

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

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**APPLICATION TO CHANGE WATER  
RIGHT NO. 43P 30106352 BY BIG HORN  
CONSERVATION DISTRICT (NEDENS  
PARTNERSHIP LLC)**      **) PRELIMINARY DETERMINATION TO  
GRANT CHANGE OF WATER RIGHT**

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On April 18, 2016, Big Horn Conservation District (Applicant) submitted Application to Change Water Right No. 43P 30106352 (Producer – Nedens Partnership LLC) to change Water Reservation No. 43P 30072431 (43P 9952-00) to the Billings Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Application is to change a portion of the Big Horn Conservation District Water Reservation by adding a point of diversion and a place of use. The Department published receipt of the Application on its website. The Application was determined to be correct and complete as of May 18, 2016.

An Environmental Assessment for this Application was completed on May 18, 2016.

**INFORMATION**

The Department considered the following information submitted by the Applicant.

Application as filed:

- Form 606CD, Conservation District Application to Change Water Reservation
- Letter from Caroline Sime, Montana Sage Grouse Habitat Conservation Program, to Duane Claypool of the Department, dated March 16, 2016, indicating that the proposed project is consistent with the program strategy.
- Maps
  - USGS Quad showing proposed secondary point of diversion and place of use.
  - USGS Quad showing proposed point of diversion.
  - BLM map showing proposed primary and secondary points of diversion and place of use.

Information within the Department’s Possession/Knowledge

- Two Leggins Canal Capacity Study Reserved Water Delivery Assessment by R. Perkins (December 2009)
- DNRC water right database records

- Environmental Assessment dated May 18, 2016.

The Department has fully reviewed and considered the Environmental Assessment and evidence and argument submitted with this Application and has determined pursuant to the Montana Water Use Act (Title 85, chapter 2, parts 3 and 4, MCA) the change application can be granted as shown below. **NOTE:** Department of DNRC means the Department of Natural Resources & Conservation; CFS means cubic feet per second; GPM means gallons per minute; AF means acre-feet; AC means acres; AF/YR means acre-feet per year; CD means conservation district; and producer means the applicant who applied to the CD to use a portion of the CD water reservation right.

### **WATER RIGHTS TO BE CHANGED**

#### **FINDINGS OF FACT**

**Table 1: WATER RIGHTS PROPOSED FOR CHANGE**

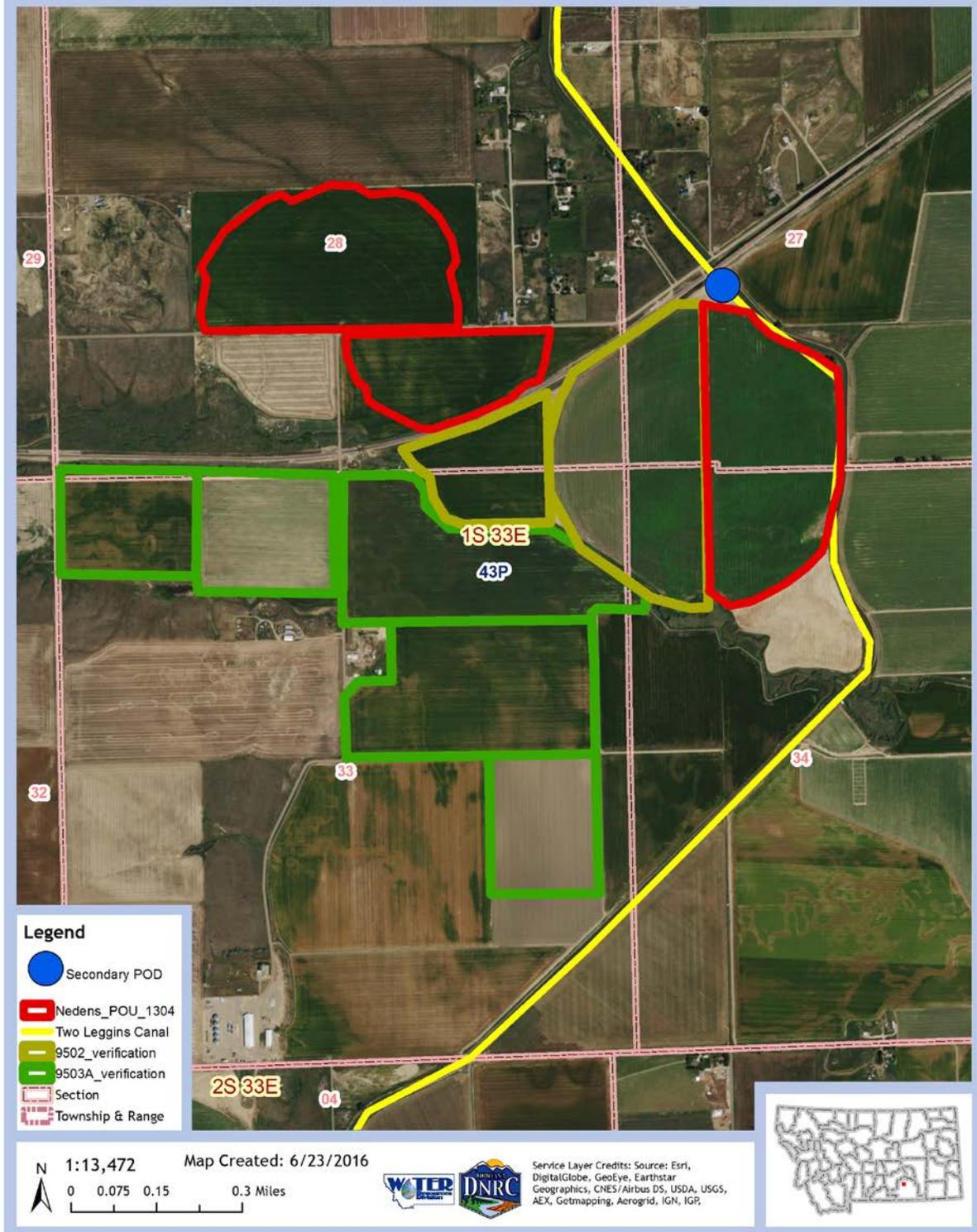
<b>WR TYPE</b>	<b>WR NUMBER</b>	<b>WR PRIORITY DATE</b>	<b>WR SOURCE</b>
Water Reservation	43P 9952-00	12/15/1978 4:18 pm	Bighorn River
CD Record	43P 30072431 BH1304	2/13/2014 11:15 am (internal priority date)	Bighorn River

### **CHANGE PROPOSAL**

#### **FINDINGS OF FACT**

1. This application is to add a point of diversion and a place of use to the Big Horn Conservation District Water Reservation (43P 9952-00).
2. A flow rate of 2.41 CFS and a maximum volume of 629 AF/YR of the Big Horn CD water reservation will be used for irrigation on 170 acres. (6.36 GPM/AC and 3.70 AF/AC)
3. The place of use is 36 AC in SW Section 27, 105 AC in S2 Section 28 and 29 AC in NW Section 34 for a total of 170 acres, all in T1S R33E Big Horn County.

### Big Horn CD (Nedens, BH 1304) 43P 30106352 Location Map



4. The 2.41 CFS will be diverted from the Bighorn River via the Two Leggins Canal in NESWSE Section 20 T2S R33E Big Horn County for sprinkler irrigation. The secondary

diversion from the Two Leggins Canal is located in Government Lot #3, generally located in the SW Section 27 T1S R33E Big Horn County.

5. The legal land descriptions for water right numbers 43P 185057-00, 43P 185058-00, and 43P 185059-00 overlap the proposed place of use. These water rights are owned by the Two Leggins Water Users Association. These water rights have never been used on the proposed place of use. The producer has two other Conservation District Record authorizations (BH 9502 and BH 9503A) from Two Leggins Canal that cover adjacent places of use (see map). The producer has not appropriated water from Two Leggins Canal for the proposed place of use. The Department finds that these rights are not supplemental because they are owned by a different entity and have never been used on the proposed place of use.

6. The Big Horn Conservation District has 14.63 CFS and 6866.35 AF remaining in their water reservation prior to this application.

7. The CD granted this producer (Nedens Partnership LLC) a right to use a portion of their water reservation on April 7, 2016 under application 43P 30072431. The CD granted the approval subject to the installation of a water measuring device. As such the DNRC will add the following condition.

THIS RIGHT IS SUBJECT TO THE TYPE OF WATER USE MEASURING DEVICE OR WATER USE ESTIMATION TECHNIQUE REQUIRED BY THE CONSERVATION DISTRICT. THE APPROPRIATOR SHALL KEEP WRITTEN RECORDS OF THE FLOW RATE AND VOLUME OF WATER USED. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE WATER USER SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

#### **§85-2-402, MCA, CRITERIA**

#### **GENERAL CONCLUSIONS OF LAW**

8. An applicant in a change proceeding must affirmatively prove all of the criteria in §85-2-402, MCA. Under this Preliminary Determination, the relevant change criteria in §85-2-402(2), MCA, are:

(2) Except as provided in subsections (4) through (6), (15), and (16) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

(b) Except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource pursuant to 85-2-436 or a temporary change in appropriation right authorization to maintain or enhance streamflows to benefit the fishery resource pursuant to 85-2-408 or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to 85-2-320, the proposed means of diversion, construction, and operation of the appropriation works are adequate.

(c) The proposed use of water is a beneficial use.

(d) Except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource pursuant to 85-2-436 or a temporary change in appropriation right authorization pursuant to 85-2-408 or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to 85-2-320, 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 change involves 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.

(e) If the change in appropriation right involves salvaged water, the proposed water-saving methods will salvage at least the amount of water asserted by the applicant.

The Department has jurisdiction to approve a change if the appropriator proves the applicable criteria in § 85-2-402, MCA. The requirements of Montana's change statute have been litigated and upheld in 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, and the applicant has the burden of proof at all stages before the Department and courts. Hohenlohe v. DNRC, 2010 MT 203, ¶ 75; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 8, *aff'd on other grounds*, Town of Manhattan v. DNRC, 2012 MT 81.

9. The burden of proof in a change proceeding by a preponderance of evidence is "more probably than not." Hohenlohe ¶¶ 33, 35.

10. In a change proceeding and in accordance with well-settled western water law, other appropriators have a vested right to have the stream conditions maintained substantially as they existed at the time of their appropriations. Spokane Ranch & Water Co. v. Beatty (1908), 37 Mont. 342, 96 P. 727; ); McDonald v. State (1986), 220 Mont. 519, 722 P.2d 598 (existing water

right is the pattern of historic use; beneficial use is the basis measure and the limit); Hohenlohe ¶ 43; Robert E. Beck, 2 Waters and Water Rights § 14.04(c)(1) (1991 edition); W. Hutchins, Selected Problems in the Law of Water Rights in the West 378 (1942); *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991)(senior appropriator cannot change pattern of use to detriment of junior); see also Farmers Reservoir and Irr. Co. v. City of Golden, 44 P.3d 241, 245 (Colo. 2002)(“We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation). This right to protect stream conditions substantially as they existed at the time of appropriations was recognized in the Act in §85-2-401, MCA. An applicant must prove that all other appropriators can continue to reasonably exercise their water rights under changes in the stream conditions attributable to the proposed change; otherwise, the change cannot be approved. Montana’s change statute reads in part to this issue:

85-2-402. (2) ... the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) *The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons* or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

....

(13) A change in appropriation right contrary to the provisions of this section is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized change in appropriation right. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to change an appropriation right except in accordance with this section

(italics added).

11. Montana’s change statute simply codifies western water law.<sup>1</sup> One commentator describes the general requirements in change proceedings as follows:

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<sup>1</sup> Although Montana has not codified the law in the detail, Wyoming has, and the two states’ requirements are virtually the same. Wyo. Stat. § 41-3-104 states:

When an owner of a water right wishes to change a water right ... he shall file a petition requesting permission to make such a change .... The change ... may be allowed provided that the quantity of water transferred ... shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.

Perhaps the most common issue in a reallocation [change] dispute is whether other appropriators will be injured because of an increase in the consumptive use of water. Consumptive use has been defined as “diversions less returns, the difference being the amount of water physically removed (depleted) from the stream through evapotranspiration by irrigated crops or consumed by industrial processes, manufacturing, power generation or municipal use.” “Irrigation consumptive use is the amount of consumptive use supplied by irrigation water applied in addition to the natural precipitation which is effectively available to the plant.”

An appropriator may not increase, through reallocation [change] or otherwise, the actual historic consumptive use of water to the injury of other appropriators. In general, any act that increases the quantity of water taken from and not returned to the source of supply constitutes an increase in historic consumptive use. As a limitation on the right of reallocation, historic consumptive use is an application of the principle that appropriators have a vested right to the continuation of stream conditions as they existed at the time of their initial appropriation.

Historic consumptive use varies greatly with the circumstances of use.

Robert E. Beck, 2 Water and Water Rights at § 14.04(c)(1)(b), pp. 14-50, 51 (1991 edition) (italics added).

In Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District (Colo. 1986), 717 P.2d 955, 959, the court held:

[O]nce an appropriator exercises his or her privilege to change a water right ... the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right ... which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right.

See also 1 Wells A. Hutchins, Water Rights and Laws in the Nineteen Western States (1971), at p. 624 (changes in exercise of appropriative rights do not contemplate or countenance any increase in the quantity of water diverted under the original exercise of the right; in no event would an increase in the appropriated water supply be authorized by virtue of a change in point of diversion, place of use, or purpose of use of water); A. Dan Tarlock, Law of Water Rights and Water Resources (2007), at § 5:78 (“A water holder can only transfer the amount that he has historically put to beneficial use.... A water holder may only transfer the amount of water consumed. The increment diverted but not consumed must be left in the stream to protect junior

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Colorado follows a similar analysis under its requirement that a “change of water right, ... shall be approved if such change, ... will not injuriously affect the owner of or persons entitled to use water under a vested water right or a decreed conditional water right.” §37-92-305(3)(a), C.R.S. E.g., Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002).

appropriators. Consumption is a function of the evapotranspiration of the appropriator's crops. Carriage losses are usually added to the amount consumed by the crops."); § 37-92-301(5), C.R.S. (in proceedings for a reallocation [change], it is appropriate to consider abandonment of the water right); Wyo. Stat. Ann. § 41-3-104.

12. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge. Admin. R. Mont. (ARM) 36.12.221(4).

### **Historic Use**

#### **FINDINGS OF FACT**

13. The Board of Natural Resources and Conservation granted the Big Horn Conservation District a water reservation (43P 9952-00) of 143.8 CFS and 20,185 AF for use on approximately 9,175 acres for future irrigation development out of the Bighorn River. The Board chairman signed the *Order of Board of Natural Resources Establishing Water Reservations* on December 15, 1978, and granted an effective time of 4:18 p.m. to irrigation reservations of Conservation Districts and State and Federal Agencies.

14. This application is to change a portion of the water reservation not yet put to use and therefore no historic use for the amount of water being changed exists.

#### **CONCLUSIONS OF LAW**

15. There is no historic use because the water being changed in this application is for future irrigation development pursuant to §85-2-316, MCA. (FOF 13 - 14)

### **Adverse Effect**

#### **FINDINGS OF FACT**

16. An authorization for change is required in §85-2-316(12), MCA, because the producer's proposed place of use and point of diversion are outside the project areas identified in the original water reservation application public notice.

17. Big Horn Conservation District is proposing to add a new irrigation project to their water reservation. The new project will add a point of diversion and a place of use.

18. Water is still available under the Big Horn Conservation District water reservation.

19. The CD published notice of Conservation District Record BH1304 on February 26, 2015 in the Big Horn County News and set a deadline for objections.

20. The CD sent individual public notices to water uses downstream of the proposed point of diversion and to the entities on the DNRC standardized list of entities to notice. No objections

were received. The CD did not provide public notice of the revised BH1304. Public notice will be provided by the Department.

21. The Big Horn Conservation District Authorization requires the water user to keep written records of the flow rate and volume of all water diverted and to submit the report to the Conservation District annually by November 1.

22. The Big Horn Conservation District is senior to the Montana Department of Fish, Wildlife and Parks water reservation.

23. The proposed consumptive use (volume) is 436.29 AF. Based upon the IWR for sprinkler irrigation at Hardin (29.96) of 170 acres in Big Horn County with a proposed use Management Factor of 88.1%, the irrigation will consume 373.93 AF. Using a 10% of the volume applied to the field (629 AF) for sprinkler systems the irrecoverable loss estimate requires an additional 62.9 AF. The proposed consumptive use is  $(373.93 + 62.9)$  436.29 AF.

24. There is no historic return flow because this is a water reservation. Based on a diverted volume of 629 AF and a consumptive volume of 436.29 AF, 192.71 AF will return to surface water.

25. This application represents a non-perfected portion of the Big Horn Conservation District. Therefore, existing water rights must be considered in order to determine whether this proposed application would adversely affect other water right holders.

26. A physical availability and legal demands review was performed in order to assess potential affects due to this proposed project. The USGS gaging station 06287000 (near St. Xavier), located in the NENENW of Section 16 T6S R31E, was utilized in this exercise.

**USGS gage name:** Bighorn River near St. Xavier, MT

**USGS gage number:** USGS 06287000

**Period of record:** 10/1/1934 to 11/30/2014 (80 years)

The Conservation District was allocated water from the Bighorn River and tributaries. This gauge is located approximately 22 miles upstream from the proposed point of diversion on the Bighorn River and has an 80 year period of record. The record of this gage extends back to 1934; however, in 1967 the Yellowtail Dam was completed across the Bighorn River altering flow patterns dramatically. Therefore, median of the mean monthly flows from 1967 to present are listed below.

All Bighorn River surface water rights between the gage and 5 miles downstream of the point of diversion in the NESWSE of Section 20 T2S R33E were included in the legal demands analysis. The State of Montana DFWP instream water reservation (43P 30017690) was not included in this analysis because it is understood the Board of Natural Resources would not have granted this right unless water was legally available. The State of Montana DFWP Statement of Claim for instream flow (43P 188683) is for a reach of the Bighorn River that ends at the Two Leggins Canal Diversion and also was not included. The maximum flow rates were used to determine the legal demands on the Bighorn River within this area. A flow rate of 35 GPM was used for stock watering direct from the source. Three water rights were noted to have extremely high flow rates relative to the number of acres being irrigated. These water rights 43P 206787-00, 43P 206789-00, and 43P 206791-00, each irrigate 55 acres and have flow rates of 750 CFS, 600 CFS, and 750 CFS respectively. Both 600 CFS (4896 GPM/AC) and 750 CFS (6120 GPM/AC) are excessive flow rates for irrigating 55 acres. A flow rate of 17 GPM/AC was used in the analysis for these water rights.

In 2015, the Two Leggins Canal had over 300 water rights claiming over 3,000 CFS from the Bighorn River (3,177.08). Many of these claims were duplicates, claiming acres that are already being supplied via the Two Leggins Water Users Association water right. By May of 2016, over half of the duplicate rights had been withdrawn and currently, 157 water rights claim 364.33 CFS in addition to the Two Leggins Water Users Association. The Two Leggins Water Users Association holds nine water rights with a total flow rate of 1540 CFS. Several of these rights are supplemental or multiple uses of the same right. Reserved Claim 43P 185058-00 is for 600 CFS and represents the minimum flow rate for the Two Leggins Water Users Association.

The capacity of the Two Leggins Canal was reviewed by Roger Perkins of Aquoneering. The capacity analysis of the Two Leggins Canal was completed in December of 2009. The report from Perkins, estimates the capacity of the canal at the headgate on the Bighorn River to be 500 CFS. This investigation divided the canal into six segments, estimating the capacity of each segment. Additionally, flow was measured in the field during the peak irrigation season of May 2009. The capacity estimates appear to be validated by the flow measurements. The project calculated the peak flows based on actual irrigated acres. The calculations considered the type and efficiency of different irrigation systems as well as the crop type and number of acres irrigated for a given crop. The calculated peak flows and actual field measurements are lower than the estimated ditch capacity.

Two Leggins canal has a capacity of 500 CFS at the headgate (Reach 1) which is the limiting section of the canal system. In order to satisfy all of the water rights in the lower reaches, the canal must divert 472.2 CFS. Subtracting the required diversion of 472.2 CFS from the 500 CFS canal capacity leaves a total of 27.8 CFS that could still be delivered by the canal. However, since 2009 up to the current date, the Department has granted changes to the CD for 10.63 CFS to be diverted from the canal, therefore there is still room in the canal for additional diversions up to 17.17 CFS. (27.8 CFS – 10.63 CFS = 17.17 CFS)

See the table below for the estimated canal hydraulics of the upper reaches. The additional flow amount depends upon the reach of the canal, but again it is limited by the capacity of the diversion at Reach 1. The table has been modified from Perkins 2009 to account for required flow in lower reaches and to account for water rights granted after 2009. The legal demand represented by the Two Leggins Canal is taken as 482.83 CFS based upon the analysis of Perkins with the addition of appropriations granted since that report.

<b>Reach</b>	<b>Canal Hydraulics Estimate (CFS)</b>	<b>Calculated Peak Flow Requirements (CFS)</b>	<b>Measured Flow May 30, 2009 (CFS)</b>	<b>Difference Between Measured and Calculated Peak Flows (CFS)</b>	<b>Flow Required to Satisfy Water Requirements at Lower Reaches (CFS)</b>	<b>Water Appropriated After 2009 (CFS)</b>	<b>Water Available for Appropriation (CFS)</b>
#1 (Moss Catcher to BNSF siphon)	500	428.7	438	-9.3	472.2	10.63	17.17
#2 (BNSF siphon to Whitman Coulee siphon)	400	299.8	-	-	-	19.46	-
#3 (Whitman Coulee siphon to Lone Tree Coulee siphon)	325	256.6	238	+18.6	272.2	11.52	41.28
#4 (Lone Tree Coulee siphon to North boundary of Sections 32-36, Township 2 North)	300	135.2	-	-	-	13.4	-

#5 (South boundary of Sections 32-36, Township 2 North to Township 3 North)	100	71.2	37	+34.2	71.2	0.0	28.8
#6 (Township 3 North to end of canal)	50	35.1	9.5	+25.6	-	0.0	

The physical availability is calculated as follows: median of the mean monthly flow at gage minus existing legal demands between gage and POD (Tables 1 and 2). The Montana Department of Fish, Wildlife and Parks Statement of Claim for instream flow (43P 188683-00) was not subtracted because it is never diverted.

The legal availability is calculated as follows: Physical Availability minus Two Leggins Canal (including post-2009 water rights) minus existing legal demands between the point of diversion and 5 miles downstream (Tables 1 and 2).

**Table 1 - Flow Rate Analysis**

Month	Apr	May	Jun	Jul	Aug	Sept	Oct
<b>Physical Availability</b>							
USGS Gage 06287000 Median of Mean (CFS) 1967-2013	2,508	2,608	4,614	4,595	2,771	2,647	2,851
Legal Demands From Gage to POD (CFS)	6.03	7.11	7.11	7.11	7.11	7.11	5.01
Physical Availability at POD (CFS)	2,501.97	2,600.89	4,606.89	4,587.89	2,763.89	2,639.89	2,845.49
<b>Legal Availability</b>							
Two Leggins Canal (CFS)	482.83	482.83	482.83	482.83	482.83	482.83	482.83
Legal Demands 5 Miles Below POD (CFS)	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Legal Availability at POD (CFS)	2,018.1	2,116.99	4,122.99	4,103.99	2,279.99	2,155.99	2,361.59

**Table 2 - Volume Analysis**

Month	Apr	May	Jun	Jul	Aug	Sept	Oct
<b>Physical Availability</b>							
USGS Gage 06287000 Median of Mean (CFS) 1967-2013	148,975.20	160,079.04	274,071.60	282,041.10	170,083.98	157,231.80	174,963.69
Legal Demands From Gage to POD (CFS)	61.95	103.16	103.68	107.13	107.13	103.82	62.85
Physical Availability at POD (CFS)	148,913.25	159,975.88	273,967.92	281,933.97	169,976.85	157,127.98	174,900.84
<b>Legal Availability</b>							
Two Leggins Canal (CFS)	28,680.10	29,636.11	28,680.10	29,636.11	29,636.11	28,680.10	29,636.11
Legal Demands 5 Miles Below POD (CFS)	8.90	14.57	14.10	14.57	14.57	14.10	14.57
Legal Availability at POD (CFS)	120,224.24	130,325.20	245,273.72	252,283.29	140,326.17	128,433.78	145,250.16

There is another USGS gage just below the primary point of diversion from the Bighorn River into Two Leggins Canal that has a 3 year period of record from 2012-2015. This gage is just below the primary point of diversion but has only 3 years of record.

**USGS gage Name:** Bighorn River at Two Leggins Bridge near Hardin, MT

**USGS gage number:** 06288400

**Period of record:** 4/2012 to 10/2015 (3 years)

A second analysis used this gage at the Two Leggins Bridge, Two Leggins Demands as calculated above and Legal Demands for 5 miles downstream.

The physical availability is calculated as follows: median of the mean monthly flow at gage plus Two Leggins Canal legal demands (Tables 3 and 4).

The legal availability is calculated as follows: Physical availability minus Two Leggins canal demands, minus legal demands 5 miles downstream (Tables 3 and 4). The Montana Department of Fish, Wildlife and Parks Statement of Claim for instream flow (43P 188683-00) was not included because it is never diverted and ends at the Two Leggins Canal point of diversion.

**Table 3 - Flow Rate Analysis**

Month	Apr	May	Jun	Jul	Aug	Sept	Oct
<b>Physical Availability</b>							
USGS Gage 06288400 Median of Mean (CFS)	2,470	2,176	3,133	2,884	1,923	2,073	2,474
Two Leggins Canal (CFS)	482.83	482.83	482.83	482.83	482.83	482.83	482.83
Physical Availability at POD	2,952.83	2,658.33	3,615.33	3,366.83	2,405.83	2,555.33	2,956.33
<b>Legal Availability</b>							
Legal Demands Below POD (CFS)	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Two Leggins Canal (CFS)	482.83	482.83	482.83	482.83	482.83	482.83	482.83
Legal Availability at POD (CFS)	2,468.93	2,174.43	3,131.43	2,882.93	1,921.93	2,071.43	1,498.91

**Table 4 - Volume Analysis**

Month	Apr	May	Jun	Jul	Aug	Sept	Oct
<b>Physical Availability</b>							
USGS Gage 06288400 Median of Mean (CFS)	146,718.00	133,532.19	186,070.50	177,019.92	118,033.74	123,106.50	151,823.43
Two Leggins Canal (CFS)	28,680.10	29,636.11	28,680.10	29,636.11	29,636.11	28,680.10	29,636.11
Physical Availability at POD	175,398.10	163,168.30	214,750.60	206,656.03	147,669.85	151,786.60	181,459.54
<b>Legal Availability</b>							
Legal Demands Below POD (CFS)	8.90	14.57	14.10	14.57	14.57	14.10	14.57
Two Leggins Canal (CFS)	28,680.10	29,636.11	28,680.10	29,636.11	29,636.11	28,680.10	29,636.11
Legal Availability at POD (CFS)	146,709.10	133,517.62	186,056.40	177,005.35	118,019.17	123,092.40	151,808.86

28. The least amount of flow legally available in any month at the point of diversion during the period of diversion using either analysis is 1498.91 CFS. The Applicant is requesting 2.41 CFS. The least amount of volume legally available is 118,019.17 AF. The Applicant is requesting 629 AF.

#### CONCLUSIONS OF LAW

29. The Applicant bears the affirmative burden of proving that proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation. §85-2-402(2)(a), MCA. Royston, supra. It is the applicant's burden to produce the required evidence. *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

30. Prior to the enactment of the Water Use Act in 1973, the law was the same in that an adverse effect to another appropriator was not allowed. Holmstrom Land Co., Inc., v. Newlan Creek Water District (1979), 185 Mont. 409, 605 P.2d 1060, *rehearing denied*, (1980), 185 Mont. 409, 605 P.2d 1060, following Lokowich v. Helena (1913), 46 Mont. 575, 129 P. 1063; Thompson v. Harvey (1974), 164 Mont. 133, 519 P.2d 963 (plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); McIntosh v. Graveley (1972), 159 Mont. 72, 495 P.2d 186 (appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); Head v. Hale (1909), 38 Mont. 302, 100 P. 222 (successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); Gassert v. Noyes (1896), 18 Mont. 216, 44 P. 959 (after the defendant used his water right for placer mining purposes the water was turned into a gulch, where the plaintiff appropriated it for irrigation purposes; the defendant then changed the place of use of his water right, resulting in the water no longer being returned to the gulch - such change in use was unlawful because it deprived the plaintiff of his subsequent right).

31. The Applicant has proven by a preponderance of the evidence that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has

been issued or for which a state water reservation has been issued. §85-2-402(2)(b), MCA. (FOF 16-28)

## **Beneficial Use**

### **FINDINGS OF FACT**

32. Applicant proposes to use water for center pivot sprinkler irrigation of 170 acres.

Irrigation is a recognized beneficial use under the Montana Water Use Act. §85-2-102, MCA

33. This change will benefit the CD by allowing them to authorize use of a portion of their water reservation. The Big Horn Conservation District must authorize projects to fulfill the purpose of the reservation.

34. Applicant proposes to use 2.41 CFS flow rate and 629 AF diverted volume. This volume and flow rate was agreed upon by the Conservation District and the producer (Nedens Partnership LLC). The requested flow rate (6.36 GPM/AC) is within the DNRC standard of 5-8 GPM/AC and is the amount required to operate the system according to the irrigation system designer (Big Sky Irrigation). The volume rate of 3.7 AF/AC is greater than the range of irrigation standards for climatic area I and 70% sprinkler efficiency ARM 36.12.115. The higher volume is necessary due to conveyance losses. The volume was calculated by the Conservation and Resource Development Division (CARDD) using the USDA NRCS Irrigation Water Requirements (IWR) program for crop water use requirements, system application efficiency and conveyance efficiency. Conveyance losses were calculated by the CD based on the information in the Two Leggins Canal Study (2009).

### **CONCLUSIONS OF LAW**

35. Under the change statute, §85-2-402(2)(c), MCA, an Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. An appropriator may appropriate water only for a beneficial use. §§85-2-301 and 311(1)(d), MCA.

36. The analysis of the beneficial use criterion is the same for change authorizations under §85-2-402, MCA, and new beneficial permits under §85-2-311, MCA. 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 (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; Worden v. Alexander (1939), 108 Mont. 208, 90 P.2d 160; Allen v. Petrick (1924), 69 Mont. 373, 222 P. 451; Sitz Ranch v. DNRC, DV-10-13390, Montana 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); *In the Matter of Application for Beneficial Water Use Permit No. 76H-84577 by Thomas and Janine Stellick*, DNRC Final Order (1995)(permit denied because no evidence in the record that the amount of water needed for fish and wildlife; absence of evidence of waste does not meet the standard of proof); *In the Matter of Application No. 40A-108497 by Alex Matheson*, DNRC Proposal for Decision adopted by Final Order (2000) (application denied as to fishery and recreation use for lack of proof); *In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-831 by Benjamin and Laura Weidling*, (DNRC Final Order 2003), *aff'd on other grounds*, In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-83100 by Benjamin and Laura Weidling and No. 76LJ-1158300 by Ramona S. and William N. Nessly, *Order on Motion for Petition for Judicial Review*, Cause No. BDV-2003-100, Montana First Judicial District (2004) (fish and wildlife use denied for lack of proof); *In The Matter of Application For Beneficial Water Use Permit 76LJ 30008762 by Vinnie J & Susan N Nardi*, DNRC Proposal for Decision adopted by Final Order (2006); Statement of Opinion, *In the Matter of Beneficial Water Use Permit No. 41H-30013678 by Baker Ditch Company* (June 11, 2008)(change authorization denied - no credible evidence provided on which a determination can be made of whether the quantity of water requested is adequate or necessary to sustain the fishery use, or that the size or depth of the ponds is adequate for a fishery); *In the Matter of Application for Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly*, (DNRC Final Order 2007), *aff'd on other grounds*, Deaterly v. DNRC et al., Cause No. BDV-2007-186, Montana First Judicial District, *Nunc Pro Tunc Order on Petition for Judicial Review* (2008) (permit denied in part because of failure to support quantity of water needed for pond); see also §85-2-312(1) (a), MCA.

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. §85-2-312, MCA; see also, McDonald; Toohy. The Department can also consider waste in a change proceeding. Hohenlohe ¶ 71. Waste is defined to include the "application of water to anything but a beneficial use." §85-2-102(23), MCA. An absence of evidence of waste does not prove the amount requested is for a beneficial use. E.g., Stellick, supra.

37. It is the Applicant's burden to prove the required criteria. Royston. A failure to meet that affirmative burden does not mean the criterion is met for lack of contrary evidence. E.g., In the

*Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

38. Applicant proposes to allow the producer to use water for irrigation which is a recognized beneficial use. §85-2-102(4), MCA.

39. Applicant has proven by a preponderance of the evidence that irrigation is a beneficial use and that 2.41 CFS up to 629 AF of diverted flow rate and volume of water requested is the amount needed to sustain the beneficial use. §85-2-402(2)(c), MCA (FOF 32 - 34)

### **Adequate Diversion**

#### **FINDINGS OF FACT**

40. Water will be diverted from the Bighorn River by the Two Leggins Canal diversion structure, which has been used effectively for many years.

41. A secondary diversion from the canal in SWNWSW Section 27, T1S, R33E, Big Horn County will be through a pipe from the canal to a concrete sump to a 40 HP Emerson electric motor connected to a Goulds vertical turbine pump operating at 1770 rpm and capable of delivering 1080 GPM (2.41 CFS).

42. A T-joint at the pump can deliver water through 1640 feet of 10 inch buried pipe to a full circle Zimmatic center pivot sprinkler or through approximately 3800 feet of 12 inch buried pipeline to two part circle Zimmatic center pivot sprinklers.

43. The irrigation system was designed by Big Sky Irrigation, Billing, Montana.

#### **CONCLUSIONS OF LAW**

44. Pursuant to §85-2-402 (2)(b), MCA, except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource pursuant to §85-2-436, MCA, or a temporary change in appropriation right authorization to maintain or enhance streamflows to benefit the fishery resource pursuant to §85-2-408, MCA, or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to §85-2-320, MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate.

45. The adequate means of diversion statutory test merely codifies and encapsulates the common 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; see also, *In the Matter of Application to Change a Water Right No. G129039-76D by Keim/Krueger* (DNRC Final Order 1989)(whether party presently has easement not relevant to determination of adequate means of diversion); *In the Matter of Application for Beneficial Water Use Permit No. 69141-76G by Silver Eagle Mining* (DNRC Final Order 1989) (collection of snowmelt and rain in lined ponds considered adequate means of diversion); *In the Matter for Application to Change a Water Right No. 101960-41S by Royston* (DNRC Final Order 1989)(irrigation system is designed for flow rates of 750 gpm, and maximum usage allowed during non-high water periods, is 144-247 gpm, and the evidence does not show that the system can be operated at the lower flow rates; diversion not adequate), *affirmed*, 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; *In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC* (DNRC Final Order 2002)(information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate); *In the Matter of Application for Beneficial Water Use Permit No. 43B-30002710 by USDA* (DNRC Final Order 2005) (specific ditch segments would be adequate after completion of maintenance and rehabilitation work).

Adequate diversions can include the requirement to bypass flows to senior appropriators. E.g., *In the Matter of Application for Beneficial Water Use Permit No. 61293-40C by Goffena* (DNRC Final Order 1989) (design did not include ability to pass flows, permit denied).

46. Applicant has 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. §85-2-402 (2)(b), MCA. (FOF 40 - 43)

### **Possessory Interest**

#### **FINDINGS OF FACT**

47. The affidavit on the Application to Change a Water Right form was signed by Steve Schanaman, Conservation District Vice-Chairman, for the Big Horn Conservation District. The submission of the Application for Reserved Water (Form 500) was signed by Brett Nedens for Nedens Partnership LLC, and implies written consent.

#### **CONCLUSIONS OF LAW**

48. Pursuant to §85-2-402(2)(d), MCA, except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource

pursuant to §85-2-436, MCA, or a temporary change in appropriation right authorization pursuant to §85-2-408, MCA, or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to §85-2-320, MCA, the 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 change involves 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.

49. 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.

50. The Applicant has proven 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. §85-2-402(2)(d), MCA. (FOF 47)

### **Water Reservation Criteria**

#### **FINDINGS OF FACT**

50. The purpose for the water reservation was established by the Board of Natural Resources and the conclusions are contained in the *Order of Board of Natural Resources Establishing Water Reservations* dated December 15, 1978.

51. The need for the water reservation was established by the Board of Natural Resources and the conclusions are contained in the Order of Board of Natural Resources Establishing Water Reservations dated December 15, 1978..

52. The amount of water necessary for the purposes of the water reservation was established by the Board of Natural Resources and the conclusions are contained in the Order of Board of Natural Resources Establishing Water Reservations dated December 15, 1978.

53. That the water reservation was in the public interest was established by the Board of Natural Resources and the conclusions are contained in the Order of Board of Natural Resources Establishing Water Reservations dated December 15, 1978.

54. This change authorization proposal is consistent with the purpose, need, amount, and public interest established by the Board of Natural Resources.

#### CONCLUSIONS OF LAW

55. The Applicant has proven by a preponderance of the evidence that the purpose, need, amount, and public interest are consistent with the 1978 Yellowstone River Order of Board of Natural Resources Establishing Water Reservations. §§85-2-316(12), 85-2-402(2)(d), MCA. (FOF 50 - 54)

#### Salvage Water

This Application does not involve salvage water.

#### DETERMINATION

Subject to the terms and analysis in this Determination Order, the Department determines that this Application to Change Water Right No. 43P 30106352 should be granted subject to the following.

Authorization is **GRANTED** to add a point of diversion and a place of use. A flow rate of 2.41 CFS up to a maximum volume of 629 AF shall be diverted from the Bighorn River into the Two Leggins Canal located in the NESWSE Sec. 20, T2S, R33E Big Horn County. The place of use shall be on 36 AC in SW Section 27, 105 AC in S2 Section 28 and 29 AC in NW Section 34 T1S R33E Big Horn County. The period of diversion and period of use shall be from April 1 to November 1, inclusive of each year.

The application will be subject to the following conditions, limitations or restrictions.

#### WATER MEASUREMENT RECORDS REQUIRED

THIS RIGHT IS SUBJECT TO THE TYPE OF WATER USE MEASURING DEVICE OR WATER USE ESTIMATION TECHNIQUE REQUIRED BY THE CONSERVATION

DISTRICT. THE APPROPRIATOR SHALL KEEP WRITTEN RECORDS OF THE FLOW RATE AND VOLUME OF WATER USED. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE WATER USER SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

### **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 a valid objection, it will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and §85-2-309, 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(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the Application with such conditions as the Department decides necessary to satisfy the applicable criteria. E.g., §§85-2-310, -312, MCA

DATED this 22<sup>nd</sup> day of July 2016

/Original signed by Kimberly Overcast/  
Kimberly Overcast, Manager  
Billings Regional Office  
Department of Natural Resources  
and Conservation