March 30, 2018

Mr. Steve Tambini
Executive Director
Delaware River Basin Commission
25 State Police Drive
Ewing, NJ 08628

Dear Mr. Tambini and DRBC Commissioners:

On behalf of the National Parks Conservation Association (NPCA), thank you for the opportunity to submit comments on the Proposed Amendments to the Administrative Manual and Special Regulations Regarding high volume Hydraulic Fracturing Activities; as well as Additional Clarifying Amendments. NPCA is pleased to see that, after thorough review of the potential environmental impacts of high volume hydraulic fracturing in the Delaware River Basin, the Delaware River Basin Commission (DRBC) has chosen to move ahead with a ban on High Volume Hydraulic Fracturing (HVHF) and a strengthening of disposal and withdrawal regulations. These measures will help protect the water quality in the Delaware River Basin and its national parks, and support the proposed actions taken by the Commission.

Formed in 1919, the nonpartisan NPCA is the only nonprofit advocacy organization dedicated to protecting and enhancing America's national parks for our children and grandchildren. We are joined by more than 1.3 million members and supporters nationwide, of which more than 4,000 are in Delaware, 35,000 in New Jersey, 65,000 in New York, and 45,000 in Pennsylvania. These members help us fulfill our mission of connecting our national parks with their surrounding landscapes.

National Parks in the Delaware River Watershed

The Delaware River Watershed is home to 10 national park sites which lure more than 11 million visitors each year. These parks include; Appalachian National Scenic Trail, Delaware Water Gap National Recreation Area, Edgar Allen Poe National Historic Site, First State National Historical Park, Hopewell Furnace National Historic Site, Independence National Historical Park, Middle Delaware National Scenic River, Thaddeus Kosciuszko National Memorial, Upper Delaware Scenic and Recreational River, and Valley Forge National Historical Park.

These millions of park visitors come to recreate, learn about our nation's history, and support local economies in the watershed. These visitors are drawn by trout fishing in the Upper Delaware Scenic &

Recreational River, the paddling opportunities of the Middle Delaware Scenic & Recreational River flowing through the Delaware Water Gap National Recreation Area, and the historical landscapes of the Revolutionary War sites lining the Lower Delaware Wild & Scenic River. The National Park Service manages 110 miles of the Delaware River and more than 400 river miles are designated as part of the Wild & Scenic Rivers system. Within just a few hours' drive of Philadelphia and New York City, Delaware Water Gap National Recreation Area is one of the most visited national parks east of the Mississippi River.

The Delaware River region has built up an international reputation for outdoor tourism and exploration opportunities which supports a most robust and sustainable spending economy. Recreation and tourism industries depend on these natural resources and contributed approximately $93 Billion to Delaware, New Jersey, New York and Pennsylvania economies in 2017. National park visitors supported these local economies with an infusion of more than $450 million into local lodging, restaurants, small businesses, and recreational opportunities in 2017. This spending supports more than 7,000 local jobs and charts a sustainable path toward rebuilding economic stability after boom or bust industry has long disappeared.

Support for the DRBC's Proposed Actions

These iconic national park sites and their millions of visitors rely upon the Delaware River Basin Commission to protect their water resources from pollution. Thus, assertions derived by the DRBC from careful study of the potential impacts of HVHF to the waters of the Delaware River Basin are of critical importance to our position. After a scientific review, which included "comprehensive reports by the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (EPA), among others," the Commission concluded that HVHF "presents risks, vulnerabilities and impacts to the quality and quantity of surface and ground water resources."[1]

That is why National Parks Conservation Association fully supports the proposed ban on high volume hydraulic fracturing within the basin and the amended policies to further restrict disposal of wastewater in the basin and the withdrawals of water from watershed for high volume hydraulic fracturing.

NPCA agrees with the Commission's findings that these measures are needed to control pollution and "avoid injury to the waters of the basin."[2] A ban on high volume hydraulic gas fracking in the Delaware River Watershed will protect the drinking water that supports the health of more than 15 million people, roughly one out of every 20 Americans, as well as the habitat for diverse wildlife such as black bears and bald eagles. Opening the basin to high volume hydraulic fracking would have exposed it to repercussions such as increased regional smog and air pollution, despoiled water quality and quantity, adverse impacts

[1] Rulemaking Notice – 18 CFR Parts 401 and 440 at 5. Citations to New York State Department of Environmental Conservation, *Final Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program – Regulatory Program for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs*, May 2015 (hereinafter, NYS Final SGEIS). Available at: http://www.dec.ny.gov/energy/75370.html, and United States Environmental Protection Agency, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States*, Dec. 2016 (EPA-600-R-16-236Fa) (hereinafter, "EPA HF Study 2016").

[2] Rulemaking Notice – 18 CFR Parts 401 and 440 at 14.

to fisheries and wildlife, and widespread fragmentation of forested habitat. These impacts could have very well affected visitation to the region's national parks.

Recognizing that the decision to impose this ban on natural gas fracking in the basin required extensive review and consideration of the socioeconomic and environmental needs of this region, NPCA fully supports the DRBC proposal and believes that the Delaware River's national parks, their neighboring gateway communities, and the visitors that love them will be better for it. The decision to ban high volume natural gas fracking, restrict water the industry's withdrawals and waste disposals in the Delaware River Basin reflects the fragility and importance of the river system and responsibly gives utmost deference for visitors and businesses dependent on the environmental health of the region.

Improvements to the Proposal

Though we strongly support the DRBC's proposed actions, we also believe there are a number of areas in which they regulations could be improved to better ensure the protection of the parks in the Delaware River Watershed.

1. Establish an Ecological Baseline for Surface Water Transfers

NPCA strongly supports the provisions added by the DRBC making "all proposed exports of water for oil and gas extraction subject to the requirement that alternatives involving no exportation be analyzed and that the water resource, economic and social impacts of the proposal be evaluated."[3] However, it is unclear from this language exactly what the phrase "water resource" covers. NPCA believes that language more clearly directing proposed exporters to consider the environmental impacts of water withdrawals be included. Thus, we propose adding the word "ecological" to the "economic and social impacts" already specified.

The ecological needs of much of wildlife in the Delaware River is dependent on adequate stream flow. For example, there are six species of mussel in the Delaware River that are endangered, threatened, or of special concern in New Jersey or Pennsylvania.[4] According to the Park Service, habitat destruction from dams, stream channel modification, erosion and siltation, and the introduction of alien species threaten continued decline and loss of freshwater mussels,"[5] and other studies have shown "a strong correlation between mussel density and depth, and mussel richness and depth" in the Delaware River.[6]

The impact of stream flow on the ecological health of the national parks of the Delaware River watershed is of the utmost importance and should be specifically considered as part of proposed withdrawals. Adding the term "ecological" to the "economic and social impacts" in the proposed rule would help ensure that those park needs – required to help restore mussel populations and other wildlife – are properly considered.

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[3] Id. at 14.
[4] https://www.nps.gov/dewa/learn/nature/mollusks.htm
[5] Id.
[6] Distribution of Freshwater Mussels (Unionidae) in Relation to Depth in the Tidal Delaware River, 1The Academy of Natural Sciences of Drexel University, Patrick Center for Environmental Research, 19th and Ben F ranklin Parkway, Philadelphia, PA 19103, *online at* https://s3.amazonaws.com/delawareestuary/sites/default/files/P8%20Thomas.pdf

2. Record Drought

Relatedly, NPCA believes that the DRBC's docket process of examining potential water withdrawals would be better served by examining them in light of record drought conditions. The Upper Delaware Scenic & Recreational River, as well as many downstream river segments, faces threats to endangered species and a robust recreation economy due to low flow challenges. Considering the DRBC's charge for drought management in the basin, adding record drought conditions to the evaluation process for withdrawals of 100,000 gallons or more per day for exportations of water out of the Basin would strengthen the proposed rules for the benefit of watershed protection.

3. Whole Effluent Toxicity Testing for Wastewater Disposal

NPCA strongly supports the inclusions of a "Whole Effluent Toxicity Testing" (WET) requirement for any hydraulic fracking wastewater disposal within the basin. However, the proposed regulations could use slight clarification on whether that is currently a requirement or recommendation.

WET requirements for wastewater disposal is important because some chemicals used in hydraulic fracturing have undetermined toxicity levels due to insufficient information. For this reason and to protect the ecological resources of the Delaware River Basin as well as the more than 15 million basin residents from future impacts of treated fracking wastewater that may have consequences for public or ecological health, we urge the DRBC to clarify and require WET in any permitted hydraulic fracturing wastewater disposal activity. We applaud the DRBC for including this in the regulations because, while some chemical concentrations in wastewater may fall below the current toxicity levels, they may have detrimental life cycle effects on basin resources and ecosystems. WET offers a more appropriate assurance of protection as knowledge of the comprehensive impacts of hydraulic fracturing chemicals continues to develop.

On behalf of National Parks Conservation Association and our members, we thank the Delaware River Basin Commission for the opportunity to submit comment on the proposed ban and amendments to special regulations regarding high volume hydraulic fracturing activities. If you have any questions about our comments, please contact Amanda John Kimsey at ajohnkimsey@npca.org or Nick Lund at nlund@npca.org.