 78402-g76M was filed with the Department on June 26, 1991, at 3:30 p.m. (Department's file)

2. Applicant proposes to appropriate up to 8,700 gallons per minute (gpm) up to 770 acre-feet (AF) per year of groundwater by means of a series of up to 24 wells all within the S $\frac{1}{2}$ S $\frac{1}{2}$  of Section 22 and the N $\frac{1}{2}$  of Section 27 of Township 13 North, Range 19 West, Missoula County, Montana,<sup>1</sup> for institutional use and for sprinkler irrigation of 120 acres. The institutional use would be the heating and cooling of buildings on the campus of the University of Montana. The place of use for irrigation would be the areas of irrigable plants, such as lawns and shrubs, on

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<sup>1</sup> Unless otherwise stated, all legal land descriptions are in Township 13 North, Range 19 West, Missoula County, Montana.

the campus of the University of Montana and is specifically described as 6 acres in the E $\frac{1}{2}$ SE $\frac{1}{2}$ SW $\frac{1}{2}$  and 35 acres in the S $\frac{1}{2}$ SE $\frac{1}{2}$  of Section 22, and 21 acres in the E $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{2}$  and 58 acres in the NE $\frac{1}{2}$  of Section 27.

The entire proposed flow rate, 8,700 gpm, would be available for either or both of the proposed purposes. The specific volume proposed for the institutional, heating and cooling, use is the entire proposed volume of 770 AF per year, with a period of diversion from January 1 through December 31 of each year. The maximum volume proposed for the irrigation use is 350 AF per year, with a period of diversion of April 15 through October 15 of each year.

The volume of water used for irrigation will be a portion of the water that has passed through the heating and cooling system, and is therefore a portion of the volume identified for institutional use. The remaining portion of the total volume which would not be used for irrigation, a minimum of 420 AF per year, would be injected back into the source through a series of injection wells.

There would be one injection well constructed and paired in a conveyance loop with each diversion well. According to the maps Applicant submitted as part of the Application, every injection well will be within 200 feet of the corresponding diversion well. Sixteen of the proposed wells are identified as being within 125 feet of the corresponding diversion well. (Department's file and testimony of Glendon Thieszen)

3. Pertinent portions of the Application were published in *The Missoulian*, a newspaper of general circulation in the area of the proposed source, on January 29, 1992. Additionally, the Department served notice by first-class mail on individuals and public agencies which the Department determined might be interested in or affected by the Application. (Department's file)

4. The Department received one objection filed against this Application. (Department's file) The objection was subsequently stricken. See page two above.

5. The proposed wells will be drilled to depths of approximately 150 feet. They will all be diverting water from the Missoula Aquifer which is an unconfined aquifer which underlies the entire area of the proposed points of diversion and place of use, and extends beyond that area. (Department's file and Department's records)

6. An aquifer test was conducted by Hydrometrics, Inc., Helena, Montana, using a newly drilled eight-inch diameter well located within the proposed point of diversion and place of use. The test results showed, in the opinion of Ray Luzek, hydrogeologist with Hydrometrics, that the proposed source aquifer has excellent water-producing potential in the region of the Missoula Valley containing the proposed points of diversion. (Department's file)

7. Computer models of the Missoula Aquifer show substantial amounts of leakage from the Clark Fork River into the aquifer in the area of the proposed points of diversion. The models show a

leakage rate significantly larger than the total proposed rate of diversion and many times larger than the total proposed volume.  
(Department's file)

8. Applicant used a two-dimensional unconfined groundwater flow model to estimate the effects of the proposed appropriation and project on the underlying water table flow system, and specifically to estimate the effects on the water levels in nearby wells. The area of the Missoula Aquifer which was modelled included the proposed place of use and also the area of the aquifer extending approximately one-half mile out from the boundaries of the proposed place of use. The model was constructed on scientifically verified assumptions and scientific data and principles. It was conducted by Eric W. Smart under the supervision of Dr. William W. Woessner, hydrogeologist and professor in the Geology Department of the University of Montana. Dr. Woessner has extensive experience in groundwater modelling and considerable knowledge of the proposed source, the Missoula Aquifer. A written report on the model, with data appendix, was submitted to the Department on March 8, 1992.

Simulated pumping of all the proposed wells at the maximum proposed withdrawal rate for the peak period of use resulted in a drawdown of between 0.1 and 0.3 feet in the nearest neighboring wells. This simulation did not account for certain mitigating factors, such as non-continuous operation and lower flow rate, which tend to minimize the effects on neighboring wells. It is the opinion of Eric Smart and William Woessner that the actual

effects of the proposed appropriation on neighboring wells would be insignificant. (Department's file)

9. William Uthman, hydrogeologist with the Department, thoroughly reviewed the report and appendix and agrees with Eric Smart's and William Woessner's interpretation of the results of the modelling. (Department's file)

10. The proposed use of the water for heating and cooling of campus buildings will save the University approximately \$40,000 per year in electricity costs. This use of water is encouraged by regional power planning entities. The water in the Missoula Aquifer is at a temperature of 48 to 50 degrees Fahrenheit year round, and therefore can be used for heating and cooling. (Department's file and testimony of Glendon Thieszen)

11. The amount of water, in both flow rate and volume, proposed for use in the heating and cooling system is calculated from a specific inventory of the air conditioning needs of the individual buildings that will be on the overall system. The need of each building was based on its individual area. (Applicant's Exhibit 1 and Department's file)

12. Applicant owns the proposed place of use and points of diversion. (Testimony of Glendon Thieszen and representation of Joan Newman)

13. The spatial area of the proposed place of use, 120 acres, was calculated to be the area within the legal land description of the proposed place of use which is plant material

that would be irrigated. The figure excludes buildings, parking lots, sidewalks, etc. (Testimony of Glendon Thieszen)

14. The amount of water proposed for irrigation is within ten percent of the irrigation requirement for 120 acres of grass, as calculated by Larry Schock. The grass, however, would be turf grasses subjected to high volumes of foot traffic as can be seen by the patterns on the aerial photographs of the proposed place of use submitted by Applicant. Heavy foot traffic stresses turf grass which can result in increasing the water needs of the turf. In the analysis of water needs of a previous University of Montana irrigation system, higher plant water needs were assumed for the place of use, part of which overlaps the proposed place of use. The proposed volume amount for irrigation is thirty percent below the turf grass water needs assumed for the previously permitted campus irrigation system. (Department's file, Department's records, and generally recognized technical fact<sup>2</sup>)

15. A majority of the proposed appropriation is intended to be nonconsumptive as to the proposed source aquifer. All water diverted but not used for irrigation would be returned to the source aquifer by means of injection wells. One injection well would be constructed for each diversion well. (Department's file and testimony of Glendon Thieszen)

16. The heating and cooling system would, once it was initially filled, always be filled with water. The amount of

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<sup>2</sup> Mont. Admin. R. 36.12.221(4) (1991)

water suspended in the system is a consumptive element of the heating and cooling system with respect to the proposed source. The amount, however, would be an insignificant portion of the total volume that has been identified to be the nonconsumptive portion of the entire appropriation. (Testimony of Glendon Thieszen)

17. The wells will be drilled by licensed drillers. The general heating and cooling scheme has been developed by a professional engineer. The designs of the specific systems will be executed by engineers and other persons with specific knowledge of and experience with water conveyance systems. The systems will be similar to ones which are already functioning, such as at St. Patrick's Hospital in Missoula. (Department's file and testimony of Glendon Thieszen)

18. No chemical or fertilizer distribution system will be connected to any of the proposed irrigation systems. (Testimony of Glendon Thieszen)

19. Applicant owns Permit to Appropriate Water 62519-g76M which is, in part, for the purpose of irrigating portions of the University of Montana campus in the S½SE¼ of Section 22 and in the NE¼ of Section 27. Applicant also owns Permit to Appropriate Water 74259-g76M which is, in part, for institutional heating and cooling purposes and for irrigation of a portion of the University of Montana campus in the W½NE¼ of Section 27. Both of these permits are for wells which divert water from the Missoula Aquifer, the proposed source. These three appropriations, the

two existing permits and the proposed permit, would be associated water rights because there are common components among them.

All three appropriations would be supplemental with respect to their use for irrigation of overlapping places of use. The total area of supplemental irrigation would be 70 acres. The irrigation use of proposed appropriation would be supplemental to the following 20 acres of irrigation presently permitted under Permit 62519-g76M: 12 acres in the SW $\frac{1}{4}$ SE $\frac{1}{4}$  and 5 acres in the W $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 22, and 2 acres in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  and 1 acre in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 27. The irrigation use of the proposed appropriation would be supplemental to the 50 acres of irrigation in the W $\frac{1}{2}$ NE $\frac{1}{4}$  of Section 27 presently permitted under Permit 74259-g76M.

Permit 74259-g76M, which is for groundwater through a well in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 27, would be used in conjunction with the proposed appropriation with respect to their use for the institutional heating and cooling purpose. They would be diverting water from the same source and would be connected to the same overall irrigation and institutional use systems. (Department's file and Department's records)

20. In calculating the total appropriation and number of wells necessary for the entire heating and cooling system and for the proposed irrigation, Applicant included the well and appropriation authorized by Permit 74259-g76M. The heating and cooling system will require 8,700 gpm and 770 AF. However, Applicant has been granted Permit 74259-g76M for 300 gpm up to

483.90 AF per year with a period of appropriation of January 1 through December 31 for institutional heating and cooling purposes and 300 gpm up to 243.93 AF per year with a period of appropriation of April 15 through October 15 for irrigation purposes. Therefore, Applicant would need authorization to appropriate only an additional 8,400 gpm up to 286.1 AF per year for heating and cooling purposes, and only an additional 8,400 gpm up to 106.07 AF per year for irrigation purposes.

Applicant anticipates, however, that when the proposed project has been completed, the well operated under Permit 74259-g76M will only be used to divert 238 gpm up to 21.01 AF per year for heating and cooling purposes, and 238 gpm up to 9.45 AF per year for irrigation purposes. Therefore, the additional appropriation authority that Applicant needs is only 8,462 gpm up to 748.99 AF per year for heating and cooling purposes, and 8462 gpm up to 340.55 AF per year for irrigation purposes. (Applicant's Exhibit 1, Department's file, and testimony of Glendon Thieszen)

21. Applicant has requested authorization for a total of 24 points of diversion, i.e., 24 wells. All materials submitted to document Applicant's proposed system and its potential impacts identify a total of 23 wells on the system, one of which is the well already authorized under Permit 74259-g76M. This indicates that only 22 new wells are planned. The only evidence in the record regarding the two wells which make up the difference between 22 and 24 are statements that because the project will take ten years to complete, there may be more buildings built on

the campus which have not been anticipated in the project plans but which, if they are built, might be candidates for inclusion in the proposed heating and cooling system. (Department file and testimony of Glendon Thieszen)

22. There are no other planned uses or developments for which water in the proposed source has been reserved. (Department's records, Department's file, and testimony of Larry Schock)

23. As part of the Department's process of preparing the public notification of this application, William Uthman identified the portion of the Missoula Aquifer, the proposed groundwater source, within which there might be a potential effect from the proposed appropriation. The area identified was: Section 22 south of the Clark Fork River, Section 27 west of Mt. Sentinel, and Section 28 with the exception of the northwest quarter. Permits have been issued for planned uses of water from that area of the Missoula Aquifer for which the Department has not received notice that the permitted project has been completed. The unperfected permits are: Permit 74259-g76M has been issued to Applicant, as discussed in Finding of Fact 19; Permit 74833-g76M has been issued to Mountain Water Company for municipal use of 2,800 gpm up to 4,516.42 AF per year of groundwater by means of a well in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 28. (Department's records, Department's file, and testimony of Larry Schock and Glendon Thieszen)

24. Applicant intends to conduct testing on each portion of the system as it is completed to assure that it functions

properly. Applicant calls the process "commissioning", and the process is documented. Certain tests, such as to quantify the capacity of each diversion well and to determine the effectiveness of each injection well, could be performed as part of the commissioning process. (Testimony of Glendon Thieszen)

CONCLUSIONS OF LAW

1. The Department has jurisdiction over the subject matter herein, and the parties hereto. Mont. Code Ann. Title 85, Chapter 2 (1991).

2. The Department gave proper notice of the hearing, and all relative substantive and procedural requirements of law or rule have been fulfilled; therefore, the matter is properly before the Hearing Examiner. See Findings of Fact 1, 2, 3, and 4.

3. The Department must issue a Beneficial Water Use Permit if the applicant proves by substantial credible evidence that the following criteria set forth in Mont. Code Ann. § 85-2-311(1) (1991) are met:

- (a) there are unappropriated waters in the source of supply at the proposed point of diversion:
  - (i) at times when the water can be put to the use proposed by the applicant;
  - (ii) in the amount the applicant seeks to appropriate; and
  - (iii) during the period in which the applicant seeks to appropriate, the amount requested is reasonably available;
- (b) the water rights of a prior appropriator will not be adversely affected;
- (c) the proposed means of diversion, construction, and operation of the appropriation works are adequate;

- (d) the proposed use of water is a beneficial use;
- (e) the proposed use will not interfere unreasonably with other planned uses or developments for which a permit has been issued or for which water has been reserved; and
- (f) 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.

4. To meet the substantial credible evidence standard in Mont. Code Ann. § 85-2-311(1) (1991) the applicant must submit independent hydrologic or other evidence, including water supply data, field reports, and other information developed by the Department, the U.S. Geological Survey, or the U.S. Soil Conservation Service and other specific field studies, demonstrating that the criteria are met. Mont. Code Ann. § 85-2-311(4) (1991).

5. Applicant proved by substantial credible evidence that Applicant has possessory interest in the property where the water is to be put to beneficial use. See Findings of Fact 2 and 12. Therefore, the criterion in Mont. Code Ann. § 85-2-311(1)(f) (1991) has been met.

6. The proposed use of the water for irrigation purposes is a beneficial use. Mont. Code Ann. § 85-2-102(2)(a) (1991). The proposed irrigation use of water will benefit Applicant. See Finding of Fact 14. The amount of water to be appropriated for irrigation purposes is reasonable for the purpose. See Findings of Fact 2, 13, and 14. Therefore, with respect to the proposed irrigation use, the criterion in Mont. Code Ann. § 85-2-311(1)(d) (1991) has been met.

7. The proposed use of the water for institutional purposes, specifically the heating and cooling of buildings, will benefit Applicant. See Finding of Fact 10. The amount of water to be appropriated for institutional purposes is reasonable for the purpose. See Finding of Fact 11. Therefore, with respect to the proposed institutional use, the criterion in Mont. Code Ann. § 85-2-311(1)(d) (1991) has been met.

8. Applicant proved by substantial credible evidence that the proposed means of diversion, construction, and operation of the diversion works are adequate. See Findings of Fact 5, 11, 17, and 18. Therefore, the criterion in Mont. Code Ann. § 85-2-311(1)(c) (1991) has been met.

9. Applicant proved by substantial credible evidence that unappropriated waters are reasonably available in the source of supply at the proposed point of diversion in the amount and during the period Applicant seeks to appropriate. See Findings of Fact 2, 5, 6, 7, and 8. Therefore, the criterion in Mont. Code Ann. § 85-2-311(1)(a) (1991) has been met.

10. Applicant proved by substantial credible evidence that the water rights of prior appropriators will not be adversely affected. See Findings of Fact 8, 9, and 15. Therefore, the criterion in Mont. Code Ann. § 85-2-311(1)(b) (1991) has been met.

11. Applicant proved by substantial credible evidence that the proposed use will not interfere unreasonably with other planned uses for which a permit has been issued or for which

water has been reserved. See Conclusion of Law 10; Findings of Fact 22 and 23. Therefore, the criterion in Mont. Code Ann. § 85-2-311(1)(e) (1991) has been met.

12. The Department may not issue a permit for more water than the project will beneficially use. Mont. Code Ann. § 85-2-312(1) (1991). This project will not use the full amount identified in the Application and public notices. See Findings of Fact 2, 19, and 20. The Department may issue a permit for less than the amount of water requested. Mont. Code Ann. § 85-2-312(1) (1991). According to the record, the maximum amount that can be beneficially used for which Applicant requires a new permit is 8,462 gpm up to 748.99 AF per year. For the separate proposed purposes, the amounts are: 8,462 gpm up to 748.99 Af per year for institutional use and 8,462 gpm up to 340.55 AF per year for irrigation purposes. See Findings of Fact 19, and 20. A permit based on this application must be limited to these reduced amounts.

13. A permit cannot be issued for speculative proposals. See In re Applications 31587-g41F and 33294-g41F by Yellowstone Village, Inc.; see also In re Application 65689-s76LJ by Rodger A. and Donna L. Worth; In re Application 28306-s41I by Ken Campbell. Applicant has failed to show a bona fide intent to develop and use more than 22 points of diversion, i.e., wells. The need for two additional wells is speculative. See Finding of Fact 21. Furthermore, the proof of lack of adverse effect of the proposed appropriation was based on a project having only 22 new

wells. See Findings of Fact 8, 9, 15, 19, and 20. Therefore, a permit based on the above-entitled application must be limited to the development of 22 wells.

14. The Department has the authority to impose terms, conditions, restrictions, and limitations the Department considers necessary to satisfy the criteria in Mont. Code Ann. § 85-2-311(1). Mont. Code Ann. § 85-2-312(1) (1983).

Because an appropriation based on this application would be used in conjunction with another water right for the proposed institutional purposes, a condition must be placed on the permit restricting the conjunctive use of the water rights to the limits of each water right and, when combined, to not exceed the total amount of water necessary for beneficial use, i.e., 8,700 gpm up to 770 AF per year. See Finding of Fact 20.

The proposed appropriation contains and was advertised to contain a substantial portion of nonconsumptive use. See Findings of Fact 2, 3, and 15. Nonconsumptive use means a beneficial use of water which does not cause a reduction in the source of supply, and where substantially all of the diverted water returns to the source of supply with little or no delay and without adverse effect to the quality of the water. Mont. Admin. R. 36.12.1010(5) (1991). Because the proposed appropriation contains a substantial element of nonconsumptive use, the volume of water diverted by each new well must be measured and recorded along with the amount of water injected back into the source. See Findings of Fact 2 and 15. This guarantees that the amount

of water proposed to be diverted to consumptive use is not exceeded. Furthermore, to ensure that each proposed injection well actually functions to make the system nonconsumptive, it is proper the permit contain a condition requiring certification that each injection well does perform that function, that is, it returns to the groundwater source from which it was diverted a volume of water equal to the amount diverted by the corresponding diversion well minus the amount used for irrigation. See Finding of Fact 2. The certification process can be part of the standard commissioning of each pair of diversion and injection wells. See Finding of Fact 24.

Applicant has stated that no chemical or fertilizer distribution system will be connected to the proposed project. See Finding of Fact 18. Furthermore, the project must be constructed so as to avoid contamination or pollution of groundwater. Mont. Code Ann. § 85-2-505(1) (1991); Mont. Admin. R. 36.12.1010(5) (1991). Therefore, it is proper for the permit to contain a condition prohibiting chemical or fertilizer distribution systems from being connected to the conveyances that lead to injection wells. It is also proper for the permit to contain a condition requiring that each diversion and injection system be constructed and maintained to allow water quality testing and that the systems be tested to ensure that the water being returned to the groundwater source will not contaminate or pollute that groundwater source (i.e., the water is returned to the source substantially undiminished in quality from what it was when it was

diverted) and that certification be given that the results of the test show contamination or pollution will not occur. The certification process can be part of the standard commissioning of each pair of diversion and injection wells. See Finding of Fact 24.

Because the proposed project involves 23 wells, i.e., 22 wells under this proposed appropriation and one well already authorized under Permit 74259-g76M, all acting as points of diversion with each well designed and constructed to divert water at a certain rate and volume, and because the project will be completed in four phases over a long period of time, i.e., ten years, it is proper for the permit to contain a condition requiring that the actual design maximum flow rate and volume of each diversion well be identified after the well has been constructed and the system of use of the respective phase has been completed. This will ensure that total system capacity and the configuration of the individual well capacities are being scaled in substantial conformance with the design plans Applicant has used to prove that the proposed project meets the statutory criteria.

15. Applicant having proven that the application meets the statutory criteria, and conditions having been identified which ensure that the project as constructed will conform to the statutory criteria, a permit may be issued. Mont. Code Ann. §§ 85-2 311(1) and 312(1) (1991).

#### PROPOSED ORDER

Subject to the terms, conditions, restrictions, and limitations specified below, Beneficial Water Use Permit 78402-g76M is

hereby granted to the State of Montana, Department of Education, Facilities Services Department, to appropriate groundwater by means of up to 22 pumped wells in the S $\frac{1}{2}$ S $\frac{1}{2}$  of Section 22 and the N $\frac{1}{2}$  of Section 27 of Township 13 North, Range 19 West, Missoula County, Montana, at a total flow rate of up to 8,462 gpm up to a total volume of 748.99 AF per year for institutional and irrigation purposes. The priority date shall be 3:30 p.m. June 26, 1991.

The institutional purpose shall be for the heating and cooling of buildings on the campus of the University of Montana in the S $\frac{1}{2}$ S $\frac{1}{2}$  of Section 22 and the N $\frac{1}{2}$  of Section 27 of Township 13 North, Range 19 West, Missoula County, Montana. The maximum total appropriation for institutional purposes shall be 8,462 gpm up to 748.99 AF per year. The period of appropriation for institutional purposes shall be January 1 through December 31 of each year.

The maximum total appropriation for irrigation purposes shall be 8,462 gpm up to 340.55 AF per year. The place of use for irrigation shall be on the campus of the University of Montana and is specifically described as 6 acres in the E $\frac{1}{2}$ SE $\frac{1}{2}$ SW $\frac{1}{4}$  and 35 acres in the S $\frac{1}{2}$ SE $\frac{1}{4}$  of Section 22, and 21 acres in the E $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$  and 58 acres in the NE $\frac{1}{4}$  of Section 27, all in Township 13 North, Range 19 West, Missoula County, Montana. The period of appropriation for irrigation purposes shall be April 15 through October 15 of each year. Of the total irrigation use, 70 acres will be supplemental irrigation of the following parcels in

Township 13 North, Range 19 West, Missoula County, Montana: 12 acres in the SW $\frac{1}{4}$ SE $\frac{1}{4}$  and 5 acres in the W $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 22, and 2 acres in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  and 1 acre in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 27 presently permitted under Permit 62519-g76M; and, 50 acres in the W $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 27 presently permitted under Permit 74259-g76M.

The flow rate and volume of water used for irrigation purposes shall be recycled water from the institutional heating and cooling system use. All water used for institutional heating and cooling which is not recycled to irrigation purposes shall be injected back into the groundwater source of supply. There shall be 22 injection wells, one paired with each diversion well.

A. This Permit is subject to all prior and existing water rights, and to any final determination of such rights as provided by Montana Law. Nothing herein shall be construed to authorize appropriations by the Permittee to the detriment of any prior appropriator.

B. This Permit is used in conjunction with Permit 74259-g76M. When used for institutional heating and cooling purposes, the combined appropriations shall not exceed 8,700 gallons per minute up to 770 acre-feet per year.

C. This Permit is supplemental to Permit 62519-g76M and Permit 74259-g76M which means they have overlapping places of use for irrigation purposes.

D. The Permittee shall submit a progress report of the work completed under this permit by NOVEMBER 30 of each year<sup>3</sup> until completion of the project. Submit reports to the Water Resources Regional Office, Holiday Village Professional Offices, Suite 105, P.O. Box 5004, Missoula, MT 59806 PH: (406) 721-4284.

E. This Permit is subject to § 85-2-505, MCA, requiring that all wells be constructed so they will not allow water to be wasted, or contaminate other supplies or sources, and all flowing wells shall be capped or equipped so the flow of water may be stopped when not being put to beneficial use. The final completion of the well must include an access port of at least .50 inch so that the static water level in the well may be accurately measured.

F. No chemical or fertilizer distribution system shall be connected to any irrigation system which is connected to a conveyance leading to an injection well operated as part of the appropriation authorized by this Permit or operated in conjunction with this Permit.

G. The Permittee shall maintain an adequate flow metering device on each diversion and each injection well throughout the diversion system in order to allow the recording of the flow rate and volume of all water diverted from the source and all water injected back into the source. The Permittee shall keep a written record of the flow rate and volume of all such waters,

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<sup>3</sup> Except 1992

including the period of time, and shall submit said records upon request to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation.

H. Each diversion well must be constructed and maintained to allow samples of water to be taken, for water quality testing, prior to it leaving or immediately after it leaves the well. Each injection well must be constructed and maintained to allow samples of water to be taken, for water quality testing, immediately prior to it entering the well.

I. Upon completion of each injection well attached to a heating and cooling loop, a sample of water that has run through the loop shall be collected at the well head of the injection well, another sample of water shall be collected at the well head of the diversion well. Both samples shall be tested for their chemical composition and organic contaminants. Permittee shall submit written certification, accompanied by documentation of the testing, to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation prior to operating the paired wells for the permitted institutional use stating that the test results show the water will enter the injection well substantially undiminished in quality from what it was when diverted.

J. Upon completion of each injection well, Permittee shall submit written certification by a hydrogeologist that the water being injected at each injection well is actually recharging the source aquifer from which the water was diverted. The

certification shall be in writing, shall be accompanied by documentation of any testing or analysis used to complete the certification, and shall be submitted to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation prior to operation of the paired diversion well for the permitted institutional use.

K. Upon completion of each of the four phases of the permitted project, Permittee shall submit a written certification of the maximum flow rates and volumes to be diverted by each well completed in the phase. The certification shall identify the separate winter and summer amounts, and the separate amounts to be diverted for institutional and irrigation uses from each well. The certification must be submitted to the Missoula Water Resources Regional Office of the Department of Natural Resources and Conservation within one year of completion of the respective phase, but not to exceed, for the final phase, the deadline for notice of completion of the entire permitted appropriation.

L. Issuance of this permit shall not reduce the Permittee's liability for damages caused by exercise of this permit, nor does the Department, in issuing this permit, acknowledge any liability for damages caused by exercise of this permit, even if such damage is a necessary and unavoidable consequence of the same.

M. Upon a change in ownership of all or any portion of this permit, the parties to the transfer shall file with the Department of Natural Resources and Conservation a Water Right Transfer Certificate, Form 608, pursuant to Section 85-2-424, MCA.

NOTICE

This proposal may be adopted as the Department's final decision unless timely exceptions are filed as described below. Any party adversely affected by this Proposal for Decision may file exceptions with the Hearing Examiner. The defaulted objector is restricted to excepting to the default ruling. The Department will disregard any exceptions submitted by the defaulted objector on other substantive issues.

The exceptions must be filed and served upon all parties within 20 days after the proposal is mailed. Parties may file responses to any exception filed by another party. The responses must be filed within 20 days after service of the exception and copies must be sent to all parties. No new evidence will be considered.

No final decision shall be made until after the expiration of the time period for filing exceptions, and due consideration of timely exceptions, responses, and briefs.

Dated this 22<sup>nd</sup> day of September, 1992.



John E. Stults, Hearing Examiner  
Department of Natural Resources  
and Conservation  
1520 East Sixth Avenue  
Helena, Montana 59620-2301  
(406) 444-6612

CERTIFICATE OF SERVICE

This is to certify that a true and correct copy of the foregoing Proposal for Decision was duly served upon all parties

of record at their address or addresses this 30<sup>th</sup> day of September, 1992, as follows:

State of Montana  
Department of Education  
Facilities Services Dept.  
& Glendon Thieszen  
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Missoula, MT 59812

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(for notification only)

Michael P. McLane, Manager  
Missoula Water Resources  
Regional Office  
P.O. Box 5004  
Missoula, MT 59806  
(via electronic mail)

  
Cindy G. Campbell  
Hearings Unit Legal Secretary