Testimony of Jeremy Cherson
Legislative Advocacy Manager
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Joint Legislative Public Hearing on SFY2022 Executive Budget Proposal: Environmental Conservation

Thank you to the chairs and members of the Senate and Assembly committees represented here for the opportunity to testify today.

Riverkeeper is a membership organization with nearly 55,000 members and constituents. Riverkeeper protects the environmental, recreational and commercial integrity of the Hudson River and its tributaries, and safeguards the drinking water of millions of New Yorkers.

Recent actions by the legislature have established New York State as a national leader on clean water and environmental protection including the passage of the historic Climate Leadership and Community Protection Act, a ban on polystyrene containers in food service, and the $3.5 billion appropriated to the Clean Water Infrastructure Act. The SFY2022 Executive Budget proposal includes sustained funding for programs that touch the lives of all New Yorkers. In a challenging year for the budget, we know that maintaining this funding is difficult, but we believe that it is necessary and right to keep sight of the multiple challenges facing the state and our communities.

Clean Water Infrastructure Act

The infrastructure investments made through the Water Infrastructure Improvement Act (WIIA) via the Clean Water Infrastructure Act (CWIA) are the biggest New York State investment in this critical priority in a generation. The Governor's 2019 doubling of the commitment to the CWIA to $5 billion marks a historic commitment to protect New York's surface and drinking waters. The legislature's strong support for this program is greatly appreciated. We are supportive of the executive proposal for an additional $500 million investment in New York's clean water. However, we have recently learned that spending on clean water appropriations ceased in 2020 for approved projects which had not yet entered into contract due to an April 28th directive from the NYS Division of Budget.[1] We urge the legislature to challenge the administration and DOB to immediately unfreeze water infrastructure spending as soon as possible.

Typically, the Environmental Facilities Corporation puts out a request for proposals to communities across the state to apply for funding from CWIA in December. However, no RFP was announced in December, 2020 nor were new announcements for grants from the states to communities that had previously submitted applications in 2020. This is concerning due to the dire need for both repairs and upgrades to infrastructure and the jobs such spending creates in local communities. We encourage the legislature to advocate for EFC to make good on the appropriations made by this body that benefits your constituents.

[1] https://www.budget.ny.gov/guide/bprm/b/b-1223.html

The investment, on top of existing disbursements helps address the nearly $80 billion documented need for water infrastructure investment in New York, the largest in the nation. The lion's share of the $4.8 billion in documented wastewater projects in the Hudson River Watershed are needed in and around New York Harbor. But we need nearly $1.4 billion in our watershed upstream of New York City.[2] For example, the 44 municipally owned wastewater treatment plants that discharge directly to the Hudson River Estuary, rely on at least 1,500 miles of sewer pipe, half of which are over 60 years old.[3]

We don't want to lose momentum on clearing the tremendous backlog of clean water projects while we make significant and necessary new investments in advanced treatment of drinking water supplies contaminated by PFOA, PFOS and 1,4-dioxane. (The investment in state grants announced in December 2019 to help Long Island communities treat 1,4-dioxane exceeded the total investment in state grants to help all of the Hudson River Watershed invest in drinking and wastewater infrastructure, source water protection and watershed restoration).

The Sewage Pollution Right to Know Law has exposed the frequency of sewage overflows and leaks. Most sewage treatment infrastructure is built assuming a useful life of 30-40 years. Robust investment paired with asset management, water conservation and equitable pricing will best alleviate today's crisis and prevent its recurrence. Consider a few of the facts:

- 10% of wastewater treatment plants that discharge directly to the Hudson River are at or above 75% capacity, and roughly 1 in 4 is at risk of inundation from sea-level rise, storm surge or both.[4]
- Four in 10 communities that own sewage infrastructure in the 10-county Hudson River Estuary Watershed region have not identified a project in need of Clean Water State Revolving Fund support[5]; therefore, any needs in these communities are unquantified;
- Source water protection needs for public drinking water supplies have not been estimated;
- NYS DOH has estimated that the cost will be in the billions to treat for PFOA, PFOS and 1,4-dioxane as it establishes Maximum Contaminant Levels for these toxic contaminants, but because most public water systems serving fewer than 10,000 people have not yet tested for them, and they are found ubiquitously, the full cost of protecting public health from these chemical scourges remains incompletely quantified;
- The cost of upgrades to remove nutrients, pharmaceuticals or other unregulated contaminants has not been estimated for most, and therefore is not included in the overall estimate of needs for the watershed, or the state as a whole.

Riverkeeper supports the Governor's proposal for an additional $500 million appropriation to the CWIA but urges spending to resume as soon as possible.

5. Environmental Protection Fund

Riverkeeper is a member of the broad Clean Water & Jobs coalition that supports the Governor's proposed funding for the Environmental Protection Fund (EPF) at $300 million. The legislature has been

[2] Riverkeeper, "Municipal Wastewater Infrastructure" 2018, available at https://www.riverkeeper.org/wp-content/uploads/2018/11/Wastewater-Handout.pdf
[3] Hudson River Comprehensive Restoration Plan, 2018, "Storm and Wastewater Target Ecosystem Characteristic report," available at http://thehudsonweshare.org/wp-content/uploads/2018/08/Storm-and-WasteWater.pdf
[4] Riverkeeper, "How's the Water?" 2017; *ibid*
[5] *ibid.*

strong champions of the EPF, and we urge you to continue your commitment to this important source of funding.

A. Hudson River Estuary Program and Mohawk Basin Program

The Hudson River Estuary Program is the state's only program dedicated to protecting the Hudson River and its watershed. Recognizing it as an indispensable source of technical advice, community grants and planning expertise, this executive budget proposal maintains FY2021 funding at $6.5 million after increasing it by $1 million in the FY2019 budget, and we are grateful for this ongoing commitment. We are also supportive of the $1 million for the Mohawk Basin Program to support critical climate change response planning, public grants, education and water management planning.

The Estuary Program's celebrated accomplishments include investing in local watershed protection efforts and state-leading regional efforts in support of source water protection; creating new parks, boat launches and fishing piers; collaborating with over hundreds of nonprofit and regional partners; providing training to 7,000 local leaders, educational opportunities to 19,000 students, educators, and members of the public, $2.6 million in projects in 83 communities, and helped communities access nearly $7 million in grants since 2015.[6] This work has resulted in lasting benefits to communities from the Capital District to New York City, and helps to support the region's $5.3 billion annual tourism economy.

The needs of the Hudson Valley region served by the Estuary Program are considerable and increasing. They include planning and implementing programs such as drinking water source protection and harmful algal bloom prevention; advancing dam removal and culvert right-sizing initiatives; promoting climate resiliency planning and implementation at locally and regionally. The Estuary Program will publish its next Action Agenda in 2020, setting an ambitious agenda for the next decade supported by a wide variety of stakeholders. Among the goals in the draft Action Agenda is the first-ever water quality assessment of the Hudson River Estuary -- a task that is at once ambitious, necessary and overdue.

Riverkeeper supports Hudson River Estuary Program funding at $6.5 million including $1 million for the Mohawk River Basin Program.

B. Drinking Water Source Protection Program

The EPF is a critical funding source for the new state Drinking Water Source Protection Program (DWSP2).[7] Communities across the state will benefit both from new Source Water Assessments, which should clearly identify risks to their water supplies, and a robust planning process to prioritize and identify actions to address those risks. For decades, New York and its communities have been under-invested in the planning and implementation of source water protection, and we have unfortunately seen the consequences as communities face drinking water pollution and health concerns as a result. The cost of treating or replacing public drinking water supplies, and of treating illnesses that result from drinking contaminated water far outweigh the cost of protecting drinking water at its source. In addition to other programs previously identified in this testimony -- such as the protection of small streams and wetlands, and investments via the Clean Water Infrastructure Act -- Riverkeeper urges the legislature to champion this essential new state program and grow it in future years.

[6] NYSDEC, The 2018 Annual Hudson River Estuary Program Coordinators Report, available at, https://www.dec.ny.gov/docs/remediation_hudson_pdf/hrep2018report.pdf
[7] https://www.dec.ny.gov/chemical/115250.html

Riverkeeper calls on the legislature to maintain funding for Source Water Assessments at $5 million.

$3 Billion Environmental Bond Act

Riverkeeper strongly supports the proposal for a $3 billion Restore Mother Nature Bond Act that was pulled from the 2020 ballot after approval by this body in the previous session. We strongly encourage the legislature to look closely at including the bond act proposal in this year's budget. While the Hudson River Estuary has undoubtedly become cleaner in the past several decades, at the same time the Hudson's most iconic fish species have experienced dramatic declines. Of nineteen species examined, one species has left the Hudson completely, two are on the verge of extirpation, one shows a slight uptick, and the rest show significant to severe declines. These include species that have supported commercial fisheries in the past and species that support robust popular sports fisheries today. Most recently, declines have been reflected in the striped bass populations, which had made a previous comeback, but their recent negative trend has the Atlantic States Marine Fisheries Commission and anglers all along the coast concerned. The bond act presents an opportunity to make investments that will benefit New York's environment for generations to come.

The downward trend of the Hudson's most charismatic fish species is unfortunate as the Hudson River Estuary represents one the planet's greatest migratory corridors. Each year millions of fish enter the Hudson River Estuary to renew their populations, but several hundred years of habitat alterations, toxic legacies, and over-harvest have taken their toll. Consequently, degradation of the environment has impacted every species in the estuary. In a natural environment, species are in constant interaction with their habitat and with each other. When these relationships are damaged or broken, the individual species suffer and subsequently the entire ecosystem becomes weakened. Moreover, if the ecological impact occurs to a species' particular life stage, then the species as a whole loses the ability to flourish. Species will continue to decline without relief from stressors placed upon habitat or their populations. The Atlantic sturgeon is the only fish currently showing promise - only after all fishing was banned in the Hudson a quarter-century ago, and they were put on the federal Endangered Species list nearly a decade ago. We should not wait for species -- especially one that appears on every stream crossing in the Hudson Valley as the icon of our region -- arrive at the brink of extinction before we act.

The Restore Mother Nature Bond Act initiative is an opportunity to act now to restore important habitat and to protect species in decline. We hope the legislature will enthusiastically support the bond act proposal. Below we've included Riverkeeper's ideas within the broad framework of the proposal for how bond act funds could best be spent to achieve the core vision of the proposal: restoring the ecological of New York.

A. Removing obsolete dams to reconnect habitat

As the New York Times recently reported, the rivers and streams in the Hudson Valley, alone, are home to approximately 1,600 dams, the vast majority of which are both outdated and obsolete.[8] These dams don't just fragment waterways, they disconnect entire watersheds, alter ecosystems, and consequently cause some of the most significant negative impacts to the ecological health of our rivers and streams. Most migratory fishes are in a precipitous decline in the Hudson Valley, if not coastwide, and

[8] https://www.nytimes.com/2020/01/20/nyregion/its-fish-vs-dams-and-the-dams-are-winning.html?smid=tw-nytmetro&smtyp=cur

fragmentation caused by dams is a major reason. Dams delay or deny adaptive migration patterns and cause physiological stress as these fishes expend unnecessary amounts of energy attempting to pass artificial obstacles to access critical ancestral habitat.

Removing outdated and obsolete dams can restore natural flow regimes, reconnect rivers with their floodplains, and allow free mobility of aquatic organisms into critical spawning & nursery habitat, which will support more robust and diverse populations assemblages for a wide variety of species.

New York State is several years into establishing a Dam Removal program, which the Restore Mother Nature initiative could take to an entirely new level. To obtain the highest biotic potential from dam removal, we need to create a criteria-based process designed strategically to target top priority removal opportunities, enable the greatest reduction of downstream blockage, open the largest stretches of high-quality habitats, and meaningfully enhance passage of migratory fish and brook trout.

New York State could lead the nation in the removal of obsolete dams to restore habitat:

- Provide reliable, continued funding for high-priority dam removal projects on non-state lands.
- NYS has a large inventory of publicly-owned dams and many are in states of disrepair. The State should begin removing obsolete dams on state property rather than continually maintaining & repairing them at taxpayer expense.
- Create a "best practices" guidance plan for the removal of dams to reduce cost, redundancy & improve efficiency of removal projects.
- Encourage NYSDEC Dam Safety to take an active role in encouraging & incentivizing dam owners to remove their dams collaboratively and efficiently.
- Take an active role in dam removal when owners create public safety risks by failing to maintain dams or abandoning them.

B. Habitat Restoration through the Reconfiguration of Improperly Designed Culverts:

Like obsolete dams, road culverts that are undersized or poorly designed act as barriers to a variety of aquatic organisms and also present hazards to human communities during storm events, when stormwater backs up behind under-sized culverts, causing flooding. Such culverts can fragment streams and wetlands, which then inhibits biological continuity and prevents organisms from accessing critical habitats. Poorly designed culverts can also act like dams by blocking or delaying migration patterns and causing the same physiological stresses. If crossing structures are not large enough, or lack dry passage, riparian wildlife may choose to cross over the road surface rather than pass through the structure. In the Hudson Valley, two-thirds of our road crossings are not passable to aquatic organisms.

Here are some of the measures that can be taken to address this issue:

- NYS needs to identify culverts & other roadway-based stream barriers that inhibit fish & wildlife passage, & establish a list of priority opportunities to reconfigure such barriers to restore habitat connectivity.
- Funds need to be allocated to address poorly-functioning culverts in priority river and stream corridors & targeted watersheds, by removing barriers, retrofitting culverts, & monitoring for presence of key species.

C. Protecting and Restoring Wetlands and Riparian Habitat

Wetlands habitat restoration and protection provides several key benefits worth investing in as part of the Restore Mother Nature Bond Act's capital investments. Restoring wetlands not only increases biodiversity by improving areas for organisms to renew and restore their populations, it can also improve coastal resilience and sequester carbon dioxide. In addition to spending state money to restore lost and degraded freshwater ecosystems, we must tighten regulations that protect existing small streams and wetlands -- a far cheaper strategy.

Increasing Biodiversity: Preserving and restoring wetlands, forests, fields, streams, underwater grasses and mudflats in the Hudson River watershed will provide thousands of species of plants, fish and wildlife with critical habitat to flourish. Habitat restoration supports increased resiliency which is critical to maintaining a functioning ecosystem during times of environmental stress such as periods of extreme weather, climate change and accelerated sea-level rise. In fragmented landscapes such as those predominating in NY today, protecting wetlands, riparian corridors, & critical habitat will facilitate biological connectivity and ecological integrity, which are essential to vibrant & diverse ecosystems.

Improving Coastal Resilience: A healthy ecosystem with greater biodiversity and variety of habitats is more adaptive in response to climate change. Preserving low-lying natural areas along shorelines to allow wetlands to 'migrate' and removing dams to restore sediment transport in tributaries will allow shallows and wetlands to continue to exist as sea-level rises. Implementing ecologically enhanced shoreline practices will allow communities to protect important properties and infrastructure from rising sea-levels and extreme storms while preserving habitat value.

Habitat protection and restoration will preserve critical functions these habitats contribute to the ecosystem, including fish spawning, nursery and forage habitats, and improved water quality. The construction of side channels in the upper estuary will increase spawning and forage habitats for many species. Side channels also provide critical low-flow refuge habitats for fish and wildlife during high flow periods associated with high discharge from extreme weather events.

Flood control and mitigation. Where watersheds have intact wetlands, undisturbed floodplains and free-flowing streams, the risks of extreme precipitation are mitigated. These natural features of the landscape have incredible capacity to absorb stormwater, preventing flooding downstream. The amount of precipitation falling in very heavy downpours has increased more than 70% between 1958 and 2010.[9] This trend is projected to continue and intensify. Communities and their drinking water supplies are therefore at an increased risk from flooding and runoff and flood-related pollution. Protecting small streams and wetlands is a proactive and necessary strategy to adapt to climate extremes.

Carbon Sequestration: In restoring critical habitat we can also capture and sequester carbon to offset impacts of climate change. Forests and wetlands not only capture atmospheric carbon but forests, in particular, are sources of transpiration, which mitigates heat-island effects. Wetlands represent important carbon sinks in addition to the other ecological services they provide. Restored lands must not be converted to other uses and must be preserved for all perpetuity to protect against extreme weather events.

Improving and maintaining water quality: Small streams are the arteries of our watersheds, and wetlands are the kidneys. Well protected streams and wetlands, with forested buffers, are the most fundamental strategies for maintaining and improving water quality, including water quality for public drinking water supplies and recreational waters. Protecting these natural features of the landscape are a

[9] NYS DEC, "Impacts of Climate Change in New York," available at https://www.dec.ny.gov/energy/94702.html Accessed on January 19, 2020.

mitigation against Harmful Algal Blooms, erosion, stormwater-related pollution and other increasingly common problems plaguing our waters.

Here are the measures we recommend in the area of wetlands and riparian restoration:

- NYS needs to implement strategies for acquiring and restoring networks of land & water corridors to support priority species and to provide other public benefits, including enhanced water quality, climate resilience, carbon sequestration, recreation and scenic value across the watershed.
- Extend DEC's authority to protect class C streams from bed or bank disturbance under the DEC's Protection of Waters Program, ensuring these streams have a baseline of protection that may be lost with the finalization of the Trump Administration's Clean Water Rule rollback. This approach is outlined in A.8349/S.5612A of 2020, which passed both houses of the legislature but was ultimately vetoed by the governor over costs considerations.
- Extend and modernize the state's program for protecting wetlands, as detailed later in this testimony.

D. Preventing the Spread of Invasives Through the Canal Systems

The increasing presence of aquatic invasive species (AIS) is an enormous threat to biodiversity here in New York State. Invasive species can threaten native species and destabilize the ecosystem.

The spread of AIS occurs largely as a result of pathways for the movement of such species, like New York's expansive canal system, which grant access to areas that otherwise would have been inaccessible or impassable to them.

The greatest threat facing the Hudson River is Asian carp (bighead and silver), tench, & round gobies. Round gobies have been identified in the Mohawk River near Utica. Tench are in Lake Ontario and the St. Lawrence River systems. Major populations of both species of Asian carp are currently limited to the Mississippi basin. The goal should be a 100% effectiveness in blocking the migration of all life stages of aquatic invasive species through canals into the Mohawk-Hudson watershed. Eradicating an introduced species, once established, is in almost every case impossible, and managing the damage they do is costly. The only truly effective method to check the spread of introduced species is to completely deny their access to our ecosystems.

To Prevent the Spread of Invasives Through the Canal System, We Recommend:

- The spread of Asian carp, tench, round gobies and other species could have catastrophic consequences to the Hudson. The Reimagine the Canals Task Force recommended that DEC study the options for preventing invasive species migrations. We urge you to provide sufficient funding for this study, and ensure that it includes robust engagement of stakeholders in the Hudson Valley, and that it considers all options, including engineered solutions west of Rome.
- Early detection of AIS can aid response to prevent invasive species from spreading. Use of environmental DNA (eDNA) techniques, which screen for the presence of genetic materials from invasives in our riverine systems is effective at detecting these species at low population levels (ie, before their spread becomes irreversible).
- **Our recommendation is that eDNA monitoring of key waterways like the Hudson, Mohawk and Erie Canal begin immediately and that plans for the establishment of effective**

interdiction for Asian Carp and Round Gobies be implemented at the earliest opportunity. The cost of such measures is uncertain, but it is without question vastly lower than the impacts to our ecosystems and recreational fisheries that would result if these species were to reach our waterways.

E. Improving Water Quality to Fight Harmful Algal Blooms ("HABs")

Without swift and proper management, HABs will increasingly occur in our waterways, threatening drinking water and reducing the viability of aquatic habitat. Any successful effort to prevent HABs must utilize a range of measures to protect water quality and reduce conditions causing such blooms, including: land acquisition or conservation easements; restoring forest buffers in priority watersheds; and comprehensive approaches to stream management and pollution control.

Such a comprehensive program to fight HABs would yield many benefits for local communities including: the improvement of water quality, reduction and mitigation of flooding, protection of wildlife habitat and the maintenance and enhancement of public access and recreational activities.

To Prevent HABs We Recommend:

- Fund and foster best management plans for farmland, such as establishing natural vegetative buffers consisting of trees and shrubs and berms between farm fields and developments that border water bodies; and, providing incentives for curtailing farm and development runoff and the planting of cover crops between cash crops seasons.
- Identify pollution reduction targets by watershed area and include a schedule of actions to be taken to achieve the reductions, including:
    - Better control of contaminants from regulated point sources of pollution such as sewage treatment plants, stormwater systems and CAFOs and other sources such as discharges and polluted runoff from agricultural lands, towns and septic systems.
    - Development and implementation of programs and policies that reduce impacts from septic systems.
- Identify and implement cost-effective urban stormwater retrofits and implement appropriate practices to control stormwater runoff from developed areas and reduce, prevent or control erosion from unpaved roads, trails and ditches.
- Modernizing New York State's Water Quality Standards for nutrients, a key tool of the Clean Water Act that needs to be put to more effective work.
- Ensure DEC funding is adequate to complete and implement Clean Water Plans for waters impaired by excess nutrients and/or plagued by Harmful Algal Blooms - including rivers like the Mohawk River and Wallkill River.
- Protect and restore small streams and wetlands, as detailed elsewhere in this testimony.

Conclusion

New York State's actions in recent years to support water infrastructure, drinking water quality and source water protection have made tremendous progress over the last few years. However, as the recommendations for a bond act make clear, there is much more work to be done on a whole range of clean water and habitat restoration initiatives.

Governor Cuomo's proposed budget preserves key environmental spending in a challenging budget year. We encourage the legislature to support his proposals and continue the conversation on a multi-billion dollar environmental bond act for 2021 or 2022. Thank you for your consideration, and for the opportunity to present this testimony.