Before The
State Of Wisconsin
DIVISION OF HEARINGS AND APPEALS

In the Matter of the Review of the Water Level Decision for Lake Koshkonong and the Indianford Dam on the Rock River in Rock County, Wisconsin	Case No. 3-SC-2003-28-3100LR

JOINT PETITIONERS' POST HEARING BRIEF

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INTRODUCTION

Lake Koshkonong is among Wisconsin's largest inland lakes. Since the Indianford Dam was constructed under authority of the Territorial Legislature in the mid-19th century, extensive portions of its shores have been developed with residences, roads, parks, businesses and other trappings of human settlement. Still, much of the lake's shore remains vegetated with cattails and other wetland plants that provide habitat to waterfowl and other wildlife. Today, thousands of people live or make their livelihoods on or near the lake's shores and thousands more congregate on its waters to pursue recreational activities like fishing, boating and hunting.

Under the public trust doctrine, the common law of riparian rights, Chapter 30, Stats. (navigable waters) and other regulations, Wisconsin law protects a wide variety of public and private interests associated with our waterways. State law recognizes too, that the placement of a dam has significant consequences on public waters and private riparian and other property rights. Dams may only be placed with express state approval. The authorization of a dam necessarily means that water levels will rise (at least some of the time) and public navigation will be enhanced. On the other hand, some low-lying areas may be inundated more often and there may be changes in the distribution of plant species.

In Chapter 31 of the Statutes, the Legislature has established specific regulations and standards applicable to impounded waters, including § 31.02(1), which identifies the interests to be addressed in administrative orders regulating water levels in impoundments. These interests include public rights in water, life, health, safety and property.

In this proceeding, DNR has not addressed the range of interests it is directed to consider when setting a water level order. Rather, it conducted its review of the District's petition to raise water levels on Lake Koshkonong as if it were setting general management policies for Wisconsin's shallow lakes. In determining and defending its water level order, the agency has consistently cited cases and applied administrative rule provisions applicable to navigable waters generally, but not germane to the standards for management of impounded water bodies. The position it has taken in this proceeding is contrary to statutory standards and in excess of the agency's authority. If adopted by the Administrative Law Judge, the Department's order would permit the agency to elevate wetland interests into a kind of trump card that preempts consideration of other compelling protected interests, including navigation, public safety and the economic well-being of Lake Koshkonong, which for some 150 years has been an impounded water body --- not by balancing these interests against specific

anticipated consequences to wetlands --- but by the mere suggestion that wetlands may be affected by any water level increases.

The Petitioners urge that this one-sided approach be rejected. We ask that the ALJ analyze the record evidence in this case and evenhandedly apply the statutory standards for water level orders under sec. 31.02(1), Wis. Stats. A contested case hearing is not a proper proceeding to set agency policy.[1] The thousands of interested Lake Koshkonong users and property owners are entitled to a hearing that addresses the specific circumstances of Lake Koshkonong in the present day, and to a water level decision that fairly applies the standards for this water level proceeding to all of the protected interests under §31.02(1), Wis. Stats.

INDIANFORD DAM -- THE BACKGROUND OF LAKE KOSHKONONG WATER LEVEL PROCEEDINGS.

The Indianford Dam was built on the Rock River outlet of Lake Koshkonong in the mid 1800s, under express authorization of the Wisconsin Territorial Legislature and subsequent state legislation. It was reconstructed and its crest was raised in approximately 1917.

Administrative authority to issue water level orders for impounded waters was originally granted to the state Railroad Commission in 1915[2] and that Commission issued the first administrative order governing the operation of the Indianford Dam in 1919. In a 1939 proceeding, after this authority had been transferred to the Public Service Commission, that body determined that Wisconsin Power & Light Co., had acquired flowage rights to maintain Lake Koshkonong water levels has they had been during its operation of the Indianford Dam following the 1919 order.[3]

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[1] Statewide agency policy is to be set through administration rulemaking under Section 227.10, *et seq*. By contrast, a contested case hearing is a proceeding focused on a particularly agency decision or order effecting the substantial interests of parties. *See generally* Wis. Stat. § 227.01(13)(b); *Wis. Elec. Power Co. v. Dep't of Natural Resources*, 93 Wis. 2d 222, 251, 287 N.W.2d 113 (1980).

[2] Ch. 380 of the Laws of 1915, §3 created Section 1596-2.1, authorizing the regulation of the water levels maintained by dams in the interest of public rights in navigable waters, safety, life, health and property. The interests to be considered and protected in a water level order have not been materially changed during the last 90 years. *See* Wis. Stat. § 32.02(1).

[3] *Petition to Raise the Normal Elevation of Water Maintained by the Indian Ford Dam in the Rock River, Rock County*, 2-WP-461, November 28, 1939.

Administrative water level order authority was transferred from the PSC to the Department of Natural Resources when that agency was created. In the late 1970s, the DNR reviewed the Railroad Commission's 1919 order in response to complaints about the impacts of persistent summer low water conditions on Lake Koshkonong navigation. As part of that review, the Department undertook to determine the Ordinary High Water Mark ("OHWM") of Lake Koshkonong, finding that elevation at 776.7 feet above mean sea level (msl).[4] The OHWM is a critical elevation because it establishes the boundary between the public lakebed and uplands that may be privately owned.

In 1982 DNR issued a water level order for Lake Koshkonong, setting the maximum summer water level at 776.33 msl (about 4 inches below the OHWM). To accommodate navigation, the 1982 Order set a minimum summer level of 775.73 msl, and required the installation of operable six-inch flashboards to maintain that minimum that level during low flow periods. The 1982 Order also established lower "winter drawdown" levels from December 1-April 30. *See* Ex. DNR-817.

Before it was actually implemented, DNR's 1982 Order was challenged by a group of private hunt clubs (Thiebeau and Carcajou), individual wetland owners, Rock County and others in Jefferson County Circuit Court. *Shearer, et al. v. DNR*, Jefferson County Circuit Court Case No. 82-CV-392. The Circuit Court proceedings focused on the mandated flashboards, which were opposed by wetland owners claiming they would damage wetland hunting preserves. DNR vigorously defended the flashboards in the Circuit Court proceeding based on the interests of navigation and water level stability. After extensive proceedings, the Court affirmed the Department's order, based on its effectiveness at addressing and balancing the competing interests involved.

On appeal by the wetland owners, the Wisconsin Court of Appeals found that the Department had erroneously denied the administrative review rights of aggrieved parties and remanded the matter so that an administrative hearing could be conducted. *Shearer v. DNR*, 151 Wis. 2d 153, 443 N.W.2d 669 (Ct. App. 1989). Despite the Court's mandate, no administrative hearing was conducted on remand, because the Department negotiated a Stipulation and Order with the

[4] "Ordinary High Water Mark" means the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic. *Diana Shooting Club v. Husting*, 156 Wis. 261, 271, 145 N.W. 816 (1914); Ch. NR 115.03(6), Wis. Adm. Code

wetland owners, the County and other parties, pursuant to which DNR issued a revised order in 1991. The 1991 order eliminated the 6-inch flashboards required in the 1982 order, but retained the maximum and minimum water levels (including the winter draw down) established in the 1982 order, shifting the reference point for these levels from Indianford Dam to a new gaging station on the lake that had been installed by the U.S. Geological Survey in 1986. The 1991 Order also moved up the winter drawdown to November 1st.

Water levels on Lake Koshkonong, sometimes referred to as a "wide spot in the Rock River," are only partially managed by the Indianford Dam. The Lake's water level fluctuates widely, both annually and seasonally, without regard to the minimum or maximum levels mandated in state administrative orders, due to the constriction of the Rock River outlet and the vastness of the Rock River watershed. Particularly during periods of extreme high flows, the river outlet and dam lack the physical ability to discharge sufficient water to maintain the lake level below the ordered maximum level. These conditions were exacerbated by the failure of the dam owner to properly repair, maintain and operate the dam (especially the wicket gates that dominate its discharge capacity) from the late 1960s through 2002.

As a consequence of these circumstances, water levels on Lake Koshkonong have often exceeded the ordered maximum level, routinely by as much as 2-3 feet. The lake's level has also fallen below the ordered minimum water level for significant periods and has regularly failed to meet the winter draw down requirements established in the 1991 Order.

In 1999, Rock County established the Rock-Koshkonong Lake District ("RKLD" or the "District") pursuant to Chapter 33 of the Wisconsin Statutes to "undertake a program of lake protection and rehabilitation" on Lake Koshkonong and associated reaches of the Rock River above the Indianford Dam. The Wisconsin Legislature subsequently enacted Wis. Stat. § 30.2025, which authorizes RKLD to implement a Lake Koshkonong Comprehensive Project.

Since shortly after its formation, the District has undertaken extensive lake studies and management initiatives, including water quality monitoring, wetland assessment and protection projects, plant inventories and various studies aimed at the development of management policies to optimize conditions for the wide variety of Lake Koshkonong users and interest holders.

In 2001, DNR and the District completed a cooperative effort to determine the OHWM of Lake Koshkonong at 14 representative locations. That 2001 study determined that the OHWM of the lake was more than a foot above the level found in the Department's 1979 study.

In 2003, RKLD entered into agreements with Rock and Jefferson Counties, pursuant to which comprehensive repairs were made to the Indianford Dam. These repairs restored the full operating capability of the dam's gates for the first time in decades. In late 2004, pursuant to a DNR permit, Rock County transferred title to the restored Indianford Dam and all associated flowage rights to RKLD.

In 2003, the RKLD petitioned DNR to modify the water level order. Under the District's proposed water level order, the maximum water level would be established at a point approximately one foot below the OHWM determined in the 2001 DNR/RKLD study. In 2003 and 2004, DNR conducted an environmental assessment of the District's proposal and issued its proposed water level order. Based on its environmental assessment, the Department denied RKLD's petition and proposed a water level order retaining the maximum and minimum water levels and winter drawdown provisions established in its 1991 order with minor modifications.

The Department granted the Petitioners' Request for this Contested Case Hearing in 2005.

ARGUMENT

I. THE ADMINISTRATIVE LAW JUDGE HAS AUTHORITY TO DETERMINE THE APPROPRIATE WATER LEVEL BASED UPON THE EVIDENCE ADDUCED AT THE HEARING.

This is a contested case hearing pursuant to Wis. Stat. § 227.44 *et seq.* The Administrative Law Judge is required to make findings of fact and conclusions of law under Wis. Stat. § 227.47(1) and § NR 2.155 of the Administrative Code, based on the evidence. Pursuant to sec. 227.45(1), "basic principles of relevancy, materiality and probative force shall govern the proof of all questions of fact."

In making findings of fact, conclusions of law and establishing the water level order for Lake Koshkonong under Wis. Stat. § 31.02(1), the ALJ is required to consider and balance the various public rights in navigable water, together with the protection of life, health and property, under the evidentiary standards articulated in sec. 227.45. The factual findings underlying the order must be proven to a reasonable certainty, by the greater weight of the credible evidence. *See Reinke v. Personnel Board*, 53 Wis. 2d 123, 137-138, 191 N.W.2d 833 (1971); Wis. Admin. Code HA 1.02(9), 1.17(2) (unless otherwise specified "burden of proof" means "the preponderance of the evidence," that is, "the greater weight of the credible evidence").

The Department agrees that pursuant to § NR 2.13(3)(a) it has the burden of proof in this proceeding to show that it reasonably weighed the relevant considerations in establishing a water level and in denying the RKLD's petition for an increase in the water level order and elimination of the winter drawdown. Section NR 2.13(3)(a) places squarely upon the DNR the burden of both going forward with the evidence and of persuasion in a contested case hearing. *See Reinke*, 53 Wis. 2d at 133 (discussing distinction between burden of going forward and burden of persuasion). While the burden of going forward with the evidence "is a procedural device for the orderly presentation of a case, and shifts to the other party when a prima facie case has been established," *Reinke*, 53 Wis. 2d at 133, the burden of persuasion "never shifts—it remains on the same party throughout the whole case." *Id.* Thus, where an agency bears the burden of persuasion, it must persuade the ALJ that its underlying action satisfied the applicable legal requirements. *See Reinke*, 53 Wis. 2d at 131-33.

When a proposed order is referred by DNR to the Division of Hearings and Appeals, the ALJ assumes the powers of the Department. Based on the evidence and arguments presented in the contested case hearing, the ALJ is required to prepare his or her own findings of fact, conclusions of law and a decision. Wis. Admin. Code § NR 2.155(1). Unless the department petitions for judicial review as provided in Wis. Stat. §227.46(8), the ALJ's decision is the final decision of the department . . . ." Wis. Admin. Code § NR 2.155(1). *See Hilton v. DNR*, 2006 WI 84, 717 N.W.2d 166 (2006).

II. THE KOSHKONONG WATER LEVEL ORDER MUST BALANCE PUBLIC RIGHTS IN NAVIGABLE WATERS, HEALTH, SAFETY AND THE PROTECTION OF PROPERTY.

The Wisconsin Legislature has long recognized that sweeping changes result when a flowing stream or river is impounded by the construction of a dam. The Legislature's distinct management policy for impounded waterways is reflected both in the arrangement of the statutes themselves (in which dams and impounded waters are regulated under Chapter 31 rather than Chapter 30) and in the substantive standards it has established for these water bodies.

The statutory standards for management of impounded waters are markedly different that those applicable to navigable waters regulated under Chapter 30. Activities under Chapter 30 are generally subject to a "public interest test" focused on public rights in navigable waters and the exercise of private riparian rights within navigable waters. *See, e.g.*, Wis. Stat. § Sec. 30.13 (authorizing a riparian owner to placement a pier that "does not interfere with public rights in navigable

waters," "interfere with rights of other riparian proprietors" or violate local ordinances).

Since 1915, when it first enumerated the interests to be considered and balanced when a water level order is established governing a dam, the Legislature has provided different standards for impounded waters that reflect the breadth of interests affected by the regulation of water levels. The statutory standards for water level orders have remained unchanged for more than 90 years. Under § 31.02(1), the Department is authorized to issue a water level orders in order to further three separate categories of interest: (A) public rights in navigable waters, (B) the promotion of safety, and the protection of life and health, and (C) protection of property.

The Legislature has also clarified that certain other water related statutes are not applicable to impounded waters regulated under Chapter 31. Notably, Wis. Stats. § 281.92, unambiguously provides that: "Nothing in this chapter affects ss. 196.01 to 196.79 or ch. 31." Among the provisions of Chapter 281 made wholly inapplicable to Chapter 31 proceedings are water quality regulations, expressly including the Wetland Water Quality Standards under Ch. NR 103 that were central to the determination of DNR to deny RKLD's water level petition and to the evaluation and arguments of the expert testimony offered by DNR and the Lake Koshkonong Wetland Association ("LKWA").

Other than the foregoing statutes, the Legislature has not expressly directed how the agency is to evaluate and balance the interests protected under § 31.02(1), Wis. Stats. But case law clearly dictates that this authority be conducted evenhandedly, with due consideration of the range of water uses and interests established by the Legislature. While phrased in the disjunctive ("in the interest of public rights . . . or for the protection of…"), it is clear from case law applying the statute that water level orders are to consider both public rights in navigable water and the other enumerated public and private interests. For example in *Chippewa & Flambeau Improvement Co. v. Railroad Comm'n*, 164 Wis. 105, 115, 159 N.W. 739 (1916) the Supreme Court affirmed the Commission's finding it was "*authorized and required*, in fixing levels, to take into consideration the rights of riparian property owners on the lakes, the damage done to such property, and the injury to fishing . . ." (emphasis added). Indeed it would be an absurd reading of the statute to conclude that the promotion of safety and the protection of life, health and property are merely optional considerations in establishing water levels in impounded waters.

Section 31.02(1) does not afford the agency discretion to ignore or minimize any of the interests accorded statutory protection. The Department must exercise its power to establish water level orders to accomplish all of the purposes

of the statute which authorizes it to act. *Flambeau River Logging Company v. Railroad Commission*, *supra*, 204 Wis. at 543. In that case, the court vacated the Commission's order regulating the flow of the river, holding: "It may well be that in the opinion of the commission the use of water for hydraulic power purposes may be more important that the use of water for purposes of navigation. Upon this point the terms of the act foreclose the commission." *Id.* As the *Flambeau* court ruled, if agency action "accomplished one purpose at the expense of another… it must be apparent that the [agency] has not properly exercised its power." *Id.* at 543. Thus, an agency is not justified in ignoring the enumerated purposes of the law which empowers it to act, simply because its actions purport to serve other purposes of that law. Nor is the Department empowered to establish additional protected interests in a water level determination that are not identified in the statute. *See Niagara of Wisconsin Paper Corp. v. DNR*, 84 Wis. 2d 32, 48, 268 N.W.2d 153 (1978) (the Legislature is trustee of the navigable waters of the State, and the DNR may not substitute its own policy for that of the Legislature). *See also Wisconsin's Environmental Decade v. PSC*, 81 Wis. 2d 344, 351, 260 N.W.2d 712 (1978) (actions of an agency will not be allowed to prevail when they conflict with the legislative history or intent). The scope of the interests identified by the Legislature in sec. 31.02(1) are examined in turn below.

A. Public Rights in Navigable Water

The Department's authority to regulate water levels requires it to first consider public rights in navigable waters. "Public rights" in navigable waters arise under Article IX, Section 1 of the Constitution, and the cases interpreting the public trust doctrine. These public rights in navigable waters have been recognized by the Wisconsin Supreme Court in numerous cases. Although the public trust doctrine originally existed to protect commercial navigation, it has been expansively interpreted to safeguard the public's use of navigable waters for purely recreational purposes such as boating, swimming, fishing, hunting, recreation, and to preserve scenic beauty. *See State v. Bleck*, 114 Wis. 2d 454, 457, 338 N.W.2d 492 (1983). These interests are recognized in WDNR's Waterway and Wetland Handbook, Chapter 130, "water levels and flows," which lists natural scenic beautify and the management of natural resources such as fish and game habitat among other public rights in navigable waters.

The parties agree that the phrase "public rights in navigable waters" embraces the protection of fish and wildlife, wetland habitat and aesthetic concerns. However, case law establishes that the public rights in navigable waters also encompass other substantial interests. In regulating level and flow in the interest of public rights in navigable waters, the Department must also give due consideration to: (1) the impacts of the water level order on navigation, (2) the

impacts of the water level order on public access to navigable water, and (3) the economic and commercial impacts of the water level order.

1. Impacts to Navigation

Over the long history of the public trust in Wisconsin, the use of public waters for navigation has been the central and enduring value. Navigational interests warrant more than passing attention when DNR regulates water levels in the public interest, because navigation is the preeminent public right in navigable waters. In acknowledging that that the doctrine had been "so enlarged as to include the use of waters for purposes of travel, for fishing, bathing, recreation and hunting," the Wisconsin Supreme Court in *Doemel v. Jantz*, 180 Wis. 225 (1923), explained:

> But in so enlarging and extending the public uses of navigable waters, the original purpose of the use of such waters for navigation purposes has never been lost sight of, and, in fact, such use is at the very foundation of the public right; and a reading of the case of *Diana Shooting Club v. Husting*, 156 Wis. 261, 145 N.W. 816, brings home the conviction that this conclusion is correct, for in defining the public use the various purposes for which the public waters may be used, besides navigation for commercial purposes, are declared to be incidents to navigation. In other words, the extension of the term is a mere corollary to the primary use. That navigation is the foundation of the public use cannot be lost sight of in the consideration of the issue involved in this case, where it is attempted to justify the use of the shore between ordinary high and low-water marks, for the purposes of travel or other similar purposes.

Id. at 229. The *Doemel* court's assessment of the purposes of public rights in navigable waters was cited more recently in *W.H. Pugh Coal v. State*, 157 Wis.2d 620, 628 (Ct. App. 1990). The court in that case noted that protecting commerce "remains at the heart of the public right." *Id.*

Similarly, in *Flambeau River Logging Company v. Railroad Commission*, 204 Wis. 524, the Supreme Court explained how an agency shall prioritize its statutory directives where navigation is at stake. The court stated, "If one purpose may be said to be more important than another, that place must be accorded to navigation. If with passage of time navigation has been of decreasing importance, a new situation has arisen *which must be dealt with by the legislature*." *Id.* at 543 (emphasis added). In finding that the Commission failed to consider the improvement of navigation for commercial purposes, the Court stated, "Water should be furnished to make such navigation as there is reasonably practicable in accordance with established practice. So far as we are able to discover, no attempt

has been made to make the findings and conclusions necessary to create such a situation." *Id*. at 545. Accordingly, the Commission's order was vacated.

The foregoing cases suggest that the protection of navigation is preeminent among the public rights in navigable waters in the Department's administration of sec. 31.02. Thus, the ALJ should place great weight upon potential impacts to navigation in the establishment of a water level order.

2. Impacts to Public Access

A second important public rights issue is the interest of the public in gaining access to navigable waterways, without which navigational rights cannot be effectively exercised. In *State v. Town of Linn*, 205 Wis. 2d 426 (Ct. App 1996), the court addressed the importance of public access, stating that the public trust doctrine "mandates that access to the state's navigable waterways be equally available to all users." The court in that case considered the application of DNR public access standards to municipal boat launch facilities, and established the authority and relevance of DNR's public access policy set forth in Wis. Admin. Code § NR 1.90. That section provides, "it is the goal of the State of Wisconsin to provide, maintain and improve access to the state's navigable lakes, rivers and streams for the public. Public access facilities shall allow for public rights of navigation, related incidental uses and other uses which are appropriate for the waterway." The *Town of Linn* court explained that this policy follows from the legislative mandate to DNR to "provide an adequate and flexible system for the protection, development and use of …lakes" under Wis. Stat. § 23.11, and that this policy is a reflection of the DNR's effort to ensure that its regulation of lakes is consistent with the public trust doctrine. 205 Wis. 2d at 444. Accordingly, the policy set forth in § NR 1.90 cannot be ignored when the Department attempts to regulate water levels, "in the interest of public rights in navigable waters."

3. Economic and commercial impacts.

Also among the public rights factors to be considered in establishing a water level order is the resulting economic benefit or detriment to the community. In *State v. Village of Lake Delton*, 93 Wis.2d 78 (Ct. App. 1979), the DNR sought to invalidate a City zoning ordinance under which the Tommy Bartlett Water Show obtained a license for the exclusive use of a portion of the lake, on the grounds that such licensing destroyed public rights in navigable water. In upholding the validity of the ordinance under the public trust doctrine, the trial court considered evidence of commercial factors as such the importance of the recreation industry to the local economy and the tax revenues generated by these activities. *Id.* at 83, 84, 104. The trial court also considered and analyzed evidence of the public's demand for services that were facilitated by the zoning ordinance, and concluded that the ordinance conferred an economic benefit on

portions of the public, particularly the local tourist industry. *Id.* at 89, 93, 99, 103. The *Lake Delton* court's affirmance of the zoning ordinance based on the trial court's reasoning illustrates that the potential economic benefit or detriment of a particular regulatory action is one of several public rights factors that must be weighed under the public trust doctrine.

B. The Promotion of Safety and Protection of Life and Health

Another set of rights that must be considered when DNR establishes a water level order under sec. 31.02(1) is the protection of life, health and safety. The parties do not disagree that the agency must consider public safety in establishing a water level order. But, in this case, the DNR's focus was so concentrated on wetland issues that the agency accorded wholly inadequate attention to this important interest.

C. The Protection of Property

The Department acknowledges that private property is a protected interest under sec. 31.02(1). But its assessment of the scope of this protected interest is in conflict with established interpretations of the statute by the Wisconsin Supreme Court. The Department's claim that it is not appropriate to consider the socioeconomic impacts of a particular water level regime is inconsistent with direct precedent on the issue. In *Chippewa & Flambeau Improvement Co. v. Railroad Comm'n*, *supra*, 164 Wis. 105, 59 N.W. 739 (1916) the Supreme Court quoted with approval the Commission's finding that:

> The waters [impacted by the Dam owner's proposed minimum and maximum water levels] are among the most famous summer resort and fishing waters in the state of Wisconsin. Large sums of money have been invested by resort owners in resorts along the shores of the lakes and on the islands, and the waters are resorted to by thousands from this and adjoining states during the summer seasons. There are many private homes built along the shores of the lake and large sums of money have been put into these improvements.

Id. at 114. That case was decided upon the stipulation of the parties that that the Commission should determine the matter as if it had been brought after the passage of ch. 380, Laws of 1915, which included the present language of sec. 31.02(1), Stats. authorizing the agency (now DNR) to set water levels on impoundments "in the interests of public rights in navigable waters or to promote safety and protect life, health and property . . ." *Id.* at 111. The findings of the court indicate that economic investment based on a particular water level is an important consideration under ch. 31.

The DNR asserts that such considerations are beyond the scope of its review in water level order proceedings, citing *Wisconsin's Environmental Decade v. DNR*, 115 Wis.2d 381 (1983) ("*Decade*"). In that case, petitioners asserted that the development of a shopping mall near the City of Appleton would detrimentally impact the downtown business district. The court in *Decade* affirmed the hearing examiner's exclusion of evidence concerning off-site socioeconomic impacts in a hearing on the issuance of water diversion permits under secs. 30.12 and 30.19 Stats., holding that "[t]he public trust in navigable waters is not to be expanded and diluted to cover downtown preservation." *Id*. at 410.

The Department's reliance on *Decade* is misplaced, because the court did not review the public interest standard under sec. 31.02(1). Rather, that case involved the DNR's environmental assessment in connection with water permits issued under ch. 30, Stats. Moreover, as a factual matter, the petitioners' economic impacts claims were not causally connected to the specific physical or environmental impacts of DNR's permitting decision, which authorized the relocation of a creek. Instead, they were a consequence of businesses flocking to the new mall development to the detriment of the downtown business district.

In contrast, the record in this proceeding shows that the water level itself drives economic activity around Lake Koshkonong. *See* Section V.I., below. It is clear that significant economic activity and investment has been organized around the impoundment decision and subsequent elevation of lake levels decades ago. Thus, there is a causal relationship between the physical and environmental impacts of DNR's action and the economic impacts of DNR's action. This is what sets DNR action under sec. 31.02 apart from other DNR regulatory activity, such as that under review in *Decade*. There is a direct relationship between the water level on Lake Koshkonong and the value of those investments. Indeed, in actions under sec. 31.02 generally, the economic impacts of DNR's action are likely to be directly related to the environmental impacts. As the court in *Chippewa & Flambeau* recognized, Wisconsin's recreation industry and real estate values are closely connected to the level and flow of Wisconsin's navigable waters.

DNR argues (Brief, at 21) that protection of property under sec. 31.02 is limited to physical impacts on property, such as "potential flooding, potential erosion, potential desiccation of shoreline areas, impacts on piers and their use, and potential impacts to shoreline structures," rather than "secondary" economic impacts. But there is no legal support for the distinction made by the Department. Ultimately, all physical impacts to property can be measured by their economic cost. For example, riparian access problems result in the diminution of property values, and create additional expense for longer piers or travel to useable public access facilities. Indeed, the Department undercut its own argument by offering economic loss calculations based on the value of board-feet of green ash, to

measure the loss in growth of trees assessed by NRC's floodplain forest study in the Carcajou floodplain forest. (Pyrek Rebuttal; Exs. DNR-62, DNR-829.) Similarly, the State Drainage Engineer offered an economic assessment of drainage benefits that will allegedly be impaired by the District's proposal. (Russell Rebuttal; Exs. 704-705.) Thus, the DNR is apparently contending that the economic measure of physical impacts of the District's proposal are admissible under sec. 31.02(1), but conversely that the economic measure of physical impacts to property threatened by the *DNR's* proposed water level order should not be considered.

While it ostensibly acknowledges the breadth of interests under the rubric of "public rights in navigable waters" and the statutory call to consider public safety, life, health and property, in practice the Department downplayed or disregarded the significant public access, safety and economic concerns raised by its proposed water level order, while inflating its assessment of claimed wetland threats posed by the District's requested levels. DNR's Closing Brief also argues in support of a very narrow conception of the property interests protected under Wis. Stat. § 32.02(1). As discussed below, the Joint Petitioners believe the DNR's decision is inconsistent with its statutory mandate, and indeed fails to "assure a reasonable accommodation of competing interests," because significant interests protected under the statute were wholly ignored by DNR.

III. THE DNR DISREGARDED ITS WRITTEN POLICY TO SET THE MAXIMUM WATER LEVEL AT OR NEAR THE OHWM.

A. Department Water Level Orders, Including the 1982 Koshkonong Order, Have Consistently Been Established in Relation to the Existing OHWM.

Although DNR has not promulgated an administrative rule that addresses the application of the statutory interests identified in sec. 31.02(1), it has adopted written policies in its Waterway and Wetland Handbook to assist program staff in the administration of that statute. The Handbook emphasizes the salience of the OHWM when the agency sets a water level order because of its direct bearing on property rights: "The OWHM is particularly significant to establish a lake's maximum and minimum elevations since it is the elevation that separates privately owned uplands from state owned lakebeds." (Ex. RKLD-139, p. 7.) This emphasis is consistent with the Department's duty to protect property under Wis. Stat. § 31.02(1).

The Department's Handbook does not describe a specific procedure or standards for determining how far below the OHWM maximum levels should be set in order to avoid raising the OHWM or causing adverse affects on private

property, beyond the statement that: "To establish levels within a 'normal' range, the maximum elevation should probably be slightly below the OHWM." (Ex. RKLD-139, p. 7.) Michael Dresen, the Department's lead staff person when the agency issued its 1982 Lake Koshkonong water level order, testified to the agency's practice which has consistently followed the Handbook guidance, setting maximum levels "slightly below to 6 inches below the OHWM." (Prefiled Direct, p. 6.) Dresen's testimony described other orders within the Department's Madison administrative area that also set maximum levels approximately 6 inches below the OHWM. DNR Engineer Susan Josheff attempted to rebut Mr. Dresen's testimony as to the agency's consistent application of the Handbook standard based on Lake Koshkonong's size in comparison with examples he had provided. However, she but was unable to identify any water body on which the agency has established a maximum water level at an elevation greater than 6 inches below the OHWM. Indeed the Department's 1982 water level order for Lake Koshkonong established a maximum level of 776.33 msl, in relation to the surveyed OHWM of 776.7 msl from 1979 – a "buffer" of 4.4 inches. (Ex. DNR-817).

While it now asserts that a 12.1 inch "buffer" between the OHWM and maximum water level is inadequate, the Department offered no evidence of any change in applicable law or in the written guidance to staff that the maximum water level should be set slightly below the OHWM. The contrast between the Proposed Order and the Department's past practices, particularly with respect to this waterbody, evidences DNR's determination to resist any modification that would increase the maximum water level order for Lake Koshkonong and that it used the spector of water flows above the OHWM merely as a means to that end, without supporting evidence or policy.

B. The District's Proposed Water Levels Will Not Alter the OHWM.

The greater weight of the credible evidence shows that the OHWM will be unaffected by the District's proposal. Accordingly, DNR's concerns with respect to a taking of private property is unfounded. The one-foot plus "buffer" used by the District in developing its petition for a water level increase was reasonable, and the District's conclusion that the existence of the buffer would prevent changes in the OHWM is supported by the greater weight of the credible evidence.

Although belatedly, DNR did accept the 2001 OHWM study conducted by its own staff and RKLD consultants in late 2002. *See* Ex. DNR-50. After a further review of that study, DNR's OHWM expert, Dale Simon, testified both to the accuracy of the 2001 OHWM determinations used by RKLD to set its proposed "buffer" and to the significant deficiencies in the Department's 1979 OHWM determination used by the agency to establish its 1982 order. These defects are

readily apparent by comparison of the 2001 OHWM Study (Exhibit DNR-39) with field notes prepared during the 1979 OHWM determination (RKLD-151). The inadequacy of the 1979 determination, and its questionable conclusion, was further elucidated by Registered Professional Surveyor Randall Weltzin (Rebuttal).

Even if the very lowest surveyed OHWM for Lake Koshkonong (778.1 msl) is used as a representative mark for the entire Lake, there is no credible evidence that the District's proposed levels would result in a change to the OHWM. The DNR's finding (Ex. DNR-8, ¶ 25) that the District's petition could result in a change in the OHWM is based on a flawed analysis of wind and wave conditions impacting the OHWM. In support of that finding, Mr. Johnson and Ms. Josheff testified with respect to a wind setup and wave runup analysis that they contend could increase the requested maximum water level of 777.0 MSL by some 1.3 feet – thus exceeding the lowest OHWM of 778.1 msl. (K. Johnson Rebuttal; S. Josheff Prefiled Direct, at pp.12-14.)

The Department's argument is based on the unsubstantiated possibility that the OHWM will react to a worst-case scenario that is not reflective of "ordinary" wind conditions. (Ex. DNR-91, p. 2.) As RKLD's engineer Robert Montgomery testified, there are two difficulties with the Department's theory. First, the distribution of OHWM elevations actually surveyed across the Lake, in relation to prevailing wind and waves, fails to substantiate the notion that wind setup could account for more than a 1-foot increase in OHWM. (Ex. RKLD-114, RKLD-502, at pp. 19-24.) Second, the wave run-up identified by in the Keillor requires exceedingly rare and transitory 38 mph wind speeds that occurs less than one half of one percent of the time, the equivalent of less than one day in a year. (Johnson Cross & Ex. DNR-91). It strains credibility to conclude, as the Department does, that such extraordinary conditions are the cause of the "ordinary" high water mark, as opposed to, for example, the period of weeks or months each year that the Rock River floods and overtops the Dam.

The Department's concern that the OHWM could be affected by the District's proposed order is inconsistent with the agency's written guidance to its own field staff and is not supported by the hydrologic modeling of the Lake Koshkonong system or by any other physical evidence. The overwhelming weight of the credible evidence presented at the contested case hearing demonstrates that the buffer between RKLD's proposed maximum water level and the OHWM accepted by DNR is far beyond that required by any rule, policy or precedent. The District stands by the conclusion of its hydrological study that the water level proposed poses no threat to lands above the OHWM.

IV. THE DNR GAVE UNDUE WEIGHT TO WETLAND ISSUES AND DISREGARDED STATUTORY CRITERIA IT WAS REQUIRED TO CONSIDER UNDER SECTION 31.02, STATS.

A. The DNR's Emphasis on Wetland Interests to the Exclusion of Other Public Rights in Navigable Waters was Clear Legal Error.

The evidence in this case overwhelming shows that, instead of according due weight to all of the statutory criteria in sec. 31.02(1), Stats., the Department arrived at the Koshkonong water level order based on a narrow, wetland-centered interpretation of "public rights in navigable waters." The Department's proposed order was explicitly "seeking to minimize further wetland loss" (P. Cunningham Cross), given the losses over time since the impoundment of the Lake. (*see, e.g.,* Proposed Order, Ex. DNR-8, at ¶ 20; Lois Simon Memo, Ex. DNR-94.) The Department's approach was perhaps most clearly summed up by Robert Hay, who testified:

> When we look at these natural systems that we've been graced to care for, our job is to manage those in such a way that we don't destroy what was there in the beginning. And, so when I look at how we would manage that in the public interest as stewards of that resource, I think we need to manage it for that habitat that was there, to the best extent we can, recognizing that now things have been severely altered. But we have to recognize that habitat for fish and wildlife is what that system supported initially. And so I would say that I would place my emphasis on managing the lake with that respect.

(Hay Cross.) Mr. Hay's management priorities are clearly reflected in the Department's Environmental Assessment, the vast bulk of which is consumed by a discussion of the historical physical setting, shallow lakes ecology, and wetland impacts. Conversely, the EA and Proposed Order provided only the most cursory analysis of impacts on public and private access and safety hazards created or maintained by the DNR water level order, and made no analysis whatsoever of economic impacts under either the District's proposal or its own order.

The Department's priorities are not those of the Legislature as reflected in sec. 31.02(1), Stats. Safety issues were all but ignored in the Department's findings, and economic considerations were nonexistent. Critically, neither the EA nor the findings of fact in the order analyze the impacts to access and navigation associated with the lower water levels that will be experienced during

the summer season due to the repair and regular maintenance of the Dam and its consequent increased capacity to maintain the lower levels.

The Department's focus on the historic loss of wetlands was outcome-determinative, as its shallow lakes ecology experts had concluded months prior to the District's formal petition that no water level increase would be consistent with its priorities for management of this resource. (*See*, *e.g.*, Ex. RKLD-164, Ex. RKLD-174.) This preemptive approach was evident in the method by which the Environmental Analysis was performed. A group of resource managers was assembled, and each premised his or her evaluation of future impacts on wetland recession occurring over a period of more than a century. This governing hypothesis [rising water = diminished wetlands compared to historic coverage and quality] controlled the analysis, and resulted in an unbalanced and selective evaluation of projected habitat impacts.

Internal correspondence reflects a concerted effort by the Department to buttress its preordained decision to deny the District's petition. For example, notwithstanding the direct involvement of DNR Engineer Susan Josheff and Water Management Specialist Michael Halsted in the 2001 report, DNR directed its OHWM expert Dale Simon to make a field investigation to review the Lake Koshkonong OHWM determination. Mr. Simon found no basis to disturb the conclusion that the OHWM at the locations surveyed in the 2001 study ranged from 778.1 upwards. Despite Mr. Simon's conclusion that "the OHWM is NOT, repeat NOT, an issue," project leader Ken Johnson persisted, suggesting that the threat of a water level that could encroach above the OHWM would make the Department's case "more of a slam dunk." (*See* Exhibit RKLD-150.) Other internal correspondence evidences that the Department's order was a foregone conclusion, even before the EA was drafted. On April 9, 2004, Paul Cunningham corresponded with a colleague to obtain a study to be used "for making our case on this denial." (Ex. RKLD-154.) Very early in the process, the Department was clearly engaged in defending the policy preferences of its current staff, rather than dispassionately evaluating the full range of interests under sec. 31.02(1).

Prior to the issuance of the EA - which Mr. Johnson (Cross) maintained was "not a decision document" – the DNR also collaborated extensively with large wetland owners and private hunt clubs to develop evidence to bolster the denial of the District's request. (*See*, *e.g.*, Ex. RKLD-187.) During the period when DNR was actively reviewing RKLD's proposed water level order and preparing its Environmental Assessment, Mr. Johnson requested specific information on wetland inventories, exotic species, emergents and literature searches from LKWA's consultant, Natural Resources Consulting ("NRC") (Ex. RKLD-185). The record reflects that LKWA was incorporated by and for several of Lake Koshkonong's large wetland property owners, expressly for the purpose of

opposing the District's petition. (Ex. RKLD-188.) LKWA's consultant, NRC, is headed by Scott Storlid, who is both a director of the Association and a shareholder in the Carcajou Hunt Club.[5] (Storlid Cross.) The sheer extent of investigation, testimony and exhibits devoted to the Carcajou Club wetlands alone suggests the extent to which the DNR's findings revolved around large wetland owners' interests. (*See* Exs. DNR-34, 54, 62, 64,68; 822 through 827; Exs. LKWA-301 through 304, 355, 331-332, 334; Exs. 601-604; 621-638).

The DNR approved three grant applications filed by NRC on behalf of LKWA in a single year (2004) (Ex. DNR-833), the award of which Johnson conceded was "unusual." (K. Johnson Cross.) LKWA specifically solicited Johnson's recommendation for the three grants, and Johnson directed his colleagues as to which of the grants was most critical based on the perceived need in the EA. It also remarkable that DNR found LKWA qualified to receive both "river grants" under Wis. Stat. § 281.70 and "lake grants" under Wis. Stat. § 281.68.

The Department's handling LKWA's application for DNR river grant funds starkly reveals the extent of the Department's collaboration with large wetland interests in evaluating the petition for an increase in the water level. On April 29, 2004, during the preparation of the Department's EA, LKWA submitted its application to analyze "Water Level Impacts on Floodplain Forests of Lake Koshkonong." (Ex. RKLD-190.) The application was reviewed by Ken Johnson, who scored the project using the criteria set out in the Department's rating sheet for such grants. (Ex. RKLD-196; S. Josheff Cross.) Mr. Johnson accorded the project 3 points for "the degree to which the project assists creation or enhancement of a local river management organization," noting: "Organizations around the lake will better understand their proposed positions & impact on the lake. Residents will flock to groups that support habitat management of the lake." He gave the project the highest possible ranking (a 10) for the value of the project to "assist local decision- making" concerning river management. Taken together, Johnson rated LKWA's Floodplain Forest project a score of 29. Unaccountably, a second scoring sheet for the same project was later completed by another member of DNR's staff. (Ex. RKLD-197.) The revised rating doubled the rating assigned by Johnson for the research project's contribution to "organizational development" although the grant application included no material organizational development activities. This and other changes to Johnson's rating boosted LKWA's Floodplain Forest growth study proposal to a score of 39. The Department received a total of 26 applications for its Spring 2004 River Grant funding cycle.

[5] The extent of Mr. Storlid's personal stake in the outcome of this case is perhaps best reflected by the exceptionally vitriolic and unprofessional tenor of his prefiled expert testimony.

(Ex. RKLD-199.) Seventeen of the 26 applications were rated above the cutoff project score of 30. For reasons not explained in the record, the Department's Final Priority List for the projects ranked LKWA's grant just above the grant-funding cutoff with a final score of 32.

The DNR-LKWA collaboration further cemented the Department's position and removed any pretense of objectivity in the Department's evaluation of the District's request. In addition to funding studies designed by parties actively opposed to the District's request, the Department solicited input and information from LKWA and other private wetland owners, including the Jefferson County Drainage District, specifically to buttress its case for denial of the RKLD petition. (Josheff Cross; Halsted Cross; Ex. RKLD-176.) The Department itself presented evidence on behalf the Jefferson County Drainage District during the hearing.

In contrast, the EA and the DNR's findings in its Proposed Order downplayed or disregarded evidence that did not fit with its theme of constantly increasing water levels and wetland loss. For example, while Mr. Johnson privately expressed skepticism in importing assumptions from a structural engineering analysis into the OHWM analysis (*see* Ex. RKLD-152), the Department's conclusions with respect to the effects of the District's petition on the OHWM were ultimately premised on that very analysis. (Johnson Rebuttal.) The DNR simply ignored the opinion of its most senior OHWM expert, Dale Simon, who found no evidence that the OHWM of Lake Koshkonong had increased 1-1/2 feet since 1979. (Simon Cross.)

The Department's "science-based" findings and conclusions often lacked important site-specific data and public input concerning the impact of the District's proposed increase or of future water levels under the existing DNR order on public rights in navigable waters and the protection of life, health and property. For example, instead of conceding what has clearly been overwhelming public support for increasing water levels on Lake Koshkonong due to a variety of legitimate concerns, the DNR presented an academic critique of the survey instrument employed by the District to measure lake user's opinions. (P. Cunningham Rebuttal.) The DNR's case was also larded with studies, publications and other exhibits intended to establish an historical framework from which to evaluate impacts on habitat, wetland and diversity. (*See, e.g.*, Exs. DNR-22 through DNR-28; Exs. DNR-34 and DNR-35.) Correspondingly, DNR's expert opinions were based on "past losses" and information gleaned from the study of other shallow lake systems – on the premise that that there is "nothing exceptional" to distinguish the hydrology of Lake Koshkonong. (R. Hay Cross) (Mr. Hay also acknowledged that he had no prior management experience with Lake Koshkong.)

Much of the DNR's evidence has no bearing on existing conditions on Lake Koshkonong and is thus of little value in evaluating the differences between the DNR's Proposed Order and the District's proposal. For example, Ex. DNR-55, a Natural Heritage Inventory of species associated with Lake Koshkonong, lists several plants that were last observed in the late 1800s, before the construction of the Indianford Dam. Similarly, Paul Cunningham offered Ex. DNR-34, an excerpt from the Carcajou Shooting Club's hunting and fishing records circa 1900. Mr. Cunningham also cited over 100 publications addressing shallow lakes ecology studies in locations across the world (Ex. DNR-24); but on cross-examination he could identify no studies of flowages comparable to Lake Koshkonong.

The Department must have eventually recognized the dearth of site-specific information to support its expert's conclusions with respect to the scope and degree of wetland impacts under the District's petition. Thus, three of its experts – Mr. Hay, Ms. Bleser and Ms. Trochlell – belatedly visited some of the Koshkonong wetlands after the contested case hearing was underway, apparently in an effort to observe the Lake under conditions they believed would simulate the ecological effects of the District's requested water levels. In critical respects, the empirical evidence failed to substantiate the Department's earlier concern with respect to wetland communities beyond the lake edge at higher elevations. Most notably, after touring the Fair Meadows property on March 30, 2006 (when the Lake stage was approximately 777.15 to 777.25 msl according to the Newville gage record, Ex. RKLD-184), Cathy Bleser was unable to opine to any degree of scientific certainty whether the white fringed orchid population would be negatively impacted by the District's proposed maximum. She further acknowledged that a draft NRC orchid study (which neither DNR nor LKWA offered into evidence) located orchid populations at elevations some 3-4 feet higher than the District's proposed maximum.

During their visit, DNR personnel also observed the floodplain forest and emergent wetlands at the mouth of Koshkonong Creek. The testimony and photographs taken that date (*see* Exs. DNR-822 through DNR-827) were presented as reflective of conditions under the District's proposed maximum water levels. But their observations failed to account for significant variables – including unthawed soils, snowmelt and runoff, and precipitation levels – that contribute to the extent of flooding and inundation of the wetlands in the early spring season.[6] That these DNR experts made just one visit to Lake Koshkonong

[6] The error was repeated by Carcajou Shooting Club President Rick Persson, who placed wooden lathes in the floodplain forest July 30-31, 2004, in an attempt to show the degree of inundation associated with the District's proposal. (Persson Prefiled Direct.) However, this effort was documented after a historic flood, during which water levels

for this purpose, that this visit was not during the time period when the summer water level order governs, and that it was not made until months after the proposed order was issued is symptomatic of the Department's approach. The investigation yielded no useful information concerning the differences between the current and proposed orders, and was made solely in an effort to bolster the DNR's findings after the fact.

B. The DNR Erred in Applying Chapter NR 103 and Section NR 1.95 of the Administrative Code in its Analysis of Wetland Impacts.

The Department's misconception of its statutory authority under sec. 31.02 is illustrated by its repeated assertion that cases, regulations, and standards under ch. 30, Stats. are applicable to this proceeding. Most notably, the DNR's and LKWA's prefiled testimony relied on the regulations in ch. NR 103, Wis. Admin. Code (wetland water quality standards). *See* Johnson cross; Trochlell Prefiled Direct, at pp. 15-16). The testimony of these witnesses disregarded the Legislature's exemption of dams and impounded waters from water and sewer regulations in ch. 281, including water quality standards found in chapter NR 103 of the Administrative Code.[7]

The DNR later conceded that ch. NR 103 did not apply, and asserts instead that "public rights in navigable waters" are chiefly informed by a Natural Resource Board policy, NR 1.95, which states: "It is in the public interest that department decisions which lead to alteration of or effects on wetlands under its jurisdiction or control are based on the intent to preserve, protect, restore and manage them for the maintenance or enhancement of their values." However, the belated substitution of NR 1.95 for its previous analysis under NR 103, does not undo the framework within which the District's petition was evaluated under the EA. For example, after retracting her opinions based on NR 103, DNR wetland ecologist Patricia Trochlell maintained that sec. NR 1.95 of the Code requires the Department to review "cumulative impacts," including those in the "past, present and reasonably foreseeable future," and explicitly with reference to pre-impoundment conditions. During cross-examination, Ms. Trochlell repeatedly

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remained substantially above 777.0 msl for 2-/12 months. (see Ex. RKLD-116, Year 2004.) LKWA's inundation exhibit,LKWA-330, was based on Jeff Kraemer's survey of the stakes "several months" after the fact, but there was no attempt to record changes in the hydrology of the floodplain forest in the intervening time, as the floodwaters receded. (Kraemer Cross.)

[7] Wis. Stat. § 281.92 provides: "Nothing in this chapter affects ss. 196.01 to 196.79 or ch. 31." The DNR's water quality standards in ch. NR 103 of the Administrative Code were promulgated under Wis. Stat. § 281.15(1).

cited the historical loss of half of Wisconsin's pre-settlement wetlands as her frame of reference in evaluating the District's petition. This "cumulative impacts" analysis appears nowhere in NR 1.95 – rather it is an artifact of ch. NR 103, which the Legislature specifically exempted from the instant proceeding. By interpreting NR 1.95 in this fashion, Ms. Trochlell's testimony bootstraps the very regulations that the Legislature in sec. 281.92 expressly excepted from ch. 31 water level proceedings.

The influence of this erroneous analysis in the DNR's findings and order is pervasive. By using the pre-impoundment condition as a baseline from which to gauge wetland losses, the Department fundamentally fails to grasp that certain consequences flow from the decisions made decades ago to construct and raise the Indianford Dam. In this context, NR 1.95 cannot be applied consistently with sec. 31.02, Wis. Stats. That policy unduly restricts the Department's actions under sec. 31.02, by requiring that: "The department's wetland regulatory decisions shall be made in accordance with standards in ch. NR 103." Both ch. NR 103 and sec. NR 1.95 improperly elevate wetland values over other public rights in navigable waters that the Department is required to balance and protect under Wis. Stat. § 31.02.

The DNR acted in excess of its delegated authority when it relied on wetland water quality standards specifically exempted from ch. 31 in making the findings underlying its water level order. The Department's revised analysis under NR 1.95 (once it conceded that NR 103 was inapplicable, that is, after the EA was final and the order was issued) is also inconsistent with the balancing of interests required by sec. 31.02, including equal consideration of public health and safety, protection of property, public access, and domestic, commercial and recreational uses.

C. The DNR's Position That Economic Interests Cannot be Considered in Regulating Water Levels Under Sec. 31.02, Stats. is Contrary to Law.

1. Economic interests are within the scope of public rights in navigable waters.

DNR must account for commercial considerations in its regulation of water levels under sec. 31.02 because commercial considerations underlie public rights in navigable water. *See* Section II.A.3., *supra*. The Wisconsin Supreme Court has recognized that a primary purpose of the public trust doctrine is to protect free commerce. *State v. Jackman*, 60 Wis.2d 700, 711 (1973). *See also State v. Village of Lake Delton*, 93 Wis.2d 78, 90 (Ct. App. 1979) *citing Muench v. Public Service Comm.*, 261 Wis. 492 (1951). As the *Jackman* court explained, "The

development of the Midwest was dependent on freedom of navigating inland rivers and waterways." 60 Wis. 2d at 707. Therefore, "it was thought necessary to declare as public policy the freedom of the inland waterways." *Id.* The court continued, "The commercial use of the internal waterways was foremost in the mind of the territorial citizens and the delegates of the Constitutional Conventions of 1846 and 1848 and they included the navigable waters clause in our constitution." *Id.*

Evidence that commercial considerations are important to Wisconsin courts in determining whether a particular action is in the interest of public rights in navigable water can be found in cases dating back to the mid-nineteenth century. In two noteworthy cases, the Supreme Court held that the maintaining the right of logging companies to run logs on the state's navigable rivers was in the interest of public rights in navigable waters. *See Olson v. Merrill*, 42 Wis. 203, 213 (1877); *Whisler v. Wilkinson*, 22 Wis. 546, 549 (1868). In making this determination, these courts reasoned that it would be "exceedingly detrimental" to the public interest to limit the ability of the pine growing industry to float logs on navigable waters. *Whisler* at 594. Thus, these courts considered the effect on the economy of the state, and on the pine growing regions in particular, in arriving at their assessment of the interest of public rights in navigable waters. These cases demonstrate that commercial considerations are of longstanding importance to the courts of Wisconsin in these determinations.

2. DNR is also required to consider commercial factors under in the protection of private property.

DNR's written policy guidance also recognizes the agency's obligation to consider property values and commercial factors in the protection of property under sec. 31.02. Chapter 130 of DNR's Waterway and Wetland's Handbook [8] entitled "Water Level and Flow," provides:

> "The Department… to promote safety and to protect life health and property may regulate and control the level and flow in all navigable waters…"
>
> Under this standard, the department may regulate and control the level and flow of water to:
>
> a. Minimize damage to property resulting from flowing, erosion or ice action…
>
> * * *

[8] Available at http://dnr.wi.gov/org/water/fhp/handbook/PDFs/ch130.pdf

f. Minimize economic losses resulting from too much or too little water.

Id. at p. 3 (emphasis in original). The DNR's self-identified responsibility to minimize "economic losses from too much or too little water" is separately enumerated from its responsibility to "minimize damage to property resulting from flowing, erosion or ice action." This distinction by DNR eliminates any ambiguity as to the scope and breadth of DNR's responsibility under sec. 31.02. Not only does DNR recognize its responsibility to minimize the more limited types of property damage such as that described in paragraph a. above, but DNR separately recognizes its responsibility to minimize the broader economic losses referred to in paragraph f. above.

The DNR's guidance is consistent with established case law. In *Chippewa & Flambeau Improvement Co., supra*, 164 Wis. 105, 159 N.W. 739 (1916), the Wisconsin Supreme Court upheld the decision of the Railroad Commission construing the "promote safety and protect life health and property" clause of sec. 31.02 to include impacts to riparian property values as well as impacts to the local resort economy. The court in *Chippewa & Flambeau* found that the Commission was "authorized and required, in fixing levels, to take into consideration the rights of riparian property owners on the lakes, the damage done to such property, and the injury to fishing . . ." *Id.* at 115. In reaching its decision, the Court recognized that the newly enacted statute (now sec. 31.02(1)) and its mandate to protect property controlled the case. *Id.* at 744 ("We have therefore to consider the effect of that act.") Thus, Wisconsin Supreme Court upheld the construction of the "promote safety and protect life health and property" clause of sec. 31.02 to include impacts to riparian property values as well as impacts to the local economy.

3. DNR's assertion that commercial considerations are inappropriate under the "protection of property" standard of sec. 31.02 is not supported by Wisconsin law.

DNR argues that protection of property under sec. 31.02 is limited to physical impacts on property, such as "potential flooding, potential erosion, potential desiccation of shoreline areas, impacts on piers and their use, and potential impacts to shoreline structures." (DNR's Brief, at 21.) The only authority DNR cites in support of this assertion is a statement from the *Decade* case, which, as noted above in Section II.C., is distinguishable on both legal and factual grounds. Further, DNR's position contradicts its own guidance on the matter, which expressly states that DNR considers economic impacts under sec. 31.02 in addition to and separate from the limited property interests that DNR identifies in its brief. Indeed, the Department's assertions are belied by its own

evidence in this case. The 1981 Environmental Impact Assessment (Ex. DNR-817, at 12, 14) explicitly considers the impact of its actions on economic conditions in the Lake Koshkonong area.

DNR advances two other arguments in attempt to minimize its obligation to consider economic impacts when it regulates navigable waters to protect property. First, the Department asserts that the Legislature intends economic impacts to be considered only where that is expressly articulated that standard, *e.g.,* Wis. Stat. § 30.195. But DNR's argument proves too much. The Legislature has also explicitly articulated where it intends for DNR to protect wetlands. For example, sec. 30.203(1)(b) provides that DNR may place structures or fill on the bed of Lake Winnebago to, among other reasons, "protect wetland habitat or water quality." Even of the Legislature has limited the consideration of economic impacts in Chapter 30 of the Statutes, this same limitation on DNR's responsibility to consider economic impacts cannot be imputed to sec. 31.02. As noted above, the State's interest in regulating the level and flow of navigable water under sec. 31.02 is more directly connected to property values and local economies. This difference between sec. 31.02 and sec. 30.195 is evidenced by the language describing the property interest at stake in the respective statutes.

Finally, the Department implies that the economic impacts demonstrated by the Petitioners in this case cannot be reasonably determined, analyzed and protected. (Brief at 21.) However, the Petitioners offered into evidence an expert evaluation of economic impacts based on concrete facts which are readily available to the general public. The time, effort and resources invested in producing this evaluation were minimal compared to the investment by DNR and other parties in producing an evaluation of wetland and other ecological impacts. DNR characterizes the evaluation of economic impacts as "speculative." However, Dr. Kashian precisely identified the per-household economic loss suffered by Lake Koshkonong residents since the repair to the Indianford Dam. (Ex. 225, at p. 5.) In contrast, for example, DNR witnesses did not even attempt to locate the OHWM to support their assertions with respect to potential property damage. *See* Section IV.D., below. Relative to the cost and uncertainty involved in determining ecological impacts, economic impacts may be determined with mathematical precision and at little expense.

D. The DNR Failed to Distinguish Between Impacts to Public Rights and Impacts to Wetlands Located Above the OHWM.

The record shows that the DNR extended its consideration of wetland habitat impacts to private lands, most notably the Theibeau marsh, Carcajou Shooting Club and Shackleford/Fair Meadow properties. But there is no support

for the proposition that "public rights in navigable waters" under sec. 31.02(1) includes the maintenance of particular species or habitat on riparian land above the OHWM. The preference of wetland owners for a lower water level regime is a *private* property interest that is entitled to no greater weight than the preference of other riparian property owners and users for higher water levels.

The Department has no authority to regulate navigable waters for the purpose of protecting habitat or floral diversity on private lands. While Ms. Trochlell testified extensively concerning the functional values and importance of wetlands, her own exhibit, DNR-851, notes that the Wisconsin wetlands inventory program "has no protection authority." With the exception of DNR's shoreland and floodplain management programs, private wetland conservation remains a voluntary activity, with the Department's role limited to funding incentives and conservation easements, as in the case of Fair Meadows. *See* 68 Op. Atty. Gen. 264, 1979 Wisc. AG LEXIS 33 (concluding that the DNR has no general permitting authority for privately owned wetlands).

While "the protection of property" (as defined by the courts) is a proper consideration, nothing in sec. 31.02(1) authorizes the DNR to consider wetland values, habitat and plant diversity associated with private property located above the OHWM. As Mr. Johnson testified (cross) that "the public has an interest below the OHWM, but not above, unless it is state land." The OHWM represents the boundary between the State's interest as trustee under the public trust doctrine and riparian rights. *See Diana Shooting Club v. Husting*, 156 Wis. 261, 272, 145 N.W. 816 (1914) (public trust extends "to such waters while they are in a navigable stage, and between the boundaries of ordinary high-water marks"); *State v. Trudeau*, 139 Wis. 2d 91, 408 N.W.2d 337 (1987) (public trust duties extend to all navigable waters and lakebed below the OHWM).

Given the Department's recognition of the significance of the OHWM in this case, its prolonged evaluation of the change in the OHWM since 1979, and the number of personnel who scrutinized the OHWM study, the failure to assess the location of the OHWM in the large riparian marshes in this case is a striking omission. Among other things, the DNR concluded that the District's proposed order "will degrade the high-quality floodplain forests, wet, wet-mesic prairies and sedge meadows and the Newville Carr which are home to numerous rare plants and animal species. (2005 Order, ¶ 23.) But Mr. Johnson testified that to his knowledge, the DNR never surveyed the location of the OHWM in the Carcajou Marsh, the Thiebeau Marsh, the Duesterbeck property, Mud Lake, or any other riparian wetlands. (K. Johnson Cross.) An evaluation of the OHWM was also notably absent from LKWA's case, despite the fact that NRC mapped and made extensive surveys of more than 500 acres of various wetlands for purposes of its floristic quality study (Ex. LKWA-345.) No elevation data was collected despite

Mr. Kraemer's testimony that one of the primary purposes of the study was to survey along a gradient to evaluate the impacts of the District's proposal. (Kraemer Cross.) None of DNR's or LKWA's witnesses could answer the question: what is the elevation or location of the OHWM adjacent to the large, privately-held marshes? As a result, there is no record support to conclude that the various wetland communities or rare plants and animals are threatened, or whether they are even properly considered as part of the range of "public rights in navigable waters" under sec. 31.02(2).

The Department cites *Just v. Marinette County*, 56 Wis. 2d 7, 201 N.W.2d 761 (1972), for the proposition that "lands adjacent to or near navigable waters exist in a special relationship to the state." DNR Brief, at 25 (citing *Just*, 56 Wis. 2d at 18). The Department's citation to that case is misplaced. *Just v. Marinette County* addressed the powers of the Wisconsin Legislature. It did not involve the analysis of powers of DNR, an administrative agency whose powers exist only as these have been delegated by the Legislature. The Legislature has not enumerated wetlands among the expressly protected interests under sec. 31.02(1) and expressly limited the application of Ch. 281 (and its related wetland standards) to exclude Chapter 31 proceedings.

In *Just*, the Wisconsin Supreme Court affirmed the authority of the Legislature to protect navigable waters by regulating adjacent wetland with "shorelands" lying within 1,000 feet of a lake and 300 feet of a stream. *See Just*, 56 Wis. 2d at 9; Wis. Stat. § 59.692 (formerly Wis. Stat. § 59.971). That case involved the State's authority to regulate private shorelands in order to benefit adjacent public waters. There is no evidence nor is the claim even made that the water levels requested by the District will be detrimental to water quality in Lake Koshkonong or the Rock River. Rather, in this case, DNR seeks to protect private wetlands by regulating public waters. This is a critical distinction. The DNR is impermissibly seeking to regulate navigable waters for the benefit of various wetland interests that are beyond the scope of the criteria set forth in sec. 31.02(1), Stats. It is ironic indeed that the Department urges the ALJ not to consider "secondary" socioeconomic impacts, while simultaneously seeking to set water levels based on *non*-navigable wetland interests *and* deeming those interests to be more important and worthy of protection than the public interest in access to navigation, safety, and recreational uses.

E. The DNR Failed to Consider the District's Flowage Rights Acquired by Deed and Prescription.

Although the DNR has claimed a concern about possible "regulatory taking" of private property under the District's proposed water levels, the record shows that the Department's consideration of this issue was misconceived and

lacks substantial evidence. As discussed above, a maximum water level that is more than one foot below the OHWM greatly exceeds DNR's written policy for such a buffer.

That DNR's claimed concern about property rights is not serious is evidence by the agency's almost total failure to actually investigate the property interests that are implicated by its decision in this case. Key among those interests are the flowage rights owned by RKLD as the owner of the dam.

1. The District has acquired deeded and prescriptive flowage rights as the successor in title to the Indianford Dam.

Under Wisconsin law, a prescriptive right is established by continuous, adverse use of rights in real estate of another for at least 20 years. *See* Wis. Stat. § 893.28(1). Where such continuous use has been made by a utility like RKLD's processor in interest, Wisconsin Power and Light Company, the required use period is reduced to 10 years. *See* Wis. Stat. § 893.28(2). Wisconsin case law has long recognized that flowage rights may be acquired by prescription. In that case, the extent of the easement holder's prescriptive rights are coextensive with the actual use of the flowage easement during the statutory limitations period. *See Burkman v. City of New Lisbon*, 246 Wis. 547, 557, 19 N.W.2d 311 (1945). In *Chippewa & Flambeau Improvement Co.*, *supra*, 164 Wis. 105, 159 N.W. 739 (1916), the Wisconsin Supreme Court ruled that the plaintiff, the owner of a reservoir dam on the headwaters of the Chippewa and Flambeau Rivers, had acquired flowage rights by prescription that were commensurate with the seasonal variation in water levels produced by the operation of the Dam for log-driving purposes.

The RKLD now holds all of the flowage rights appurtenant to the Indianford Dam, including those established by prescription during the periods when its predecessors in title, Wisconsin Power and Light and Rock County, owned and operated the dam. The Warranty Deed granted to it by Rock County in 2004 conveyed all of these rights to the District when it obtained title to the Indianford Dam. (Exhibit RKLD-507, Tab 5)

The interests transferred by the County included flowage rights obtained by its predecessor Wisconsin Power and Light Co., by prescription. Some of those interests were expressly recognized in a 1939 Wisconsin Public Service Commission Order involving the Indianford Dam in which the ALJ acknowledged that the operation of the dam by the owner and its predecessors for more than 20 years had established a prescriptive right to continue to maintain said dam in that manner. *Petition to Raise the Normal Elevation of Water Maintained by the*

Indian Ford Dam in the Rock River, Rock County, 2-WP-461, November 28, 1939.

Beyond the flowage rights recognized in the 1939 PSC proceeding, the record in this proceeding evidences that the combination of decreased gate capacity of the malfunctioning dam after its use for hydroelectric power was terminated in the early 1960s, and DNR's failure to enforce gate repairs or to establish or enforce a maximum water level before and after its 1982 and 1991 Orders, have expanded the owner's flowage rights. These flowage rights are now held by RKLD and are as entitled to protection under § 32.02(1) as any other real property interests. DNR project leader Kenneth Johnson professed no knowledge of any flowage rights held by the dam owner and apparently made no effort to determine what property rights could be jeopardized by its proposed order.

There is significant evidence that the wicket gates on the Indianford Dam became inoperable at least 30 years ago, that they were not repaired until the early 2000s, and that the previous owner of the dam during the period from 1966 until 2004 did not consistently operate the dam in conformity of the DNR's 1982 or 1991 orders. A 1974 report prepared for DNR (Ex. RKLD-153) describes the results of an inspection of the Indianford Dam that year, which revealed that one wicket gate was frozen in the 7/10ths open position while the other was frozen shut. Robert Montgomery, Ken Johnson and Susan Josheff testified that the dam's wicket gates provide the largest part of its capacity. Those witnesses and DNR's lead staff member in development of its 1982 order, Michael Dresen, all testified that the wicket gates were not fully operable and were not operated in a manner consistent with the water level order for much of the period from at least 1979 until the gates were repaired in the early 2000s. Michael Dresen testified to his personal knowledge that one of the dam's gates was in a frozen open position during the 1970's and early 1980's.

This condition had the effect of both: (1) compromising the dam's capacity to hold the minimum water level established in the 1982 and 1991 orders, and (2) compromising its ability to pass water in order to maintain levels at or below the maximum water during high flow conditions. DNR's OHWM expert, Dale Simon, testified that the OHWM is established by long-term water levels continuing over a period of more than 20 years. If DNR's Environmental Assessment is correct and the OHWM has increased in recent decades as a result of the inoperability or mismanagement of the dam, the very same causes would have given rise to additional flowage rights obtained by RKLD and its predecessor in title, Rock County.

Ken Johnson also pointed out that the failure of the previous dam owner to regularly clean the wicket gate trash racks resulted in pool being maintained at

higher level than if trash racks had been regularly maintained. The Proposed Order ¶ 34 (Exhibit DNR-8), further supports this view, stating that: "During most winters since 1991, winter drawdown not achieved due to conditions including inoperable gates, poor maintenance, hydrologic conditions and failure to operate the dam." To the extent the Dam was functional, operations were haphazard at best before the comprehensive repairs completed in 2002. Additional evidence elicited on cross-examination of Susan Josheff indicates that DNR was aware of, but acquiesced to the conditions thus created.

Taken as a whole, the record supports the view that RKLD has established additional prescriptive flowage rights as a consequence of the pattern of dam operation over the last three decades. Under Wis. Stat. § 31.02(1) the Department was required to establish a water level order that considers these property interests, as well as the interests of riparian property owners, including wetland and upland shore owners.

2. Implementation of DNR's proposed order would constitute a regulatory taking of the District's prescriptive flowage rights as a result of the dam repairs.

The record is very clear that the Indianford Dam, its gates and other operating components were comprehensively restored in the early 2000's. The record is also clear that, as a result of the repairs, compliance with DNR's proposed water level order would have the effect of significantly reducing the water levels to which Lake Koshkonong property owners, boaters and other users have become accustomed to over a period of decades. The testimony of Robert Montgomery illustrates the anticipated effect of the DNR water level order coupled with the affects of the gate and other dam repairs. *See* Exs. RKLD-117 and RKLD-118.

If the Administrative Law Judge adopts the DNR's proposed Order in this case, it would effect a regulatory taking of any prescriptive rights held by RKLD to flow areas above the levels permitted under the Department's order but within the limits of its flowage rights. It would also reduce navigational opportunities on the lake from the level experienced under substantially the same orders during the period that the dam has been out of repair and mismanaged.

3. DNR is barred by equity from enforcing an Order that will lower water levels below the level experienced in recent decades.

Whether or not they have established prescriptive rights, Lake Koshkonong users have become accustomed to the water levels that they experienced during a period of decades when the discharge gates were not fully operational and levels above the ordered maximum prevailed much of the time. In exercising its authority under Wis. Stat. § 31.02(1), the Department should have considered the interests of boaters, riparian owners and other lake users over the long period in which inadequate dam maintenance and operation provided a higher accustomed water level than those that will prevail now that the dam has finally been repaired and is being professionally operated by the District.

Principles of equity support the perpetuation of both the District's accrued flowage rights under the water level order and the interests of riparian owners and boaters based on the economic investment they have made in reliance on existing water levels. *See Smith v. Youmans*, 96 Wis. 103 (1897).

In *Youmans*, a group of riparian property owners sought to enjoin a dam owner from drawing down or lowering the water level of Lake Beulah in Walworth County. The level in the lake had been maintained for more than forty years since the construction of the dam, with the exception of drawdowns to power a grist mill. *Id.* at 105. Based on that history, the dam owner had acquired a right by prescription to flow the lands submerged by the lake. This made the lake navigable from the shore and a desirable place for the development of summer cottages and resorts. *Id.* at 106. In reliance on those conditions, the plaintiffs and others purchased property, built summer homes and resorts, and made other valuable improvements. *Id.* The court in *Youmans* held: "It has long been settled that the artificial state or condition of flowing water, founded upon prescription, becomes a substitute for the natural condition previously existing, and from which a right arises on the part of those interested to have the new condition maintained." Citing a water law treatise, the court concluded: "When a riparian owner has diverted the water into an artificial channel, and continued such change for more than twenty years, he cannot restore it to its natural channel, to the injury of other proprietors along such channel, who have erected works or cultivated their lands with reference to the changed condition of the stream, or to the injury of those upon the artificial watercourse who have acquired by long user the right to enjoy the water there flowing." *Id.* at 110.

The DNR's denial of the District's petition was based on the mere possibility that the OHWM could be increased and effect a taking of riparian property. But the DNR did not even consider the counterpart property rights accruing to the Dam owner and the rights and expectation interests of other riparians based on the historic water levels existing since the Dam fell into partial disrepair in the 1960s.

F. The DNR's Claim That the Interests Under Sec. 31.02 Were Properly Balanced in the Original 1991 Order is Not Supported by the Record.

The Department has repeatedly asserted in this case that the essential balance between navigational and wetland interests was properly struck in the 1982 and 1991 orders (e.g., DNR Brief, at 28.)

Michael Dresen, DNR's lead project staff during the development of the agency's 1982 order emphasized that the requirement for the installation of 6-inch flashboards along of the crest of the spillway was to protect the interests of navigation. (Dresen Direct) The 1982 order included the express finding that the flashboards were necessary to maintain levels during periods of low stream flow. (Ex. DNR-817, at ¶ 6.) Mr. Dresen testified that he ultimately disagreed with the Department's 1991 order eliminating the flashboards in the context of a settlement of litigation brought by Thibeau, Carcajou, Shearer and other wetland owners, because he concluded that such a compromise did not properly protect navigational interests.

In rebuttal, DNR's current Rock River Basin Manager, Susan Josheff, attempted to restore credibility to the Department's 1991 Order during the following exchange with Attorney Sweeney.

> Question: Switching to 1991, the settlement that was discussed, you were here when Mr. Driessen testified, I believe, weren't you?
>
> Answer: Yes I was.
>
> Question: Would monitoring on the lake versus removal of the flash board, would that be something that DNR would do as a balancing in order to balance the rights of different interests on the lake?
>
> Answer: That was its intention.

Ms. Josheff's testimony assumed that navigation benefited as a result of transferring the maximum and minimum water level benchmark from the Dam to the Lake Koshkonong gage. In fact, the exact opposite is true. Ms. Josheff testified on cross examination that the water level of the lake is approximately 3.5 inches *above* the water level at the dam during normal flows. Thus, the effect of the 1991 order – which transferred the benchmark to the Lake gage but also maintained the same maximum and minimum water level as in the 1982 order – was to *lower* the level of the Lake by some 3.5 inches. The consequence of setting the levels at the lake gauge rather than at the dam are shown on Exhibit RKLD-

500. Shifting the reference level from the dam to the lake effectively lowered the water level below what the 1982 order had proposed. This further impaired the interests of navigation, which were already damaged by the Department's decision to eliminate the 6-inch flashboards to maintain boating conditions during periods of low flow, as well as the extension of the winter drawdown period to include the month of November.

Attorney Cain attempted to rehabilitate Ms. Josheff's testimony during the course of her cross-examination, stating that the levels ordered in the 1982 order "were based on the reading at the lake gauge, not at the gauge on the dam." But that statement conflicts with uncontested testimony from Ms. Josheff and Mr. Montgomery that the lake gauge did not exist before 1986. We have found nothing in the record to corroborate Cain's claim. Even if his unsupported contention is correct, it only underscores the depth of the agency's misunderstanding as to how the 1991 order reflected a balanced approach that recognized both wetland and navigational interests.

V. THE EVIDENCE AND AN APPROPRIATE BALANCING OF THE PUBLIC RIGHTS, SAFETY AND PRIVATE PROPERTY CONSIDERATIONS UNDER SEC. 31.02 SUPPORT A WATER LEVEL ORDER CONSISTENT WITH THE DISTRICT'S REQUEST.

A. The District's Water Level Order is Based on a Comprehensive Hydrological Analysis and Site-Specific Ecological Evaluation.

1. The District's analysis of impacts under the petitioned water levels was based on an extensive hydrologic and hydraulic analysis that incorporated the DNR's critique of the model.

A reasonable assessment of the impacts of the District's requested water level must begin with an accurate projection of actual water levels under the proposed summer maximum. The District undertook to examine these impacts through the development of a comprehensive hydrological model, using the widely accepted HEC-RAS software developed by the United States Geological Survey. (Montgomery Prefiled Direct, pp. 20-23; Ex. RKLD-113 and RKLD-116). Mr. Montgomery's key conclusions based on the model were as follows:

(a) There will be a significant decrease in Lake Koshkonong summer water levels under the DNR's Proposed Order. Although identical to the current summer order, this operating regime at full gate capacity will result in lower Lake

Koshkonong water levels than those observed over the past 18 years for approximately 50% of the summer season, when water levels have been above approximately elevation 776.3 ft. MSL. The reduction in water levels produced by the 2005 proposed order is expected to be as much as approximately 0.5 feet, compared to historic levels.

(b) The difference between the recorded 1987 through 2005 water levels and the modeled effect of the Proposed Order is primarily due to the fact that until recently, Indianford Dam has not been fully operable. If the 2005 proposed order is enforced, Lake Koshkonong stage will be significantly lower than had been observed prior to August 2002 (the date the Dam became fully functional). The DNR Proposed Order will produce slightly higher water levels than those that have been observed under lowest flow conditions, which occur approximately 10% of the season. For the remaining 40% of the summer season, the DNR 1991 orders will produce water levels very similar to those that have occurred over the past 18 or more years.

(c) RKLD's proposed order will result in higher water levels than the DNR order for the bulk of the summer season. The District's proposed order will produce water levels higher than those observed historically for approximately 70% of the season, when water levels have been below elevation 776.8 ft. MSL. During the time that the District's proposed orders result in higher water levels on Lake Koshkonong, the increased water level is typically 0.2 to 0.3 feet higher than historical conditions. But RKLD's proposed order will also produce slightly lower water levels than have been observed for the past 18 years for approximately 30% of the summer season, during times when existing water levels have been above approximately elevation 776.8 ft. MSL.

(d) Describing the difference in water surface elevations produced by the two operating orders as simply the difference between their target elevations is inaccurate. The typical difference between the water surface elevations produced by the two orders is not the same as the difference in summer target elevations (0.6 feet). The two orders produce water surface elevations that are typically from 2.4 to 3.6 inches (0.2-0.3') apart for about 65% of the summer season. The maximum difference in water surface elevation between the two orders is approximately 0.5 feet. For the remainder of the season (during times of extremely low water conditions or moderate to high flood conditions), the two orders produce very similar water surface elevations on Lake Koshkonong.

(e) DNR's proposed order results in a more static pool elevation than the RKLD proposed order. Lake water surface elevations will be more variable under RKLD's proposed order, whereas the water surface elevations will be a

near-static pool for approximately 60% of the summer season under the DNR's proposed order.

(f) There is no meaningful difference in the effect of the District's and the DNR's proposed summer orders when Lake elevations are above 777.3 ft MSL. Both orders produce similar results for Lake water surface elevations above approximately 777.3 ft. MSL.

(Montgomery Prefiled Direct, pp. 24-25.)

Mr. Montgomery's testimony and exhibits establish that the differences in the effects of the two orders for a substantial part of the summer order are quite modest. Although Kenneth Johnson took issue with Montgomery's inclusion of May as part of the summer drawdown, the selection of the illustrated periods was consistent with the time frames set out in DNR's order. Johnson's criticism on this point fails to acknowledge the routine Rock River - Lake Koshkonong flooding during the summer season is wholly beyond the control capacity of the Indianford Dam.

Susan Josheff criticized the hydrological study chiefly on the grounds that the analysis assumed a system of gate operations that would not aggressively encourage higher water levels. This criticism assumes that the gate operations of the dam are beyond DNR control. They are not. The Department, through an amended order adopted by the ALJ, can include specific directives for gate operations, including the use of the specific set points for gate operations assumed in the Montgomery hydrologic study.

Josheff's other criticisms focus on the effects of the RKLD proposed order on the OHWM discussed earlier in this brief. Notably, through its months of evaluating the water level order for the Indianford Dam during the early 2000s, DNR itself made no effort to quantitatively evaluate the impacts of alternative management orders. By contrast, the DNR developed and modeled 12 alternative Proposed Operating Strategies for evaluation during the proceedings leading to its 1982 order, when state of the art of hydrological computer modeling was in its early stages (Ex. DNR-817, ENVIRONMENTAL IMPACT ASSESSMENT SCREENING WORKSHEET, Table 1b.)

In contrast to the District's extensive modeling, the Department's purported environmental assessment was based on three simple assumptions: (1) that *any* increase in the ordered water level would be detrimental to wetlands, (2) that no assessment of the extent of potential damage or injury was necessary, and (3) that it was not necessary to weigh and consider the consequences of its order on navigation or other protected public and private interests. Period.

2. The District's analysis of ecological effects was based on empirical evidence, using an appropriate baseline.

The District's ecological experts were keenly aware of the need to analyze the impact of a proposed water level increase on wetlands and habitat. (Hjort Prefiled Direct, at pp. 2-3, 7-8.) Based on extensive, detailed observations over a five-year period, elevation measurements, literature review, and careful study of the impact of water levels on the extent and character of vegetation in the Lake Koshkonong wetland fringe, that the extent of the increase over the existing operating order would not materially affect the existing ecological balance.

As the District's biologist Stephen Hjort testified, when evaluating the impact of a water level regime on Lake Koshkonong's wetland and habitat values, the characterization of "low" versus "high" water must be made in relation to the surface elevations in the marshes. Mr. Hjort participated with DNR staff in a joint Lake Study to establish transects for repeated observation of various wetland communities at different water levels. Based on his extensive measurement and observation, Mr. Hjort concluded that water levels in the range of 776.0 to 777.0 msl (the range of the District's proposed summer levels) are at the low-normal end of the spectrum, and that the water is below the soil surface in the emergent wetlands at lake elevations of 776.0 to 776.5 msl. (S. Hjort Rebuttal, Ex. RKLD-504; S. Nichols Direct, p. 9). At higher water levels, above approximately 777.30 msl, the respective operating orders do not differ in their ability to control the water level. (*See* Ex. RKLD-117.) It is at those levels, and particularly under flood conditions (above 778.6 msl) that wetland loss has been documented. For example, a DNR staff memo from Patricia Trochlell (Ex. DNR-79b) notes that due to higher water levels during the spring and summer of 2004 "we saw a loss of much of the herbaceous vegetation in forested wetlands." Mary Ann Buenzow, DNR's Forester for the Lake Koshkonong area also observed: "There have been an increased number of trees tipped along the shoreline following an extended flood period in 2004. I believe this long period of high water is also to blame for the general decline in ash and oak trees in the southern section of the Carcajou woods." (Ex. DNR-64.) Notably, the damage recorded by these resource managers occurred under the DNR operating order, after the repairs to the Dam.

The District's experts concluded that, while there would be expected variation in flood or drought years, the proposed water levels would maintain hemi-marsh conditions that provide food and cover for insects, turtles, waterfowl, and spawning fish, and are considered the most productive wetland stage for the widest range of species. (S. Hjort Direct, p. ; Ex. RKLD-128) Conversely, at the

water levels under the DNR's Proposed Order, Mr. Hjort observed a closing up of the hemi-marsh openings, and reestablishment of dense stands of cattails, bullrush and reeds. While RKLD's proposal dampens the lower or drought end of the water level spectrum, it nevertheless provides a simulated moderate drought cycle for the maintenance of emergent wetlands. With respect to submerged wetlands, Mr. Hjort anticipated that higher water levels would result in some loss of plants on the lakeward edge of the aquatic beds due to reduction in sunlight penetration. However, he concluded that this would be minimal and would be offset on the shoreward side, for an overall shift in location of the submerged aquatic bed, without any significant change in wetland aerial coverage. (Hjort Prefiled Direct, p. 19.)

As Mr. Hjort explained, the extent and aerial coverage of both submergent and emergent wetlands on Lake Koshkonong is largely dependent on the water level during a "window of opportunity" in the early growing season. (Hjort Direct, p. 18-19.) The water level in late May through early June of any given year affects the extent of sunlight penetration to young plants, and thus the success of both submergent and emergent wetland vegetation. The data in Ex. RKLD-136 shows the average conditions to which the aquatic plant life in Lake Koshkonong has adapted during the important early growing season. During that time, the operation of the Indianford Dam – and thus the operating order – does not have significant influence over the higher water levels that typically occur.

In terms of the volume of expert testimony and exhibits devoted to the issue, one of the DNR's primary concerns with respect to increased water levels was the perceived threat to floodplain forests, particularly the large tract of forest in the Koshkonong Creek area that includes the Carcajou Shooting Club property. The District's experts concluded that the requested water levels would not result in materially different impacts to the floodplain forest than the existing order. The 2001 OHWM study confirmed the "presence and action of water" on the wetland fringe to at least 778.1 msl, the lowest elevation of the study. This confirms that an even greater area of the floodplain forest than that impacted by the District's proposed maximum is regularly underwater. The evidence further shows that the lowest elevations of the floodplain forest (e.g., those most likely to be impacted by an increase in the water level of the Lake) are dominated by flood-tolerant silver maple and green ash. The DNR-funded study entitled "*Lake Koshkonong Water Levels and Growth Rate of Trees in Bordering Floodplain Forests*" (Ex. DNR-62) attempted to correlate the growth rate of trees with historic water levels, but found nothing of statistical significance, and no impacts that could reasonably be termed economically significant. (Nichols Rebuttal.) Moreover, the floodplain forest growth study reveals that there are a substantial number of larger, mature trees that have persisted despite such adverse conditions. As Ted Pyrek noted, individual trees of the same species can vary widely in their flood tolerance. Given the

persistence of mature trees at elevations that are regularly inundated for long periods of time in most years, Dr.Nichols concluded that the floodplain forests were not imperiled at the District's requested levels.

3. The elimination of the winter drawdown is protective of habitat and aquatic species.

RKLD's requested water level order seeks the elimination of the winter (November 1-April 30) drawdown on the basis of public access and recreational values, as well as concerns with winterkill due to oxygen depletion, and stranding and freezing of immobile species. The speed and efficiency with which the fully operational Dam can implement the DNR drawdown, to the detriment of those species, is illustrated in Ex. RKLD-124. While the evidence is inconclusive, Mr. Hjort also testified that fish kills more commonly result from oxygen deprivation due to low water conditions. Further, as Dr. Stan Nichols testified (Prefiled Direct, p. 6), submerged aquatic vegetation ("SAV") in extensive areas of the shallows become dewatered or frozen to the lake bottom during the drawdown. Those areas are exposed to freezing temperatures, desiccation, and mechanical damage. In areas where ice freezes to the lake bottom, plants are exposed to mechanical damage and freezing temperatures.[9]

Dr. Nichols testified (Prefiled Direct, p. 5) that the habit values of submerged wetlands are greater than those of the near-monotypic emergent wetland areas. SAV is the base of the aquatic food chain and provides protective habitat for zooplankton (algae eaters) and other invertebrates, and young fish. Submerged aquatic plants help to stabilize bottom sediments, reduce sediment re-suspension, and reduce wave energy. Mr. Nichols, a plant ecologist with over thirty years of experience, testified that the loss of ten acres of the remaining submerged aquatic beds is a far greater detriment to the Koshkonong ecosystem than the erosion of ten acres of emergent wetlands. (S. Nichols Cross.) Thus, preservation and expansion of the aquatic beds was a priority in developing the

[9] While DNR wildlife biologist Richard Kahl recognized the critical habitat and water quality values of submerged aquatic vegetation (*e.g.*, Ex. DNR-29, p. 6), he was dismissive of Dr. Nichols' concerns with regard to the dewatering, freezing and tearing out the remaining, sparse populations of submergents under the drawdown. However, Mr. Kahl's conclusions were based his year-to-year observations of sago pondweed at Vinnie Ha Ha in the late 1980s, prior to the initiation of the winter drawdown by the 1991 operating order. Further, Mr. Kahl's testimony contradicted statements in his own research paper in which he cited the detrimental effects of excessive winter drawdowns on aquatic macrophytes. (Ex. DNR-29, p. 26.) *See also* Ex. RKLD-164 (Email of R. Hay: "We also know that [winter] drawdowns will kill submergent plants.")

District's water level petition, in particular the request to eliminate the winter drawdown.[10]

Dr. Nichols opined that the elimination of the drawdown will result in the substantial increase in area where winter water depths are more habitable for SAV growth. It will also increase the area where insects, other invertebrates, mollusks, herptiles, and aquatic furbearers can overwinter without exposure to freezing temperatures, desiccation, and mechanical damage from the movement of ice sheets. (Prefiled Direct, p. 7.) In addition, as the DNR's Proposed Order found, the elimination of the winter drawdown improves winter access for ice fishing and other recreational activities. (Ex. DNR-8, ¶ 35.)

The DNR's Proposed Order modified the winter maximum by one-third of a foot, from the current maximum of 775.77 to 776.00, with a target elevation of 775.75 msl. (*see* Ex. DNR-12). The Department's rationale for maintenance of the drawdown was threefold: (1) to reduce shoreline damage from ice expansion; (2) to decrease wave action during the open water months of November and April; and (3) to cause fish, including carp, to emigrate out of shallow marsh areas including Mud Lake and Thiebeau Marsh. (Proposed Order, Ex. DNR-8, at ¶¶ 36, 38, 42-43.)

The record shows that the efficacy of the winter drawdown in achieving the Department's objectives is minimal at best. As the District's geomorphologist Dr. David Mickelson testified, Lake Koshkonong's deep layer of loose sediment is not conducive to dewatering from the drawdown. The frozen sediment is susceptible the freeze-thaw cycle, to heaving, floating up and causing erosion by the same mechanism as floating ice. (D. Mickelson Direct, pp. 4-6.) Because the shallow waters of Lake Koshkonong extend out so far from the shore, a larger area is affected by freeze-on under the winter drawdown. While erosion at the shoreline may be reduced by drawdown, the detrimental effects of sediment heaving are felt over a broader area of lake bottom and have a more detrimental impact on vegetation in shallow parts of the lake than they would be with a higher winter water level. (D. Mickelson Direct, pp. 7-8.)

The Department's second objective is to reduce wave action in the late fall and early spring. But the drawdown is typically ineffectual in limiting wave action in the spring, and interferes with public access rights in the fall. In the late

[10] When asked to rank the importance of emergent versus submergent wetlands in terms of habitat value, Paul Cunningham responded that "emergents are the ones that have been undergoing continual recession" -- illustrating both the Department's use of an inappropriate baseline and its arbitrary preference for emergent wetlands in prioritizing public rights in navigable waters.

fall, the attempt to limit wave action via a drawdown is inconsistent with other important public rights, including navigation and access to the marshes for hunting and fishing. (D. Bush Prefiled Direct, pp. 13-14.) The winter drawdown's interference with public access for recreation is illustrated by the photos taken in November 2002, after the start of the winter drawdown (Ex. RKLD-137). While the owners of the Thieabeau Hunt Club are able to use a private water control structure to maintain levels that suit the club's purposes, the water level in shallow marshes elsewhere on the lake is inadequate for recreational access. Further, the evidence shows that the precipitous drawdown in late fall results in the dewatering and death by dessication and freezing of amphibians and freshwater mussels.

Conversely, during the annual spring floods, the Indianford Dam cannot effectively maintain drawdown levels. A review of the daily stage data for Lake Koshkonong (Ex.RKLD-109) for the month of April confirms that water levels are typically well above 777.30 msl, the point at which the effects of the respective operating regimes become indistinguishable. (Montgomery Prefiled Direct, p. 25; Ex. RKLD-117.) As Dr. Mickelson testified (Prefiled Direct, p. 8), water levels in the spring often rise before lake ice has melted, allowing lake ice and slabs of frozen sediment to float in to the shoreline, causing erosion damage. Wave and wake erosion is more reliably controlled by the armorment of the shorelines, as discussed below.

Finally, the extent of the winter drawdown was calculated by reference to the elevation of the bottom of Mud Lake, with the goal of removing rough fish from the shallow marshes. (D. Bush Direct, p. 6.) But, as Mr. Hjort testified, the drawdown is unnecessary because once ice forms in the shallow marshes, those areas are not deep enough for the fish, which then migrate to deeper waters. Further, the effort to remove carp from the marshes, while nominally beneficial, ultimately fails to keep the carp from accessing those areas to spawn, due to uncontrolled high flows in the spring.

4. Ongoing erosion of emergent wetlands can be substantially mitigated with rip-rap and wave arrestors.

The Department acknowledges that emergent wetland loss has been occurring under the current DNR water level order. RKLD experts testified that the erosion of wetlands will continue under any operating regime due to the Dam's inability to control high flows and flooding. Given that the operating order cannot control for such events, RKLD testified that the practical remedy lies in constructing additional breakwater and riprap structures of sufficient size and material to reduce erosion from waves and wakes. Indeed, the Legislature has enacted specific legislation authorizing the placement of structures in Lake

Koshkonong to improve navigation, restore or protect wetland habitat, water quality, fish and wildlife habitat, and enhancements to the aesthetic and recreational value of the Lake. *See* Wis. Stat. § 30.2025(2). According to Dr. Mickelson (Direct, p. 9, lines 11-16), the placement of rip-rap can be an effective way to minimize wave and ice erosion. Exhibit RKLD-147 illustrates the effective design of rip-rap, properly installed and sloped to encourage ice to ride up the rip-rap. Thus, much of the erosional force of the ice shove is expended without damaging wetlands or upland shoreline behind the structure.

Mr. Hjort discussed his observations following the installation of rock armoring along the lakeward edge of several large wetland tracts on approximately 35% of the wetland shoreline. (S. Hjort Direct, at pp. 17-18.) He reported that the results of armoring the shoreline to date have been "very positive" – noting their effectiveness in mitigating wave action as well as trapping and collecting sediments that are then revegetated with emergent species. (Ex. RKLD 135.). RKLD experts substantiated the efficacy of riprapping shorelines as well as the prospect for more substantial physical structures under a joint "Section 206" project with the Army Corps of Engineers to mitigate wind and wave erosion. (Hjort Rebuttal.)

The Department offered into evidence photographs that were intended to show that the existing riprap structures are too small and ineffectual to mitigate erosion in the emergent wetlands. However, as Mr. Hjort pointed out, the photographs of waves overtopping these structures were taken at a snapshot in time when windspeeds were in excess of 20 mph – conditions that occur less than 2% of the time on Lake Koshkonong, according to DNR. (Ex. DNR-91, p. 2.) Further both Ken Johnson and Doug Fendry agreed on cross-examination that construction of breakwaters under ACOE proposal would mitigate erosion of the emergent wetlands. A further benefit of this approach is that protects against erosion from water levels, wind and waves that are not able to be controlled by the water level regime. As Bob. Hay noted in an email to colleagues (Ex. RKLD-164): "The drawdown serves to reduce the effect of [high water, ice and wind] during the winter months. It is not a final solution as high water during other times of the year are also problematic."

B. The Difference in Ecological Impacts Between RKLD's Requested Water Levels and the Proposed Order Are Not as Significant as DNR Maintains.

The Department's experts repeatedly tied the magnitude or relevance of projected impacts on the Koshkonong ecosystem to historic conditions. But this case does not present a choice between the District's proposal and a return to historic conditions, and in practical effect, the difference between the two orders is

not as ecologically significant as the Department maintains. The historical framework within which the Department analyzed the District's petition led to a "balancing analysis" under which *any* incremental increase in wetland erosion or habitat loss was viewed as unacceptable. Because of this premise, the DNR failed to productively assess the impacts of water levels in terms of current conditions and the modest increase requested by the District, and without regard for the desirability of increased access, navigability, safety, economic benefits and recreational opportunities for many members of the public.

1. DNR exaggerated the ecological impacts of the District's proposal by extrapolation from previous wetland losses.

The centerpiece of the EA is DNR's analysis of wetland loss compared to historic water levels. The EA posits that Lake Koshkonong's wetlands have receded over time in direct proportion to incrementally increasing water levels. Accordingly, the DNR has concluded, another increase in the water level will result in the further, unacceptable diminishment of wetlands and associated habitat. The DNR's comparison of the present extent of the wetlands to pre-impoundment conditions explicitly assigns blame for the recession and degradation of these communities to inexorably rising waters between the 1930s and the present.

The Department's reference to historic conditions as a baseline from which to gauge wetland losses is improper, because this water level proceeding is occurring some 90 years after the basic economic decision was made to impound the waters of the Lake. It is universally agreed that a return to that bygone era is infeasible for a multitude of social, economic, hydrologic and engineering reasons. It is therefore inappropriate to review historical conditions in striking a balance of interests under sec. 31.02 in the present day. Further, by focusing on historic water levels, the DNR's evaluation downplayed the significance of other environmental factors in the historic loss of riparian wetlands, including the introduction of carp, nutrient and sediment loading, and shoreland development. Neither the District's proposal nor the DNR's order addresses those limiting factors, and the experts agree that neither will restore Lake Koshkonong to a clear water, aquatic plant dominated state that would be the foundation for wetland restoration.

The DNR's paradigm is not descriptive of current conditions and does not account for the present operational characteristics of the Dam. As Paul Cunningham acknowledged, his "time series analysis" was not predictive of future water levels or show that water levels would trend upward indefinitely under the District's proposed order. (P. Cunningham Cross.) Until 1991, there was no

water level order with prescribed minimums and maximums governing the operation of the Indianford Dam. (*See* Ex. DNR-7, at pp. 9, 14.) During the 1990s, Ken Johnson testified, the Dam was improperly operated, the wicket gates were in disrepair, and the trash racks were not maintained. These were factors that Mr. Johnson ascribed to the increase in the OHWM. Apparently, the OHWM increased between 1979 and 2001, even though gage records and flow analysis fail to support an increase in the amount of water in the system. As Mr. Montgomery concluded after detailed review and statistical analysis of the Fort Atkinson gage data, regional and nationwide studies, water levels on Lake Koshkonong have not displayed an upward trend in the past approximately 35 years. (Montgomery Rebuttal; Ex. RKLD-155.) Thus, the record reasonably supports the conclusion that in recent times, the failure to properly operate and maintain the Dam – rather than water levels per se – resulted in adverse physical effects to the shoreline and wetlands.

In any event, as Mr. Hjort testified (Direct, at pp. 15-17; Exs. RKLD-130 through RKLD-134), the recent ecological response of the Lake Koshkonong wetlands to changing water level conditions has not been linear. Mr. Hjort's observations from the 2000-2005 Lake Study have revealed that during years in which there has been significant flooding during the growing season, many areas of shallow marsh emergent communities have converted to deep marsh aquatic beds. Conversely, during periods of prolonged drought conditions, there has been a resurgence of the shallow marsh emergent communities. The record of aerial photographs in the past thirty years is limited, but also tends to support Mr. Hjort's recent observations. *See* Ex.RKLD-129 (Year 2005 photography).

The Dam was not fully operational and maintained daily until after the District acquired ownership and the second wicket gate was fixed in 2002. This represents a significant break with historic conditions and a fundamental change in hydrology impacting the wetlands. The Dam, properly operated, is able to pass flows faster. This was starkly demonstrated by the 2003 winter drawdown. As Mr. Montgomery's modeling demonstrated, the Dam also moderates high flows under both operating regimes, and water levels respond similarly to low flow conditions under either regime. The DNR concluded that, with the dam fully operable and regularly maintained, there was a chance to stabilize the wetlands under its Proposed Order (R. Hay Cross.) But it unreasonably rejected an equivalent scenario for the wetlands to reach equilibrium under the District's modestly increased levels.

Despite the moderate differences in hydrology, the Department's witnesses frequently testified as though the District's petition would precipitate continuing, infinite wetland losses, but that such losses could be halted or even reversed under its Proposed Order. For example, Mr. Hay testified that reptile and amphibian

habitat would be lost under the District's proposal because of the disappearance of dense emergent wetland at the lake edge that these species had come to depend on. But there is no evidence that the District's proposal will cause a dramatic recession of emergent wetlands, which is conceded to be, by far, the most extensive wetland type of Lake Koshkonong. (R. Hay Cross; J. Kraemer Cross.) Indeed, while the DNR experts frequently cited concerns about receded emergent wetlands and resulting habitat loss, the evidence indicates that the relative habitat value of emergent wetlands is not great. This is particularly so for the monotypic or near-monotypic stands of cattails and reeds that dominate Lake Koshkonong's emergent wetland fringe. (S. Hjort Direct, p. 11.) As these areas undergo a transition to hemi-marsh, they provide greater habitat values for waterfowl, invertebrates, turtles, muskrats and spawning fish. (*See* S. Hjort Direct, pp. 11–12; D. Fendry Direct, p..

2. DNR consistently downplayed or disregarded information tending to show that wetland impacts will not substantially differ under the respective orders.

In contrast to RKLD's evidence, very little of the testimony and few of exhibits introduced by DNR's ecological experts were predicated on the actual hydrological conditions of Lake Koshkonong, or a careful analysis of the water level regime under the District's proposal. The DNR's and LKWA's extensive analysis of aerial photography depicts the recession of shoreland historically, but sheds very little light on the response of the wetlands since the initiation of water level regulation in 1991, and especially since the Dam's full capacity has been restored. In addition, as photogrammetrist Randy Weltzin testified, the failure to correlate specific photos to water level and season, or to view them in stereo pairs, resulted in errors of interpretation that preclude the quantification of actual acreage of wetlands lost. (See Weltzin Direct; Ex. RKLD-163.) More significantly, DNR and LKWA failed to analyze available aerial photo evidence (contained in the identical photographs reviewed by NRC) which shows only isolated potholes of water in the Koshkonong floodplain forest in a photo taken June 16, 1969, when the water level was at the District's target elevation.

The Department's experts applied the general teachings of shallow lakes ecology to make sweeping conclusions concerning projected loss of wetland habitat. But the DNR substantially failed to analyze whether and to what extent wetland habitat would be impacted under either proposed operating regime. For example, DNR wetland ecologist Pat Trochlell opined that the population of white fringed orchids in Fair Meadows was "just hanging on," but had no evidence to support that opinion other than the fact that this species is federally listed as endangered. (Trochlell Cross.) Ms. Trochlell offered a number of unfounded

opinions concerning potential impacts to floristic diversity and the "drowning" of wetland plant communities without any supporting surveys or hydrological data. (P. Trochlell Direct, pp. 11-14.) The evidence offered by LKWA was similarly devoid of elevation data to support a finding of impacts to floristic quality and diversity. (Kraemer Cross; Ex. LKWA-345.) The DNR's endangered species expert, Cathy Bleser testified that her role was simply to identify the *presence* of threatened species and rare communities associated with Lake Koshkonong's wetlands, without actually assessing whether there would in fact be any impact to those species as a consequence of the District's proposal. She testified: "Effects to the species would depend on what happens with the hydrological regime, what happens with water levels, what happens to trees, and that is not my area of expertise . . ." (C. Bleser Cross, 041006D, at 32:10.)

To a person, the DNR's experts' conclusions were based on a conclusion that the District's proposal would result in water levels being consistently 6-8" higher than current conditions during the growing season. Paul Cunningham found the difference between the two orders significant in terms of the degree of emergent wetland rejuvenation that would be experienced. However, he admitted that he had not studied the hydrological modeling, and was "somewhat surprised" (Cunningham cross) to learn that the modeling reveals that water levels at low flows are the same under either order (See Exhibit 116). He testified that he believed under the District's proposal that the hemi-marsh areas would ultimately degrade to lake marsh. But those conclusions, and the degree of wetland impact, depend critically on the elevations of these wetlands in relation to the water level – an issue that Mr. Cunningham admittedly did not analyze.

In addition, the DNR's experts failed to acknowledge that the changes in the impoundment and the watershed over time have enabled the evolution and adaptation of species that are uniquely suited to dramatically fluctuating water levels and degraded water quality conditions. The DNR's conclusions with respect to the impacts of the District's proposal failed to account for the riverine character of Lake Koshkonong's ecosystem – specifically the regular and prolonged flooding of the wetlands, and the evolution of wetland communities in such an environment. The Department consistently rejected information that tended to show that wetland recession was caused by flooding over which the Indianford Dam has no control.

With respect to floodplain forests, DNR experts wholly ignored the documentary evidence that the forested area of the Koshkonong Creek wetlands had expanded dramatically over the decades, coinciding with the historic record of increased water levels as related by Paul Cunningham. The DNR steadfastly clung to its position that critical forest habitat was threatened by the District's petition, although it was shown that rising water levels had coincided with a substantial

expansion of the floodplain forest. That view persisted even though, according to DNR, the rare habitat values of the floodplain forest are associated with large tracts of closed canopy. (Cathy Bleser Rebuttal; Ex. DNR-841.)[11] The Department focused very narrowly on the extent of the floodplain forest communities at the lake edge in concluding that the District's requested water levels threatened the loss of that habitat due to inundation. Because the Department's operating attributed historic wetland loss to corresponding rise in water levels, its experts could not conceive that increased water levels played any positive role in the expansion of those wetlands.

3. Neither operating regime will have any effect on the water clarity or water quality of Lake Koshkonong.

There was significant focus in the EA and DNR testimony on the mechanism of a "forward switch" in shallow lakes ecology, whereby Lake Koshkonong exhibited a transformation from a clear-water, plant-dominated state, to a turbid, high-nutrient condition characterized by regular algae blooms. (Cunningham Prefiled Direct.) But it is also undisputed that neither operating regime will alter those conditions or precipitate a "reverse switch," which Mr. Cunningham explained requires the reestablishment of submerged aquatic vegetation via summer drawdowns and other management efforts. (Cunningham Direct, p. 18; Garrison Cross.) As Dr. Nichols testified (Direct, p. 8), neither water level regime addresses the problems that caused the demise of Lake Koshkonong's aquatic beds, including the abundance of carp, poor water clarity, extreme flooding, low winter water levels and wind and wave action.

Further, Dr. Nichols noted (and the DNR's water quality modeling confirms), the amount of nutrient filtering that can be accounted for by Lake Koshkonong's wetlands is miniscule in comparison to the extent of nutrification of the Lake and the Rock River. (S. Nichols Direct, p. 11-12; Ex. DNR-86.) Even assuming for purposes of argument that wetlands could be wholly destroyed by the District's proposed water levels, Dr. Nichols testified that the nutrient-filtering capacity of Lake Koshkonong's riparian wetlands is negligible in relation to nutrient levels in the Rock River watershed and internal loading from nutrient-

[11] Mr. Pyrek testified that he thought the expansion of the Koshkonong Creek floodplain forest was a result of changing land use patterns. This testimony wholly disregards the first principle of wetland plant ecology – which underlies the DNR's entire case – that hydrology governs the extent and location of wetland communities. (*see* J. Reinhartz Prefiled Direct, p. 7.) Ms. Trochlell's opined on cross-examination that the expanded areas of forest likely weren't "floodplain forest" wetlands because they were more recent and therefore less diverse, wholly ignoring that the Koshkonong Creek floodplain forest areas surveyed by NRC are dominated by just three species. (Ex. DNR-62, at p. 8.)

laden sediments. DNR's witness Paul Garrison concurred in that testimony. The evidence thus shows that there is no material difference between the water quality functions of wetlands under DNR's order and RKLD's petition. Indeed, the 2005 Order expressly finds that "[i]ncreased water levels will have no effect on water clarity and the frequency of algal blooms." Ex. DNR-4, at ¶ 17.

Paul Garrison opined on cross examination that Lake Koshkonong would remain on the federal § 303(d) list of impaired waters under either the DNR's or the District's proposed water levels. Nevertheless, the DNR reasoned that the District's proposal would make it more difficult in the future to remove the Lake from the EPA's 303(d) list of impaired waters. (Johnson Prefiled Direct, p. 12.) The Department's rationale is thus dependent on a future possibility that it concedes will not occur absent substantial management efforts other than the water level regime. This reasoning simply begs the question why the DNR is attempting to address its wetland management priorities via the operation of the Indianford Dam (which is acknowledged to be inadequate to the task), rather than through its regulatory authority to reduce phosphorus and sediment loading from water treatment plants and agricultural uses in the Rock River watershed. (*See* Wis. Stat. ch. 283; Wis. Admin. Code ch. NR 217; Ex. RKLD-182.).

C. The District's Proposed Water Levels are Necessary to Protect the Public Safety, Life and Health.

1. Extensive evidence demonstrates that current summer water levels are an impediment to protecting health, safety, and life on Lake Koshkonong.

a. There are extensive areas of the existing surface of Lake Koshkonong which are burdened by shallow water conditions under the current DNR water order.

The bathymetric information introduced at trial establishes extensive areas of Lake Koshkonong that are affected by shallow water conditions under the current DNR order. *See* Exs. 203, 204, and 205. During his testimony, John Stockham identified the areas within Lake Koshkonong that are particularly affected by shallow surface water conditions (Exhibit 204). Many of these areas impacted by shallow surface water conditions are located adjacent to developed residential areas.

b. *Low summer water conditions create increased congestion on the Rock River portions of the water body thereby increasing risks to boaters*.

Mr. Henry Sautin, chief of the Rock River Safety Patrol, testified at the proceeding. Mr. Sautin's responsibilities include providing law enforcement services and rescue and recovery operations on the Rock River as well as Lake Koshkonong. Chief Sautin testified that low water conditions cause boaters to shun the lake and congregate on the Rock River, resulting in increased congestion and decreased boater safety. This contributes to "considerably more wave action," which has resulted in small boats capsizing, floating docks pitching people on them into the water (with resultant injuries), damage to boats tied to these docks, and damage to the docks themselves.

Chief Sautin's testimony was corroborated by various members of the public, including Mr. Eric Samuelson, the owner of the Rock River Marina and the former owner of the Lakeland Campground, ("[e]verybody is looking for water and finding it in the river"), and Steven Holmes, who testified at the public hearing that low water conditions create significant congestion on the river portion of the water body.

c. *Current low water summer conditions create risks to swimmer safety*.

Chief Sautin also testified that the low water summer conditions force swimmers to go out greater distances from shore to find adequate depths for swimming, thereby increasing the risk encountering motorized boat traffic. According to Chief Sautin, "Many times, we get people who are hundreds of yards from shore swimming to get water that's up to their waist or up to their chest." A specific example given by Chief Sautin was Lakeland Campground, which has a designated swimming area in the middle of its boat ramp, piers, and mooring area. "Unfortunately," testified Chief Sautin, "what a lot of boaters do, is in order to not have to take a long time coming into shallow water, they'll come in at a high rate of speed, come close to the swimming area, and I've seen at times through the designated swimming area, to get to the docks or to the ramps." The danger is self-evident.

Many members of the public also testified at the public hearing about how low water summer conditions create additional risks to swimmers' safety. Leonard Mueller, lake resident and supervisor for the Town of Summer, testified that swimmers must go out at least 90 feet to get 18 inches of water in various portions of the lake. Michael Murano testified that children have to swim almost 200 feet out into the lake to find sufficient depth for swimming and thereby run the risk of motorized boat traffic encounters. David Saunders, Phyllis Meyers, and

John Meyer all confirmed that, under the current low water summer conditions, children have to wade so far out into the lake to find adequate depths that they are encountering the boating traffic and associated risks that these encounters entail.

d. ***Low water summer conditions impede rescue operations on the lake.***

Chief Sautin, Frank Micale, and Jerry Richardson all testified that the time required for emergency response had been increased due to inaccessible boat launches during low water summer conditions. Chief Sautin's testimony on this point was particularly compelling:

> Question: In your experience, have other water safety patrol agencies had difficulty even launching their equipment at designated launch areas on Lake Koshkonong during periods of low water?
>
> Answer: Yes, yes I have
>
> Question: Can you explain?
>
> Answer: Well, let's take Dalton's Landing, for example, which is a designated launching spot for the Rock County Sheriff's Department. Many times emergency equipment would respond to Dalton's Landing, try to put their boat in the water, and have difficulty getting the boat in the water, we'd have to walk the boat out a distance, and then again we would have to idle out until we got deep enough water to move out further and then accelerate to get to operating speed.

Sautin also described the difficulties that low water summer conditions created when responding to a very dangerous rescue situation involving a father and his 3-year-old daughter. He described how the low water summer conditions prevented his patrol boat from getting up to speed from the pier where water was deep enough, so that he could respond to the emergency:

> Question: Have you had an experience, Chief Sautin, where the DNR's current targeted water level actually impacted your ability to respond properly to a rescue call on Lake Koshkonong last summer?
>
> Answer: Yes, I did, we were working on a recovery operation, it was a multi-jurisdictional effort, and I was in Tykes Bay when we received a call, rescue call of some people in the water. I was in the boat by myself, so I had to go to the pier at Norm's to take and get additional personnel. The problem is that I had difficulty, even with myself in the boat, getting to the pier because of shallow water, and then, once I added three more personnel to the boat, we had to literally walk the boat out a ways until we got enough

water for the bottom of the boat to float, then we had to idle slowly out until we got deep enough water to lower our engine unit and respond to the emergency.

As a result, Mr. Sautin testified, he arrived at the scene of the emergency with no time to spare, since the 3-year-old daughter was already suffering from hypothermia, and the other two victims were also suffering the effects of exposure to the cold water.

Mr. Sautin also testified that he had observed low water conditions impeding Jefferson County rescue operations:

> Question: Well, Chief Sautin, have you witnessed any instances, where the Jefferson County rescue teams were affected by low water level conditions during the summer on Lake Koshkonong?
>
> Answer: Yes I did.
>
> Question: And where were you sir, when you first heard a call on the lake if you could generally describe?
>
> Answer: I probably was somewhere in the middle of the lake, we were working our way north because we were going to prepare for the Fourth of July fireworks display that was going to be going on that evening.
>
> Question: OK, go on and say what happened next after you got the call.
>
> Answer: While we worked into the area, we weren't requested, but we worked into the area and what I observed was the Jefferson County boat in the area of the landing, but always away from the shore, and it appeared that their boat was run aground, and I observed that a pontoon boat coming in from the west and there were people doing CPR on an individual on the pontoon boat. While the pontoon boat only got so close to the pier and apparently it got mired down in the mud, and the law enforcement officers and other rescue personnel had to walk out and pull the boat towards the pier and I don't recall, but if memory serves me correct, I believe they had to carry the victim from the pontoon boat to the pier.
>
> Question: Why wasn't the Jefferson County rescue boat able to maneuver the pontoon boat on that occasion?
>
> Answer: Because of shallow water, the boat was on the bottom.

For his part, Chief Sautin testified, he couldn't make any attempt to provide any assistance to the Jefferson rescue personnel on that occasion; he got as close as he

could, but his own patrol boat ran aground in the low water summer conditions. If the responding personnel had needed any further assistance, Chief Sautin testified, he would have had to get out of the boat and had to walk to assist them, given the shallow conditions on the lake. Sautin testified that the lake level of the water on that occasion was very close to the DNR's targeted water level of 776.20 MSL.

During the public hearing portions of the proceeding, a number of public members testified about concerns on rescue operations during low water conditions. Gail Ferguson, who has lived on the lake since 1958, testified that there had been severe accidents and concerns about rescues resulting from low water conditions. In addition, Norm Stanley, the owner of Norm's Hideaway, testified that low water summer conditions hampered rescue operations by reducing access for rescue vehicles at existing boat ramps on the lake.

e. *Low water conditions impede the performance of general boat safety patrol activities*.

Chief Sautin testified that he utilizes a 20-foot Crestliner for his patrol and rescue operations on Lake Koshkonong; he needs at least 3-1/2 feet of water for proper operational capabilities of his patrol boat. This depth required for full operational ranges was confirmed by Jerry Richardson, the owner of Harbor Marine. *See* Richardson rebuttal testimony, Exhibit 218. However, the bathymetric data indicates there are extensive areas within the Lake Koshkonong surface area that are currently serviced by less than 3-1/2 feet of water, *see* Exhibits 202 through 205, significantly limiting the area in which the Chief's boat can operate.

There also is extensive testimony in the record of a high incidence of propeller damage caused by summer water conditions on the lake which directly affects boat safety patrol operations. This was confirmed by Chief Sautin as well as Jerry Richardson during their respective testimony. Not only would prop damage to Chief Sautin's own boat force him to stop and change the prop but, Chief Sautin testified, low water summer conditions and associated propeller damage incidents had required him to assist boaters experiencing such incidents of damage "on a number of occasions." This assistance affects response time and impedes Chief Sautin's ability to attend to more important safety patrol duties.

DNR witnesses suggested that air boats could be used for water rescues during summer low water conditions. Chief Sautin, however, testified that air boats are not appropriate for water rescues for a number of reasons. His testimony on this subject was definitive:

Question: Are you aware of whether Jefferson or Rock County sheriff's departments have air boats that are available to assist in rescue efforts on Lake Koshkonong, Chief Sautin?

Answer: Yes I am.

Question: And what is the source of your knowledge?

Answer: I am an air boat operator for Rock County or I was, I retired.

Question: Now do you have an opinion to a reasonable degree of professional certainty on the utility of these air boats in assisting in water rescues during the summer months on Lake Koshkonong?

Answer: We don't use air boats on water rescues for a couple of reasons. First of all, Lake Koshkonong is a very large lake and subjected to a lot of wind and wave action. Your typical air boat has very little free board, so it could easily be swamped. Also, air boats, their engines, is mounted high so the center of gravity on the boat is very high and tends to be unstable, especially when you're trying to recover victims that were in the boat. Then also air boats are rather difficult to maneuver, there are no brakes, there are no ways of stopping them. On the ice, in order to stop, we spin 180 degrees and accelerate and that's how it stops. So we can't idle, we can't maneuver accurately.

Question: Would it be fair to say that air boats, in your experience, are primarily if not almost exclusively used during winter rescues?

Answer: Yes, that's all we use them for. Yes.

Jerry Richardson also confirmed that air boats are not appropriate for rescue operations during low water summer conditions. See Richardson supplemental testimony, ex. 218.

2. Increased summer water level would significantly enhance safety, health, and life protection on the lake.

Chief Sautin, Jerry Richardson, and Frank Micale all testified that increasing the summer water levels would significantly enhance public safety and protection of life on Lake Koshkonong. Chief Sautin in particular explained that more water would enable the patrol to operate closer to the shore. "We would be able to take in response to emergencies that much quicker, whatever that much quicker is going to be. I need time to get more water, it's going to be a plus for us

as far as response time, as far as operation, as far as apprehending violators, so it would be a positive thing for us."

D. Navigation on Lake Koshkonong Would be Significantly Enhanced by the District's Requested Water Levels.

1. Extensive low water areas create impediments to navigation on the lake.

The bathymetric data presented at the hearing establishes there are extensive areas of the lake characterized by low water conditions. *See* Exhibits 203 through 205 and John Stockham associated testimony. Numerous members of the public testified at the hearing about long piers and the corresponding impediments to navigation and to the full range of operation of motor boats created by the lengths of such piers. *See* testimony of Jerry Richardson and Chief Sautin. In addition, the Rock Koshkonong Lake Association map of the lake depicts numerous areas where low water conditions create hazards and dangers to navigation. *See* Exhibit 219.

Numerous members of the public also testified about the manner in which low water summer conditions create a challenge to navigation on the lake. Eric Samuelson, the owner of one of the marinas on the lake, affirmed that "it is becoming dangerous to operate boats without adequate water levels" during the summer months. Diane Enbendroft, another lake resident, testified at the public hearing that the low water conditions create numerous problems associated with prop damage caused by such dangerously low conditions. These dangerously low conditions create serious concerns for navigation because, according to Ms. Enbendroft, most members of the public use the lake for recreational boating rather than hunting or fishing. Gordon Peppin, another resident on the lake, testified at the public hearing that he could remember much better navigation on the lake when he was younger and waters were higher; now, by contrast, the water is so low that he can't launch his 17-foot craft. Indeed, even though he is an avid fisherman, the water is so low that he does not fish on the lake anymore and trailers his boat to other inland lakes to fish.

2. Current summer low water conditions are associated with extensive motor repair requirements.

Mr. Jerry Richardson, owner of the Harbor Marina, described the high frequency of repairs caused by low water summer conditions on Lake Koshkonong. Mr. Richardson testified that such conditions are associated with significant increases in propeller repairs; the two highest years of prop repairs were for the years 2005 (a low water year) and 2003 (the first year the dam was

actually controlled by the Lake District). *See* bar graph of prop repairs, Exhibit 212. Mr. Richardson also testified that the high number of repairs in these years is closely correlated with DNR's specified summer water level of 776.20 msl. *See* Exhibit 213 (tracking of the government records of water levels) and Exhibit 212 (the bar graph of repairs by year)).

In addition, Mr. Samuelson, the owner of the Rock River Marina, testified at the public hearing about extensive prop and drive repairs caused by low water conditions associated with the summer months under the DNR's order. Leonard Muehler, supervisor for Town of Summer, testified that he had spent $1,500 for repairs caused by damage to his boat caused by summer low water conditions.

3. The District's requested summer water levels would enhance navigation on Lake Koshkonong.

Numerous witnesses in both the public and technical portion of the public hearings described how higher water levels would enhance navigation. Jerry Richardson testified that higher water levels would reduce the need for propeller repairs. Other witnesses testified that higher water levels would be associated with shorter piers and fewer impediments to navigation on the lake. *See* testimony of Frank Micale and the DNR depth measurements associated with different water levels at public access ramps contained in the Environmental Assessment Report, Exhibit 7 at pp. 84-88. There also was extensive testimony at the hearing regarding the improvements that could be associated with public access caused by higher water conditions associated with the District's suggested summer water levels. *See* testimony of Jerry Richardson, Frank Micale, and numerous members of the public.

Witnesses also testified that higher water levels would result in greater effectiveness for boat lifts. *See* testimony of Jerry Richardson and Frank Micale. Higher water also would be associated with less congestion on the Rock River during the current low water summer conditions under the DNR's order (Chief Sautin) as well as more effective boat patrol activities, thereby increasing public enjoyment of the resource. *See* testimony of Chief Sautin.

E. The District's Proposed Water Level Order Significantly Enhances Public Access for Lake Koshkonong.

1. The public ramps on the lake are not accessible during the low water summer period.

During both the public and expert testimony phases of the hearing, persuasive testimony presented by petitioners as well as various member of the

public demonstrated the inadequacy of public access ramps on Lake Koshkonong during the summer months under the DNR's current low water summer level orders. Messrs. Richardson, Micale, and Sautin provided extensive testimony indicating the inadequacy of the public access ramps during the low water summer conditions under the DNR's current water level order.

Various members of the public also testified about the inadequacy of the public access ramps on Lake Koshkonong. Dale Ferguson testified that the public access ramps on the lake are generally not usable during low water summer conditions. Chico Pope, owner of Buckhorn Restaurant, testified about safety concerns for users of the Dalman's boat landing located near his restaurant and described frequent requests for assistance in launching boats from that public access location during low water summer conditions.

Thomas Lipke testified at the public hearing that public access ramps on the lake are essentially unusable during low water summer conditions. In fact, he testified, he needs a paddle to launch his boat at the access ramp at Charlie Bluff's during the low water summer conditions under the DNR's current order.

Extensive public testimony also was presented by Evelyn and Charles Payson about the lack of public access at any of the public access ramps during low water summer conditions on the lake. They described measurements they took at the Vinnie Ha Ha ramp and the inadequacy of public access at that ramp under the current summer water regime. According to the Paysons, the District's requested summer water level would definitely improve public access at these public access ramps.

Robert King also confirmed that public boat launches on Lake Koshkonong are not usable during low water summer conditions. He described his attempts to use one of the boat ramps during the summer low water conditions on the lake. According to Mr. King, it was necessary to go out almost three blocks from shore until his boat no longer hit the bottom of the lake. After this experience, Mr. King would only use public access ramps near the DNR station on the river, since this was the only accessible ramp during the low water summer conditions. John Sherrer also testified at the public hearing about the difficulties in using the Bingham and Dallmans boat ramp for his 16-foot boat during the summer low water conditions under the existing DNR's water level order.

2. The available public ramps on the river are not adequate for public access on the lake.

Jerry Richardson provided dramatic testimony at the hearing about the inadequacy of the available public access ramps located on the Rock River as a substitute for the unusable lake access ramps on Lake Koshkonong. According to

Mr. Richardson, there is only one public boat ramp located upriver in Fort Atkinson that is available during the summer months, and one public ramp located downriver near the dam during the low water summer months for public access (the Newville public access ramp). All other private ramps that are located on the lower Rock River portion are only available for a fee and do not qualify as public access ramps within the meaning of the DNR regulations. Mr. Richardson testified that the Fort Atkinson and Newville ramps are located 7 miles from each other; it would take approximately 30 minutes to travel by boat between them. Mr. Richardson also testified that a land vehicle would have to travel about 20 miles to get from one to the other; it would take about 30 minutes to travel this distance by car.

DNR witnesses asserted that private access facilities might mitigate the inadequacies of the public access facilities at Lake Koshkonong. However, DNR standards for public access specifically prohibit consideration of privately-owned public boating access for meeting the requisite access requirements if any fee is charged for use of such access facilities. *See* Wis. Adm. Code §NR1.91(7). Accordingly, the availability of any private access ramps which charge fees for services located on Lake Koshkonong cannot be used to meet the public access legal requirements.

3. Dredging is not a feasible option for enhancing public access on the lake during low water summer conditions.

Various members of the wetlands association asserted that dredging is a feasible alternative to increasing water levels during the summer months to enhance navigation and public access. However, dredging was not discussed as an available option in the Department's environmental assessment. In addition, Frank Micale provided extensive testimony that dredging was an ineffective option for enhancing public access ramps, such as Vinnie Ha Ha, in the past. He filed supplemental testimony on the ineffective nature of dredging to enhance navigation and public access on Lake Koshkonong. *See* Exhibit 221.

4. The District's requested summer water level would enhance public access.

There is substantial testimony in the record that the District's summer water level request, if granted, would improve public access on Lake Koshkonong. Members of the public such as Mr. & Mrs. Payson as well as Chief Sautin, Frank Micale, and Jerry Richardson all testified about how higher water levels during the summer months consistent with the District's requested levels would enhance public access at the public ramps located on Lake Koshkonong.

F. The District's Proposal Protects Riparian Owners' Rights.

1. The current summer water levels adversely impact virtually all riparian water-related rights for most home owners on the lake.

a. *Pier lengths and navigation rights of water front property owners*

The current low summer water levels have forced riparian owners to drastically lengthen their piers in order to reach adequate navigation levels. Dave Saunders testified at the public hearing that he is a lake resident who is required to have over 200 feet of pier for his 24-foot pontoon boat to reach navigable water. John Sherrer testified that his pier is more than 80 feet long and is still unable to reach navigable water for use of his boat off of his property.

Mr. Samuelson testified that he is putting extensions that run 200-300 feet into the river and boat lifts located 50 yards out in the water ("out in the middle of nowhere") to reach navigable conditions.

William Manthey testified at the public hearing that, when he lowered his pontoon boat into the water from his boat lift last fall, it hit bottom and he needed three other people to get it out; it had to be dragged more than 300 feet from shore before it would float clear.

Carl Rybarczyk testified that water levels during the summer have been too low for the use of his boat for years. He testified that the summer water level is so low that currently he simply stores his boat on his property on dry land, since it is unusable from his property.

Mr. John Meyer testified that he is required to have over 128 feet of pier and still needs to push his pontoon boat off the boat lift located at the end of his pier. He also testified that, even at this distance, low water summer conditions require him to walk his pontoon boat into the water before it is usable.

Finally, Thomas Nolfi, a lake resident, testified that he has a pontoon boat and low water levels conditions require him to go in the water to access his pontoon boat for navigation. He also testified that current summer water conditions create a "mud hole" under the current DNR summer water level order.

b. *Shoreline swimming*

As noted already, many members of the public testified about the difficulties in finding adequate depths for swimming near shore on their

properties. In addition, John Sherrer testified at the public hearing that he is concerned about how far children need to swim from shore to find adequate depth for swimming and the risk that such distances present for encounters with boat traffic.

2. Higher summer water levels would mitigate adverse riparian impacts associated with the DNR's current summer water level order.

Numerous members of the public described the benefits of higher summer water levels associated with the enjoyment of their lake property. Eric Saunder testified about a neighbor who tried to sell his house and didn't have enough water for his property and had to take his property off the market.

John Grimm testified at the public hearing that he sold his house on the lake and bought a house on the river due to higher water conditions associated with the river property. At his previous location on the lake, he testified that low water conditions required him to walk his boat out several hundred yards before it was operational in the lake. He also testified that the summer drawdown also served to end the boating season prematurely as a result of severe prop damage incidents during the lower water conditions associated with the DNR's order during the summer.

Mr. Chip Knilans testified at the hearing that the future of the lake is dependent upon higher summer water levels. He testified that residences and businesses would benefit from higher water conditions on the lake.
Diane Enbendroft testified at the public hearing that the summer water level is so low that she has to push their pontoon boat out into the lake to make it usable.

3. Higher summer water levels would significantly enhance private riparian property values.

As explored more fully in the next section, Mr. Stockham testified at the hearing that higher summer water levels will enhance the value of shoreline footage associated with riparian interests. The collective added monetary value associated with higher water levels for shoreline property values would be in the millions of dollars, according to Professor Kashian's testimony. These increased values should be compared and contrasted with the minimal timber value for the board-feet of lumber estimated to be lost by DNR's witnesses (a present value of approximately $50 according to Ted Pyrek) and the alleged minimal impacts to farm fields, which was the subject of testimony by David Russell, and Mr. Kutz (approximately $1,500) caused by higher summer water conditions associated with the District's requested summer water levels.

4. Higher summer water levels would significantly enhance water-related commercial enterprises.

As indicated in the next section, Professor John Stockham provided extensive testimony the manner in which businesses related to navigation on Lake Koshkonong would be significantly enhanced by increasing summer water levels.

In addition, numerous members of the public testified about the positive impacts for various commercial ventures that would result from higher summer water levels. Eric Samuelson, a former owner of the Lakeland Campground, testified at the public hearing that this facility attracts 300 to 400 families each year to the area as a result of this water resource.

Chad Larson, owner of the Sunset Bar & Grill testified about problems with access to his business for boat traffic on the lake during the low summer water conditions associated with the existing DNR's water level order. He testified that the current low water conditions require a pier that is 300 feet to provide access to boat traffic for his business on the lake. See photos and Exhibit 1035 through 1041.

Norman Stanley, owners of Norm's Hideaway, testified at the public hearing about the adverse impacts of lower water summer conditions to his restaurant business. He testified that he is required to have a pier that is more than 150 feet to get to navigable waters. He also described how he frequently must wave customers off, since he only has 12 feet of pier sufficient to service visiting boats at navigable depths for his business.

Dale Ferguson testified that he has lived on the lake since 1958. He described the fact that there is virtually no lake access to restaurants on the lake due to low water summer conditions.

Chad Larson, owner of the Sunset Bar & Grill, testified about the impact on his business caused by low summer water conditions and the need for piers more than 300 feet long to service recreational boaters visiting his restaurant.

Finally, John Meyer testified that he has to walk his pontoon boat in the water to have access to Norm's Hideaway. He also testified that he has stopped going to the Sunset Bar & Grill because it is virtually inaccessible with his pontoon boat during summer low water conditions under the current DNR order.

G. DNR's Winter Drawdown has Substantial Adverse Impacts on Public Rights Within the Meaning of Wis. Stat. § 31.02.

1. There are substantial recreation and navigation-related impacts caused by the winter drawdown.

There was extensive testimony at the public hearing regarding adverse impacts associated with the winter drawdown under the current DNR's order. Steve Holmes testified at the public hearing that the winter drawdown puts a premature ending to the boating season. He testified that low water conditions associated with the winter drawdown before the ice forms causes impediment to getting boats off of boat lifts and impedes full use of boats to enjoy the late fall colors in the area. Thomas Lipke, a lake resident who loves to fish, testified at the public hearing that the winter drawdown adversely affects fishing on the lake. Chad Larson, owner of the Sunset Bar & Grill and Steve Holmes both testified at the pubic hearing that ice fishing is almost eliminated under the winter drawdown.

2. There are significant aesthetic concerns associated with the winter drawdown.

Charles and Evelyn Payson provided compelling testimony about the significant aesthetic concerns associated with the winter drawdown, supplemented by a power point presentation and pictures depicting the extensive and aesthetically displeasing mud flats generated by the winter drawdown associated with the DNR's order. *See* Exhibits 1061 and 1062.

H. The District's Proposed Order Serves the Public Interest by Reducing Adverse Impacts to Property Values for Homeowners on Lake Koshkonong.

1. The lower water levels associated with the Department's water level order will have adverse impacts on property values.

The economic testimony presented at the hearing indicates that a decrease in the water level of a lake will reduce property values at properties surrounding the lake. In fact, an analysis of property values at Lake Koshkonong indicates that the reduction of water levels associated with the completion of repairs and regular maintenance of the Indianford Dam under the Department's current water level order already has done just that. Conversely, to the extent that the District's water level order will result in maintaining historical water levels, the negative effects on property values resulting from the lowering of the water level associated with the Department's water level will be avoided.

a. *Dr. Kashian*

In his pre-filed direct testimony, Dr. Russell Kashian testified that, based on accepted economic theory, adoption of the District's order would avoid negative impacts to property which would occur as a result of the Department's order and corresponding water level decline. Accepted economic theory indicates that a reduction in the water level of a lake will have several effects that result in negative impacts to property values at the Lake. Dr. Kashian explained each of these effects and the economic literature supporting them. A reduction in water level which results in an increase in the distance from home to shore or a decrease in shoreline length will result in a lowering of the property value. Kashian Pre-Filed Direct Testimony at 9, 11. The reduction in the water level in itself has a direct and negative effect on property values, independent of the effects based on shoreline length and the distance from home to shore. *Id.* at 12. Finally, the public perception that water level is decreasing is also likely to contribute to a decrease in property values regardless of the actual manifestation of the factors described above. *Id.* at 7. Thus, Dr. Kashian concluded, the Department's order and resulting decline in water levels will result in negative impacts to property values. Conversely, Dr. Kashian testified, if the District's proposed water level order does not result in a lowering of the water level, then these adverse impacts will not occur if the District's order is adopted.

Dr. Kashian then verified the accepted economic theory by comparing property values at Lake Koshkonong before and after the completion of repairs to the Indianford Dam and corresponding water level declines. Dr. Kashian submitted a written summary of his analysis at the hearing as Exhibit 225. In that statement, Dr. Kashian testified that in order to determine whether a change in the water level of a lake had an impact on property value, it is necessary to isolate and analyze the demand for the measurable attribute of housing demand that is most closely related to water levels. This is because increases in the demand for other attributes which are unrelated to water levels, such as the square footage of a house, can mask decreases in demand for the attribute that is closely related to water levels. Dr. Kashian further testified that shoreline frontage is the measurable attribute of housing that is most closely related to water levels. Exhibit 225 at 2. Accordingly, Dr. Kashian isolated the demand for shoreline frontage at Lake Koshkonong using hedonic analysis and tracked this demand over time.

Dr. Kashian explained that in order to ensure that a detected change in demand for shoreline frontage is the result of changing water levels at the subject lake (as opposed to a change for shoreline frontage at lakes generally) it is necessary to compare the detected change in demand for shoreline frontage at Lake Koshkonong to the demand for shoreline frontage at another similar lake over the same time period. So, Dr. Kashian also isolated and tracked the demand

for shoreline frontage at Beaver Dam Lake, and compared the trend at Lake Koshkonong to the trend at Beaver Dam Lake. Dr. Kashian concluded as follows:

> "Prior to the dam repair, a foot of shoreline at Lake Koshkonong contributed $222 to the value of a home. During the same period, a foot of shoreline at Beaver Dam Lake contributes $121 to the value of a home on that lake. However, during the period after the completion of repairs to the Indianford Dam, the value of a foot of shoreline on [Lake Koshkonong] rose to $298. While during the same period, the value of a foot of shoreline on [Beaver Dam Lake] rose to $207. In other words, the value of a foot of Shoreline at Lake Koshkonong rose by 35%, while the value of a foot of shoreline on Beaver Dam Lake rose by 71%.
>
> The failure of the properties at Lake Koshkonong to appreciate to the same degree as their counterparts at Beaver Dam Lake has had a significant adverse economic impact to the Lake Koshkonong region. Had the properties on Lake Koshkonong kept pace with their counterparts on Beaver Dam Lake, they would have witnessed an additional inflation adjusted appreciation of $79.41 per foot of shoreline. Given that the average property in this sample has lake frontage of eighty-five feet, the failure to appreciate at Lake Koshkonong translates to a loss of wealth of $6,788.95 per household (or $8,161.68 in current dollars)."[12]

Although the lakewide magnitude of lost property value is not susceptible to precise determination, it is clearly enormous. For example, if we take Dr. Kashian's estimate of $8,161.68 loss of value per household and multiply by the approximately 2200 households around the lake (*see* Exhibit 207 at 22), we arrive at a loss of wealth of almost $18 million since the completion of repairs to the Indianford Dam. It is important to remember, moreover, that this figure only represents the loss of value of lakefront real estate, and does not account for other economic impacts to area businesses described at the hearing. Thus, the overall economic impact of the DNRs current water level order probably would exceed $18 million by a significant but as-yet-indeterminate amount. By comparison, DNR's estimated economic impact resulting from higher water levels was barely over $1500.

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[12] Bracketed text reflects a typographical error in the original exhibit. The names of the lakes were reversed in the original.

Thus, Dr. Kashian, concluded, and the evidence shows that below market returns on real property at Lake Koshkonong are attributable to the completion of the repairs to the Indianford Dam and the corresponding water level decline. Furthermore, market forces would have lead to a higher appreciation of real property values on Lake Koshkonong in the absence of the dam repair and corresponding water level declines. Thus, to the extent that the District's water level order will result in maintaining historical water levels, the negative effects on property values resulting from the lowering of the water level associated with the Department's water level will be avoided.

b. *Mr. Stockham*

At the hearing Mr. John Stockham, expert witness for the petitioners, also testified that a decline in water levels would result in adverse impact to property values. Mr. Stockham pointed out that adverse aesthetic impacts caused by lower water levels would contribute to lower than expected property values. Mr. Stockham also noted that the reduced utility of the lake for recreational purposes and the public perception of all of these impacts will adversely affect property values.

c. *Other Witnesses*

Testimony from many Lake Koshkonong residents during the public portion of the hearing also shows the decrease in demand for lakefront property at Lake Koshkonong during periods of low water. Eric Sander testified to difficulties in marketing houses on the lake during periods of low water. John Grem testified that he left his house on the lake for a house on the river in order to obtain better lake access. Several residents, such as Diane Enbendroft, testified to their dissatisfaction with access at their property during periods of low water. Conversely, both John Meyer and Leonard Muehler testified that increasing water levels during the summer months would raise property values at Lake Koshkonong.

2. The testimony of Mr. Duesterbeck on real estate values was discredited at the hearing.

During the hearing, the LKWA's witness Linn Duesterbeck attempted to refute Dr. Kashian's analysis by comparing the "average annual appreciation" at Lake Koshkonong to the same figure at Beaver Dam Lake, using only data related to properties at these lakes that were sold then subsequently re-sold. Dr. Kashian, in a statement submitted at the hearing, testified that Mr. Duesterbeck's analysis is inadequate for several reasons. Exhibit 226. First, Dr. Kashian explained, Mr. Duesterbeck's analysis is inadequate because he failed to separate the value of

lake frontage from the total value of the properties cited in his analysis. Dr. Kashian explained:

> "The problem with using the price of the entire property in determining whether declines in the lake level had an effect on property value, is that the price of the entire property represents the buyers' valuation of all of the attributes of the house as a whole. However, not all of the attributes of the property are related to the water level. For instance, the valuation of the entire property includes the buyers' valuation of the lot, bedrooms, bathrooms, school district and whether the front door was painted red. None of these attributes of the total real estate value are connected to the water level of the lake, but they are all included in the sale price of the property. Thus, using a proxy such as sale price, which includes the valuation of all of these attributes, skews the picture of the effect that the lowering of the lake level had."

Exhibit 226 at 3. Mr. Duesterbeck's analysis also is inadequate, Dr. Kashian explained, because he failed to control for historical demand at the Lake Koshkonong and Beaver Dam. Simply comparing demand for shoreline frontage at Lake Koshkonong to the demand for shoreline frontage at another lake that did not experience a similar water level decline is inadequate, Dr. Kashian testified, because any change (or absence of change) indicated by this approach could be the result of other differences between the two lakes. *Id.* at 4.

Dr. Kashian also pointed out several other failures in Mr. Duesterbeck's analysis relating to his exclusive use of properties that were sold and re-sold. First, these properties have a tendency to be either "lemons" or "passion fruit." "Accepted practice," Dr. Kashian testified, "would be to eliminate these properties from the study because they don't represent the relevant focus population for one reason or another. However, rather than eliminating these properties from the study, Mr. Duesterbeck focused on them exclusively." Second, Mr. Duesterbeck's set was simply too small to draw any meaningful conclusions. Third, Mr. Duesterbeck excluded important sets that he should have analyzed, such as new homes. Finally, Mr. Duesterbeck's sample was hand selected to support his desired outcome. He selectively eliminated properties that were sold and resold, but which would have shown declining property values at Lake Koshkonong. *Id.* at 5.

I. Higher Water Levels Will Significantly Affect Lake-Dependent Commercial and Recreational Activity, Both On and Off the Lake.

Evidence presented at the hearing demonstrates the District's proposed water level also would avoid significant negative impacts on commercial activities in the Lake Koshkonong area that would result from lower water levels. This proposition is supported by well accepted economic doctrine as well as practical analysis of economic conditions at Lake Koshkonong.

1. Dr. Kashian

For example, in his Pre-filed Direct Testimony at pp. 14-15, Dr. Kashian testified that, "The decrease in water level has a negative impact on the economic activity in adjoining communities." Dr. Kashian based his expert opinion on various studies that use input output analysis to examine the impact changing the water level has on the local community. A comparative study of the Santeetlah Reservoir (2002) determined that drawing down this reservoir by one foot resulted in a loss of total value to the reservoir resident of 3.3% and a loss to the visitor of 9.1%. *Id*. A study entitled, "Economic Effects of TVA Lake Management policy in East Tennessee" (2003), determined that a delay of the drawdown from the beginning of September to the end of September produced an increased per person expenditure of between 10.6% and 15.7%. Finally, Dr. Kashian has personally analyzed the impact Delavan Lake has had on the surrounding economy, and determined that the economy of the communities surrounding Delevan Lake is directly related to the Lake itself. Based on accepted economic theory as well as his own first hand research, Dr. Kashian testified that a decline in water level will have a negative impact on the economies of the surrounding communities.

2. Mr. Stockham

Later in the hearing Mr. Stockham explained the mechanics by which a decline in water level might affect local economies. Many businesses surrounding lakes such as Lake Koshkonong are dependent on recreational users and boating traffic as a customer base; lowering the water level does several things to reduce recreational use boat traffic that would provide a customer base to these businesses. First, adverse impacts to navigation, access and aesthetic quality generally will reduce the number of visitors even attempting to access the lake. Mr. Stockham testified that this is the result of diminished public perception of the lake as an attractive recreation resource. Second, since lower water levels will reduce the utility of piers and trailerable boat access points, many residents as well as visitors will be prevented from accessing the lake. Third, of those waterbound recreational users that do visit the lake and manage to access the water, lower water levels make it more difficult for them to patronize these businesses. In other words, once on the water, boaters will have a difficult time making their way to destinations such as supper clubs.

Mr. Stockham also testified that this analysis should not be limited to businesses that rely exclusively on recreational users of the lake. Indeed, business located as far as four or five miles from the lake are likely to rely on recreational lake visitors for some portion of their customer base. Moreover, these business likely drive other business such that a reduction of activity at a business that relies on recreational lake users, such as a boat repair shop, will likely result in a reduction of business activity at another business, such as a propeller replacement supplier.

With regard to Lake Koshkonong in particular, a 1999 study entitled "Assessing Potential Economic and Ecological Impacts of Removing the Indianford Dam" conducted by the Center for Community Economic Development at the UW-Extension determined that altering the water level of Lake Koshkonong will adversely affect property values and economic development. This study determined that a dramatic reduction in lake levels had the potential to cause a decline of $9 million in gross sales that support an estimated 150 total jobs in the real estate and service sector businesses. The study further concluded that local retail businesses would witness a decline of $5.25 million in gross retail sales that support an estimated 200 total jobs.

The conclusions of this study were corroborated by Mr. Stockham. The recreation industry is particularly important to the economy in the area surrounding Lake Koshkonong, and Lake Koshkonong's recreation industry is particularly susceptible to a reduction in the water level of the Lake. At the hearing, Mr. Stockham identified a significant number of recreation related business that are likely to be susceptible to the effects described above. Mr. Stockham identified several marinas, lakefront supper clubs such as Kepmer's Lamp, motor boat repair shops, and lakefront campgrounds such as the Hidden Valley Campground which are likely to be dependent on recreational users and boating traffic as a customer base. Mr. Stockham also identified a list of businesses which demonstrated their commercial interest in boat traffic and recreational lake use by advertising to the boating public and supporting the RRKA's efforts in enhancing the navigability of the lake.

Mr. Stockham also identified several businesses outside of the area immediately surrounding Lake Koshkonong which are likely to be affected by the reduction of water levels over time, such as lodging facilities in Edgerton and Milton and the Ace Hardware in Ft. Atkinson. Finally, Mr. Stockham testified that the sale of boating related goods is a substantial component of the economy in the area, and that this component is likely to be impacted by the reduction in boating that will correspond to the decline in water levels.

3. Other Testimony

Dr. Kashian's and Mr. Stockham's expert analyses of the importance of the recreation industry to the local economy and the susceptibility of this industry to water level declines was corroborated by extensive public testimony from local business owners who are concerned about the impact of reduced water levels on their livelihood. For example, Eric Samuelson, former owner of the Lakeland Campground, testified at the public hearing to the importance of the recreation industry to the local economy, noting that this facility attracts 300 to 400 families each year to the area. Peter Hansen, Wisconsin Restaurant Association, testified at the public hearing about the economic benefit to the community's economy associated with the 12 eating establishments on the lake that can be used by the motoring public on the lake. He further testified that there are 50 eating establishment in the local area.

Numerous other witnesses testified to the susceptibility of local recreation related business to declines in water levels. Chad Larsen, owner of the Sunset Bar and Grill testified about problems with access to his business for boat traffic on the Lake during the low summer water conditions under the existing water level order; according to Mr. Larsen, the current low water conditions require a pier that is 300 feet to provide access to boat traffic for his business on the lake. See photos in exhibits. nos. 1035 through 1041. Norman Stanley, owner of Norm's Hideaway, testified at the public hearing about the adverse impacts of low water summer conditions to his restaurant business; he is required to have a pier that is more than 150 feet to get to navigable water and has to waive customers off since he only has 12 feet of pier sufficient to service visiting boats at navigable depths for his business. Chico Pope, owner of Buckhorn Supper Club located on the lake, testified at the public that his restaurant caters to the campground and other water related users who have trouble accessing his business by water; his pier now needs to be 300 feet long. See photos at exhibit 1002. He further testified that 7.2 inches of more water during the summer would be helpful to his business.

In addition to business owners, the patrons of these establishments also verified the vulnerability of these businesses to low water conditions. Dale Ferguson, who has lived on the lake since 1958, testified that he has no access to restaurants on the lake due to low water conditions. Mr. John Mayer testified that he has to walk his pontoon boat to have access to Norms Hideaway, and has stopped going to the Sunset Bar and Grill altogether because it is inaccessible with his pontoon boat. Leonard Muehler, Town supervisor for Town of Sumner, and lake resident testified about the difficulties of motorized boats of normal draft to access Norm's Hideaway and Sunset Resort. According to Mr. Muehler, only pontoon boats can access these recreational/entertainment facilities given the low water conditions on the lake

J. The District's Proposed Water Level Order Will Serve the Public Interest by Generating Public Revenues.

The evidence presented in the hearing in this matter also demonstrates that the effects of the Department's water level order on area property values will result in a loss of tax base and loss of tax revenues for local units of government and school districts.

In his Pre-Filed Direct Testimony, Mr. Stockham provided expert testimony on the relationship between declining property values and tax revenues:

> Tax revenues received by local governments are based primarily on real estate assessments, which are in turn based on real estate sales data. If assessments in an area decline relative to the surrounding area, the tax revenues received by local governments will be less than they would have been without the drop in assessment values…

The implications of lower lakefront property values is self-evident. As Mr. Stockham explains:

> Lower assessments of lakefront properties would likely have an adverse financial impact on all taxing jurisdictions in the area, which include local units of government, school districts, vocational and technical school districts, and the respective counties…
>
> The governmental functions of most local governments and school districts in Wisconsin are financed through property taxes. While there are a variety of State aids and shared-revenues, property taxes are the major revenue source for local government, schools districts and vocational and technical schools. Generally, a loss of tax base means either that government services and functions are reduced or property tax rates are raised with the result that other taxpayers would, in effect, need to make up for the loss of tax revenues from the properties that would be adversely impacted through payment of higher taxes. Thus, all of the taxpayers, including both lakefront and non-lakefront property owners, have a stake in maintaining property values for lakefront properties.

Stockham Pre-Filed Direct Testimony at 14.

As Mr. Stockham summarized, the relationship between lower water levels and widespread harm to the community is direct and undesirable:

> Any action that has the effect of lowering water levels would adversely impact the public interest in a variety of ways. First, as I

> have mentioned above, physical access to the lake and shoreline would likely be adversely impacted for owners of private property along portions of lakeshore, particularly where there are shallow conditions near shore. Second, public assess via public lands and boat landings, as shown on Exhibit 205, would potentially be adversely impacted by lower water levels. Third, navigability would likely be impacted by reductions in the usable surface waters and by increasing safety hazards posed by submerged obstacles such as rocks and stumps which would be nearer to the surface as a result of the lower water levels. Finally, there are a broad range of economic consequences of lowering water levels that would have a direct impact on lakefront real estate, but would ultimately adversely impact the entire area due to loss of tax base and loss of tax revenues going to local units of government and school districts….
>
> In my professional opinion, any order that would have the affect of decreasing water levels would adversely impact public interest with respect to water access by both individual lakefront property owners, area residents, and the visiting public. In addition, a decrease in water levels would likely have an adverse impact on the tax base of the surrounding area resulting in impacts on local governmental and school districts. Ultimately owners of both lakefront and non-lakefront property owners would likely be impacted by incrementally higher tax rates to compensate for loss of tax revenues from impacted lakefront properties.

Stockham Pre-Filed Direct Testimony at 16, 17.

CONCLUSION

A river is many things to many people. As Justice Holmes wisely observed, "a river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed . . . ." *New Jersey v. New York, 283 U.S. 336, 342 (1931).* Wisconsin law recognizes many interests served by public waters, from boating, swimming and hunting to economic development and hydropower production. The placement of a dam works a great change in a flowing river. Its management can affect the characteristics and utility of both the stream itself and the riparian lands through which it flows. For this reason, a fair rationing of the treasure is needed.

The Legislature has specified which of the many consequences of managing impounded waters must be reckoned in a water level order, and it has not granted DNR unbridled authority to act in accord with the preferences of the individuals currently holding agency staff positions.

The record in this water level proceeding convincingly demonstrates that DNR placed an emphasis on the interests of a small group of private hunting clubs and their members, supported by the intellectual interests of agency staff seeking to change both public uses of Lake Koshkonong and public perceptions of the values of shallow lakes. The imbalance in the Department's assessment of the real-world impacts of its proposed order was vividly shown by the public participation in this hearing. Over three days of public testimony, dozens of witnesses testified in support of the RKLD proposal and against DNR's proposed order. This testimony came from the direct experience of real people who live and work and play on and near Lake Koshkonong. Public witnesses personally observed the widespread fish and invertebrate mortality that had accompanied a "successful" winter drawdown. They actually use (or try to use) the boat launches intended to provide navigational access to Lake Koshkonong, but are frequently forced to travel great distances to the more useable Rock River launch sites. Public witnesses expressed wonder that DNR should pay so little heed to the hazards facing swimmers, the interference with boating accident rescues and the navigational impediments posed by outrageous pier lengths and remote, detached boat lifts. The public testimony in support of DNR's order was (like the expert phase of the proceedings) dominated by private hunting club members, individual wetland owners and representatives of advocacy organizations recruited by them.

Like it or not, real consequences would flow from the adoption of DNR's proposed order, particularly since the Indianford Dam's operational capacity has finally been restored. Even without a change in the maximum or minimum water levels, the water levels of Lake Koshkonong will fall even further. This will benefit wetland hunting clubs by ensuring that their private preserves will remain inaccessible to the public. It may provide an opportunity for further academic research on shallow lakes ecology. But it will only exacerbate the conditions that have engendered widespread public skepticism about the Department's commitment to fairly assess and balance the impact of its water level orders on all of the interests protect by the law.

For its part, DNR has scarcely deigned to address many of the issues considered most critical by the public and the Legislature (including navigation, public access and safety) and has wrongly declared other protected interests (property values and regional economic health) beyond the scope of its concern.

These interests are very real to those who call Lake Koshkonong home and those who regularly visit the lake community. They do not wish to surrender the place they love to be used as a laboratory for agency staff to observe trends that may possibly develop over decades or centuries of low summer water levels, despite the powerful scouring effect of seasonal Rock River floods.

The people of the Lake, represented by the Rock Koshkonong Lake District, the Rock River Recreation Association and the Lake Koshkonong Association ask only this: that the ALJ acknowledge that their concern for navigation, public safety and the economic vitality of Lake Koshkonong and accord those values due consideration along with the interests of the wetland clubs and their supporters among DNR staff and advocacy groups.

The RKLD order was carefully designed to increase water levels a critical few inches during the low water season, without causing the inundation of land above (or even near) the OHWM and without any significant injury to wetlands or private hunting preserves. We urge the ALJ to consider the evidence germane to the full scope of interests the Legislature has identified for consideration in a water level proceeding and to issue an order that optimizes conditions for all the lake's users.

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Respectfully submitted,

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