

June 20, 2018

Gregg J. Corbo
gcorbo@k-plaw.com

Hon. Janet Reinhart and
Members of the Board of Selectmen
Wellfleet Town Hall
300 Main Street
Wellfleet, MA 02667

Re: Herring River Restoration – Phase 1
Potential Liabilities

Dear Members of the Board of Selectmen:

I am writing to follow-up on my June 23, 2014 opinion regarding the Town's potential for exposure to liability in connection with the Herring River Restoration Project (the "Project"). Specifically, based on project specifications and studies done at that time, I opined that the Project might expose "the Town to significant financial liability." Since that time, however, the scope of the Project has been more well-defined and new studies concerning its potential impacts on private properties have been conducted. In light of this new information, you have asked that I revisit the issue and provide an opinion regarding the Town's potential for exposure in connection with Phase 1 of the Project.

In my opinion, based on the scope of work currently being proposed for Phase 1 of the Project, and the anticipated effects of that work on private properties as set forth in recent studies, it is my opinion that the steps taken by the Project Proponents have greatly reduced the likelihood that the Town will face significant financial liability.

The Towns of Wellfleet and Truro, and the Cape Cod National Sea Shore have been working together with numerous Federal, State and local agencies (hereinafter referred to as the "Project Proponents") to study, design and implement a project to restore native flow to the Herring River estuary. Phase 1 of the Project is currently in the permitting stage. Based on information you have provided, it is my understanding that the restoration of tidal flow as a result of Phase 1 work will impact approximately 566 acres of land, with 95% (531 acres) of that land lying within the boundaries of the Cape Cod National Sea Shore and the remaining 5% (31 acres) comprising privately owned land. Of the 31 acres of privately-owned land to be affected, 10 acres are owned by the Chequessett Yacht and Country Club and 8.7 acres are owned by the Wellfleet Conservation Trust. The remaining 12.3 acres, accounting for 2% of the restoration area, are on portions of 17 residential parcels. It is my understanding, however, that in most cases, the portions of the parcels that will be affected by the Phase 1 work are already comprised of non-buildable wetlands, and that the impacts will be limited to changing vegetation from fresh water to salt-water tolerant species. It is my further understanding that the restoration of tidal flow on these properties will not affect any structures and will not change flood insurance requirements. For other properties for which the



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project is expected to have greater impacts, the Project Proponents have been in negotiations with the property owners to provide mutually agreeable mitigation plans.

These potential impacts are based on models which may or may not be able to accurately predict the full impact of the Project. To account for this uncertainty, tide gate openings have been designed so that they can be reduced at any time and water levels will be constantly monitored to ensure the protection of private properties. Moreover, any proposed future increases in water levels beyond those approved in permits for Phase 1 would require permit amendments or new permits, with full regulatory review and opportunities for public input. Therefore, although the full impact of the Project may not be known at this time, it appears that significant measures have been proposed to minimize adverse effects on private property rights.

As with any other public project which implicates private property rights, this Project may expose the Town to some risk of liability. It appears, however, that the Project Proponents have taken steps to minimize that risk by narrowing the scope of the Project, by building in adaptive management measures and by mitigating impacts to private property owners. In fact, it is my understanding that the Project Proponents have been negotiating with some of the affected property owners to provide mitigation and flood protection plans. In my opinion, agreements with affected property owners can be an effective tool to minimize the Town's financial risk.

While other affected property owners may still assert claims based on the restoration of tidal flow to the area, any such claim will have to be based on a showing that the claimant suffered damages as a result of the action complained of. For example, if an affected property owner were to claim that the Project resulted in a taking of their property, they would have to show that the Project resulted in a permanent physical intrusion on or outright acquisition of their property for public use, Blair v. Department of Conservation and Recreation, 457 Mass. 634, 639 (2010), and that, as a result of the impacts of the Project, their property is worth less than it was before. Kane v. Town of Hudson, 7 Mass.App.Ct. 556, 559 (1979). In this matter, the Project Proponents have gone to great lengths to minimize damage to private property by designing the Project so that the impacts are experienced primarily on portions of private property that already comprise non-buildable wetlands. In my opinion, it is unlikely that the conversion of property from one type of non-buildable wetland to another type of non-buildable wetland will have a significant impact on property values. Therefore, based on the measures taken by the Project Proponents to minimize the impacts of the Project on private property rights, it is my opinion that the Phase 1 work will not expose the Town to a risk of significant financial liability.

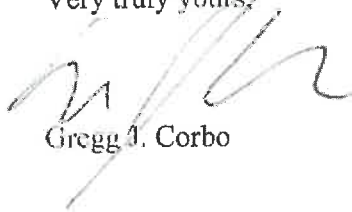
Notwithstanding the foregoing, please be advised that because this opinion is based on the anticipated effects of a circumstance that has not yet occurred, the Town's eventual liability may be different than described herein. Therefore, as with any other project that may affect private property

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rights, I suggest that you factor the potential for liability into your decision-making process, and I can discuss these issues with you in greater detail if you please.

Thank you for your attention to this matter and please do not hesitate to contact me if there are any further questions in this regard.

Very truly yours,



Gregg J. Corbo

GJC/caa



Herring River Restoration Committee

Wellfleet/Truro, MA

To: Herring River Executive Council
From: Herring River Restoration Committee
Date: February 15, 2018, Revised May 22, 2018
Re: Risk Management for the Herring River Restoration Project

The Herring River Restoration Project (Project) represents a unique opportunity to restore a native Cape Cod salt marsh system and reclaim vast ecological and economic benefits provided by a healthy estuary.

The Project has evolved over more than a decade of careful study and community dialogue, including completion of a comprehensive environmental impact assessment. The Final Environmental Impact Statement/Report (FEIS/R) for the Project, reviewed and approved by Federal agencies and the MA Executive Office of Energy and Environmental Affairs in 2016, incorporates detailed assessment of impacts to environmental, cultural and social factors. This assessment provides the basis for the conservative Project design and implementation approach that maximizes the broad public benefits of restoration while minimizing risks of negative impacts. As described in more detail below:

- A very small portion of the Phase 1 restoration area involves any potential for liability at all. Ninety-five percent of the restoration area in Phase 1 is on land owned by the Cape Cod National Seashore; only two percent is on private residential parcels. All of this land is currently regulated wetlands;
- The Project protects all low-lying public and private structures in the floodplain;
- Wetland and other regulations applicable to the Project allow regulators to approve restoration of tidal hydrology while protecting all structures from flood impacts;
- The Project's proposed changes in hydrology and tidal flow on private property and/or changes in vegetation due to increased salinity resulting from restoration do not constitute a plausible claim for compensatory damages;
- Existing conditions in the estuary involve risk and potential costs to the taxpayers.

Recent letters and email communications circulated by a group called the Herring River Concerned Citizens (Concerned Citizens) have raised claims that the Project is not adequately addressing what the group perceives as significant risks associated with the Project. On February 9th, the Herring River Restoration Committee voted unanimously to send this memorandum to the Herring River Executive Council in order to 1) describe the comprehensive and evidence-based process used by the Project to maximize restoration benefits and guard against unintended impacts to property and natural resources; and

2) respond to specific questions and assertions about project-related risk circulated by the Concerned Citizens.

[1] First, it is important to put the issue of risk into proper context. No project is completely risk-free. There are countless examples of public projects designed to provide broad community benefits such as bridges, dam removals, water and sewer installations, and harbor dredging that carry some degree of risk. In each of these cases, it is incumbent on the project proponents to identify and evaluate the risks that can be reasonably associated with the undertaking, and then to design and implement the project in a manner that minimizes and reasonably manages anticipated risks. Effective risk management must be based on facts and evidence.

[2] The Herring River Restoration Project is taking a serious, comprehensive and evidence-based approach to assessing and mitigating the risks associated with the restoration of tidal flow to the Herring River floodplain. Risk of unintended impacts to public or private structures, infrastructure, natural or cultural resources, and other socioeconomic interests have been identified and carefully evaluated in the approved FEIS/R. As noted above, the FEIS/R incorporates detailed assessment of impacts to environmental, cultural, and social factors, including potential impacts to low-lying roads and properties, views, and shellfish resources, among others. This evaluation of impacts is based on high-accuracy topographical surveys, engineering studies, state-of-the-art monitoring and hydrodynamic modeling, input from national scientific experts, and extensive public and stakeholder engagement. As the Project design has evolved, impact assessments have continued to be refined through ongoing study.

[3] Based on this assessment, significant risk management measures and liability protections have been incorporated directly into the Project's design, operations plans, and governance structure, all of which have been widely and openly discussed to date and will be thoroughly detailed and scrutinized during the Phase 1 permitting process. Environmental permits for Phase 1 will require compliance with an array of Project construction and implementation measures and conditions that will maximize restoration benefits and minimize the risk of adverse effects.

The Project's conservative approach to design and implementation incorporates the following five features:

1. New bridge at Chequessett Neck Road (CNR) will be designed with tide gates to gradually increase tidal range;
2. Additional dikes and tide gates will be installed at Mill Creek and Pole Dike Creek to provide secondary flood protection;
3. Property-specific measures will be installed to prevent impacts to public or private structures from restored tidal flow;
4. High-level oversight of operations and maintenance of new structures will be put in place, with policy and decision-making residing at the community level;
5. As restoration occurs and healthy tidal marsh is restored, the long-term resiliency and flood control function of the coastal floodplain will be enhanced.

Project phasing further limits the potential risk of adverse impacts. During Phase 1, tide gates at CNR bridge and Mill Creek dike will be configured to allow partial tidal flow into the Herring River and Mill Creek up to a maximum water level specified for each respective basin. The Pole Dike Road river crossing will be equipped with a tide gate that allows (outgoing) drainage while preventing any tidal flow from entering Upper Pole Dike Creek. Maximum water levels in all areas of the estuary affected by Phase 1 tidal restoration will be kept below elevations that could impact any structures that are not protected by Phase 1 flood protection measures.

Tidal flow will be restored in specified increments over a number of years through the new CNR and Mill Creek tide gates while the system responses are carefully monitored. The tide gate openings can be reduced at any time if system conditions warrant.

Any proposed future increases in water levels beyond those approved in permits for Phase 1 would require permit amendments or new permits—with full regulatory review and opportunities for public input—as well as agreements with property owners for any necessary flood protection measures.

[4] The effects of Phase 1 tidal restoration are far more limited than has been implied by the Concerned Citizens. All public and private property that will experience tidal restoration under Phase 1 is currently regulated wetlands. Ninety-five percent (535 acres) of the Phase 1 restoration area is owned by the Cape Cod National Seashore. The remaining 5% (31 acres) of the Phase 1 restoration area is privately owned wetland that would experience hydrologic changes (e.g., existing freshwater wetland reverts back to saltwater wetland). Of these 31 acres, 10 are owned by the Chequessett Yacht and Country Club and 8.7 acres are owned by the Wellfleet Conservation Trust. The Project team is working cooperatively with each of these property owners. The remaining 12.3 acres, accounting for 2% of the restoration area, are on portions of 17 residential parcels. Restoration of tidal flow on these properties will not affect any structure (see [5] below) and will not change flood insurance requirements. The extent to which vegetation will change from fresh water to salt-tolerant species within the Phase 1 restoration area will depend on the land elevation and water salinity in any given location. The Project will offer vegetation management services to affected property owners to accelerate the transition to tidal wetlands by removing trees or shrubs from the restoration area on their land.

[5] The Project protects all low-lying public and private structures in the floodplain. The Project has identified five private properties as having structures that may require flood protection measures under Phase 1 restoration: Chequessett Yacht and Country Club (which has entered into a conceptual agreement for flood protection); one property owner currently in negotiations with the Cape Cod National Seashore for a land exchange; and three other property owners with structures that may require flood protection measures. The Project team has engaged these three owners with the goal to develop mutually agreeable flood protection plans for their structures. Two of these property owners indicated that they would not consent to having onsite flood protection measures proposed for their respective properties described in permit applications. As a result, alternative flood protection measures are being incorporated into the project design

that fully protect structures on these two properties and do not require work to be performed on the properties. A third owner has consented to having flood protection measures on their property described in permit applications. The measures, if agreed to, would be funded by the Project and be completed prior to a change in water level that could affect those properties. The flood protection measures will be the subject of a written legal agreement between the property owner and the Town of Wellfleet, as Project proponent.

[6] Wetland and other regulations applicable to the Project allow regulators to approve restoration of tidal hydrology while protecting all structures from flood impacts. The Project is seeking permits under the MA Wetlands Protection Act (WPA) regulations. These and other applicable regulations protect wetlands and the important public interests they serve, including clean water, protection from storm damage, and provision of fisheries, shellfish, and wildlife habitat. For example, the WPA Ecological Restoration Limited Project provisions explicitly allow approval of tidal restoration projects while also ensuring that the “built environment”, including structures and infrastructure, is not impacted by significant increases to flooding and storm damage. In the case of the Herring River, where the estuary and the public interests it supports have become so severely degraded over the past century, the WPA allows regulators to approve the return of tidal flow to revive the damaged river and its wetlands, so long as the proposed work complies with applicable WPA provisions.

[7] The Project’s proposed changes in hydrology and tidal flow on private property, and/or changes in vegetation due to increased salinity resulting from restoration, do not constitute a plausible claim for compensatory damages. The current tidally restricted environment of the Herring River is an artificial condition created by the installation of the CNR dike. Historic tidelands upstream of the dike are still subject to public trust rights and multiple federal, state, and local laws that greatly restrict land use in order to protect public interests. So long as no structures are affected, restoration of healthy tidal wetlands, including restoring freshwater wetlands to saltwater wetlands on private property, does not constitute grounds that would support a claim for compensatory damages. Although some property owners and their counsel may seek to make such claims, the implausibility of such claims, combined with the small number of properties involved, limits the Town’s liability.

[8] All road segments within the Phase 1 restoration area will be raised above maximum restored water levels prior to the restoration of tidal flow that could affect them. Road Improvements will be coordinated with Police, Fire and Departments of Public Works. A temporary traffic bypass will allow traffic/pedestrian/bicycle flow across the CNR bridge throughout construction. The Project will improve low-lying portions of Pole Dike, High Toss, Old County and Bound Brook Island Roads at no direct construction cost to the Town. Construction truck routes will be designed to avoid the downtown business district. Traffic management plans will seek input from local residents, businesses and town departments to ensure the least disruption possible during construction. The Project will repair any construction-related wear and tear on local roads. According to the Wellfleet Department of Public Works

Director, this work will actually save the Town and its taxpayers millions of dollars in needed road repair.

[9] The claims of significant risk and liability that have been widely disseminated by the Concerned Citizens are based on the unsupported premise that the Project entails major risks and potential liabilities. That premise is unsupported because:

- **The scope of Phase 1 restoration is limited almost entirely to federal land, and project effects are limited to existing wetland resource areas and regulated flood zones on relatively small portions of private property.**
- **The Project minimizes risk through an extremely conservative design utilizing modern infrastructure and water management controls.**
- **The Project will employ adaptive management, a structured, science-based decision-making process that helps people effectively and transparently manage large and complex natural resource projects that involve numerous (sometimes competing) objectives, constraints, and inherent uncertainties.**
Extensive monitoring and modeling of many environmental factors in the Herring River system has occurred over several years and is ongoing. This information is being used to establish baseline conditions and to predict how the system will respond to reintroduction of tidal flow. As tidal flow is gradually restored through the CNR bridge, water quality, vegetation, tide levels, salinity, sediment movement and many other environmental factors will be monitored and compared with pre-restoration conditions and model-based predictions of how the system is expected to respond. The rate of tidal restoration will be adjusted, and other adaptive management measures will be implemented, based on real-time response of the system and progress toward achieving restoration objectives. The United States Geological Survey (USGS), which helped to design the adaptive management plan for other large-scale restoration projects, is working with the Herring River Restoration Project to design an in-depth Adaptive Management Plan specific to this project.
- **All decisions about changes to tidal flow will be made locally by the Herring River Executive Council with technical input from the Herring River Restoration Committee. Local control means that local concerns can be promptly addressed.**
- **All major infrastructure elements will be funded and constructed before tidal restoration begins; the Phase 1 project budget includes the costs of all flood mitigation measures and appropriate contingency funding for unanticipated costs that could arise during construction and implementation.**

[10] The Concerned Citizens have expressed their opinion that, because they believe the Project risks are so great, the proponents must secure insurance, escrow accounts, and/or other financial resources to cover expenses for what they assert may be extensive property damages, economic losses, and compensable legal claims resulting from the Project. These assertions are not supported by a factual and reasoned analysis of Project risk. While the Concerned Citizens and their representatives have expressed many opinions, legal and otherwise, no material evidence has been presented to substantiate the claim that the Project will create significant risks

and liabilities for damage awards. In contrast, as described above, the Project proponents have generated extensive, credible information supporting the position that the Project's conservative and risk-averse approach to phasing, design, implementation, and governance will create a very low risk of impacts and liabilities that could result in compensable damages.

Furthermore, contrary to claims that have been made by the Concerned Citizens, the effects of the Project will likely improve – not impair – the value of properties abutting the floodplain, while generating significant ecological, social, and economic benefits for the communities and region.

Scenic views will be enhanced

Based on Project modeling of expected changes to vegetation and hydrology, and the observed effects of other coastal habitat restoration projects in the region and nationally, the Project is expected to result in long-term viewscape benefits. These benefits include the ability to observe broad expanses of open water (at high tide), salt marsh, and salt meadows. To reduce aesthetic effects during the temporary marsh transition period, the Project will remove woody vegetation on public lands (and with prior permission on private lands) before trees and shrubs are killed by salt water. This work will be done in stages corresponding the planned increments of tidal restoration.

Evidence supports enhancement—not devaluing—of property values

Other coastal locations in Wellfleet provide many examples of residential and commercial properties in close proximity to intertidal landforms, from mud flat, to open water, to intertidal salt marsh. None of these properties are adversely affected by their close proximity to intertidal areas. To the contrary, the value and rental income potential of properties abutting intertidal areas are typically higher than comparable properties that are not in close proximity to intertidal areas.

Protections for shellfish resources

Extensive scientific studies regarding shellfish resources, water quality and system hydrodynamics conducted for the Herring River Restoration Project support the conclusion that the Project will result in significantly improved shellfish habitat and anticipated reopening and expansion of productive shellfish beds at the river mouth that have been closed due to fecal coliform contamination. Moreover, the claim of potential adverse impacts on shellfish resources caused by sedimentation and poor water quality resulting from the Herring River Restoration Project are not supported by the science. These findings have been reviewed and vetted with the shellfishing community in multiple public venues. Monitoring and modeling will continue both pre- and post-construction to confirm these outcomes.

By restoring twice-daily flushing of the estuary with clean, high-salinity Cape Cod Bay water, the Project will improve water quality, especially near the river mouth, resulting in the reopening and expansion of harvestable oyster beds.

Restoration of hundreds of acres of productive tidal marsh will also increase the flow of suspended organic matter (phytoplankton and organic detritus) into Wellfleet Harbor to fuel filter-feeding shellfish growth. Reopening and expansion of shellfish beds will benefit local shellfishermen, growers and the local economy. Expanding harvestable shellfish beds will help support Wellfleet's economy, which netted one-third of the state's oyster catch in 2014, worth \$4 million per year. This will also help to sustain the roughly 1,400 shellfishing jobs on Cape Cod, many of which are based in Wellfleet.

The Project is committed to continuing to work closely with the Wellfleet Shellfish Advisory Board and other local shellfish interests to answer questions, address concerns, and refine modeling and monitoring programs.

[11] Calls for all Project funding to be in place prior to permitting do not reflect an understanding of the permitting process and how public projects are funded.

The permitting phase is a vetting process in which the Project must demonstrate to the satisfaction of permitting agencies the ability to achieve projected benefits and guard against potential negative impacts. In order for permits to be issued, the Project must demonstrate compliance with all applicable permitting requirements. Most Project funders will be looking for progress toward obtaining required permits as an indication of project viability before awarding funds. In fact, progress in permitting that demonstrates that the Project is at or near being "shovel ready" greatly enhances funding potential. As noted above, all major infrastructure elements will be funded and constructed before tidal restoration begins.

[12] Current degraded conditions in the floodplain pose documented risks to the community and environment. Without the project, the Town of Wellfleet can expect to bear the full cost of repair and eventual replacement of the CNR dike and tide gates. The tide gates are nearing the end of their useful life. Other environmental risks associated with current conditions include:

- Continued closure of shellfish beds upstream and downstream of the CNR dike due to poor water quality;
- Continued listing of Herring River as "impaired" under the Federal Clean Water Act (CWA) Section 303(d) for fecal coliform, low pH, high metal concentrations and fish passage barriers;
- Continued designation of the Chequessett Neck Road Dike by the MA Division of Marine Fisheries as a point source of bacterial contamination of shellfish beds;
- Continued loss of estuarine salt marsh functions which provide critical habitat for fisheries and other wildlife and combat climate change by absorbing and storing carbon from the air (in contrast to the significant amounts of methane the estuary is currently emitting due to lack of tidal circulation);
- Continued loss of opportunities for recreation and education, such as fishing, shellfishing, kayaking, birdwatching, etc., that help bolster the region's economy and quality of life;
- Nuisance mosquito production from vast areas of stagnant freshwater that cannot drain from the wetlands; and

- Continued impediments to river herring migration.

In closing, the Project design and implementation approach maximizes broad public benefits of restoration while minimizing risks of negative impacts and potential for compensable damages. The scope of Phase 1 restoration is almost entirely on federal land and Project effects are limited to existing wetland resource areas and regulated flood zones on relatively small portions of private property. The Project protects all low-lying public and private structures in the floodplain. The potential for risk is further minimized through a conservative design utilizing modern water control infrastructure, local governance of project decision making, and a science-based adaptive management program with extensive monitoring to guide and inform Project implementation. The effects of the Project will likely improve – not impair – the value of properties abutting the floodplain, while generating significant ecological, social, and economic benefits for the communities and region.

Please let us know if you have any questions concerning this information.

Cc:

Wellfleet Board of Selectmen

Truro Board of Selectmen

Hon. Elizabeth Warren

Hon. Edward Markey

Hon. William Keating

Hon. Julian Cyr

Hon. Sarah Peake

Mr. Ronald Amidon, MassDFG

Mr. Jonathan Idman, Cape Cod Commission

Mr. Lealdon Langley, MassDEP

Mr. Don Palladino, Friends of Herring River