Before The
State Of Wisconsin
DIVISION OF HEARINGS AND APPEALS

In the Matter of a Conditional High Capacity Well Approval for Two Potable Wells to be Located in the Town of Richfield, Adams County Issued to Milk Source Holdings, LLC	Case No. IH-12-03
In the Matter of a Conditional High Capacity Well Approval for Two Potable Wells to be Located in the Town of Richfield, Adams County Issued to Milk Source Holdings, LLC	Case No. IH-12-05
In the Matter of a Conditional High Capacity Well Approval for Two Potable Wells to be Located in the Town of Richfield, Adams County Issued to Milk Source Holdings, LLC, on March 13, 2013	Case No. DNR-13-021
In the Matter of a Conditional High Capacity Well Approval for Two Potable Wells to be Located in the Town of Richfield, Adams County Issued to Milk Source Holdings, LLC, on March 13, 2013	Case No. DNR-13-027

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

Pursuant to due notice, hearing was held at Madison, Wisconsin on June 24-27, 2013, and December 16-20, 2013. The Division also held a public hearing on the evening of June 26, 2013, Jeffrey D. Boldt, Administrative Law Judge (ALJ) presiding. The parties requested an opportunity to submit written closing arguments, and the last was received on May 9, 2014.

On June 9, 2014, the Department of Natural Resources (DNR) filed a Motion to Stay Issuance of Decision. The parties addressed the issue through written briefs. Subsequently the parties agreed to the following resolution of the Motion for a Stay, suggested in the DNR's June 30, 2014 brief:

> "DNR respectfully suggests that the ALJ's decision could include a finding under s. NR 2.155(1), Wis. Adm. Code, that DNR complied with the procedural requirements of WEPA, but that substantive compliance with WEPA is being litigated in separate court proceedings. If the ALJ were to include such a finding,

> the record would not need to be reopened to receive evidence of DNR's additional work in response to the Supplemental Remand Order. However, DNR respectfully requests that the ALJ decision also include a finding that any future challenges to DNR's compliance with WEPA be heard by the courts, in accordance with the North Lake decision, and be confined to the record, as provided in s. 227.57(1), Wis. Stats. Otherwise, if Petitioners are allowed to bring a new contested case hearing petition on DNR's additional environmental analysis, this would defeat the goals of judicial economy and efficiency, which dictate that such a challenge should be heard as part of the current proceedings."

(DNR brief, pp. 7-8)

Further, on July 1, 2014, the Petitioners Friends of the Central Sands, Family Farm Defenders, Pleasant lake Management District and Jean MacCubbin, all of whom had vigorously opposed the pending Motion to Stay Issuance of the Decision, indicated that they did not object to this proposal.

On July 3, 2014, the ALJ issued a Ruling and Order Denying the Request for a Stay, and advised the parties that the record was closed and a final decision would be issued within 60 days.

In accordance with Wis. Stat. §§ 227.47 and 227.53(1)(c), the PARTIES to this proceeding are certified as follows:

Richfield Dairy, LLC
Milk Source Holdings, LLC, by

Attorney Jordan Hemaidan
Attorney Michael P. Screnock
Michael, Best & Friedrich, LLP
One South Pinckney Street, Suite 700
PO Box 1806
Madison WI 53701-1806

Wisconsin Department of Natural Resources, by

Attorney Judith Ohm
DNR
PO Box 7921
Madison, WI 53707-7921

Hanaman Family, by

Attorney Dana L. Hanaman
W13388 Czech Drive
Coloma, WI 54930

Family Farm Defenders, Friends of Central Sands and Individual Petitioners, by

Attorney Christa Westerberg
McGillivray, Westerberg & Bender, LLC
211 South Paterson Street, Suite 320
Madison, WI 53703-4504

Pleasant Lake Management District and Jean MacCubbin, by

Attorney Carl A. Sinderbrand
Axley Brynelson, LLP
2 East Mifflin Street, Suite 200
PO Box 1767
Madison, WI 53701-1767

SUMMARY OF ISSUES

The issues for which the hearings were granted to PLMD, FFD, and the Hanaman Family are:

- When considering whether to condition or deny a proposed high capacity well approval, does DNR have legal authority to take into account the cumulative impacts caused by existing drawdown of groundwater and surface waters, or is DNR's legal authority limited to considering only the potential adverse environmental impacts of the proposed high capacity well or wells for which an approval is being considered?

- Holding: To fulfill its obligations under Wis. Stat. §§ 281.11, 281.12, 281.34, and 281.35, its public trust duties, the *Lake Beulah Management District v. DNR*, 2011 WI 54, 335 Wis.2d 47, 799 N.W.2d 73 (*Lake Beulah*) decision and to protect public waters both surface and groundwater the Department must consider cumulative impacts to prevent "potential harm to waters of the state." Numerous water resources experts testified that one could not properly evaluate the "concrete scientific evidence" (as required by *Lake Beulah*) without considering existing and reasonably anticipated cumulative impacts. Further, *State v. Michels Pipeline Construction, Inc.*, 63 Wis. 2d 278, 217 N.W.2d 339 (1974) (*Michels Pipeline*) and other prior decisions setting out "the modified reasonable use doctrine" in public nuisance actions do not bar consideration of cumulative impacts in connection with a statutory DNR review of a high capacity well permit application. Rather, the plain language of *Michels Pipeline* makes it clear that the privilege to use groundwater is qualified and cannot cause harm to others by lowering the water table or adversely impacting surface waters.

- Whether DNR properly considered the environmental impact of the proposed high capacity wells on the waters of Pleasant Lake and other waters of the State, including the groundwater aquifer and nearby private wells, when DNR was presented with scientific evidence of potential harm to waters of the State.

- Whether DNR correctly exercised its expertise in water resources management, its discretion and its duty as trustee of public trust resources when DNR determined that the proposed high capacity wells would not cause a significant adverse impact on the waters of the State and DNR granted the conditional approval to Milk Source Holdings, LLC.

- Holding for these Two Issues: The petitioners have carried their burden of proof in documenting with "concrete scientific evidence" that the high capacity well as permitted would cause significant adverse detrimental impacts to waters of the state by lowering water levels in Pleasant Lake and nearby streams. A reduction of the annual maximum pumping rate from 72.5 million gallons to 52.5 million gallons will provide a proper balancing of private and public rights under the "modified reasonable use doctrine" by allowing the dairy operation to proceed while protecting the public waters of Pleasant Lake and nearby streams including Chaffee Creek and springs from harm. The reduction of the maximum annual pumping rate provides some margin for safety for likely detrimental impacts not modelled by the dairy, including transient conditions such as droughts and other low flow events, and likely additional impacts from already-approved wells which were not included in the dairy's modeling data.

FINDINGS OF FACT

1. Richfield Dairy, LLC (Richfield Dairy or Dairy) has proposed to construct a concentrated animal feeding operation (CAFO) at the intersection of 1st Drive and Cypress Avenue in the Town of Richfield, Adams County.

2. Richfield Dairy will be located in a geographic area known as the Central Sands, which is characterized by well-drained, highly permeable sandy soils. The water resources of the Central Sands are extensive.

3. Pleasant Lake is an approximately 130-acre groundwater seepage lake, located about 2.5 miles southeast of the proposed Richfield Dairy. Because of groundwater inputs, the lake is rich in calcium, is relatively well buffered and has good water clarity.

4. Pleasant Lake is used for boating, fishing, and swimming and there is public access to the lake. Many areas of the shoreline have been developed and nearshore vegetation is relatively sparse along many areas of the shoreline.

5. A draft Shoreline Assessment Study that was completed by the University of Wisconsin - Stevens Point and Waushara County Land Conservation Department on 33 lakes in Waushara County ranked Pleasant Lake as second worst overall for Waushara County. The study used 4 criteria to assess shoreline characteristics and health: vegetation, degree of erosion, human influence and number of human structures.

6. Pleasant Lake's water level has varied by about five feet over the past 50 years. The water level in 2007 is the lowest recorded level. The water level in 2012, which was a

moderate drought year, is similar to a level recorded in 1964 and is about a foot higher than in 2007, also a drought year.

7. Banded killifish are a species of special concern but are not actively tracked by DNR. Banded killifish are present at multiple locations all around Pleasant Lake. There is suitable habitat and available spawning areas for Banded Killifish at multiple locations around Pleasant Lake, and they are found in areas with sand and sparse vegetation.

8. In the southwest corner of Pleasant Lake is an area known as Turtle Bay. Adjoining Turtle Bay and connected to the lake by a small channel is a wetland known in this case as the Turtle Bay wetland.

9. It is possible but not clear that the pond in the Turtle Bay wetland and the channel connecting the pond to Pleasant Lake were dredged. Aerial photos indicate that the channel has been very small at certain times, such as 1937, 1977 and 2010. Despite the channel being very small at times, banded killifish are present in the Turtle Bay area of Pleasant Lake. There was no dispute among the parties that, whether or not the channel was dredged, Turtle Bay is a navigable water of the state and a rich and diverse environmental resource with high value as habitat.

10. There are two small unmapped wetlands near Pleasant Lake, located on private property. They do not have mapped boundaries on the Wisconsin Wetland Inventory but instead appear as points because their locations are too small to map through aerial photograph interpretation.

11. There is a spring located at the headwaters of Chaffee Creek. The spring has recorded flow of 1.2-2 cfs.

12. There is a calcareous fen, a rare and important wetland type, at the spring pond located at the headwaters of Chaffee Creek. Groundwater discharges at multiple locations on the hillside around the pond and flows downslope to the spring pond.

13. There are several navigable trout streams located within five miles of the proposed Richfield Dairy, including Chaffee, Tagatz, Fordham, and Little Roche-a-Cri Creeks. Some segments of the streams are ranked Class I by DNR and some are Exceptional or Outstanding Resource Waters. The Department has invested heavily in upgrading and restoring these trout streams.

14. Richfield Dairy filed an application for approval of two high capacity wells on May 4, 2011, primarily for animal watering, cleaning, and evaporative cooling of the barn in the summer.

15. DNR released a draft environmental assessment (EA) for the project, primarily focused on the Wisconsin Pollutant Discharge Elimination System (WPDES) Permit and plans and specifications for the facility, on May 11, 2011. DNR responded to public comments and certified the EA on November 1, 2011.

16. DNR issued a high capacity well approval to Richfield Dairy on November 3, 2011.

17. Family Farm Defenders, Friends of Central Sands and Individual Petitioners (FFD), Pleasant Lake Management District (PLMD) (FFD and PLMD are collectively referred to as Petitioners) and the Hanaman Family filed petitions for a contested case hearing regarding the 2011 well approval. DNR granted the petitions for hearing and referred the cases to the Division of Hearings and Appeals (Division).

18. On July 27, 2012, Richfield Dairy submitted an amended application for well approval at a pumping rate of 72.5 million gallons per year (mgy).

19. DNR prepared a supplemental EA (SEA) in November 2012, responded to public comments and certified the SEA on March 13, 2013.

20. DNR issued a high capacity well approval (Approval) to Richfield Dairy on March 13, 2013. This is the Approval at issue in this case.

21. Petitioners filed petitions for a contested case hearing, which were granted by DNR on April 23, 2013. The Division consolidated all the cases.

22. The Division received pre-filed testimony from the parties, and a contested case hearing was held June 24-27, 2013, and December 16-20, 2013. The Division also held a public hearing on the evening of June 26, 2013.

23. In its draft EA, DNR did not conduct any evaluation of water quantity impacts or indicate that the high-capacity well application was among the documents reviewed in preparing the draft EA. The draft EA indicated that DNR staff "will" evaluate such impacts. (Ex. 5)

24. While the well application was under review, DNR was presented with significant scientific evidence regarding impacts of high-capacity well pumping in the Central Sands, and the direct and cumulative impacts on the water bodies that would be affected by the dairy's pumping. This included correspondence from hydrogeologist Ken Wade regarding cumulative impacts, and an October 7, 2011, letter from Dr. George Kraft, professor of water resources and Director of the Center for Watershed Science and Education at the University of Wisconsin Stevens Point. Using his existing peer-reviewed regression analysis and groundwater model Dr. Kraft determined that the Richfield Dairy wells pumping at 52.5 MGPY would result in drawdown of an additional 2 inches at Pleasant Lake on top of the existing 1.5' drawdown, and that the wells would reduce flows in nearby headwater streams by more than 5% in some stretches.

25. Prior to finalizing the EA, DNR's evaluation of impacts to Pleasant Lake and nearby streams consisted of a phone conversation in October 2011, among central office and area water resources and fisheries managers, based on the projected water level or flow reductions modeled for this project by Dr. Kraft.

26. In this phone conversation, DNR management conveyed the agency's newly-formulated legal position that DNR does not have the authority to consider cumulative impacts when making a decision on a high capacity well application. DNR scientists and regional biologists stated they would prefer to be able to take such impacts into account to better manage the resource by incorporating water resource science, and because they were concerned about existing impacts already experienced as a result of water pumping.

27. The final EA included very limited discussion of water quantity impacts, and did not include any substantive discussion of cumulative impacts caused by high-capacity well pumping, even though it was required by the administrative code.

28. In its draft SEA in November 2012, DNR generally acknowledged cumulative impacts of pumping in the area for purposes of WEPA but it did not provide much more substantive information about water quantity impacts than in the final EA. The Department maintained the same position that it does not have authority to consider cumulative impacts when making high capacity well decisions under Wis. Stat. § 281.34.

29. In response to the draft SEA, the DNR again received concrete scientific evidence regarding impacts of high-capacity well pumping in the Central Sands, and the direct and cumulative impacts on the water bodies that would be affected by the dairy's pumping.

30. In late February 2013, in response to these comments, DNR management asked water management and fisheries staff to review the comments and proposed responses prepared by the author/coordinator of the SEA. These staff had little or no prior involvement in the matter, and were given a short time to review the project, comments, and proposed responses.

31. Some of the DNR fisheries and water resources staff who conducted this review concluded that the potentially affected streams were already significantly impacted by baseflow reductions from existing pumping, and that no further reductions should be allowed. But, based on the directive that they consider the impact from Richfield Dairy's wells "alone," without consideration even of the streams' pumping-impacted condition, they found no significant adverse environmental impact from Richfield Dairy. The DNR Section Chief of the Water Use Section within the Bureau of Drinking Water and Groundwater, Eric Ebersberger, testified that DNR regional biologists would have preferred "from a scientific perspective" to consider and regulate cumulative impacts. "I recall their questions about that approach that they didn't necessarily think that was the most logical approach to protect the resources but accepting the fact that that was our legal position." (*Id.*, TR, Vol. 10, p. 2834)

32. In their pre-filed testimony and exhibits prior to hearing, witnesses for Petitioners identified resources that had not been identified or considered by DNR in its prior evaluations, including a wetland pond and sedge meadow at Turtle Bay in the southeast corner of Pleasant Lake; a channel connecting the pond to the lake; two small wetlands very close to the Pleasant Lake; and a spring pond and calcareous fen at the headwater springs of Chaffee Creek.

33. At the close of the first week of hearing on June 24, 2013, DNR requested the opportunity to conduct further field investigation of these resources. The ALJ granted this

request over the objection of the petitioners. DNR staff conducted that investigation on or about August 6-7, 2013, and submitted supplemental pre-filed testimony relating to the same.

34. The amount of water reduction that would result from the Richfield Dairy wells was calculated by Dr. Kraft, based on his existing groundwater model of the region and regression analyses. Dr. Charles Andrews also calculated water reductions on behalf of Richfield Dairy. Both experts agreed that all models have their limitations, as they are predictive tools that necessarily extrapolate from limited data sets.

35. Dr. Kraft's groundwater model was developed by him and colleagues at the University of Wisconsin-Stevens Point over many years, focusing on the Central Sands area. Dr. Kraft has supplemented this effort with a statistical regression analysis based on existing data and measurements.

36. Dr. Andrews' model was created by him for the New Chester Dairy case, a separate proceeding relating to a nearby dairy owned by Milk Source Holdings, Inc., which also owns the Richfield Dairy. That model is a refinement of the Kraft model to the extent that it can generate output on a smaller grid. It, too, has its limitations, and there was evidence that some of its results are not consistent with empirical data. (Dr. Gaffield TR, Vol. 14, p. 3815)

37. The predicted drawdowns at Pleasant Lake from Dr. Kraft's and Dr. Andrews' models are not significantly different. Dr. Kraft predicted a drawdown of 1.9 inches based on 52.5 mgy and 5.6 inches based on 131.2 mgy. Since these relationships are linear, his output for 72.5 mgy would be approximately 2.5-3 inches. Dr. Andrews' modeling at 72.5 mgy showed a drawdown of 1.6 inches, with a margin of error of ±0.26 inches.

38. Dr. Andrews' model understates the impacts of Richfield Dairy's pumping because it only simulated the Dairy's pumping on a transient basis for 25 years, plus it averages the drawdown across the lake when water enters from the west, the same side as the dairy. (Wade Pre-filed at 10:8-26) The 2.5-3 inch figure is more conservative and better reflects the likely impacts from the project at the 72.5 mgy annual limit. (Kraft, See also: Dr. Gaffield TR, Vol. 14, p. 3813)

39. For existing impacts to water levels, Dr. Kraft has calculated the reduction in Pleasant Lake's water level over the past 20 years due to pumping as at least 1.5 feet and perhaps as much as 3.5 feet. Dr. Andrews' model output showed that 0.75 feet of the drawdown is due to existing pumping. This number is suspect, as the only other major reason for water loss would be weather, and climatological data show that the recent decades generally have been normal to wetter than normal. Dr. Kraft's analysis is also supported by a statistical regression analysis, which is based on measured data in the field and which confirms that existing groundwater pumping has a larger role in surface water drawdowns than Dr. Andrews estimates. Dr. Kraft's regression analysis correlated his modeling results with historic and current empirical data.

40. For streams, Dr. Andrews' model finds existing impacts range from the single digits to over 40% reduction in studied streams, while modeled Richfield Dairy reductions range from 0.1-3.6% from baseflow under average conditions.

41. Dr. Andrews estimated that only 83% of the already-approved pumping drawdowns to Pleasant Lake have impacted the lake so far, since it takes time for the effect of withdrawals to appear at more distant surface water bodies. Further, this figure is an underestimate, since Dr. Andrews' modeling missed a substantial number (14%) of wells closest to the dairy: 20 existing and 6 proposed. (Gaffield, Wade) Accordingly, Dr. Andrews underestimated the magnitude of the existing drawdowns, as well as the percentage reduction that has already been manifested at local water resources.

In supplemental testimony, Dr. Andrews also opined that his earlier calculations had overstated predictions of impacts because he had not sufficiently accounted for increased groundwater recharge which could result from collecting stormwater from impervious surfaces and directing it to an infiltration basin. Dr. Andrews recalculated a 38 percent reduction in his predicted impacts.

Both of Dr. Andrews' recalculations reflect the uncertainties of modeled results accurately reflecting the complexities of the water cycle and the need for some margin for error. For purposes of this decision, it appears that these two significant revisions essentially offset each other, although this is an unknown because not all already permitted wells were considered in his modelled results and he did not recalculate his results using those wells that have been approved since his original modeling was conducted.

42. Further, Dr. Andrews' modeling of stream flow assumed average steady state — *i.e.*, constant — conditions, even though such conditions do not exist in the environment. While this allows a comparison of dairy well pumping to average conditions, it does not allow for evaluation of the dairy wells' impact under transient conditions, i.e. periods of low stream flows that occur in months when other wells are pumping, recharge distribution is different, or when climate limits flow.

43. DNR did not initially conduct any evaluation of the impact of further water loss on Pleasant Lake. Instead, it determined that the Richfield Dairy drawdown would not be significant based on the comparison of the predicted drawdown at Pleasant Lake to its recent historical drawdown, concluding that the predicted drawdown was only 11 of the historical drawdown and therefore not significant. However, this is highly dubious and unsupported from a scientific perspective, because it leads to the conclusion that the more impacted the lake has been, the less significant any further additional drawdown will be. (Kraft)

44. Additionally, DNR did not evaluate the proposed drawdown in addition to the existing drawdown from an unimpacted water level.

45. A preponderance of the evidence demonstrates that there already have been significant impacts to Pleasant Lake, due to both water level reductions and other stressors, including shoreline development and climatic changes. Eurasian water milfoil and algal blooms have become somewhat more prevalent at the lake, an indicator of a reduced calcium concentration in the water. Less of the shoreline is naturally vegetated, limiting spawning areas for both game fish and the banded killifish, a species designated as State Special Concern. The

channel between the Turtle Bay pond and the lake shows that it is shrinking in size and has had more or longer periods of being dry, thereby inhibiting transfer of aquatic species.

46. The evidence also demonstrates that predicted water level reductions caused by the Richfield Dairy will adversely affect the lake both on its own and in conjunction with other existing and reasonably anticipated stressors.

47. Small changes in water level will have significant impact on the lake, due in part to the area of shallows that would be permanently or more frequently exposed, and loss of water temperature and nutrient control from springs.

48. The loss of water due to the Richfield Dairy high capacity well will affect shallow areas like Turtle Bay more significantly, resulting in the loss of vegetation in the best and most diverse remaining plant community on the lake. As UW Milwaukee Professor Dr. Timothy Ehlinger testified, a small change water level can result in a disproportionate detrimental impact upon high quality littoral zone plants and habitat. (Ehlinger Pre-filed, p. 15; See also: Dr. Linton Pre-filed at p. 7 and pp. 15-16)

49. The 2.5 to 3 inch drop estimated by Dr. Kraft at the approved level of 72.5 million gallons will also likely cut off the lake's tenuous connection to the Turtle Bay wetland, an ecologically valuable area, and will likely result in the inability of banded killifish to reach the wetland for spawning. (Linton, Ehlinger, Marshall)

50. These are all significant adverse environmental impacts that have been demonstrated by a preponderance of the evidence by the petitioners.

51. Drawdowns attributable to the high capacity well will create negative impacts to public navigation and recreation opportunities by shrinking the surface area of the lake by 1-2 acres and increasing the shoreline by about 1 vertical foot.

52. Streams in the area of the dairy receive most of their flow from groundwater. Baseflow is extremely important to trout streams.

53. Midwest trout streams derive their thermal suitability for trout from inflow of cool groundwater, which sustains the proper temperature range for trout (about 37-77°F) in summer and winter.

54. Research on trout streams in the Central Sands has correlated trout biomass to baseflow: the less water a trout stream has, the smaller its trout population.

55. Headwater areas of streams are particularly sensitive to flow reductions since they have the smallest channels, but they are also ecologically important as the primary locale for trout reproduction in the Central Sands.

56. Reductions of even the 3.5% of baseflow predicted by Dr. Andrews in the Chaffee Creek headwaters could result in damage to the trout population due to factors like decreased living space, temperature alterations, and other habitat degradations.

57. Dr. Andrews' modeling significantly underestimates pumping impacts in drought or low-flow conditions, when baseflow reductions of 18% or more have occurred at Chaffee Creek and will likely cause impacts that will take trout several years to recover from, like reduced survival of eggs and sac-fry.

58. These are likely and significant adverse environmental impacts to trout streams that the State has expended substantial resources to preserve, enhance and protect.

59. Some DNR water resources and fishery staff agree that when Richfield Dairy's drawdowns are considered against the existing, pumping-impacted condition of the resource, no further reductions in flow from pumping should be allowed, and in some case, flow should be rehabilitated. However, others opined that they did not foresee likely significant impacts at the 72.5 mgy annual pumping maximum limit.

60. There is a calcareous fen, a rare wetland type, inhabiting mostly the northern, and some part of the southern, shores of the Chaffee Creek spring pond. The spring pond is a kettle or glacial void in the topography that intersects with the regional groundwater table. Regional groundwater, flowing in from the northwest, discharges at the toe of the slope surrounding the spring pond and travels in rivulets down to the spring pond over a one-foot elevation change. The fen vegetation is present in the 20-30 foot zone between the toe of the slope and the spring pond.

61. Existing pumping-induced reductions to the calcareous fen area have not been modeled for the spring pond, but it is probable that reductions of at least 2" in the water table have occurred. Portions of the fen have transitioned to shrubbier and more invasive plants and some trees upslope of the current discharge, indicating that it has dried down.

62. Fens depend on mineral-rich groundwater to supply the calciphiles that live within them; almost all fens have nearly no surface water inputs. Fens that lose groundwater will have less saturation due to the lower water table, and will have more surface water inputs. This causes other plants to move in that are better suited to the new conditions, oftentimes exotic or invasive species, and the rare fen species get overgrown and shaded out. The fen will transition to another wetland type entirely—first a sedge meadow, then a shallow marsh. (Carpenter)

63. Lowering the water table will cause groundwater to exit lower down the slope where the fen is located, at least 2 feet and likely more. The remaining groundwater will exit in finer peat, meaning less of it will get through to supply the fen. Reductions of groundwater inputs will lead to a vegetation change, with the calcareous fen specialists being the first to go.

64. The predicted 1-1.5" drop in the water table in the area of the calcareous fen would likely lead to a 10% or greater loss of the fen, which is significant. (*Id.*) Any reduction in the annual maximum pumping rate will make any such impacts less significant.

65. It is scientifically unsupported, and impossible as a practical matter, to manage water resources if cumulative impacts are not considered. That is, when assessing impacts to a resource, one must examine how existing and proposed impacts affect the resource as a whole from a pre-pumping or pre-impacted condition. (See: Discussion)

66. The DNR did not consider cumulative impacts, or perform a cumulative impact analysis, for purposes of the decision to grant, deny, or condition the Richfield Dairy permit. However, these impacts were considered at great length and in considerable detail at hearing.

67. The DNR also did not consider incremental impacts in making its decision whether to grant, deny, or condition the Richfield Dairy high-capacity well approval, i.e. the incremental impacts of Richfield Dairy's pumping against the impacted condition.

68. Pleasant Lake and its biodiversity already have suffered as a result of water level changes, as well as other stressors. By the admission of DNR's limnologist and surface water monitoring section chief Tim Asplund, there are already "existing significant pumping impacts" on Pleasant Lake. These include, for example, "significant losses of emergent and submerged vegetation" due to decline in water levels and human use of the lake under these low water conditions.

69. By DNR's admission, "the proposed pumping by the Dairy's wells would pose an additional stress on Pleasant Lake." And further, when you put these two impacts together (1.5 feet of existing reduction and 2-plus inches of dairy pumping) against a no-impact condition, the results are also significant: "So if you're asking me if a 1.7-foot drawdown would be significant, I would say yes, but . . . that was never part of the way we reviewed this case." (TR at 3146:5-8 (Asplund)

70. Water loss due to groundwater removal has contributed to a shrinking of the Turtle Bay wetland. This is a significant adverse environmental impact to which Richfield Dairy will only contribute. The DNR acknowledged existing impacts on Turtle Bay and admitted, "existing and future impacts could cause Turtle Bay to no longer support open water communities, causing loss of habitat." (Ex. 14 at 10 (SEA resp. to cmts.))

71. Pumping declines over the past several decades have impaired navigation on Pleasant Lake, deterred riparian owners from using the lake, eliminated boat access to the Turtle Bay wetland, and harmed near-shore vegetation. Richfield Dairy's wells will contribute to and likely worsen that condition at the approved maximum annual pumping rate.

72. As for area streams, both SSPA's and Dr. Kraft's modeling show existing and proposed baseflow reductions at or above the level which would have adverse effects on the cold water fish species present.

73. Given the existing impacts, DNR biologists and water resources specialists asked to review the Richfield Dairy well application uniformly agreed they would not recommend further reductions to streams.

74. DNR biologist Jennifer Bergman determined the existing 40% drawdown on Carter Creek and October 2012 drying episode has already changed the stream and its fish populations. (TR at p. 3389:14-3390:3)

75. The existing drawdowns on Chaffee Creek, Carter Creek, Tagatz Creek, and other streams in the region already constitute an adverse environmental impact, and the Richfield Dairy's wells as permitted would make that impact worse.

76. The Chaffee Creek spring located just east of Pleasant Lake is the only mapped large spring within five miles of the dairy. Flow at the spring, as represented in three model cells, has been reduced 18% (.28 CFS) due to irrigation pumping, or from 1.59 CFS to 1.31 CFS.

77. Consideration of the concrete scientific evidence presented at hearing indicates that the permit must be modified to prevent significant adverse impact to Pleasant Lake, Turtle Bay, Chaffee Creek and its spring and other waters of the state.

78. A preponderance of the credible evidence supports limiting the maximum annual pumping limit to 52.5 million gallons a year (mgy) rather than the 72.5 million gallons approved by the Department. A reduction in the maximum annual withdrawal to 52.5 mgy will allow the dairy operation a "reasonable use" of groundwater necessary to proceed while also ensuring that it does so in a manner that better protects the public waters of both Pleasant Lake and numerous nearby streams, including Chaffee Creek and its headwaters spring.

79. The 52.5 million gallon maximum has been modeled at length by Dr. Kraft and it is clear that detrimental impacts to all public waters would be less significant with this modification. The 72.5 mgy limit could lead up to a 3inch drop in water level in Pleasant Lake from the Richfield Dairy pumping alone. (Kraft) The reduction as permitted brings the predicted reduction to less than two inches which could be crucial in preserving the hydrological connection with Turtle Bay. A reduction of the maximum annual pumping rate by 20 million gallons per year will provide some margin for safety under the stresses of transient conditions, including droughts, not modelled by the Dairy. (See: Kraft, Gaffield, Ex. 165) Further, this reduction anticipates further water withdrawals from already approved wells not included in Dr. Andrew's modeling data. (Wade, Gaffield)

80. While public waters remain at some risk at this level of pumping, a preponderance of the credible evidence supports a finding that at this reduced level detrimental environmental impacts will not be significant enough to deny the permit outright. Many experts for the Dairy and Department opined that they did not expect significant impacts even at the 72.5 mgy annual pumping level. Further, this is a Conditional Approval and may be modified under certain circumstances. The Conditional Approval "does not guarantee that the existing or proposed system will produce acceptable water quality or quantity. Additionally, consistent with section Wis. Admin. Code NR 812.09(4)(a), the department may modify this approval as necessary to address impairment of water supply of water to a public utility." (Ex. 4, p. 7)

DISCUSSION

The Department of Natural Resources took an unreasonably limited view of its authority to regulate high capacity well permit applications to reach the conclusion that it lacks the authority to consider cumulative impacts in connection with its review of high capacity wells. Whether or not the Department felt that it was constrained by the "modified reasonable use" doctrine, to understand "a reasonable use" of groundwater in these circumstances, it was incumbent upon the Department to consider "the concrete, scientific evidence of potential harm to waters of the state" caused by this high capacity well application and existing and reasonably anticipated cumulative impacts. *Lake Beulah Management District v. DNR*, 2011 WI 54, 335 Wis.2d 47, 799 N.W.2d 73 As numerous experts on all sides testified in the instant case, to properly consider the concrete scientific evidence one has to consider the cumulative impacts of groundwater withdrawals upon surface waters and springs consistent with the DNR's clear legal duty to "protect, maintain and improve the quality and management of the waters of the State, ground and surface, public and private." *Id.*

The Wisconsin Supreme Court has long recognized the authority and duty of DNR to consider the cumulative impacts in considering what constitutes a reasonable use of public surface waters under the public trust doctrine (e.g. *Hixon v. PSC*, 32 Wis.2d 608, 146 N.W.2d 577 (1966) and *Sterlingworth Condominium Assoc., Inc. v. DNR*, 205 Wis.2d 710, 556 N.W.2d 791 (Ct. App. 1996)). While these decisions did not involve DNR review of groundwater withdrawals, and were based upon a statutory framework not applicable in this case, it is also true that the statutes in those cases also did not mandate consideration of cumulative impacts either and were also in contexts allowing for a reasonable use of public waters. With respect to high capacity well permit applications, the *Lake Beulah* decision has clearly mandated consideration of all available "concrete, scientific evidence," which has for decades included consideration of cumulative impacts.

In 1966 the *Hixon* Court eloquently explained why consideration of cumulative impacts was essential, even though the legislature had not required considering them and even though Hixon was entitled to a reasonable use of his shoreline as a riparian. "A little fill here and there may seem to be nothing to become excited about. But one fill, though comparatively inconsequential, may lead to another, and another, and before long a great body of water may be eaten away until it may no longer exist. Our navigable waters are a precious natural heritage; once gone, they disappear forever." (*Hixon* at 589) *Hixon* and subsequent cases including *Sterlingworth,* reflected the clear scientific consensus that cumulative impacts have to be considered to understand the impact of a proposed activity in the context of both other users of resources and the public surface waters of the state.

DNR and RD argue that DNR's constitutional and statutory obligations to protect waters of the State, as described and reinforced in *Lake Beulah*, is somehow constrained by *State v. Michels Pipeline Construction, Inc.*, 63 Wis. 2d 278, 217 N.W.2d 339 (1974). In *Michels Pipeline* the Wisconsin Supreme Court adopted a modified "reasonable use" doctrine for evaluating permissible uses of groundwater in the context of tort liability and what constituted a valid cause of action. However, *Michels Pipeline* and subsequent cases make clear that the permissible uses articulated therein were not intended to impair the protection of lakes, streams

and other users of public waters. Rather, the *Michels Pipeline* principle expressly protects surface water resources and other users from the adverse effects of large industrial users.

While not a high capacity well case and therefore not directly controlling, *Michels Pipeline* contains several important principles that are germane to this case.

1. The underlying case related to the allocation of damages incurred due to use of groundwater, and does not create property rights in groundwater.
2. To the extent it addresses rights, the Court clearly states that the authority to use groundwater is a "privilege" against liability, and not a property right.
3. **The privilege to use groundwater is qualified, and cannot a) cause harm to others by lowering the water table; or b) adversely impact surface waters.**

(*See*: McAvoy, Wisconsin Strives to Minimize Conflicts Over the Uses of Groundwater, Marquette Law Review, Vol. 59, Issue 1, 1976)

In *Michels Pipeline*, the Court addressed whether damage to wells and homes caused by municipal dewatering for a sewer project could give rise to a claim for public nuisance. The municipal defendants argued that the leading Wisconsin case, *Huber v. Merkel*, adopted the "English rule," that one had a right to withdraw any amount of water percolating through the ground. *Id.* at 288-90. This rule was premised on the notion that groundwater flow was too mysterious to be regulated. *Id.* at 291. The Court rejected this rule, overruling *Huber*, because, *inter alia*, it was inconsistent with the then-current understanding of groundwater and out of harmony with the law in other jurisdictions. *Id.* at 292-94. In so ruling, the Court observed that science recognizes "the interdependence of all water systems." *Id.* at 292. "In nature, there is an inseparable relationship between all water, whether in the atmosphere, on the earth's surface, or under the earth's surface." *Id.* (quoted source omitted).

The Court then considered two alternative rules a) the "reasonable use" doctrine, which allows one to withdraw any amount from his land absent proof of injury to others; and b) the "correlative rights" rule, which allocates water on a discrete basis among its users. *Id.* at 299.

The Court rejected the correlative rights rule as not widely accepted and difficult to administer. *Id.* at 300. It also rejected the reasonable use doctrine because it contains too broad a privilege to use groundwater and does not sufficiently protect those who may be harmed by unrestricted use. *Id.* Instead, it adopted the modified reasonable use rule in proposed Section 858A of the Restatement of Law Second, *Torts,* which provides that withdrawal of groundwater for beneficial purposes is not subject to liability for interference with another's use unless: a) it causes an unreasonable harm by lowering the water table or reducing artesian pressure; b) the groundwater forms an underground stream; c) the withdrawal has a direct and substantial effect on a stream of lake. *Id.* at 302-03. The Court then stated:

> Thus the rule preserves the basic expression of **a rule of nonliability – a privilege if you will – to use ground water beneath the land.** The formulation of the exception to this basic rule recognizes that there is usually enough water for all users so that apportionment is not necessary but that the problem is who shall

> bear the costs of deepening prior wells, installing pumps, paying increased pumping costs, etc., necessitated by a lowering of the water table by a larger user.... The proposed rule of the Restatement Second would place the matter of cost of the same rational basis as the rule applicable to surface streams, the reasonableness of placing the burden on one party or the other."

Id. at 303 (emphasis added)

Subsequent case law confirms that *Michels Pipeline* does not create a property right in groundwater. In *E-L Enterprises v. Milwaukee Metro. Sewerage Dist.*, the Supreme Court held that the circuit court erred by instructing the jury that groundwater is the property of the person who owns the overlying land, as inconsistent with *Michels Pipeline*. 2010 WI 58, ¶ 29 n. 20, 326 Wis. 2d 82, 326 Wis. 2d 82, 785 N.W.2d 409. The Court made this statement in the context of rejecting a constitutional takings claim based on the defendant's removal of groundwater. The argument that *Michels Pipeline* created rights to groundwater that limit DNR's duty to protect public trust waters is incorrect as a matter of law.

Further, the Department has clear authority from both the legislature and directly controlling case law to protect public waters in connection with high capacity well permit applications. Administrative agencies "have only such powers as are expressly granted to them or necessarily implied...." by an act of the legislature. *American Brass Co. v. State Board of Health*, 245 Wis. 440, 448, 15 N.W.2d 27 (1944). In this instance, the legislature has conferred both express and necessarily implied authority of the DNR to set reasonably necessary conditions and to consider sound water resource science in its review of high capacity wells.

Under Wis. Stat. § 281.34(2) no person may construct or withdraw water from a high capacity well without the approval of the DNR. Wisconsin Stat. § 281.34(7) gives the DNR the explicit authority to modify or rescind an approval if the approval is not in conformance with standards or conditions applicable to the approval. The Legislature's authorization to the DNR to modify or rescind an approval if the well or use of the well is not in conformance with standards or conditions applicable to the approval necessarily implies that the DNR has authority to include conditions in all well approvals.

The DNR has also been granted the authority and duty to implement the state's public trust responsibilities when issuing all high capacity well approvals under Wis. Stat. §§ 281.11, 281.12, 281.34 and 281.35.

This authority and duty includes the permissive statutory authority to condition high capacity well approvals when necessary to protect the public's interest in navigable waters. As the Wisconsin Supreme Court found in *Lake Beulah Management District v. DNR*, 2011 WI 54, 335 Wis.2d 47, 799 N.W.2d 73, the Legislature explicitly granted the DNR the broad authority and a duty to regulate high capacity wells through Wis. Stat. §§ 281.11 and 281.12 and the authority was not revoked by the language in Wis. Stat. §§ 281.34 and 281.35.

To briefly review, Wis. Stat. § 281.11 provides in part that "The department shall serve as the central unit of state government to protect, maintain and improve the quality and

management of the waters of the state, ground and surface, public and private." (emphasis added) Wisconsin Stat. § 281.12 provides in part that "The department shall have *general supervision and control over the water of the state.* It shall carry out the planning, management and regulatory programs necessary for implementing the policy and purpose of this chapter." (emphasis added) The *Lake Beulah* Court interpreted these statutes to mean that the Legislature has delegated the authority to regulate high capacity wells to the DNR, including, as the Court specifically stated, the authority to require conditions as necessary. (*See Lake Beulah*, ¶¶4, 37, 39, 63)

The unanimous Wisconsin Supreme Court was very clear on this point.

> ¶3 We conclude that, pursuant to Wis. Stat. § 281.11, § 281.12, § 281.34, and § 281.35 (2005-06),[5] along with the legislature's delegation of the State's public trust duties,[6] the DNR has the authority and a general duty[7] to consider whether a proposed high capacity well may harm waters of the state.[8] Upon what evidence, and under what circumstances, the DNR's general duty is implicated by a proposed high capacity well is a highly fact specific matter that depends upon what information is presented to the DNR decision makers by the well owner in the well permit application and by citizens and other entities regarding that permit application while it is under review by the DNR.
>
> ¶4 **We further hold that to comply with this general duty, the DNR must consider the environmental impact of a proposed high capacity well when presented with sufficient concrete, scientific evidence of potential harm to waters of the state.** The DNR should use both its expertise in water resources management and its discretion to determine whether its duty as trustee of public trust resources is implicated by a proposed high capacity well permit application, such that **it must consider the environmental impact of the well or in some cases deny a permit application or include conditions in a well permit**. (emphasis added)

See Lake Beulah, ¶¶3-4

The DNR interprets *Lake Beulah*, a unanimous Wisconsin Supreme Court decision that repeatedly affirms the Department's legal duty to protect public waters, in a very narrow manner. (TR 39-41) It seizes upon the Court's use of the "a" or "the" when referring to articles relating to the well in question in that case for the proposition that the DNR is precluded from considering cumulative impacts. This parses the Court's language in a way that defeats *Lake Beulah's* clear holding. It appears far more likely that the Court only referred to wells in the singular because it was discussing DNR's duty in the context of a proposed well. *See, e.g., Id.*, ¶ 4.

Additionally, the terms were used to describe DNR's duty to consider "environmental impacts." *i.e.*, "DNR must consider the **environmental impact** of a proposed high capacity well ...." *Id.* (emphasis added). The term "environmental impact" or "environmental effect" describes the broad range of direct, indirect, secondary, and cumulative impacts required to be

evaluated under WEPA. *See, e.g.,* Wis. Stat. § 1.11(2)(c)1.; Wis. Admin. Code §§ NR 150.01(1), 150.03(2) and (3), and 150.22(2)(a) Further, numerous DNR and all of the petitioners' experts testified that to properly consider the "environmental impact" of the proposed groundwater withdrawals that it was necessary to consider cumulative impacts. Even the Dairy's own expert, Dr. Andrews, clearly embraced this idea when he recalculated his modeling because he had not properly considered the already-existing background or cumulative impacts from previously permitted wells.

Dr. Kraft, a nationally known water resource expert from U.W. Stevens Point, has been studying the Central Sands ground and surface water systems for decades. He succinctly described why any scientific evaluation has to include cumulative impacts.

> The DNR cannot protect surface waters of the central sands region if it does not consider cumulative impacts. From a factual perspective, groundwater – surface water systems cannot be managed by considering one well at a time.
>
> It is an empirical fact that cumulative impacts on surface waters are occurring from existing groundwater pumping. The DNR acknowledges this in the SEA. Ignoring these impacts when approving new wells is analogous to issuing wastewater permits while ignoring that existing pollution is already killing fish or issuing air pollution permits while ignoring that existing pollution is already harming human health.
>
> The cumulative existing impacts are part of the background conditions that have already affected the resource and must be considered when evaluating the impact of an additional contributor. For example, a conservative estimate of the cumulative effects of existing groundwater pumping on Pleasant Lake is 1.5 foot drawdown. This artificially lowered water level has already altered the surface area, depth, and ecology of the lake, not to mention adjacent wetlands that experienced the same influence. This lower water level and the associated impacts are part of the condition onto which a new permanent reduction is going to be added. And then possibly another, and another, and another and another .... Ignoring cumulative impacts leads to the logical endpoint of DNR approving more high capacity wells beyond when the lake is totally dry.
>
> The recent history of the Central Sands reflects what happens when cumulative impacts are not considered. The example of Long Lake was given previously. Other well known cases are the Little Plover River, which dried; and Wolf Lake in Portage County, where the county beach is no longer useable by the public. None of the wells impacting these water bodies would independently have satisfied DNR's approach to determining significant adverse impact. Yet collectively, they have caused severe impairments to these water bodies.
>
> Pleasant Lake is already experiencing lowered water levels and deteriorating quality due to groundwater pumping. DNR's action to approve wells for a single

> user will allow an additional reduction equaling about 10% of the 1993-2007 average pumping-related reduction that has already occurred.

(Kraft Pre-filed; pp. 18-19)

Significantly, no water resources expert testified that one could properly consider the concrete scientific evidence relating to the water cycle without considering cumulative impacts. Rather, many testified that basic science required it. The DNR's own experts concluded that they could not properly consider the "environmental impact" of the well in a way that is consistent with sound water resource science without considering cumulative impacts.

For example, DNR aquatic biologists David Bolha and Jennifer Bergman both testified that "by themselves" permitted water withdrawal would not have a significant adverse impact upon surface waters. However, because several nearby streams have already been severely impacted by existing high capacity wells, a further reduction of flow could work a significant loss of habitat. (Exs. 432 and 458; TR, Vol. 12 at p. 3416) Bolha opined at hearing that effects of pump from existing wells over Richfield Dairy wells as permitted would be significant for Chaffee Creek, Carter Creek, and Tagatz Creek. *Id.* at p. 3417

Another DNR biologist, Ms. Bergman, also agreed.

> Q. Essentially what you're saying here is based on the modeled flow reductions for Richfield Dairy alone, you're not finding significant impacts. But if you look at the cumulative impacts, you would recommend no further water removal; correct?
>
> A. For some of the streams.

Id. at 3345; *see also,* Ex. 461 (Bergman comments on draft SEA: "Results that show removal of baseflow under existing conditions for some of the streams is alarming.") She later explained the importance of considering cumulative impacts:

> Q. And as an aquatic biologist, you would want to consider those cumulative and existing impacts when you're assessing any particular project; correct?
>
> A. Correct.
>
> ALJ BOLDT: And that's just basic science, isn't it?
>
> THE WITNESS: Yes.
>
> Q. If you're not, you're not simulating real world conditions, are you?
>
> A. No.

TR, Vol. 12 at p. 3355

DNR water resources specialist Scott Provost, called adversely by Petitioners, agreed:

Q. Sure. Would you agree that if you aren't considering the impacts that have already occurred, like the 40 percent that already occurred to Carter for baseflow, that you can't protect the resource when you're considering additional withdrawals?

A. That would be a safe assumption. That's the way I approach a lot of this, is if you've got a stream that, according to its modeling, has already been – its flow has been reduced by 40 percent on a small (inaudible) stream, that's significant. And any more will only exacerbate them.

Id. 3 at 804

The potential for detrimental cumulative impacts is clear. Exhibits 124 and 125 set forth the dramatic increase in the number of high capacity wells in the Central Sands from 1950 (24 wells) to 2000 (2,675 wells), and from 2000-2012, respectively. These wells represent more than half of all high capacity wells in the state. *Cf.* Exs. 125 and 153. Exhibit 163 shows a continuing trend of new well approvals in the Central Sands, which has escalated over time. As larger dairy operations become more common, the volume of water withdrawals sought in permits has also increased.

The decline of lake levels and stream flows was well documented in the record. Exhibit 106 graphically depicts the lake level data for Pleasant Lake. While DNR witnesses characterized this as a "variation" or "fluctuation" in their pre-filed testimony, they agreed that the trend over the last 20 plus years has been a decline. *See, e.g.,* TR, Vol. 11 at pp. 2955-56 (Greve) Modeling performed by Dr. Andrews, on behalf of the Dairy, demonstrates that there already have been significant reductions in the baseflows of pertinent streams due to irrigation pumping. Dr. Andrews modeled baseflow reductions from existing wells using stream flow data reflected in his July 2012 report. (Ex. 3a, App. G-1) His modeling results are tabulated in the SEA. (Ex. 8, Table 1 at 10) Dr. Andrews calculated substantial baseflow reductions **solely from existing irrigation wells**, including 18.2% at Chaffee Creek and 40.8% at Carter Creek.

These substantial existing impacts were corroborated by witness observations. For example, Mr. Bolha testified to the dry stretches in Carter Creek, including important habitat and spawning areas. *See* TR, Vol. 12 at pp. 3408-09 (Bolha) and 3340 (Bergman) Dr. Quinten Carpenter, an expert on calcareous fens who studied the Chaffee Creek fen, testified to the historical changes in vegetation at the upstream end of the fen that reflect loss of stream flow and habitat.

Dr. Kraft calculated a 1.9-inch permanent water level reduction in Pleasant Lake due to the RD wells pumping at 52.5 mgy; and a 5.6-inch reduction at the previously approved 131.2 mgy. Exs. 121, 122 Based on Dr. Kraft's calculations, at the now-proposed pumping rate of

72.5 mgy, the calculated reduction would equate to approximately 3 inches. This is in addition to the water losses due to existing and historical pumping, weather, and reasonably anticipated future stressors (*e.g.*, more wells, higher pumping rates, climate change). By contrast, Dr. Andrews' modeling predicted a RD-related drawdown of 1.6 inches ± 0.26 inches. DNR did no independent modeling.

Both Dr. Kraft and Dr. Andrews consistently demonstrated intellectual integrity and a willingness to consider opposing viewpoints. Dr. Andrews acknowledged that his modeling had failed to account for already existing cumulative impacts which will result from the fact that already approved high capacity wells will continue to lower water tables over time. Dr. Kraft acknowledged, in part, Dr. Andrews' point in his supplemental testimony that he may have underestimated groundwater recharge due to collection of stormwater in the infiltration basin. However, it is important to also bear in mind that Dr. Kraft also opined in his pre-filed testimony that the original modeling done by Dr. Andrews overestimated groundwater recharge due to applied irrigation, which "runs counter to the consensus among hydrologists, biophysicists, and agronomists, who generally believe that irrigation scheduling largely eliminates infiltration back to the water table." (Kraft Pre-filed, p. 13)

The impacts to Pleasant Lake under either scenario would be significant, especially, as Dr. Andrews conceded, all of the expected impacts from existing high capacity wells have not yet been experienced. Dr. Andrews testified that he had significantly underestimated the impact of existing permitted high capacity wells because, like this instant facility, water withdrawals and impacts will occur over several decades. His original modeling only captured 83 percent of anticipated water withdrawals. Further, Dr. Andrews' calculation of an additional 17 percent reduction in Pleasant Lake water level impacts from existing wells only included wells permitted by the end of 2011. (*Id.*) That means that the underestimation that Dr. Andrews conceded does not fully capture the impact of already approved well facilities.

A preponderance of the credible evidence supports limiting the maximum annual pumping limit to 52.5 million gallons a year (mgy) rather than the 72.5 million gallons approved by the Department. A reduction in the maximum annual withdrawal to 52.5 mgy will allow the dairy operation to proceed while ensuring that it does so in a manner that protects the public waters of both Pleasant Lake and numerous nearby streams, including Chaffee Creek and its headwaters. Significantly, the Dairy at one point estimated its annual water usage to be approximately 52.25 mgy, and that is why Dr. Kraft modeled this proposed annual pumping rate. (Ex. 2, p. 8 (original Conditional Approval; 6d, Kraft Cmts.) While the Dairy has since sought a much higher annual limit (as much as 131.2 mgy), at one point it considered the 52.5 mgy limit in the permit as modified below as sufficient for its needs.

None of the parties are likely to be completely satisfied with this outcome. The petitioners argue, as many of their experts opined, that no further water withdrawals can be safely undertaken without significant detrimental impacts. Richfield will regret the reduction in the maximum annual pumping rate in light of its many distinguished experts who opined that there would not be significant detrimental impacts even at the 72.5 mgy annual limit. The Department would prefer not to have to consider cumulative impacts as it analyzes high capacity well applications.

However, a preponderance of the credible scientific evidence and careful application of the modified reasonable use doctrine make it clear that a reduction of the total annual pumping maximum by approximately 27.1 percent (from 72.5 to 52.5 mgy) represents an appropriate balance between the rights of private parties to a reasonable use of waters of the State, and the rights of the public to not experience detrimental impacts to those public waters. Inherent in the balancing which is at the heart of Wisconsin's rich tradition and practice in interpreting the public trust doctrine is the idea that neither private rights nor public rights are paramount, and that, accordingly, often no single party gets exactly what it wants. This approach has served the state and its natural resources very well.

The Department shall accordingly amend the Conditional Approval to reflect the reduction in the annual maximum pumping limit.

CONCLUSIONS OF LAW

1. The Division has authority to hear contested cases and issue necessary orders in this matter pursuant to Wis. Stat. § 227.43(1)(b).

2. On factual matters, the Petitioners have the burden of proof, and the standard is by a preponderance of the evidence. Wis. Admin. Code § NR 2.13(3)(b); *see also* NR 203.15; HA 1.17(2)).

3. The DNR administers the high capacity well program under Wis. Stat. § 281.34, *et seq.* In evaluating whether to approve a high capacity well, DNR must consider the potential adverse impacts on waters of the State, and must make its decision consistent with its statutory and constitutional public trust authority and duty to manage and protect navigable waters for the benefit of the public. *Lake Beulah Mgmt. Dist. V. State*, 2011 WI 54, 335 Wis. 2d 47, 799 N.W.2d 73.

4. The DNR possesses the authority to consider cumulative impacts to waters of the State caused by high capacity well pumping, climate, and other factors when assessing applications for high capacity wells. The failure to consider these impacts is a gap in public trust enforcement because it is impossible to adequately consider any "concrete, scientific evidence" of harm to the waters of the State without considering the direct and secondary detrimental impacts to said waters by known and reasonable expected cumulative impacts.

5. Petitioners, through their representatives and distinguished experts, submitted sufficient "concrete scientific evidence" of potential surface water reductions due to groundwater withdrawal to invoke DNR's duty to consider the impacts of the proposed RD wells to Pleasant Lake and area streams and wetlands.

6. Whether evaluated under the specific high capacity well permitting statutory scheme and the clear and direct language of the Wisconsin Supreme Court in the *Lake Beulah* decision or the more general common law principles set forth in the modified reasonable use

doctrine, the focus is the same—a landowner's rights to the use of groundwater for a beneficial use may not result in a "direct or substantial effect upon the water of a water course or a lake" (*Michels Pipeline,* 63 Wis. 2d at 302-303) Nor may it "cause harm to the waters of the State" (*Lake Beulah*). Under either the specific and binding language of *Lake Beulah* or the general modified reasonable use doctrine in public nuisance and tort actions, the permit as approved is unreasonable because it results in likely direct substantial and measureable detrimental impacts to Pleasant Lake and nearby streams including Chaffee Creek.

7. While there will remain the potential for measureable detrimental impacts from the permit as modified, the permit as modified lessens the significance of these impacts and provides a proper balancing of a reasonable use of the groundwater by the Dairy without causing substantial harm to public waters of the State.

8. It is not possible to evaluate what constitutes a "modified reasonable use" of public groundwater resources by a high capacity well permit application without considering both the background of the existing concentration of private users of groundwater but also the reasonably anticipated cumulative impacts of other users. Further, to evaluate the concrete, scientific evidence of potential harm to the waters of the State (*Lake Beulah*) requires consideration of cumulative impacts.

9. Similarly, the DNR cannot fulfill its statutory mandate under Wis. Stat. § 281.34 to "ensure that the high capacity well does not cause significant environmental impact" without considering both the existing "background" of previously approved water withdrawals and the reasonably expected cumulative impacts of other users.

10. The Wisconsin Supreme Court has long recognized the authority and duty of DNR to consider cumulative impacts (e.g. *Hixon v. PSC*, 32 Wis.2d 608, 146 N.W.2d 577 (1966) and *Sterlingworth Condominium Assoc., Inc. v. DNR*, 205 Wis.2d 710, 556 N.W.2d 791 (Ct. App. 1996)). While these decisions did not involve DNR review of well approvals, and were based upon statutory frameworks not applicable in this case, it is also true that the statutes in those cases also did not mandate consideration of cumulative impacts either and were also in contexts allowing for a reasonable use of public waters. With respect to high capacity well permit applications, the *Lake Beulah* decision has clearly mandated consideration of all available "concrete, scientific evidence," which has for decades included consideration of cumulative impacts.

11. In accordance with Wis. Admin. Code § NR 150.20(2)(b), DNR was required to identify in the EA the potential impacts of all agency actions related to Richfield Dairy's project proposal, including the two proposed high capacity wells.

12. Pursuant to the Court of Appeals' decision in *Family Farm Defenders v. DNR*, Appeal No. 2012AP1882 (Dec. 19, 2013) (unpublished), DNR is now required to complete its examination of the cumulative impacts of other wells and activities in the watershed in order to satisfy its obligations under WEPA.

13. Although the Division assessed compliance with the procedural requirements of the Wisconsin Environmental Policy Act (WEPA), Wis. Stat. § 1.11 and Wis. Admin. Code ch. NR 150, as part of its decision in this matter, DNR's EA and SEA have also been the subject of judicial review. DNR is in the process of conducting additional environmental analysis under Wis. Admin. Code ch. NR 150, pursuant to a decision by the Court of Appeals, *Family Farm Defenders et al. v. DNR*, Appeal No. 2012AP1882 (Dec. 19, 2013).

14. The parties stipulated to the following Conclusion of Law. The DNR complied with the procedural requirements of WEPA under Wis. Admin. Code § NR 2.155(1). However, substantive compliance with WEPA is being litigated in separate court proceedings. Further, any future challenges to DNR's compliance with WEPA will be heard by the circuit courts, in accordance with the *North Lake* decision, and be confined to the record, as provided in Wis. Stat. § 227.57(1).

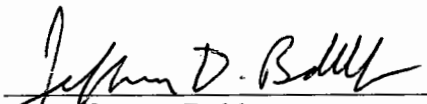
ORDER

WHEREFORE, the Conditional Approval in High Capacity Well File Number 01-3-0009 shall be AMENDED as follows. The second sentence of the second paragraph under the heading Water Quality, Location and Monitoring Conditions for Proposed Wells #1 and #2 shall read: "The approved maximum groundwater withdrawal amount for the property is 52,500,000 gallons in any 365-day period."

IT IS FURTHER ORDERED that any other related provisions are amended to reflect this maximum annual withdrawal amount, and that all other provisions of the Conditional Approval remain in full force and effect.

Dated at Madison, Wisconsin on September 3, 2014.

STATE OF WISCONSIN
DIVISION OF HEARINGS AND APPEALS
5005 University Avenue, Suite 201
Madison, Wisconsin 53705
Telephone: (608) 266-7709
FAX: (608) 264-9885

By: 

Jeffrey D. Boldt
Administrative Law Judge

NOTICE

Set out below is a list of alternative methods available to persons who may desire to obtain review of the attached decision of the Administrative Law Judge. This notice is provided to insure compliance with Wis. Stat. § 227.48 and sets out the rights of any party to this proceeding to petition for rehearing and administrative or judicial review of an adverse decision.

1. Any party to this proceeding adversely affected by the decision attached hereto has the right within twenty (20) days after entry of the decision, to petition the secretary of the Department of Natural Resources for review of the decision as provided by Wisconsin Administrative Code NR 2.20. A petition for review under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.

2. Any person aggrieved by the attached order may within twenty (20) days after service of such order or decision file with the Division of Hearings and Appeals a written petition for rehearing pursuant to Wis. Stat. § 227.49. Rehearing may only be granted for those reasons set out in Wis. Stat. § 227.49(3). A petition under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.

3. Any person aggrieved by the attached decision which adversely affects the substantial interests of such person by action or inaction, affirmative or negative in form is entitled to judicial review by filing a petition therefore in accordance with the provisions of Wis. Stat. §§ 227.52 and 227.53. Said petition must be served and filed within thirty (30) days after service of the agency decision sought to be reviewed. If a rehearing is requested as noted in paragraph (2) above, any party seeking judicial review shall serve and file a petition for review within thirty (30) days after service of the order disposing of the rehearing application or within thirty (30) days after final disposition by operation of law. Since the decision of the Administrative Law Judge in the attached order is by law a decision of the Department of Natural Resources, any petition for judicial review shall name the Department of Natural Resources as the respondent and shall be served upon the Secretary of the Department either personally or by certified mail at: 101 South Webster Street, P. O. Box 7921, Madison, WI 53707-7921. Persons desiring to file for judicial review are advised to closely examine all provisions of Wis. Stat. §§ 227.52 and 227.53, to insure strict compliance with all its requirements.