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

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APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 42M 30103504 BY KNIFE RIVER NORTH CENTRAL	**)** **)** **)**	**PRELIMINARY DETERMINATION TO GRANT PERMIT**

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On August 18, 2015, Knife River North Central (Applicant) submitted Application for Beneficial Water Use Permit No. 42M 30103504 to the Glasgow Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 35 GPM up to 31 acre-feet (AF) diverted volume of groundwater for industrial use (aggregate washing). The Department published receipt of the Application on its website. The Department sent Applicant a deficiency letter under § 85-2-302, Montana Code Annotated (MCA), dated October 14, 2015. Applicant responded with information dated November 10, 2015. The Application was determined to be correct and complete as of November 24, 2015. An Environmental Assessment for this Application was completed on December 9, 2015.

INFORMATION

The Department considered the following information submitted by the Applicants.

Application as filed:

- Application for Beneficial Water Use Permit, Form 600
- Attachments
- Maps: aerial photo proposed aggregate washing site and wells.
- Electronic copy of Form 633

Information Received after Application Filed

- Deficiency response received November 10, 2015

Information within the Department's Possession/Knowledge

- Aquifer Test Report by DNRC ground water Hydrologist Attila Folnagy, dated August 26, 2015
- Depletion Report by DNRC ground water Hydrologist Attila Folnagy, dated August 27, 2015
- Department record of existing water rights
- USGS records for gaging station #06329500, Yellowstone River near Sidney, MT

The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, MCA).

PROPOSED APPROPRIATION

FINDINGS OF FACT

1. The Applicant proposes to divert water from a groundwater aquifer by means of two wells (well #1-285 feet deep and well #2-400 feet deep) from March 1-December 1 at 35 GPM up to 31 AF, from points in the SWSWSENE and the SESESWNE Section 13, T24N, R59E, Richland County, for industrial use from March 1-December 1. The Applicant proposes to use the water for industrial purposes to operate an aggregate wash plant. The place of use is generally located in the S2SWNE Section 13, T24N, R59E, Richland County.

2. The Applicant has requested a volume of 31 AF. The Applicant based their requested amount on their experience with aggregate washing operations. The volume includes settling pond capacity, pond evaporation, water lost to the aggregate that does not return to the pond and make up water to keep the pond full. The consumptive use will consist of water lost to aggregate (4 AF) and pond evaporation (3.25 AF). It is anticipated that the remaining 23.75 AF will infiltrate back into the soil.

3. Applicant proposes to use the water for a period of 10 years, the anticipated life of the gravel pit.

§ 85-2-311, MCA, BENEFICIAL WATER USE PERMIT CRITERIA

GENERAL CONCLUSIONS OF LAW

4. The Montana Constitution expressly recognizes in relevant part that:

> (1) All existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed.
> (2) The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use . . . shall be held to be a public use.
> (3) All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.

Mont. Const. Art. IX, §3. While the Montana Constitution recognizes the need to protect senior appropriators, it also recognizes a policy to promote the development and use of the waters of the state by the public. This policy is further expressly recognized in the water policy adopted by the Legislature codified at § 85-2-102, MCA, which states in relevant part:

> (1) Pursuant to Article IX of the Montana constitution, the legislature declares that any use of water is a public use and that the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this chapter. . . .
> (3) It is the policy of this state and a purpose of this chapter to encourage the wise use of the state's water resources by making them available for appropriation consistent with this chapter and to provide for the wise utilization, development, and conservation of the waters of the state for the maximum benefit of its people with the least possible degradation of the natural aquatic ecosystems. In pursuit of this policy, the state encourages the development of facilities that store and conserve waters for beneficial use, for the maximization of the use of those waters in Montana . . .

5. Pursuant to § 85-2-302(1), MCA, except as provided in §§ 85-2-306 and 85-2-369, MCA, a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or related distribution works except by applying for and receiving a permit from the Department. See § 85-2-102(1), MCA. An applicant in a beneficial water use permit proceeding must affirmatively prove all of the applicable criteria in § 85-2-311, MCA. Section § 85-2-311(1) states in relevant part:

… the department shall issue a permit if the applicant proves by a preponderance of evidence that the following criteria are met:

(a) (i) there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate; and

(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.

(b) the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. In this subsection (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;

(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 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, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit;

(f) the water quality of a prior appropriator will not be adversely affected;

(g) 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

(h) 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.

(2) The applicant is required to prove that the criteria in subsections (1)(f) through (1)(h) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (1)(f), (1)(g), or (1)(h), as applicable, may not be met. For the criteria set forth in subsection (1)(g), only the department of environmental quality or a local water quality district established under Title 7, chapter 13, part 45, may file a valid objection.

To meet the preponderance of evidence standard, "the applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other evidence, including but not limited to water supply data, field reports, and other information developed by the applicant, the department, the U.S. geological survey, or the U.S. natural resources conservation service and other specific field studies." § 85-2-311(5), MCA (emphasis added). The determination of whether an application has satisfied the § 85-2-311, MCA criteria is committed to the discretion of the Department. Bostwick Properties, Inc. v. Montana Dept. of Natural Resources and Conservation, 2009 MT 181, ¶ 21. The Department is required grant a permit only if the § 85-2-311, MCA, criteria are proven by the applicant by a preponderance of the evidence. Id. A preponderance of evidence is "more probably than not." Hohenlohe v. DNRC, 2010 MT 203, ¶¶33, 35.

6. Pursuant to § 85-2-312, MCA, the Department may condition permits as it deems necessary to meet the statutory criteria:

> (1) (a) The department may issue a permit for less than the amount of water requested, but may not issue a permit for more water than is requested or than can be beneficially used without waste for the purpose stated in the application. The department may require modification of plans and specifications for the appropriation or related diversion or construction. The department may issue a permit subject to terms, conditions, restrictions, and limitations it considers necessary to satisfy the criteria listed in 85-2-311 and subject to subsection (1)(b), and it may issue temporary or seasonal permits. A permit must be issued subject to existing rights and any final determination of those rights made under this chapter.

E.g., Montana Power Co. v. Carey (1984), 211 Mont. 91, 96, 685 P.2d 336, 339 (requirement to grant applications as applied for, would result in, "uncontrolled development of a valuable natural resource" which "contradicts the spirit and purpose underlying the Water Use Act."); see also, *In the Matter of Application for Beneficial Water Use Permit No. 65779-76M by Barbara L. Sowers* (DNRC Final Order 1988)(conditions in stipulations may be included if it further compliance with statutory criteria); *In the Matter of Application for Beneficial Water Use Permit No. 42M-80600 and Application for Change of Appropriation Water Right No. 42M-036242 by Donald H. Wyrick* (DNRC Final Order 1994); Admin. R. Mont. (ARM) 36.12.207.

7. The Montana Supreme Court further recognized in Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starner (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.

See also, Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order* (2011). The Supreme Court 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., 211 Mont. at 97-98, 685 P.2d at 340; see also Mont. Const. art. IX §3(1).

8. An appropriation, diversion, impoundment, use, restraint, or attempted appropriation, diversion, impoundment, use, or restraint contrary to the provisions of § 85-2-311, MCA is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized appropriation, diversion, impoundment, use, or other restraint. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to appropriate, divert, impound, use, or otherwise restrain or control waters within the boundaries of this state except in accordance with this § 85-2-311, MCA. § 85-2-311(6), MCA.

9. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge, as specifically identified in this document. ARM 36.12.221(4).

Physical Availability

FINDINGS OF FACT

10. The Applicant provided aquifer test results for a 72-hour pump test on its proposed production well. The aquifer test was conducted by Morrison-Maierle Inc. An Aquifer Test Report and Depletion Report were completed by DNRC groundwater Hydrologist Attila Folnagy on August 26, 2015 and August 27, 2015, respectively. The Aquifer Test Report confirmed that the aquifer test and methods utilized were adequate.

11. This project will use two wells located 200 feet apart. Well #1 is 285 feet deep, has a casing diameter of 4.5 inches, and a static water level of 160 feet. The screened portion of the well is from 245-285 feet below ground surface (BGS). Well #2 is 400 feet deep, has a casing diameter of 4.5 inches, and a static water level of 185 feet. The screened portion of the well is from 380-400 feet below ground surface (BGS). The wells are completed in sandstone units of the Fort Union Formation. Hydrogeologic information indicates the formation has many thin, discontinuous, and alternating beds that regionally function as one continuous aquifer.

12. Background groundwater monitoring of static water levels was performed on the Pumping Well #2 and monitoring well (MW-02). A 72-hour aquifer test was conducted on Well #2. Well #1 was not tested. A variance was requested and granted for Well #1 since Well #2 was tested at the requested flow rate of 35 GPM.

13. The 72-hour aquifer test started on April 29, 2015, at 12:00 P.M. and continued uninterrupted until 12:02 P.M. on May 2, 2015, at a flow rate of 35 GPM, plus/minus 1 GPM, for the duration of the test. Discharge was measured using a digital paddle wheel type flow meter and was conveyed 100 feet to a swale that flowed away from the site. The groundwater level data for the Pumping Well and monitoring well were collected with Level TROLL 700 automatic data loggers from In-Situ®. Raw data were converted to depth to water based on a manual measurement with an electric tape and subsequently converted to drawdown. The maximum drawdown in the pumping well (Well #2) was 50.4 feet from the static water level of 207.83 feet BGS leaving 141.8 feet of available drawdown. The monitoring well (MW #2) is located 60 feet

from the Well #2 and exhibited a maximum drawdown of 13.3 feet from a static water level of 209.45 feet BGS.

14. Cooper – Jacob Solution (1946) for a Pumping Test in a Confined Aquifer was used to analyze drawdown from the aquifer test to obtain estimates of aquifer properties. Modeling analysis calculates an average transmissivity of 155 ft^2/day and a storativity of 2.5 x 10^{-3} for the aquifer. Based on the analysis, there is 71,610 ft^3/day or 600 AF per year of aquifer flux through the delineated area.

15. The Depletion Report identifies that surface water depletion by the proposed groundwater pumping of the proposed wells will manifest within the Yellowstone River throughout the year. If the proposed appropriation depletes surface water, physical availability of surface water will be quantified on the depleted source.

16. The following USGS gage was utilized to quantify median of mean monthly flows and volumes on the Yellowstone River: USGS Station #06329500, Yellowstone River near Sidney, MT. This gaging station is located approximately 13 miles upstream of the point where depletions will manifest on the Yellowstone River (Below the confluence of First Hay Creek and the Yellowstone River). The following table shows the median of mean monthly flows (CFS) at the gaging station during the year.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5354	5998	9490	9111	17455	39935	21685	7595	6801	7794	7295	5858

17. A list of all intervening water rights between the USGS gage and the location where depletions were identified to manifest was generated in order to calculate flow rate and volume physically available.

Rights Between Gage and Location of Depletions						
Water Right #	Flow (cfs)	VOLUME (AF)	Q Section	Section	Township/Range	Period of Diversion
42M 104422 00	4.7	913	SWNWSE	2	22N59E	04/01 to 10/15

42M 104509 00	2.1	412	SWSESW	25	23N59E	04/01 to 10/01
42M 10468 00	4.45	554	SESW	32	24N60E	04/15 to 10/15
42M 11187 00	4.45	175	SWSESW	32	24N60E	04/15 to 10/15
42M 114728 00	1.7	271	SWSESW	25	23N59E	04/01 to 11/01
42M 11655 00	5.57	270	SESESW	32	24N60E	05/01 to 10/15
42M 119268 00	133.22	37845	NWSWSE	25	23N59E	04/01 to 10/31
42M 119271 00	43	33.3	NWSWSE	25	23N59E	04/01 to 10/31
42M 137597 00	0.08	3.39	S2	8	23N60E	01/01 to 12/31
42M 137600 00	Stock Direct	0.24	SW	36	23N59E	01/01 to 12/31
42M 137604 00	Stock Direct	0.34	NE	13	23N59E	01/01 to 12/31
42M 137605 00	Stock Direct	0.2	SWNW	18	23N60E	01/01 to 12/31
42M 137615 00	Stock Direct	1.01	S2S2	29	24N60E	01/01 to 12/31
42M 137617 00	Stock Direct	0.34	W2W2	36	23N59E	01/01 to 12/31
42M 165230 00	65.5	47422	SWNESW	9	22N59E	01/01 to 12/31
42M 169026 00	0.71	57	E2SWSW	14	23N59E	05/01 to 09/30
42M 178328 00	2.65	105	NWSWNW	36	23N59E	04/01 to 09/30
42M 30051296	1.1	136	SWNWSE	2	22N59E	04/01 to 10/15
42M 30064201	2.5	578	SWNWSE	2	22N59E	01/01 to 12/31
42M 31493 00	8.91	6.63	SENWSW	9	22N59E	09/01 to 03/30
42M 3656 00	3	118.3	E2NWSE	9	22N59E	05/01 to 09/01
42M 55525 00	13.36	275.4	SESW	32	24N60E	04/15 to 10/15
42M 6815 00	12	2200	NENE	18	23N60E	05/01 to 09/15
42M 80579 00	8.7	870	NWSWSE	25	23N59E	04/01 to 11/01

*Rights with a designation flow stating Stock Direct are instream stock rights and have been assigned a cumulative flow rate of 0.08 cfs for the analysis.

18. The following tables show calculated monthly availability of flow and volume at the location where depletions will manifest. Median of the mean volume was calculated by multiplying the median of the mean monthly flow rate (CFS) by the number of days in the month by 1.98 AF/CFS/day.

Physical Availability Flow Rate (cfs)			
Month	**Median Monthly Flows**	**Water Rights Between Gauge and Depletions**	**Flow Rate Physically Available**
Jan	5354	77	5277
Feb	5998	77	5921
Mar	9490	77	9413
Apr	9111	288	8823
May	17455	309	17146
Jun	39935	309	39626
Jul	21685	309	21376
Aug	7595	309	7286
Sep	6801	315	6486
Oct	7794	297	7497
Nov	7295	74	7221
Dec	5858	74	5784

Physical Availability Volume (AF)			
Month	**Median Monthly Volumes**	**Water Rights Between Gauge and POD**	**Volume Physically Available**
Jan	328629	4001	324628
Feb	332529	4001	328528
Mar	582496	4001	578495
Apr	541193	9954	531239
May	1071388	10490	1060898
Jun	2372139	10490	2361649
Jul	1331025	10490	1320535
Aug	466181	10490	455691
Sep	403979	10450	393529
Oct	478396	9910	468486
Nov	433323	4001	429322
Dec	359564	4001	355563

19. The Department finds that both groundwater and hydraulically connected surface water is physically available in the amount proposed for diversion.

CONCLUSIONS OF LAW

20. Pursuant to § 85-2-311(1)(a)(i), MCA, an applicant must prove by a preponderance of the evidence that "there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate."

21. It is the applicant's burden to produce the required evidence. *In the Matter of Application for Beneficial Water Use Permit No. 27665-41I by Anson* (DNRC Final Order 1987)(applicant produced no flow measurements or any other information to show the availability of water; permit denied); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

22. An applicant must prove that at least in some years there is water physically available at the point of diversion in the amount the applicant seeks to appropriate. *In the Matter of Application for Beneficial Water Use Permit No. 72662s76G by John Fee and Don Carlson* (DNRC Final Order 1990); *In the Matter of Application for Beneficial Water Use Permit No. 85184s76F by Wills Cattle Co. and Ed McLean* (DNRC Final Order 1994).

23. The Applicants have proven that water is physically available at the proposed point of diversion in the amount Applicants seek to appropriate. § 85-2-311(1)(a)(i), MCA. (FOF 10-19)

Legal Availability

FINDINGS OF FACT

24. Modeling results show that the 0.01 foot drawdown contour occurs at 16,500 feet from the Applicant's wells.

25. There are 56 existing groundwater water rights within the identified zone of influence of 16,500 feet from the wells. After inputting 2 AF and 5 AF for each domestic right and stock right, respectively, that did not have an assigned volume; the groundwater legal demand calculated within the zone of influence is 287.2 AF per annum. Subtracting the legal demands

from the calculated aquifer flux (600 AF) leaves 312.8 AF of groundwater per annum legally available. The full list of groundwater rights identified within the zone of influence is below.

Water Right Number	Flow Rate (GPM)	Volume (AF)	Period of Diversion
42M 30014725		2	01/01 to 12/31
42M 101502 00	10	5	01/01 to 12/01
42M 13266 00	15	2	01/01 to 12/31
42M 32125 00	9	5	10/01 to 04/30
42M 30024251		2	01/01 to 12/31
42M 8319 00	6	5	01/01 to 12/31
42M 30017806		2	01/01 to 12/31
42M 4966 00	16	5	03/01 to 05/31
42M 142782 00	5	0.31	01/01 to 12/31
42M 142781 00	5	0.31	01/01 to 12/31
42M 30049784	8	0.45	01/01 to 12/31
42M 30064105	8	1	01/01 to 12/31
42M 61860 00	12	1.5	01/01 to 12/31
42M 55486 00	4.5	1.5	01/01 to 12/31
42M 38661 00	12	1.5	01/01 to 12/31
42M 178292 00	8	1.5	01/01 to 12/31
42M 50373 00	8	1.5	01/01 to 12/31
42M 26671 00	10	1.5	01/01 to 12/31
42M 53287 00	4.5	1.5	01/01 to 12/31
42M 69266 00	10	1.5	01/01 to 12/31
42M 40970 00	10	1.5	01/01 to 12/31
42M 69286 00	5	1.5	01/01 to 12/31
42M 66243 00	12	1.5	01/01 to 12/31
42M 21006 00	2	1.5	01/01 to 12/31
42M 61864 00	4.5	1.5	01/01 to 12/31
42M 22554 00	10	1.5	01/01 to 12/31
42M 43719 00	15	1.5	01/01 to 12/31
42M 24070 00	10	1.5	01/01 to 12/31
42M 22468 00	18	1.5	01/01 to 12/31
42M 108370 00	1	1.6	01/01 to 12/31
42M 108371 00	1	1.6	01/01 to 12/31
42M 71775 00	10	1.61	01/01 to 12/31

42M 114669 00	5	1.63	01/01 to 12/31
42M 30001511	5	1.63	01/01 to 12/31
42M 91901 00	5	1.63	01/01 to 12/31
42M 32124 00	9	1.7	01/01 to 12/31
42M 77507 00	12	1.7	01/01 to 12/31
42M 108369 00		1.7	01/01 to 12/31
42M 30063245	15	1.75	01/01 to 12/31
42M 36600 00	98	1.79	01/01 to 12/31
42M 36310 00	20	1.8	01/01 to 12/31
42M 81307 00	10	2	01/01 to 12/31
42M 168981 00	15	2	01/01 to 12/31
42M 108379 00	21.5	2.31	01/01 to 12/31
42M 71774 00	18	2.35	01/01 to 12/31
42M 182756 00	15	2.4	01/01 to 12/31
42M 30064348	12	3	01/01 to 12/31
42M 34881 00	7	3.5	01/01 to 12/31
42M 30063247		9.66	03/01 to 11/30
42M 30065331	35	10	01/01 to 12/31
42M 44396 00	50	13.9	01/01 to 12/31
42M 41543 00	10	16	01/01 to 12/31
42M 51834 00	10	16.13	01/01 to 12/31
42M 46976 00	50	24	01/01 to 12/31
42M 28899 00	50	30	01/01 to 12/31
42M 104445 00	46	74.2	01/01 to 12/31
		287.2	

26. The Depletion Report written by DNRC groundwater Hydrologist Attila Folnagy identifies that surface water depletion from pumping Applicant's wells for the proposed irrigation use will manifest in the Yellowstone River. Legal availability of surface water on the Yellowstone River was analyzed from the point where surface water depletion was identified to manifest (Below the confluence of First Hay Creek and the Yellowstone River) to the North Dakota border, approximately 2 miles downstream.

27. This analysis includes individual water rights within the 2 mile reach to the North Dakota border as well as the Montana Department of Fish, Wildlife, & Parks (FWP) instream flow reservation. The following tables show the existing legal demands and availability of water

(flow and volume) after accounting for existing legal demands within the area of potential impact on the Yellowstone River. There are no downstream water rights from the point of depletion to the North Dakota border so the only legal demand is FWP's instream flow right.

Legal Availability Flow Rate (cfs)				
Month	**Flow Rate Physically Available at POD**	**FWP Instream Flow Right**	**Downstream Water Rights**	**Flow Rate Legally Available**
Jan	5277	3738	0	1539
Feb	5921	4327	0	1594
Mar	9413	6778	0	2635
Apr	8823	6808	0	2015
May	17146	11964	0	5182
Jun	39626	25140	0	14486
Jul	21376	10526	0	10850
Aug	7286	2670	0	4616
Sep	6486	3276	0	3210
Oct	7497	6008	0	1489
Nov	7221	5848	0	1373
Dec	5784	3998	0	1786

Legal Availability Volume (AF)				
Month	**Volume Physically Available at POD**	**FWP Instream Right**	**Downstream Water Rights**	**Volume Legally Available**
Jan	324628	229438	0	95189
Feb	328528	239889	0	88639
Mar	578495	416034	0	162462
Apr	531239	404395	0	126844
May	1060898	734350	0	326548
Jun	2361649	1493316	0	868333
Jul	1320535	646086	0	674449
Aug	455691	163885	0	291807
Sep	393529	194594	0	198935
Oct	468486	368771	0	99715
Nov	429322	347371	0	81951
Dec	355563	245397	0	110166

28. The following tables show the timing and amount of depletion caused by the proposed appropriation compared to flow and volume legally available on the Yellowstone River at the point in which the depletion will occur.

Comparison-Flow Rate (CFS)			
Month	**Flow Rate Legally Available at POD**	**Flow Rate Depleted**	**Flow Rate Remaining**
Jan	1539	0.04	1539
Feb	1594	0.04	1594
Mar	2635	0.04	2635
Apr	2015	0.04	2015
May	5182	0.04	5182
Jun	14486	0.04	14486
Jul	10850	0.04	10850
Aug	4616	0.04	4616
Sep	3210	0.04	3210
Oct	1489	0.04	1489
Nov	1373	0.04	1373
Dec	1786	0.04	1786

Comparison-Volume (AF)			
Month	**Volume Legally Available at POD**	**Volume Depleted**	**Volume Remaining**
Jan	95189	1.1	95188
Feb	88639	1.1	88638
Mar	162462	1.1	162461
Apr	126844	1.1	126843
May	326548	1.1	326547
Jun	868333	1.1	868332
Jul	674449	1.1	674448

Aug	291807	1.1	291806
Sep	198935	1.1	198934
Oct	99715	1.1	99714
Nov	81951	1.1	81950
Dec	110166	1.1	110165

29. The Department finds that both groundwater and hydraulically connected surface water is legally available in the amount requested.

CONCLUSIONS OF LAW

30. Pursuant to § 85-2-311(1)(a), MCA, an applicant must prove by a preponderance of the evidence that:

(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.

E.g., ARM 36.12.101 and 36.12.120; Montana Power Co., 211 Mont. 91, 685 P.2d 336 (Permit granted to include only early irrigation season because no water legally available in late irrigation season); *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992).

31. It is the applicant's burden to present evidence to prove water can be reasonably considered legally available. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (the legislature set out the criteria (§ 85-2-311, MCA) and placed the burden of proof squarely on the applicant. The Supreme Court has instructed that those burdens are exacting.); see also Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston (1991), 249 Mont. 425, 816 P.2d 1054

(burden of proof on applicant in a change proceeding to prove required criteria); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005))(it is the applicant's burden to produce the required evidence.); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions, LLC* (DNRC Final Order 2007)(permit denied for failure to prove legal availability); see also ARM 36.12.1705.

32. Pursuant to Montana Trout Unlimited v. DNRC, 2006 MT 72, 331 Mont. 483, 133 P.3d 224, the Department recognizes the connectivity between surface water and ground water and the effect of pre-stream capture on surface water. E.g., Wesmont Developers v. DNRC, CDV-2009-823, Montana First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 7-8; *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006)(mitigation of depletion required), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); see also Robert and Marlene Takle v. DNRC *et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994) (affirming DNRC denial of Applications for Beneficial Water Use Permit Nos. 76691-76H, 72842-76H, 76692-76H and 76070-76H; underground tributary flow cannot be taken to the detriment of other appropriators including surface appropriators and ground water appropriators must prove unappropriated surface water, *citing* Smith v. Duff, 39 Mont. 382, 102 P. 984 (1909), and Perkins v. Kramer, 148 Mont. 355, 423 P.2d 587 (1966)); *In the Matter of Beneficial Water Use Permit No. 80175-s76H by Tintzman* (DNRC Final Order 1993)(prior appropriators on a stream gain right to natural flows of all tributaries in so far as may be necessary to afford the amount of water to which they are entitled, *citing* Loyning v. Rankin (1946), 118 Mont. 235, 165 P.2d 1006; Granite Ditch Co. v. Anderson (1983), 204 Mont. 10, 662 P.2d 1312; Beaverhead Canal Co. v. Dillon Electric Light & Power Co. (1906), 34 Mont. 135, 85 P. 880); *In the Matter of Beneficial Water Use Permit No.* 63997-*42M by Joseph F. Crisafulli* (DNRC Final Order 1990)(since there is a relationship between surface flows and the ground water source proposed for appropriation, and since diversion by applicant's well appears to influence surface flows, the ranking of the proposed

appropriation in priority must be as against all rights to surface water as well as against all groundwater rights in the drainage.) Because the applicant bears the burden of proof as to legal availability, the applicant must prove that the proposed appropriation will not result in prestream capture or induced infiltration and cannot limit its analysis to ground water.§ 85-2-311(a)(ii), MCA. Absent such proof, the applicant must analyze the legal availability of surface water in light of the proposed ground water appropriation. *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 By Utility Solutions LLC* (DNRC Final Order 2007) (permit denied); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 ; Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12.

33. Where a proposed ground water appropriation depletes surface water, applicant must prove legal availability of amount of depletion of surface water throughout the period of diversion either through a mitigation /aquifer recharge plan to offset depletions or by analysis of the legal demands on, and availability of, water in the surface water source. Robert and Marlene Takle v. DNRC *et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994); *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006)(permits granted), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit 41H 30019215 by Utility Solutions LLC* (DNRC Final Order 2007)(permit granted), *affirmed*, Montana River Action Network et al. v. DNRC et al., Cause No. CDV-2007-602, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions LLC* (DNRC Final Order 2007) (permit denied for failure to analyze legal availability outside of irrigation season (where mitigation applied)); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30026244 by Utility Solutions LLC* (DNRC Final Order 2008); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by*

Patricia Skergan and Jim Helmer (DNRC Final Order 2009)(permit denied in part for failure to analyze legal availability for surface water depletion); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 (Court affirmed denial of permit in part for failure to prove legal availability of stream depletion to slough and Beaverhead River); Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12 ("DNRC properly determined that Wesmont cannot be authorized to divert, either directly or indirectly, 205.09 acre-feet from the Bitterroot River without establishing that the water does not belong to a senior appropriator"; applicant failed to analyze legal availability of surface water where projected surface water depletion from groundwater pumping); *In the Matter of Application for Beneficial Water Use Permit No. 76D-30045578 by GBCI Other Real Estate, LLC* (DNRC Final Order 2011) (in an open basin, applicant for a new water right can show legal availability by using a mitigation/aquifer recharge plan or by showing that any depletion to surface water by groundwater pumping will not take water already appropriated; development next to Lake Koocanusa will not take previously appropriated water). Applicant may use water right claims of potentially affected appropriators as a substitute for "historic beneficial use" in analyzing legal availability of surface water under § 85-2-360(5), MCA. Royston, supra.

34. Applicants have proven by a preponderance of the evidence that water can reasonably be considered legally available during the period in which the applicants seek to appropriate, in the amount requested, based on the records of the Department and other evidence provided to the Department.§ 85-2-311(1)(a)(ii), MCA. (FOF 24-29)

Adverse Effect

FINDINGS OF FACT

35. If a shortage of water exists, the Applicant has the ability to make the necessary adjustments to the amount of water they pump so that they do not create an adverse effect to existing users. This includes the ability to stop diverting water in the event that a valid call is made.

36. Attila Folnagy, groundwater Hydrologist for the Water Management Bureau of the DNRC, modeled drawdown of the aquifer by the proposed pumping of the Applicant's wells. The evaluation of drawdown was completed using the Theis (1935) solution with the following parameters: T=9,600 ft^2/day and S=0.001. Well #1 and Well #2 were modeled as one well with a constant pumping rate due to their close proximity. Drawdown in excess of 1 foot occurs in wells that are 15,000 feet from the applicant's wells. There are 45 water rights and 24 water rights have a known well depth and static water level that are predicted to experience drawdown greater than 1 foot. The well predicted to have the least available water level after pumping the Applicant's wells would have 14 feet available water column.

37. The Depletion Report identifies that the Yellowstone River is hydraulically connected to the source aquifer and will be subject to surface depletions from pumping the Applicant's wells. Evaluations of the rate and timing of surface water depletions are based on the assumption that groundwater pumping eventually is offset by an equivalent increase in recharge or decrease in discharge. The source aquifer consists of sandstone units of the Fort Union Formation. Modeling of depletion was carried out using the annual consumption of 13.22 AF based on losses from the aggregate and evaporation from the pond. The following table shows the calculated consumption and net depletion to the Yellowstone River.

Month	Consumption (AF)	Depletion (AF)	Depletion (gpm)
January	0	1.10	19.0
February	0	1.10	19.0
March	1.47	1.10	19.0
April	1.47	1.10	19.0
May	1.47	1.10	19.0
June	1.47	1.10	19.0
July	1.47	1.10	19.0
August	1.47	1.10	19.0
September	1.47	1.10	19.0
October	1.47	1.10	19.0
November	1.47	1.10	19.0
December	0	1.10	19.0
Total	13.22	13.22	

38. The Department finds that there will be no adverse effect to existing water users due to the proposed appropriation. There are 24 ground water rights that have a known well depth and static water level that are predicted to experience drawdown greater than 1 foot. There are no wells that have an available water column less than 10 feet. Water is both physically and legally available in the Yellowstone River in the amount which will be depleted.

CONCLUSIONS OF LAW

39. Pursuant to § 85-2-311(1)(b), MCA, the Applicant bears the affirmative burden of proving by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Analysis of 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. See Montana Power Co. (1984), 211 Mont. 91, 685 P.2d 336 (purpose of the Water Use Act is to protect senior appropriators from encroachment by junior users); Bostwick Properties, Inc. ¶ 21.

40. An applicant must analyze the full area of potential impact under the § 85-2-311, MCA criteria. *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company* (DNRC Final Order 2006). While § 85-2-361, MCA, limits the boundaries expressly required for compliance with the hydrogeologic assessment requirement, an applicant is required to analyze the full area of potential impact for adverse effect in addition to the requirement of a hydrogeologic assessment. Id. ARM 36.12.120(8).

41. Applicant must prove that no prior appropriator will be adversely affected, not just the objectors. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 4.

42. In analyzing adverse effect to other appropriators, an applicant may use the water rights claims of potentially affected appropriators as evidence of their "historic beneficial use." See Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston (1991), 249 Mont. 425, 816 P.2d 1054.

43. It is the applicant's burden to produce the required evidence. E.g., Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (legislature has placed the burden of proof squarely on the applicant); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005). (DNRC Final Order 2005). The Department is required to grant a permit only if the § 85-2-311, MCA, criteria are proven by the applicant by a preponderance of the evidence. Bostwick Properties, Inc. ¶ 21.

44. Section 85-2-311 (1)(b) of the Water Use Act does not contemplate a de minimis level of adverse effect on prior appropriators. Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pg. 8.

45. The Applicants have proven by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. § 85-2-311(1)(b) , MCA. (FOF 35-38)

Adequate Diversion

FINDINGS OF FACT

46. The Applicant proposes to divert water from a groundwater aquifer by means of two wells (Well #1-285 feet deep and Well #2-400 feet deep well) from March 1-December 1 at 35 GPM up to 31 AF, from points in the SWSWSENE and the SESESWNE Section 13, T24N, R59E, Richland County, for irrigation use from March 1-December 1. The Applicant proposes to us the water for industrial purposes to operate an aggregate wash plant. The place of use is generally located in the S2SWNE Section 13, T24N, R59E, Richland County. The wells were drilled by Sharp Drilling Inc, a licensed well driller in the State of Montana (Lic. No. WWD-515). Both wells have a casing diameter of 4.5 inches. The static water level in the Well #1 is 160 feet and the screened portion of the well is from 245-285 feet below ground surface (BGS). The static water level in the Well #2 is 185 feet and the screened portion of the well is from 380-400 feet below ground surface (BGS). The wells are completed in sandstone units of the Fort Union Formation. A Wacker Neuson model PT6LT pump will be used to pump water out of the pond to the aggregate wash plant. The "dirty" water gravity flows back to the pond where fine particles settle out as the water flows from one end to the other. The water is continuously recycled. The wells make up the water lost to moisture in the stockpiled aggregate and evaporation from the pond.

47. Determining the drawdown of diversion is done by modeling the period of diversion for the proposed wells using a constant pumping rate of 10 GPM for Well #1 and 15.4 GPM for Well #2, including interference drawdown, and adding drawdown from daily pumping that will result from pumping the proposed wells #1 and #2. The total maximum drawdown for Well #1 of 94.5 feet is the sum of the modeled aquifer drawdown at the end of 276 days (27.5 feet) that includes interference drawdown resulting from pumping Well #2 at 15.4 GPM, the drawdown (67 feet) at 1,200 minutes (time it takes to pump the daily volume of 14,400 gallons) extrapolated from the 14-hour drawdown and yield test. With a static water level of 165.9 feet bgs, this would leave 24.6 feet of available drawdown above the bottom of Well #1. The total maximum drawdown for Well #2 of 81.7 feet is the sum of the modeled aquifer drawdown in Figure 7 at the end of one year (33.5 feet) that includes interference drawdown resulting from

pumping Well #1 at 10 GPM, the drawdown (48.2 feet) at 634 minutes (time it takes to pump the daily volume of 22,176 gallons) into the 72-hour aquifer test. With a static water level of 207.8 feet bgs, this would leave 110.5 feet of available drawdown above the bottom of Well #2. Drawdown analysis indicates the well is adequate in providing the requested flow and volume.

CONCLUSIONS OF LAW

48. Pursuant to § 85-2-311(1)(c), MCA, an Applicant must demonstrate that the proposed means of diversion, construction, and operation of the appropriation works are adequate.

49. The adequate means of diversion statutory test merely codifies and encapsulates the case law notion of appropriation to the effect that the means of diversion must be reasonably effective, i.e., must not result in a waste of the resource. *In the Matter of Application for Beneficial Water Use Permit No. 33983s41Q by Hoyt* (DNRC Final Order 1981); § 85-2-312(1)(a), MCA.

50. Applicants have proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. § 85-2-311(1)(c), MCA. (FOF 46-47)

Beneficial Use

FINDINGS OF FACT

51. The Applicant is proposing to divert 35 GPM flow up to 31 AF per year for industrial use (aggregate washing). Up to 100,000 tons of aggregate will be washed annually and construction standards allow for 5% moisture in the finished product. This equates to approximately 4 AF per year. The pond capacity is 7.9 AF and the pond evaporation is 3.25 AF. The remaining 15.85 AF will provide a sufficient volume of make-up water to allow for adequate settling of fine particulates. Washed aggregate moisture (4 AF) + pond capacity (7.9 AF) + pond evaporation (3.25 AF) + make-up water (15.85 AF) = 31 AF. The flow rate of 35 GPM is adequate for the initial fill of the pond and to provide make-up water for that lost to stockpile aggregate and pond evaporation.

CONCLUSIONS OF LAW

52. Under § 85-2-311(1)(d), MCA, an Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use.

53. An appropriator may appropriate water only for a beneficial use. See also, § 85-2-301 MCA. It is a fundamental premise of Montana water law that beneficial use is the basis, measure, and limit of the use. E.g., McDonald, supra; Toohey v. Campbell (1900), 24 Mont. 13, 60 P. 396. The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, *Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court, Lewis and Clark County (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; *In The Matter Of Application For Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly* (DNRC Final Order), *affirmed other grounds*, Dee Deaterly v. DNRC *et al*, Cause No. 2007-186, Montana First Judicial District, *Order Nunc Pro Tunc on Petition for Judicial Review* (2009); Worden v. Alexander (1939), 108 Mont. 208, 90 P.2d 160; Allen v. Petrick (1924), 69 Mont. 373, 222 P. 451; *In the Matter of Application for Beneficial Water Use Permit No. 41S-105823 by French* (DNRC Final Order 2000).

Amount of water to be diverted must be shown precisely. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 3 (citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet).

54. Applicant proposes to use water for industrial use, which is a recognized beneficial use. § 85-2-102(4), MCA. Applicant has proven by a preponderance of the evidence industrial use is a beneficial use and that 31 AF of diverted volume and 35 GPM flow of water requested is the amount needed to sustain the beneficial use. § 85-2-311(1)(d), MCA. (FOF 51)

Possessory Interest

FINDINGS OF FACT

55. The applicant signed the affidavit on the application form affirming the applicant has 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. Additionally, the applicant provided a copy of the Rock, Sand, and Gravel Materials Agreement entered into with the property owners, Dennis and Samuel Anderson.

CONCLUSIONS OF LAW

56. Pursuant to § 85-2-311(1)(e), MCA, an Applicant must prove by a preponderance of the evidence that it 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, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit.

57. Pursuant to ARM 36.12.1802:

> (1) An applicant or a representative shall sign the application affidavit to affirm the following:
> (a) the statements on the application and all information submitted with the application are true and correct and
> (b) except in cases of an instream flow application, or where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, the applicant 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.
> (2) If a representative of the applicant signs the application form affidavit, the representative shall state the relationship of the representative to the applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.
> (3) The department may require a copy of the written consent of the person having the possessory interest.

58. The Applicant has proven by a preponderance of the evidence that they have 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. § 85-2-311(1)(e), MCA. (FOF 55)

PRELIMINARY DETERMINATION

Subject to the terms, analysis, and conditions in this Order, the Department preliminarily determines that this Application for Beneficial Water Use Permit No. 42M 30103504 should be GRANTED.

The Department determines the Applicant may divert water from a groundwater aquifer, by means of two wells (285 and 400 feet deep), from March 1-December 1 at 35 GPM up to 31 AF, from points in the SWSWSENE and SESESWNE Section 13, T24N, R59E, Richland County, for industrial use (aggregate washing) from March 1-December 1. The place of use is located in the S2SWNE Section 13, T24N, R59E, Richland County.

NOTICE

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §§ 85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection, the application and objection will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and § 85-2-309, MCA. If valid objections to an application are received and withdrawn with stipulated conditions and the department preliminarily determined to grant the permit or change in appropriation right, the department will grant the permit or change subject to conditions necessary to satisfy applicable criteria.

DATED this 23rd day of December, 2015.

/Original signed by Denise Biggar/
Denise Biggar, Manager
Glasgow Regional Office
Department of Natural Resources and Conservation