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

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IN THE MATTER OF APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 41P 30001476 BY MARGARET AND WALTER SILL	**)** **)** **)** **)**	**FINAL ORDER**

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Pursuant to the Montana Water Use Act and to the contested case provisions of the Montana Administrative Procedure Act, and after notice required by Mont. Code Ann. 85-2-307, a hearing was held on July 11-12, 2013, in Conrad, Montana, continued and reconvened on August 13, 2013, in Helena, Montana, to determine whether a beneficial water use permit should be issued to Walter and Margaret Sill, hereinafter referred to as "Applicant" for the above captioned application under the criteria set forth in Mont. Code Ann. 85-2-311.

APPEARANCES

Applicant appeared at the hearing by and through counsel, John Bloomquist. Karl Uhlig, WGM Group testified as an expert witness for Applicant; Gary Andres, Sovereign Consulting testified as an expert witness for Applicant; Robert Sill testified for Applicant. Russ Levens, DNRC Hydrogeologist was called by Applicant and testified.

Objectors Marguerite Freebury, Raleigh King, Sandra Starbuck, Marjorie Hughes, Troy Wanken, Dale Seifert, Stacey and Michael O'Neal, Gordon Hurley, Donald Seifert, Raymond Newmiller, Gene and Cheryl Curry, James Nelson, Vance and Carla Raines, and Beverly Jean Marshall (Objector Group) appeared at the hearing by and through counsel, Holly Franz. Jack Hurley, Jim Nelson, Dale Seifert, and John Raines testified on behalf of Objector Group. Dr. Willis Weight testified as an expert witness for Objector Group; David Baldwin, Water Rights Solutions testified as an expert witness for Objector Group. Russ Levens, DNRC Hydrogeologist was called by Objector Group and testified.

EXHIBITS

Both Applicant and Objector Group prefiled exhibits for the record. In the following list, Applicant Exhibits are preceded "A" and Objector Group Exhibits are preceded by "O". These exhibits are accepted into the record and consist of the following:

Exhibit A-1 consists of 44 pages entitled "Water Right Beneficial Use Application, Walter J. and Margaret E. Sill."

Exhibit A-2 consists of 1 page stating "Any and all documents, correspondence, pleadings, orders, motions, briefs, exhibits and/or transcripts contained in **DNRC file for Application No. 41P 30001476."**

Exhibit A-3 consists of 18 pages of Water Right Abstracts from the DNRC database.

Exhibit A-4 consists of one CD entitled "Hearing Transcript, Excerpts from WC-2004-04" for Application No. 41P 30001476.

Exhibit A-5 consists of 85 pages entitled "Notice of Filing of Master's Report, RE: Case WC-2004-04."

Exhibit A-6 consists of 3 pages entitled "Order Adopting Master's Report for Four Dismissed Claims.

Exhibit A-7 consists of 9 pages entitled "Sill Decision" from Water Court Case No. WC-2004-04.

Exhibit A-8 consists of 18 pages entitled "Order Amending and Adopting Master's Report for Seven of Eleven Claims" Water Court Case No. WC-2004-04.

Exhibit A-9 consists of 33 pages of photocopies of aerial photographs entitled "Bob Sill's Aerial Photos, Copies with ownership indicated and year of photo if known."

Exhibit A-10 consists of 2 pages entitled "The National Map" and appears to identify the general location of the Application.

Exhibit A-11 consists of photocopies of 1979 and 1995 aerial photos of the project area identifying and locating existing water rights.

Exhibit A-12 consists of 91 pages identified as "Technical Memorandum #1" through "Technical Memorandum #4" prepared by Gary Andres and Karl Uhlig related to "Revisions to Volume, Rate and Operation", "Aquifer Test and Model", "Legal Availability and Adverse Effect", and "Water Quality" all dated 7 February 2013.

Exhibit A-13 consists of 194 pages of field notes, model run results and miscellaneous observations and notes from Applicant's analysis.

Exhibit A-14 consists of 3 pages entitled "Margaret E. and Walter J. Sill, Water Operations Guide" dated August 2013.

Exhibit O-1 consists of 3 pages entitled "Professional Resume of David O. Baldwin, P.G."

Exhibit O-2 consists of 8 pages entitled “Affects Analysis of Proposed Sill Groundwater Pit” dated January 9, 2004, by D. Baldwin.

Exhibit O-3 consists of 8 pages including a one page letter from John Sonderegger, Ph.D. to David Baldwin, concurring in Mr. Baldwin’s conclusions, and a 7 page resume for John Sonderegger.

Exhibit O-4 consists of a one page graph entitled “Applicant’s Pit – Water Level (after pumping of pit storage).”

Exhibit O-5 consists of a one page photocopy of an aerial photograph depicting the project area, the Sill pond, the King wells, and wetlands as mapped by the US Fish and Wildlife Service – National Wetland Inventory.

Exhibit O-6 consists of a one page geologic map of the project area, depicting the Applicant’s pit location and the location of Objectors POD’s and instream stock rights.

Exhibit O-7 consists of 3 well log reports in the name of Vance Raines.

Exhibit O-8 consists of 7 pages entitled “Water Quality Affects Analysis for Proposed Sill Pit” dated January 9, 2004 by D. Baldwin.

Exhibit O-9 consists of 3 water right General Abstracts from the DNRC database in the name of Carla and Vance Raines.

Exhibit O-10 consists of 3 water right General Abstracts from the DNRC database in the name of Nelson Farm & Ranch of Valier.

Exhibit O-11 consists of 2 water right General Abstracts from the DNRC database in the name of Michael J O’Neal, et. al.

Exhibit O-12 consists of 1 water right General Abstract from the DNRC database in the name of Marguerite V Freebury.

Exhibit O-13 consists of 2 water right General Abstracts from the DNRC database in the name of Hurley, Gordon Revocable Living Trust.

Exhibit O-14 consists of 1 water right General Abstract from the DNRC database in the name of Cheryl and Gene Curry.

Exhibit O-15 consists of 4 water right General Abstracts from the DNRC database in the name of Jacqueline and Kenneth Wheeler and Big Flat Coulee, LLC.

Exhibit O-16 consists of 6 water right General Abstracts from the DNRC database in the name of Pondera County Canal & Reservoir Co.

Exhibit O-17 consists of 2 water right General Abstracts from the DNRC database in the name of Robert and Sandra Sill.

Exhibit O-18 consists of 3 pages of aerial photographs generally depicting the project area and significant features.

Exhibit O-19 consists of a 1 page map depicting Applicant's pond location, Applicant's property boundary and the location of Objectors' POD and instream stock rights.

Exhibit O-20 consists of a 1 page topographic map depicting Applicant's pond location and Objectors' POD's.

Exhibit O-21 consists of 6 pages entitled "Affects Analysis of Proposed Sill Groundwater Pit", "Corrected and Updated on May 25, 2013" by D. Baldwin.

Exhibit O-22 consists of 1 page of calculations using Lohman's version of the Theim equation.

Exhibit O-23 consists of 3 pages entitled "Schultz Coulee Basin, Estimate of Average Annual Flow."

Exhibit O-24 is the resume of Willis Weight, Ph.D., P.E. consisting of 21 pages.

Exhibit O-24 is a 3 page letter from Willis Weight to Dave Baldwin dated May 23, 2013, regarding the technical aspects of the application of the Sill Ranch beneficial water-use permit No. 41P-30001476.

PRELIMINARY MATTERS

This Application was filed with the Department in 2002. The matter was certified to the Water Court pursuant to Mont. Code Ann. 85-2-309(2) in 2004 for a determination of the validity and extent of the Objector Groups' water rights listed as the basis for their objection. In 2010, the Water Court issued its final order (Order Remanding Claims to Department of Natural Resources and Conservation and Closing Order) for Water Court Case No. WC-2004-04. At that time, this Hearing Examiner assumed jurisdiction over the matter and a hearing was conducted to determine whether the Application meets the requirements and criteria for issuance of a Beneficial Water Use Permit pursuant to Mont. Code Ann. 85-2-311. That hearing was held on July 11–12, and August 13, 2013.

As originally filed, the Application requested the development of a groundwater pit situated in the NENE Sec. 18, T30N, R4W, seeking a flow rate of 350 gallons per minute (gpm) up to 488.35 acre-feet per year for supplemental irrigation use on 395.8 acres. The Application also requested stockwater use for up to 400 animal units (AU). Following the Water Court proceedings and upon remand to the Department the Application was modified to maintain the flow rate at 350 gpm, but to reduce the irrigated acreage to 145 acres located in the E2E2 Section 18, and the NENW Section 17, T30N, R4W. The total volume requested was reduced

to 188.7 acre-feet per year, with 120.3 acre-feet being consumed and 68.4 acre-feet of return flow to Winginaw Coulee or the unnamed tributary (UT) of Bullhead Creek. The yearly stockwatering volume was reduced to 1.7 acre-feet per year for a total volume from the groundwater pit of 190.4 acre-feet per year. Prior to the hearing Objector Group filed a "Motion to Republish or in Alternative to Continue." That motion was denied by my Order dated April 16, 2013 based on Department precedent that if there is a reduction in the flow rate, volume, irrigated acres, or period of use the modification is deemed a subset of the original application and republication is not required.

During the hearing in this matter it was agreed by the Hearing Examiner and all parties that a site visit to the area of the project would be beneficial to the understanding of the issues. A site visit was conducted in the afternoon of July 12, 2013 which was attended by the parties and the expert witnesses after the conclusion of the Applicant's case in chief and the testimony of the Objector Group lay witnesses. The site visit included viewing the Applicant's pit, the King corral and house wells, and various stops along the water courses involved in the issues.

Subsequent to the site visit and upon resumption of the hearing on August 13, 2013, Objector Group proceeded with their case in chief by eliciting testimony from their expert witnesses, Dr. Weight and David Baldwin. Counsel for Applicant, during the testimony of Dr. Weight, made a motion to strike all testimony presented by him that was not directly related to Exhibit O-25. At that time, this Hearing Examiner took the motion under consideration to be ruled on in this Final Order. It appears that the basis for the motion to strike was that Dr. Weight was referring to notes that he had taken as a result of the field investigation and that those notes were never disclosed to the Applicant. This Hearing Examiner finds that the notes and observations that Dr. Weight made as a result of the site visit fall within the general ambit of what was disclosed prior to the hearing regarding what he would testify to. Objector Group's May 31, 2013 Supplemental Disclosure of Witnesses and Exhibits states in part: "5. Dr. Willis Weight. Mr. Levens [sic] may testify regarding the inadequacy of the Applicant's technical analysis including the drawdown aquifer test and the groundwater modeling efforts." Dr. Weight's reliance on notes that he took as a result of the site visit do not appear to be any re-analysis of his previous opinion, but rather served merely to refresh his memory of what he observed during the site visit. The Motion to Strike is **DENIED**.

During rebuttal testimony of Karl Uhlig presented by Applicant, a monitoring plan identified as Exhibit A-14 was offered by the Applicant. That plan was developed a few weeks prior to the final day of the hearing. Counsel for Objector Group objected to the introduction of Exhibit A-14 as not being disclosed prior to the hearing. Exhibit A-14 was marked and offered.

This Hearing Examiner deferred from making a ruling on the introduction of Exhibit A-14 and the issued will be addressed later in this Final Order.

FINDINGS OF FACT - General

1. Application for Beneficial Water Use Permit No. 41P 30001476 in the name of Walter and Margaret Sill, was filed with Department on August 5, 2002. Subsequent to the filing of the Application, on March 6, 2006, ownership of the Application was transferred to Robert and Sandra Sill. (Department File)

2. An Environmental Assessment (EA) dated November 25, 2002, was prepared by the Department and has been reviewed by the Hearing Examiner and included in the record of this proceeding. (Department File)

3. As originally submitted, the Application requested a Beneficial Water Use Permit with a flow rate of 350 gpm up to 481.55 acre-feet per year for supplemental irrigation use on 395.8 acres. The original Application also requested stockwater use for up to 400 AU at a flow rate of 350 gpm up to 6.8 acre-feet per year. The total volume requested was 488.35 acre-feet per year. The proposed source of water was a groundwater pit located in the NENE Sec. 18, T30N, R4W. (Department File)

4. After the Water Court proceedings, the Application was modified resulting in using the same groundwater pit with the same flow rate of 350 gpm, but to reduce the irrigated acres to 145 acres located in the E2E2 Sec. 18, and the NENW Sec. 17, T30N, R4W. 74 of the 145 acres are currently under a pivot (70% efficient) and 71 acres are flood irrigated (60% efficient). The total volume being requested for irrigation is 188.7 acre-feet per year, with 120.3 acre-feet being consumed and 68.4 acre-feet becoming return flows to Winginaw Coulee or the UT of Bullhead Creek. The requested period of diversion for irrigation purposes is April 15 through October 31. For stockwater purposes the modified Application is requesting water for 100 AU year-long. Applicant is requesting 1.7 acre-feet per year for stockwatering purposes. (Department File, Exhibit A-12(a))

CONCLUSIONS OF LAW - General

5. The Department has jurisdiction to issue a provisional permit for the beneficial use of water if the Applicant proves the criteria in Mont. Code Ann. 85-2-311 by a preponderance of the evidence. (Mont. Code Ann. 85-2-311(1) (2001))

6. Pursuant to § 85-2-302(1), MCA, except as provided in §§ 85-2-306, 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 (2001). Section § 85-2-311(1) and (2) state 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;
> (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). (Mont. Code Ann. 85-2-311(1)(a) through (h) and (2) (2001); *In the Matter of the Application for Beneficial Water Use Permit No. 41S 30000871 by Thom Farms,* DNRC Proposal for Decision, 2003, Denial of Permit upheld in Final Order, 2004)

FINDINGS OF FACT - Physical Availability

7. The groundwater pit is located immediately adjacent to or possibly within a wetland mapped by the US Fish and Wildlife Service – National Wetland Inventory. The wetland appears to contain a clearly defined channel connecting it directly with the UT of Bullhead Creek. (Exhibits O-5, O-18)

8. Applicant conducted what is described as an aquifer test in May 2002 prior to the Pondera County Canal & Reservoir Company (PCCRC) beginning water deliveries. The Applicant excavated a pit into a shallow aquifer. At the beginning of the test, the pit was approximately 170 feet long and 15 feet wide, with a water depth of 5 feet. The pit was initially pumped at 1100 to 1200 gpm for 2 hours and 20 minutes. This initial pumping began on May 15, 2002 and was conducted in order to dewater the stored water in the pit. (Exhibit A-12(a), Exhibit A-13)

9. After the initial pumping period, the pumping rate was reduced to and maintained at 350 gpm for 44 hours 46 minutes. (Exhibit A-13)

10. At approximately 1:00 pm, one hour into the 350 gpm constant pumping rate, an excavator began enlarging the pit. This enlargement continued until approximately noon the next day (23 hours) until the pit was enlarged to 240 feet long and 15 feet wide, with a depth of water of 6 – 7 feet. The pumping rate of 350 gpm continued until approximately 9:00 a.m. the next day. (Exhibit A-13, Exhibit A-12(a))

11. As expected, water levels in the pit declined quickly after pumping began at the elevated rate of 1100 – 1200 gpm. Once the stored water was evacuated, the pumping rate was decreased to 350 gpm and was maintained at that rate for the duration of the pumping period (almost 45 hours). Water level in the pit remained stable throughout the test after the rate was decreased to 350 gpm. Total drawdown was approximately 4.4 feet. After pumping stopped, water levels rose in the pit, reaching full recovery after approximately 36 hours. (Exhibit A-12(b), Exhibit A-13)

12. Applicant monitored two artesian wells as part of the aquifer test. Water levels in the Corral Well, an artesian well approximately 2645 feet northeast of the groundwater pit, show rising levels prior to and during the early part of the test. After about 5 hours into the test, water levels in the well began to drop, reaching an apparent drawdown of approximately 0.1 feet at the end of the test. Had the water levels in the Corral Well continued to rise as shown at the start of the test then the drawdown would have been more in the order of 0.4 feet. Applicant, however, dismisses this possibility as unlikely because the rise in the Corral Well is in contraindication of the adjacent King House Well which was declining prior to the test; the recovery in the Corral Well is not as steep as would be expected if the rise had continued; and the Applicant's modeling shows that the drawdown in the Corral Well should be more in the order of 0.1 feet. Applicant even expresses doubt about the results by stating "[f]low rates recorded at the Corral well suggest a decline in flow from 6.8 gpm to 4.8 gpm during pumping, based on a single reading prior to testing. The flow rate does not show any rise during the roughly 8 hours monitored after testing, suggesting the apparent decline in flow during testing may not be accurate, though based on water levels some decline may have occurred." (Exhibit A-12(b))

13. Applicant next used MODFLOW for their modeling efforts. Applicant established a 10 mile by 10 mile grid of cells aligned with the expected direction of groundwater flow. Transmissivity of the cells representing the actual groundwater pit were set very high to simulate open water conditions. Transmissivity elsewhere was varied until an adequate match between modeled and observed pumping test drawdown in the pit was achieved. The model was run in steady state mode to establish base conditions in order to replicate the groundwater gradient between the pit and the artesian wells. Once the base conditions were established, a total of 16 wells [sic] were added to represent the pit. The model was then converted to transient mode to replicate the pumping test. The pumping test simulation was then run, varying the transmissivity and storage until drawdown in the pit and the Corral Well matched observed drawdown from the test. The best match was achieved with a transmissivity of 6650 ft^2/day and a storage coefficient of 0.0006. (Exhibit A-12(b))

14. Objector Group also conducted an expected drawdown model for the Corral Well assuming a confined aquifer and using the Theis equation. Objector Group first determined the storativity using Lohman's method and the Applicant's aquifer thickness estimate of 18 feet (rounded up to 20 feet). The result is a storativity of 0.00002 which is in the range given by Driscoll for a confined aquifer. Then using a distance of 2600 feet from the groundwater pit to the Corral Well, a transmissivity of 3500 ft^2/day, and a time of 1.64 days after the pit was

dewatered, the expected drawdown would be 6.99 feet. Using the same process, the expected drawdown at the King House Well would be 7.48 feet. These figures assume that the source of water is from a confined aquifer and no recharge from another source. (Exhibit O-21)

15. Applicant used Objector Group's numbers in a simulation in their MODFLOW model and found that the drawdown in the pit was predicted at 9.8 feet (vs. 4.4 feet observed) and 0.3 feet at the Corral Well (vs. 0.1 feet observed). Applicant concludes that this discrepancy is due to Objector Group using a transmissivity that is too low. (Exhibit A-12(b))

16. Objector Group contends that the very small observed drawdown at the Corral Well versus their calculation of 6.99 feet confirms that a recharge boundary was intercepted by the drawdown in the pit. In other words, their numbers show that, in fact, the source of water from the pit cannot be solely from a confined aquifer and they speculate that the adjacent wetland is a likely source of recharge water for the pit. (Exhibit O-21)

17. Using Applicant's "best match" of a transmissivity of 6650 ft^2/day and a storage of 0.0006, and applying the same method used by Objector Group (Lohman and Theis), this Hearing Examiner has calculated an expected drawdown in the Corral Well of approximately 1.5 feet which is more consistent with Objector's findings than Applicant's. (Hearing Examiner calculation)

18. Applicant's model was constructed without adequate consideration of the hydrogeology of the area and the model parameters were "varied until a match was found." Not having appropriately derived aquifer properties undermines any calculations on any zone of influence analysis, adverse affects analysis or credibility of Applicant's analysis. (Exhibit O-25)

19. Because of the conflicting evidence, the lack of specific geohydrologic characteristics in the Applicant's analysis, the expansion of the pit during Applicant's testing, and the extremely close proximity of the wetland to the groundwater pit, it is apparent to this Hearing Examiner that there is more going on with the geohydrology in the vicinity of the groundwater pit and that neither Applicant's nor Objector Group's analysis is adequate to explain the actual source of the water that finds its way into the pit. (Exhibit A-12, Exhibit O-21, Exhibit O-25, Exhibit A-13)

20. Applicant argues that the memoranda in the file from the Department staff expert, Russ Levens, show that Applicant's pump test is adequate. Mr. Levens' first memoranda, dated August 29, 2002, contain three important caveats:

> The pumping test conducted by Land Water demonstrates the ground-water pit can supply the desired pumping yield under what (I assume) were high water level conditions in mid May. However, the thickness and extent of the aquifer (probably glacial till or outwash), and the size of the recharge area all will influence the seasonal variability of

ground-water levels and could influence the sustainability of production from the pit later in the irrigation season.

The applicant needs to provide a description of the source of water to the pit, and data on seasonal variability of ground-water levels and surface water flows in order to evaluate the sustainability of the desired pumping rate and volume. The applicant can obtain information about the aquifer and completion of other wells from driller's logs available from DNRC or the Ground-Water Information Center (GWIC), and published reports. Additional monitoring, or data from GWIC or the USGS (if available) are needed to characterize seasonal changes in ground water levels, and spring and stream flows near the pit.

The proposed pit is a developed spring and, therefore, flows in the unnamed intermittent stream or other surface water fed by the spring could be affected at some time. The pumping test had no apparent effect on surface water flows, however effects of ground-water pumping on surface water can be delayed significantly. In addition to the delay effect, the intermittent nature of the surface streams in the area affects the potential that surface water right holders may be harmed. The applicant's pit might be poorly connected to surface water during the irrigation season if the duration of surface water flow is limited to periods of high runoff from spring snowmelt. Again, the applicant needs to document seasonal changes in surface flows in the unnamed tributary to Bullhead Creek and other surface waters.

Applicant did conduct a search for additional information in the form or reports or published data and also did a search of the wells in the area looking for additional information, as requested. Very little useful information was found. In Applicant's response to the Levens memoranda, they state, *inter alia,* that should adverse affects to senior appropriators manifest in the future, the permit can be conditioned such that pumping will cease. (Department File)

CONCLUSIONS OF LAW – Physical Availability

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)

22. Applicant has not proven that there is water physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. While the evidence is obvious that the groundwater pit can produce 350 gpm (at least for as long as the test was run, 45 hours), what is not obvious in this situation is the precise source of the water that enters the pit. The evidence is contradictory as to whether the source is solely from a confined aquifer, or whether some recharge boundary was encountered as drawdown proceeded inducing water from another source into the pit.

> The burden of proof to show the use of natural subterranean water courses as conduits on a developed reservoir system must be a substantial one. There should be some recourse to modern hydrological techniques and not mere conjecture based on inconclusive data and ordinary observation.

Perkins v. Kramer, 148 Mont. 355, 363, 423 P.2d 587 (1966)

The Department has long recognized that when appropriating subterranean waters, the Applicant must identify the source of those waters. In the Matter of Application for Beneficial Water Use Permit No. 14965-g41E and Application for Change of Appropriation Water Right No. 19230-c41E by Tomas H. Boone, Trustee, DNRC Final Order, Permit Denied (1981) the Department found that the water proposed to be diverted by a pit are interrelated to the flows to the north channel of the Boulder River; therefore, the water to be diverted include an unknown quantity of surface water and " . . . a condition requiring the Boone Trust to cease diverting water when senior appropriators' rights are unsatisfied is insufficient protection for senior appropriators *until the sources of water diverted by the pit is known and the interrelation of pit water to surface water is determined." See also*, In the Matter of the Application for Beneficial Water Use Permit 80590-s42K by Ronetta Blackburn and Christopher Theodor, DNRC Final Order, Permit Denied (1993) (The Hearing Examiner concluded in Conclusion of Law 7 that Applicants had not proven "there are unappropriated waters in the source of supply") also, FN5 of that order states "The evidence in the record of this contested case is not sufficient to determine with assurance that the water now filling the pond is groundwater."

The cases cited above are not cited for the proposition that either Applicant in the instant matter or Objector Group have proven their positions, but rather that the evidence in the record is so conflicting that it leaves this Hearing Examiner with the conviction that Applicant has not met his burden of proof by a preponderance of the evidence that the source of supply can sustain 350 gpm (since the source of supply is not definitively identified). (FOF 4, 11 - 20

23. This Hearing Examiner is similarly concerned about the fact that while the pump test was being conducted, the groundwater pit was being expanded. This Hearing Examiner, in 35 years of being involved in water management and water rights issues, has never experienced nor heard of a pump test or aquifer test being conducted while the well (pit) was still under construction. Applicant provides no evidence of how that expansion could affect the results of the test. Objector Group's closing brief analogy that "It is comparable to starting a pumping test with a given sized well and then increasing the diameter of the well during the test." This Hearing Examiner agrees that "expansion of the pit by 70 feet in length and a foot or two in

depth" with no change in water level while pumping at a constant rate of 350 gpm "strains credibility." (Objector Group Closing Brief at 3)

Applicant must prove all of the statutory criteria by a preponderance of the evidence. Mont. Code Ann. 85-2-311(1). Because this Hearing Examiner cannot find that the expansion of the pit during the pump test did not change flow characteristics into the groundwater pit, without any explanation, such an assertion is not credible and thus does not rise to a preponderance of the evidence. See In the Matter of the Application for Beneficial Water Use Permit No. 41H-30003523 by Montana Golf Enterprises, LLC, DNRC Proposal for Decision (2003). (FOF 7 - 10)

24. Mr. Levens' August 29, 2002, memoranda essentially make the same conclusion as Conclusion of Law 22, above. That is that the pit itself can sustain a pumping rate of 350 gpm (at least for 45 hours in May) but questions the season-long or long term sustainability of such a pumping rate. Again Boone Trust demonstrates that a condition that would prohibit further pumping if adverse effects manifest is not an adequate protection for senior water rights holders because *the source* of the water has never been identified. (FOF 20)

25. This Hearing Examiner is well aware that the definition of groundwater has changed from when Boone Trust was decided. Under Boone Trust the definition was "any water beneath the land surface or beneath the bed of a stream, lake reservoir, or other body of surface water, and which is not a part of that surface water." The Legislature, in 1991, changed the definition to what it is today and what it is for purposes of this Application. It reads: ""Ground water" means any water that is beneath the ground surface." That change, however, did not change the law regarding the interconnectedness of surface and ground water, as illustrated above in Blackburn and Theodor.

FINDINGS OF FACT – Legal Availability

26. Applicant has failed to prove Physical Availability. (COL 22 - 24)

27. Legal Availability is determined using an analysis of 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 demand, 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. (Mont. Code Ann. 85-2-311(1)(a)(ii) (2001))

28. Applicant identified all existing water users that fall within the calculated zone of influence developed through Applicant's model. Applicant's model, however, does not adequately determine the specific source or sources of water in the groundwater pit, and without parsing out how much water may be coming from groundwater and how much may be coming from surface water or some other recharge boundary it is not possible to effectively address legal availability of the identified surface and groundwater rights. (Exhibit A12(c), COL 21)

CONCLUSIONS OF LAW – Legal Availability

29. Pursuant to § 85-2-311(1)(a), MCA, an applicant must prove by a preponderance of the evidence. The burden of proof lies with the Applicant. 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). The burden of proof is the same for both permit and change applications.

30. 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. While many of the *Trout Unlimited* line of cases involve closed basins, as demonstrated by *Boone Trust* and *Blackburn and Theodor*, the principles regarding connectivity and legal availability are the same in both closed and open basins.

31. Applicant has failed to prove that water can be reasonably 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. Without a finding of physical availability, no analysis of the evidence on physical water availability and existing legal demand can be conducted. (FOF 26 - 28)

FINDINGS OF FACT – Adverse Effect

32. Applicant has not proven that there is water physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. (COL 22 - 25)

33. Applicant has failed to prove that water can be reasonably 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. (COL 31)

34. 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. (Mont. Code Ann. 85-2-311(1)(b) (2001))

35. Applicant's state that "[i]f long term pumping of the spring decreases flows in the UT of Bullhead Creek to the point that the existing water rights are not satisfied and the downstream

users can show that the decreases are related to the pumping, the applicant can either stop pumping or supplement flows by reservoir releases. (Department File – Response to Levens' August 29, 2002 memo)

36. Applicant submitted a "Water Operations Guide" at the hearing which was marked and offered as Exhibit A-14. The date on the plan is listed as August 2013, which indicates that it was prepared after the first two days of the hearing, July 11-12, 2013, and prior to the final day of the hearing, August 13, 2013. Objector Group objected to the introduction of Exhibit A-14 as not being disclosed. (Audio Trans. 8/13/2013, #08 @ 5:00)

37. Exhibit A-14 is a plan to prevent adverse effect by introducing trigger flows at three sites in the Bullhead Drainage – Site 1 UT Bullhead below Sill Reservoir, Site 3 Winginaw Road, and Site 4 Trunk Butte Road. In addition to the trigger flows the plan includes site specific conditions for objectors Raines, Nelson, Hurley, Seifert and Freebury. Because the Exhibit A-14 includes trigger flows and site specific conditions which Objector Group has never had the opportunity to review and analyze, this Hearing Examiner sustains Objector Group's objection to introduction of Exhibit A-14 as being never disclosed and untimely. Exhibit A-14 is **NOT ADMITTED**.

CONCLUSIONS OF LAW – Adverse Affect

38. 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);

39. Again, Applicants statement that they will cease pumping if adverse effect is manifested or believes that the Application can be conditioned in such a manner is not effective. A condition requiring the Boone Trust to cease diverting water when senior appropriators' rights are unsatisfied was insufficient protection for senior appropriators "*until the sources of water diverted by the pit is known and the interrelation of pit water to surface water is determined."* Boone Trust, *supra.* (FOF 32, 33, COL 22)

40. Without a determination of physical availability or legal availability, this Hearing Examiner is unable to determine 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. (COL 22 – 25, 31)

FINDINGS OF FACT – Means of Diversion

41. Applicant's means of diversion is by pumping a groundwater pit using a White 44 HP diesel motor connected to a Cornell 4RB pump. A pump curve was provided and indicates that a rate of 350 gpm can be achieved. (Department File, Exhibit A-12)

42. One hour into the 350 gpm constant pumping rate, an excavator began enlarging the pit. This enlargement continued until approximately noon the next day (23 hours) until the pit was enlarged to 240 feet long, 15 feet wide, with a depth of water of 6 – 7 feet. The pumping rate of 350 gpm continued until approximately 9:00 am the next day. (Exhibit A-13, Exhibit A-12(a))

CONCLUSIONS OF LAW – Means of Diversion

43. 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.

44. 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.

45. Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. (Mont. Code Ann. 85-2-311(1)(c) (2001))

46. Applicant has not proven that the construction of the appropriation works are adequate. The mere fact that the pit was still being constructed during the pumping test indicate to this Hearing Examiner that Applicant needed to enlarge the pit in order to achieve and maintain the pumping rate applied for. That leaves to question whether future enlargements to the pit will be necessary to maintain such pumping rate later in the season or over the long term. (FOF 8 – 10, 42, COL 23 - 24)

47. Applicant has not proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. (COL 43)

FINDINGS OF FACT – Beneficial Use

48. Applicant proposes to use 188.7 acre-feet per year for supplemental irrigation on 145 acres. That equates to 1.3 acre-feet per acre or 15.6 inches. Applicant's PCCRA water delivers 4 to 6 inches per year, so combined the total water applied to the 145 acres would be 19.6 to 21.6 inches per year. Using IWR for this location indicates the need for 19.8 inches in a normal year and 21.1 inches in a dry year. (Exhibit A-12)

49. Applicant requests 1.7 acre-feet per year for stockwatering use. Applicant states that he will have the need for 100 AU yearlong but that actual operation would likely consist of 200 head for a 6-month period either in the winter/spring period or in the late summer/fall. Thus the amount of stockwater would be 0.017 acre-feet per year per animal which is the Department standard. (Exhibit A-12, ARM 36.12.115)

CONCLUSIONS OF LAW – Beneficial Use

50. Applicant has proven by a preponderance of the evidence that the proposed use of water is a beneficial use. (FOF 48 – 49)

FINDINGS OF FACT – Possessory Interest

51. Applicant signed the Affidavit that affirms that they have a possessory interest in place of use.

CONCLUSIONS OF LAW – Possessory Interest

52. Applicant has proven by a preponderance of the evidence that 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. FOF 51)

ORDER

For the reasons given above Application for Beneficial Water Use Permit No. 41P-30001476 by Margaret and Walter Sill is **DENIED**.

NOTICE

This final order may be appealed by a party in accordance with the Montana Administrative Procedure Act (Title 2, Chapter 4, Mont. Code Ann.) by filing a petition in the appropriate court within 30 days after service of the order.

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

Dated this 5th day of December 2013.

/Original signed by David A Vogler/
David A Vogler, Hearing Examiner
Department of Natural Resources
and Conservation
Water Resources Division
P.O. Box 201601
Helena, Montana 59620-1601
(406) 444-6835

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the FINAL ORDER was served upon all parties listed below on this 5th day of December 2013 by first class United States mail.

JOHN E BLOOMQUIST
DONEY CROWLEY PAYNE BLOOMQUIST PC
PO BOX 1185
HELENA, MT 59624-1185

HOLLY FRANZ
ATTORNEY AT LAW
PO BOX 1155
HELENA, MT 59624-1155

Cc:
DNRC, HAVRE REGIONAL OFFICE
PO BOX 1828
HAVRE MT 59501-1828

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