

October 22, 2021

**Via E-mail and U.S. Mail**

Mr. John Peterson  
Executive Director, Winnetka Park District  
540 Hibbard Road  
Winnetka, Illinois 60093

Re: Breakwall Risk Management

Dear John:

Thank you for hosting me recently at Winnetka Park District's Lloyd Beach, Elder Lane Beach, and Centennial Beach as part of PDRMA's on-going discussions regarding the beaches and ways to safely manage beach erosion disrupting the Winnetka Park District's shoreline recreation programming. We understand that the Park District is presently in the process of combining the beaches at Elder and Centennial into a single continuous beach ("Elder-Centennial Beach") and is presently in the design/permit phase of an erosion mitigation project at Elder-Centennial Beach. In connection with that project you have asked me to evaluate the design from a risk management perspective. Based on my review of the site and the plans current as of the date of this letter, I find that the Elder-Centennial Beach Project contains important and meaningful safety features.

**Background**

As background, the proposed breakwater barrier shown in the current design of the Elder-Centennial Beach project will provide substantial benefits to the Park District, including improved safety for beach users and protection of the Park District's beach asset, through mitigation of beach and shoreline erosion, and beach enhancement for community users of the beaches and water areas. The Breakwater was part of the Park District's Winnetka Waterfront 2030 Plan Master Plan, adopted in 2016. An example of the benefits of the breakwall can be shown by comparing photos of the Park District's Lloyd Beach before and after completion of its extensive erosion mitigation project in 2020. (*Compare 2019 Lloyd Beach at **Photo A** with 2021 Lloyd Beach at **Photo B***).

**Lloyd Beach**

To address severe erosion and other issues at Lloyd Beach, the Park District designed and constructed large breakwalls using Armor Stone (large boulders) that extend into Lake Michigan 250 feet from the toe of the bluff to the most eastern placed stone, and well above the surface at current water levels. The Lloyd Beach breakwater design includes a variety of features intended to reduce risks to beach users and the general public, including (but not limited to) clear signage instructing individuals in word and picture not to climb the rocks. (**Photo C**) The Park District also regularly inspects the site and employs beach attendants and lifeguards to actively manage general use patrons

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and organized user groups. The Park District clearly delineates what activities can and cannot be performed in the beach area, which, in the case of Lloyd Beach, is limited to walking on the shoreline and the use of the beach and water for boating activity. Lloyd Beach is not a swimming beach.

Notwithstanding those efforts, we understand there have been incidents in which patrons visiting Lloyd Beach climb onto the rock-constructed breakwalls, either by disregarding the signage on the base of the breakwall arm, or by accessing the breakwall from the water when on boats or when swimming in violation of clearly posted rules. The risks created by the rock breakwaters include most notably a drop-off from heights exceeding four to six feet in certain locations, depending on a variety of factors, as well as potentially uneven, slippery footing conditions, and wave forces. On land, the drop-off is steeper on the southern side of the breakwall because of the accumulation of sand due to littoral drift on the northern side. (Compare northern side of Lloyd breakwall at **Photo D** with southern side of breakwall at **Photo E**). While patrons should not be on the breakwall in the first place, the reality is that if patrons disregard the safety steps already taken by the Park District to discourage access onto the breakwall, a risk of injury exists. The Park District understandably wants to take steps to avoid such injuries, even to those who are not intended, permitted users of the property.

As such, the Elder-Centennial Beach project design attempts to further improve the breakwater's safety characteristics over the Lloyd design, based on the problems encountered at Lloyd after completion of the Lloyd project. We have assessed the Park District's Elder-Centennial breakwater design plans, current as of the date of this letter, and believe the breakwater design at Elder-Centennial Beach is an improvement over the Lloyd design, due in part to its inclusion of barriers at drop-offs and enhanced deterrence against patrons attempting to climb breakwall rocks from the beach or water. Notably, Elder-Centennial Beach will feature a swimming beach, which may allow easier access to the breakwalls from the water, which is one (among many) considerations in deciding what steps may help further deter such unauthorized access. The groin extensions in the Elder-Centennial Beach project plans will provide benefits comparable to those contained in suggestions 1 and 2 below.

We have assembled a list of potential mitigation measures that could be employed – either singly or in combination, and whether retroactively at Lloyd Beach and/or in the future at other shoreline sites, including Elder-Centennial Beach. Obviously, the appropriate mitigation measures for each beach may vary depending on a host of circumstances (e.g., authorized beach use, supervised vs. unsupervised usage, geography and topography, unique design/erosion concerns, littoral drift, etc.). There is no “one size fits all” solution to any beach along Lake Michigan, even among beaches owned or operated by a single local public entity. Further, PDRMA has not evaluated the financial implications applicable to each of the following options, which may change considerably depending on the factors unique to each beach location along Lake Michigan and each local public entity that owns land along Lake Michigan.

PDRMA ideas include:

1. **Install Fencing to Keep Patrons off the Breakwalls.** This step, which is a suggested enhancement to the Elder–Centennial Beach breakwater design and which could perhaps be retroactively fitted to Lloyd Beach, would have the substantial benefit of physically deterring patrons from climbing out on the rocks of the breakwall and avoiding the drop-offs. Of course, like all fences, for a patron intent on getting past the safety device, a fence can be climbed. However, fencing would deter access, enhance non-intended/non-permitted user status for those who attempt to climb it, and increase willful and wanton defenses in litigation. Further, it would act as a clear visual indication of the information the signage conveys, which is that climbing onto the breakwalls is not permitted.
2. **Install a Groin Extension System to Keep Patrons off the Breakwalls:** This measure would provide the same benefits as fencing (above) but with the added benefit of being difficult to climb onto in the first place and, thus, further reducing fall hazard. Given their height and design, the groin extensions will be more difficult to climb or jump over versus other fence designs (chain link fence, cable cords, etc.), and they can be extended further onto the breakwall, thereby addressing hazards created by patrons accessing the breakwall from the beach and from the lake.

The risk of climbers on the breakwall will be more pronounced at beaches where swimmers are in the water (Elder-Centennial) than at beaches where only boating is allowed (Lloyd), though the problem could occur at either type of beach. Depending on their design, coloring, etc., groin extensions also may increase visibility for those providing swimmer supervision (whether by Park District lifeguards at bathing beaches or by parents/family members onshore for unguarded bathing beaches).

Thus, we believe the groin extensions could improve safety and reduce the Park District's risk, by reducing fall risk, enhancing intended/non-permitted user status, making it physically more difficult to breach the breakwall, and helping lifeguards and others (parents, etc.) to monitor swim activities.

3. **Additional Signage: Installation of additional signage, particularly farther along the breakwall and on the beach itself.** Right now, the signage understandably appears at the most likely access point to the breakwall at Lloyd beach, i.e., the base of the breakwall. However, signage in areas further along the breakwall and/or along the beach could also assist in communicating the expectations to patrons. This step is expected to have the benefit of notifying patrons of the risks/requirements before the patrons venture near the drop-offs. Additional signage will also be helpful in those instances where patrons try to climb onto the breakwall from the water or the shore. This step could be used at both locations.

4. **Website Warnings: Reinforcing signage on the Park District's website.** Currently, the Park District's website discusses the uses of the Park District's various beaches (e.g., designations as swimming beach, boating beach, dog beach, etc.). However, to our knowledge, the website does not discuss restricted access on the breakwalls. Adding website warnings could be beneficial both for discouraging access, as well as enhancing non-intended/non-permitted user defenses in litigation.
5. **Adoption of Ordinance:** Board of Park Commissioners' adoption of an ordinance declaring the purpose of the breakwalls and ordering patrons to not access them in violation of signage. This has similar benefits to the website warning option, but with the added benefit that an ordinance will create a stronger non-intended/non-permitted user defense.

As always, each of these potential changes should be weighed against any potential negative impacts from adopting them.

Please do not hesitate to contact me or the Park District's assigned Risk Management Consultant for any additional questions or if you want to discuss specific or additional options. We appreciate the Park District's efforts on the important topic of patron safety and asset protection.

Very truly yours,



Sara P. Yager  
General Counsel  
Park District Risk Management Agency

cc: Steven B. Adams, Counsel for Winnetka Park District (via e-mail)

**Photo A**



**Photo B**





**Photo C**



**Photo D**



**Photo E**

