

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

Exelon Generation Company, LLC)	
Conowingo Hydroelectric Project)	P-405-106
)	
)	

THE NATURE CONSERVANCY’S COMMENTS ON OFFER OF SETTLEMENT

Pursuant to the Federal Energy Regulatory Commission’s (Commission) Rules of Practice and Procedure, *see* 18 C.F.R. § 385.602(f), The Nature Conservancy (TNC or the Conservancy) provides these comments to the “Joint Offer of Settlement and Explanatory Statement of Exelon Generation Company, LLC and the Maryland Department of the Environment,” eLibrary no. 20191029-5119 (October 29, 2010) (Settlement Offer).

As stated in its Motion to Intervene,¹ the Conservancy has significant interests in the restoration and long-term protection of the lower Susquehanna River and Chesapeake Bay. It has participated actively in the relicensing proceeding to develop the scientific record regarding the Conowingo project’s impacts on water quality and aquatic resources in the lower Susquehanna and Chesapeake Bay and measures to avoid, minimize, or mitigate those impacts.² For example, it worked collaboratively with other relicensing participants to develop an alternative operational

¹ TNC, “Motion to Intervene, Recommended Alternatives for Environmental Analysis, and Preliminary Terms and Conditions,” eLibrary no. 20140131-5199 (Jan. 31, 2014) (TNC MOI), pp. 1-2.

² *See, e.g., id.*; TNC, “Comments on Draft Multi-Project Environmental Impact Statement For Hydropower Licenses, Susquehanna River Hydroelectric Projects,” eLibrary no. 20140929-5354 (Sept. 29, 2014); TNC, “Supplemental Comments on Draft Multi-Project Environmental Impact Statement For Hydropower Licenses, Susquehanna River Hydroelectric Projects,” eLibrary no. 20150206-5219 (Feb. 6, 2015); TNC, “Letter re: Exelon Generation Company, LLC’s Conowingo and Muddy Run Projects (P-405, P-2355), and York Haven Power Company, LLC’s York Haven Project (P-1888),” eLibrary no. 20150304-5131 (Mar. 4, 2015); TNC, “Comments on Final Multi-Project Environmental Impact Statement For Hydropower Licenses, Susquehanna River Hydroelectric Projects,” eLibrary no. 20150416-5198 (Apr. 16, 2015) (TNC FEIS Comments); TNC, “Letter re: Conowingo Hydroelectric Project (P-405-106),” eLibrary no. 20191029-5163 (Oct. 29, 2019).

flow regime (NGO-Agency Flow Alternative) that could meet biological objectives for migratory and residence fish, freshwater mussels, macroinvertebrates, aquatic turtles, and submerged aquatic vegetation (SAV), while limiting costs to 1% of annual revenue.³ As a science-based organization, the Conservancy recognizes that the Susquehanna River and Chesapeake Bay are complex ecosystems with multiple sources of ecological impacts, upstream and downstream. In that context our focus in these proceedings has been on defining and mitigating the *incremental* impact of Conowingo dam on these systems over the term of the requested license. Consistent with this focus, the Conservancy has advocated, before the Commission and the Maryland Department of the Environment (MDE),⁴ for a new license that strikes an appropriate balance between the power and non-power benefits of the project based on this and other scientific data in the record.

The Conservancy is concerned that the Settlement Offer will not be protective of the already degraded aquatic ecosystems that will continue to be heavily impacted by the presence and operation of the Conowingo Project for the next 30 to 50 years. The Explanatory Statement accompanying the Settlement Offer, which is short on science-based analysis and evidence, does not allay this concern. More specifically, the Explanatory Statement does not resolve two key issues that are critical to the Commission’s comprehensive development analysis under Federal Power Act (FPA) section 10(a)(1), 16 U.S.C. § 803(a)(1), and ultimate licensing decision:

- Whether the proposed operational flows will comply with water quality standards and address the Project’s contribution to hydrologic impairment in the Lower Susquehanna River; and

³ TNC, “Letter re: Conowingo Hydroelectric Project (P-405-106),” eLibrary no. 20191029-5163 (Oct. 29, 2019).

⁴ See letter from Allison Vogt to Elder Ghigiarelli, Jr. (Jan. 16, 2018) (Enclosure 1).

- Whether off-license measures are adequate to mitigate the Project’s incremental impacts on water quality (including sediment and nutrients) in the Lower Susquehanna River and Chesapeake Bay.

These comments are organized as follows: Section I provides general comments on the adequacy of the Explanatory Statement; Section II provides comments regarding the enforceability of settlement terms; Section III provides comments regarding whether the Settlement Offer shows the proposed measures will effectively address project impacts over the term of the new license; Section IV requests the Commission’s Office of Energy Projects (OEP) Staff convene a technical conference; and Section V concludes the comments. Section III includes specific questions for the Settling Parties and/or OEP Staff that seek to clarify the basis for certain proposed settlement terms, including claims that such terms will adequately mitigate the project impacts over the proposed 50-year license term. We request that the Settling Parties respond in writing to these questions prior to OEP Staff convening a technical conference to address remaining technical disputes, as requested in Section IV.

I.
The Settlement Offer Does Not Include an Adequate Explanatory Statement.

Under the Commission’s rules, “[a]n offer of settlement must include: (i) The settlement offer; (ii) A separate explanatory statement; (iii) Copies of, or references to, any document, testimony, or exhibit, including record citations if there is a record, and any other matters that the offeror considers relevant to the offer of settlement”⁵

The Commission’s “Policy Statement on Hydropower Licensing Settlements” (Sept. 21, 2006) (Settlement Policy) further states that settling parties should: “[p]repare an explanation of the settlement that will enable the Commission to understand the parties’ intent *and what in the*

⁵ 18 C.F.R. § 385.602(c)(1).

*record they believe supports their proposals.*⁶ Such explanation and citation to the record is important because:

The Commission must also ensure that its decisions on settlements, like all decisions under the FPA, are supported by substantial evidence. To support a proposed license condition, then, it is necessary for the parties to develop a factual record that provides substantial evidence to support the proposed condition, and demonstrates how the condition is related to project purposes or to project effects. The settling parties should provide the Commission with record support showing a nexus between the proposal and the impacts of the project, as well as to project purposes, and also explain how the proposal will accomplish its stated purpose.⁷

The Settlement Offer broadly claims, “the Proposed License Articles are fully supported by the record in the proceeding, including the Final Environmental Impact Study (the “EIS”) and the relicensing studies undertaken by Exelon in consultation with resource agencies and other stakeholders.”⁸ However, as discussed in more detail in Section III, the Explanatory Statement does not show this to be the case.

For example, with regard to flow, the Explanatory Statement includes multiple citations to the record regarding the potential impacts of project operations on downstream resources.⁹ However, it does not provide science-based analysis or evidence in support of its claim that the proposed flow regime will mitigate those impacts. It states that it is incorporating two discrete flow-related recommendations made by OEP Staff in the EIS – e.g., eliminating periods of zero minimum flow in the winter and increasing minimum flows in early June – but does not show that its flow proposal with these changes will be protective of water quality and aquatic resources. It states that the flow regime “will provide additional benefits and protection,” but

⁶ Settlement Policy (emphasis added), p. 4.

⁷ *Id.* at 3.

⁸ Settlement Offer, p. 2.

⁹ *Id.* at 10.

does not attempt to quantify the “benefits,” describe them in biologically meaningful terms, or cite to any record evidence in support.¹⁰ It does not respond to the evidence submitted by the Conservancy, Susquehanna River Basin Commission (SRBC), and U.S. Department of the Interior’s Fish and Wildlife Service (FWS), that Exelon’s previous flow proposal, which is substantially similar to the one proposed in the Settlement Offer, with the exception of Mid-March through May, will continue, not mitigate, ongoing degradation of ecological resources and impairment of water quality.¹¹ The Explanatory Statement does not explain whether the proposed operational flow regime will address the Conowingo Project as the source of flow alteration and changes to stream hydraulics, specifically daily changes to depth and velocity, that have caused non-attainment of the designated use of supporting aquatic life and wildlife on the Lower Susquehanna River,¹² even though the Settlement Offer effectively waives Maryland’s authority to address that impairment further. *See* Section IV, *infra*.

¹⁰ Settlement Offer, p. 11.

¹¹ *See* Enclosure 1, *see also* Susquehanna River Basin Commission, “Comments Regarding Final Environmental Impact Statement for the Susquehanna River Hydroelectric Projects (York Haven Project-FERC Project No. 1888-030; Muddy Run Project-FERC Project No. 2355-018; Conowingo Project-FERC Project No. 405-106),” eLibrary no. 20150420-5208 (Apr. 20, 2015), pp. 3-5; U.S. Department of the Interior, “Review of Notice of Application Ready for Environmental Analysis, Conowingo Hydroelectric Project, Federal Energy Regulatory Commission (FERC No. 405-106): Comments, Recommendations, Preliminary Terms and Conditions, and Preliminary Prescriptions,” eLibrary no. 20140131-5194 (Jan. 31, 2014), pp. 15-16.

¹² TNC, “Letter re: Conowingo Hydroelectric Project (P-405-106),” eLibrary no. 20191029-5163 (Oct. 29, 2019); *see also* Maryland’s 2018 Final Integrated Report - Category 4c Waters (April 9, 2019), *available at* https://mde.maryland.gov/programs/Water/TMDL/Integrated303dReports/Documents/Integrated_Report_Section_P_DFs/IR_2018/2018IR_Part_F.6_Final.pdf (last accessed Jan. 17, 2020); letter from Catherine A. Libertz to Lee Currey (Apr. 9, 2019), *available at* https://mde.maryland.gov/programs/Water/TMDL/Integrated303dReports/Documents/Integrated_Report_Section_P_DFs/IR_2018/2018_EPA_Approval_Letter.pdf (last accessed Jan. 17, 2020).

II.
The Settlement Offer Includes Several Terms that Would Be Unenforceable by the Commission.

A. The Settlement Offer Relies Too Heavily on Off-License Measures.

The Settlement Offer includes several measures that would not be included in the new license. Many of the measures commit Exelon to fund MDE and/or the Maryland Department of Natural Resources (MDNR) initiatives. The Conservancy is concerned that these off-license commitments are inadequate substitutes for clearly defined measures that are enforceable by the Commission.

According to the Commission’s Settlement Policy, parties may include off-license commitments in a settlement offer, but the Commission cannot consider such agreements in evaluating whether a settlement offer complies with the FPA and is in the public interest:

Settling parties are free to enter into “off-license” or “side” agreements with respect to matters that will not be included in a license. However, the Commission has no jurisdiction over such agreements and *their existence will carry no weight in the Commission’s consideration of a license application under the FPA.*¹³

The off-license measures in the Settlement Offer appear intended to address a wide-range of project-related impacts, including restoration of the mussel populations, improved eel passage, improved water quality, study of removal and disposal, tailrace gaging, etc. However, because these measures are off-license, the Commission cannot consider them. The record does not show that the Settlement Offer as a whole is adequate to mitigate project impacts on affected resources. The extent of unmitigated impacts under the Settlement Offer is even greater if the Commission cannot consider the off-license agreements. In short, the Settling Parties have not shown that a new license based on the proposed license articles will comply with the

¹³ Settlement Policy, p. 3 (emphasis added).

Commission's duty under FPA section 10(a)(1) to ensure the licensed project is best adapted to a comprehensive plan of development for the Susquehanna River.

In addition to the Commission's inability to consider off-license measures in its comprehensive development analysis, it is contrary to the public interest to have measures intended to comply with legal requirements for environmental protection enforceable only by the licensee and MDE as a matter of contract. This interferes with the Commission's statutory oversight and enforcement authorities. It also denies the public a venue to seek enforcement of such measures.

B. The Proposed License Articles Are Not Sufficiently Enforceable.

The Settlement Offer includes a number of proposed license articles.¹⁴ Leaving aside disputes regarding the substance of the proposed articles, a number of them are drafted in a way that are not sufficiently enforceable by the Commission.

According to the Commission's Settlement Policy: "proposed license conditions must be enforceable.... [C]onditions that do not clearly outline the licensee's responsibilities and establish the parameters governing required actions may be difficult or impossible to enforce."¹⁵

For example, the Settlement Offer includes a proposed license article for "Trash and Debris." However, the proposed license article does not include any provisions for notifying the Commission of complaints relating to accumulated trash and debris, reporting compliance with proposed cleanup requirements, or other measures for monitoring whether proposed measures are adequate in terms of public safety, environmental resources, and project facilities.¹⁶

¹⁴ Settlement Offer, Attachment A.

¹⁵ Settlement Policy, p. 3.

¹⁶ Settlement Offer, Attachment A, p. 8.

As another example, the proposed license article, “Monitoring Stream Flows in the Tailrace,” states: “licensee shall perform and submit to the Maryland Department of the Environment a study regarding the feasibility of redesigning, installing, and maintaining best available real-time flow telemetry at the stream gage in the Project tailrace” If the study found it would be feasible, Exelon’s obligation to prepare and implement a Tailrace Gage Plan is dependent on the outcome of the study. As such, the Commission should have oversight for the feasibility study itself, including the criteria that will be applied to determine feasibility.

III.

The Settlement Offer Does Not Show the Proposed Terms Will Address the Project’s Significant Environmental Impacts on Ecological Resources of the Lower Susquehanna River over the License Term.

As the proponents of the Settlement Offer, Exelon and MDE have the burden of showing that their proposal would protect the public interest and meeting the Commission’s comprehensive development/equal consideration standard.¹⁷ Again, it is the Settling Parties’ responsibility “to develop a factual record that provide substantial evidence to support the proposed condition, and demonstrates how the condition is related to project purposes or to project effects.”¹⁸ It is also their responsibility to “explain how the proposal will accomplish its stated purposes.”¹⁹

Based on our review, the settling parties have not met this burden with respect to certain conditions discussed below.

¹⁷ Settlement Policy, p. 2.

¹⁸ *Id.* at 2-3.

¹⁹ *Id.* at 3.

A. The Settlement Offer Does Not Show the Proposed Flow Regime Will Protect Fish and Other Aquatic Resources in the Lower Susquehanna River.

As MDE found in issuing the water quality certification, operation of the Conowingo Project has significant and presently unmitigated impacts on the availability of habitat for fish and wildlife in the Lower Susquehanna River ecosystem.²⁰ These impacts are linked to (1) the operation of Conowingo dam, as part of an open-looped pumped storage system with daily peaking and (2) the trapping of coarse substrate (sand, gravel and cobble) behind the dam that is critical for maintaining habitat for the growth and propagation of fish, wildlife and aquatic vegetation in the Lower Susquehanna River and provides additional benefits to the Chesapeake Bay.²¹

The Settlement Offer provides (p. 10), “[t]o mitigate any potential impacts, Exelon has agreed to a two-phased operational flow regime.” Within three years of license issuance, the Settlement Offer proposes to adjust operational flows from current operations (*see* Attachment A, p. 1, “Operational Flow Regime”). The Explanatory Statement (p. 17) states the proposed, “operational flow regime of the Conowingo Project will, within three years of license issuance, significantly increase minimum flow releases at the project.” It also claims the flow regime will provide ecological benefits: “[t]hese increased flow will provide additional aquatic habitat downstream of Conowingo Dam. Additionally, the limitations on ramping will reduce the potential for fish stranding, improve conditions for fish migrating upstream, and reduce impacts to spawning.” *Id.*

²⁰ See MDE, “Clean Water Act Section 401 Certification for the Conowingo Hydroelectric Project FERC Project No. P-405/MDE WSA Application No. 17-WQC-02 (Apr. 27, 2018) (401 Certification), Section 6 (Summary of Findings); *see also* Enclosure 1.

²¹ See Enclosure 1.

The Conservancy disagrees that the Settling Parties have shown their proposed operational flow regime will mitigate the impacts of project operations, particularly peaking operations, on habitat and ecological health in the Lower Susquehanna River for four main reasons: (1) under the existing license conditions, operations cause impairment of the aquatic life and wildlife designated use on the Lower River, (2) proposed minimum flows would be very similar to or lower than the existing license for most of the year (3) the magnitude of daily peaking will continue to severely limit habitat availability for fish, wildlife and aquatic vegetation and (4) proposed down ramping conditions do not adequately consider the evidence of stranding impacts. We address each of these reasons in more detail below.

1. Conowingo Dam operations cause impairment of the aquatic life and wildlife designated use on the Lower Susquehanna River mainstem.

The Conservancy previously requested that OEP Staff consider Maryland’s 2018 Final Integrated Report (April 9, 2019), Section “F.6 Category 4c Waters,” which lists the Lower Susquehanna River mainstem below Conowingo dam as an impaired waterbody under the Clean Water Act (CWA) for non-attainment of the designated use of supporting *aquatic life and wildlife*.²² Conowingo Dam is identified as the source of the flow alteration and changes to stream hydraulics (depth and velocity) that cause non-attainment of the designated use. The report states that assessment of the flow regime and measured biological impacts were used to demonstrate the “Conowingo Dam operations cause impairment of the aquatic life and wildlife designated use.”²³ The Environmental Protection Agency approved Maryland’s listing on April 9, 2019.

²² TNC, “Letter re: Conowingo Hydroelectric Project (P-405-106),” eLibrary no. 20191029-5163 (Oct. 29, 2019).

²³ *Id.*

As supported by the record and summarized in the Conservancy's previous filings, operational impacts to aquatic life and wildlife include:

- 75 to 95% loss in available spawning, egg and larval habitat for diadromous fish including American shad, river herring, striped bass and Atlantic and shortnose sturgeon and little to no evidence of successful larval development within reach. (*see* TNC MOI, p. 14, Attachment 1, Table 4 and Figures 6-12, 23-30, 32-41);
- Altered migration cues and lengthen migratory times for diadromous fish (TNC MOI, Attachment 1, Table 4);
- Alteration of the resident fish community toward habitat generalists and an estimated loss of 50 to 80% of persistent spawning habitat (*see* TNC MOI, Attachment 1, Table 4 and Figures 17, 26, 41-43);
- Fish stranding and mortality due to peaking, downramping and dewatering, thermal stress and predation (*see* TNC MOI).
- Loss of freshwater mussel recruitment below the dam (*see* TNC MOI, pp. 14-15, Attachment 1, Table 4 and Figure 13; *see also* RSP 3.19,¹ pp. ii.);
- An impaired macroinvertebrate community, dominated by highly tolerant species (*see* TNC MOI, p. 15, *see also* RSP 3.18,¹ pp. 16-17);
- Loss of state and federally endangered species habitat, including reptiles, for reproductive growth and hibernation (*see* TNC MOI, p. 15, Attachment 1, Table 4, Figures 18, 22 (map turtles), Figures 11, 16, 25, 29, 35-37 (Shortnose sturgeon));
- Sediment-starved lower river and flats (*see id.* at 15-16);
- Loss of Submerged Aquatic Vegetation (SAV) communities below the dam (*see* TNC MOI, TNC NREA Comments, p. 15); and
- Loss of stable shallow feeding habitats for wading birds below the dam (egrets, great blue heron).

2. Proposed minimum flows are very similar to, or lower than, the existing license for most of the year and are below typical drought conditions for most of the year.

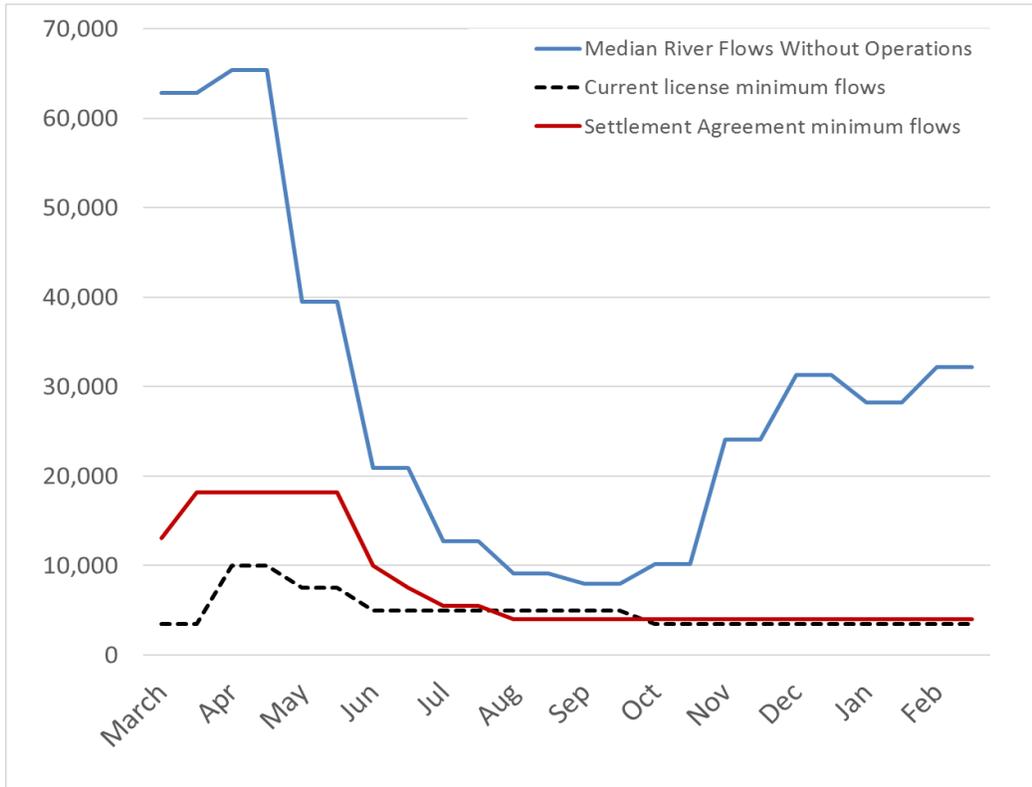
We agree with the Settlement Offer’s claim that, in the spring months, proposed minimum flow releases will be substantially increased, relative to minimum flows under the existing license approved in 1980. However, this would not be the case for the summer, fall and winter months. Rather, the proposed minimum flows in summer, fall and winter months – that is for three-quarters of the year – would be very similar to or below the minimum flows in the existing license (*see* Figure 1). As acknowledged in RSP 3.16,²⁴ successful propagation and growth requires suitable habitat conditions across all life stages. The seasonal periodicity of several fish, macroinvertebrate and freshwater mussel species in the Lower River is illustrated in Table 1, including dependences on summer, winter and fall months.

Further, in all months, the proposed minimum flow releases are below typical drought conditions (monthly Q95) for most of the year, below the historic daily flows in December, January, February, and April, and orders of magnitude below median conditions, year-round (*see* Figure 2). As stated in our Motion to Intervene, the Conservancy in partnership with the SRBC and the U.S. Army Corps of Engineers, developed ecosystem flow recommendations to support the species and ecological functions of the Susquehanna River mainstem (DePhilip and Moberg 2010). The study provides clear evidence that the proposed minimum flow releases below the monthly Q95 are inadequate to mitigate Project impacts and is supported by the USGS & EPA

²⁴ Exelon, “Final Study Report: Instream Flow Habitat Assessment Below Conowingo Dam: RSP 3.16” (Aug. 2012), *available at* https://mde.maryland.gov/programs/Water/WetlandsandWaterways/Documents/ExelonMD/WQCAApplication0517_pp1202-1476.pdf (last accessed Jan. 17, 2020).

(2016) technical guidance for developing flow standards to support Clean Water Act water quality standards and their beneficial uses (pp. 41-51).²⁵

Figure 1. A Comparison of median river flows without operations (blue), current minimum flows requirements (dashed black) and minimum flows in the Proposed License Articles (red).



²⁵ See TNC, “Letter re: Conowingo Hydroelectric Project (P-405-106),” eLibrary no. 20191029-5163 (Oct. 29, 2019).

Table 1. Under the Settlement Offer, minimum flows will remain the same or lower than the existing condition through the summer, fall and winter. As illustrated by RSP 3.16, most species have life stages that require suitable habitat during summer, winter and fall.

TABLE 3.2.1-2: SEASONAL PERIODICITY OF OCCURRENCE OF TARGET SPECIES IN THE SUSQUEHANNA RIVER BELOW CONOWINGO DAM. ITALICIZED LIFE STAGES ARE CONSIDERED IMMOBILE. HABITAT GUILDS ARE SHOWN IN PARENTHESES.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
American Shad												
<i>Spawning</i>												
<i>Fry</i>												
Juveniles												
Adults												
Hickory Shad												
<i>Spawning (Deep-Slow)</i>												
<i>Fry(Shallow-Slow)</i>												
Juveniles (Deep-Slow)												
Adults (Deep-Fast)												
Blueback Herring												
<i>Spawning (Deep-Slow)</i>												
<i>Fry (Shallow-Slow)</i>												
Juveniles (Shallow-Slow)												
Adults (Deep-Slow)												
Alewife												
<i>Spawning (Deep-Slow)</i>												
<i>Fry (Shallow-Slow)</i>												
Juveniles (Deep-Slow)												
Adults (Shallow-Slow)												
White Perch												
<i>Spawning (Shallow-Fast, Deep-Fast)</i>												
<i>Fry (Shallow-Slow)</i>												
Juveniles (Shallow-Slow, Deep-Slow)												
Adults (Deep-Slow)												
Yellow Perch												
<i>Spawning (Deep-Slow)</i>												
<i>Fry (Shallow-Slow)</i>												
Juveniles (Deep-Slow)												
Adults (Deep-Slow)												
Striped Bass												
<i>Spawning</i>												
<i>Fry</i>												
Juveniles												
Adults												

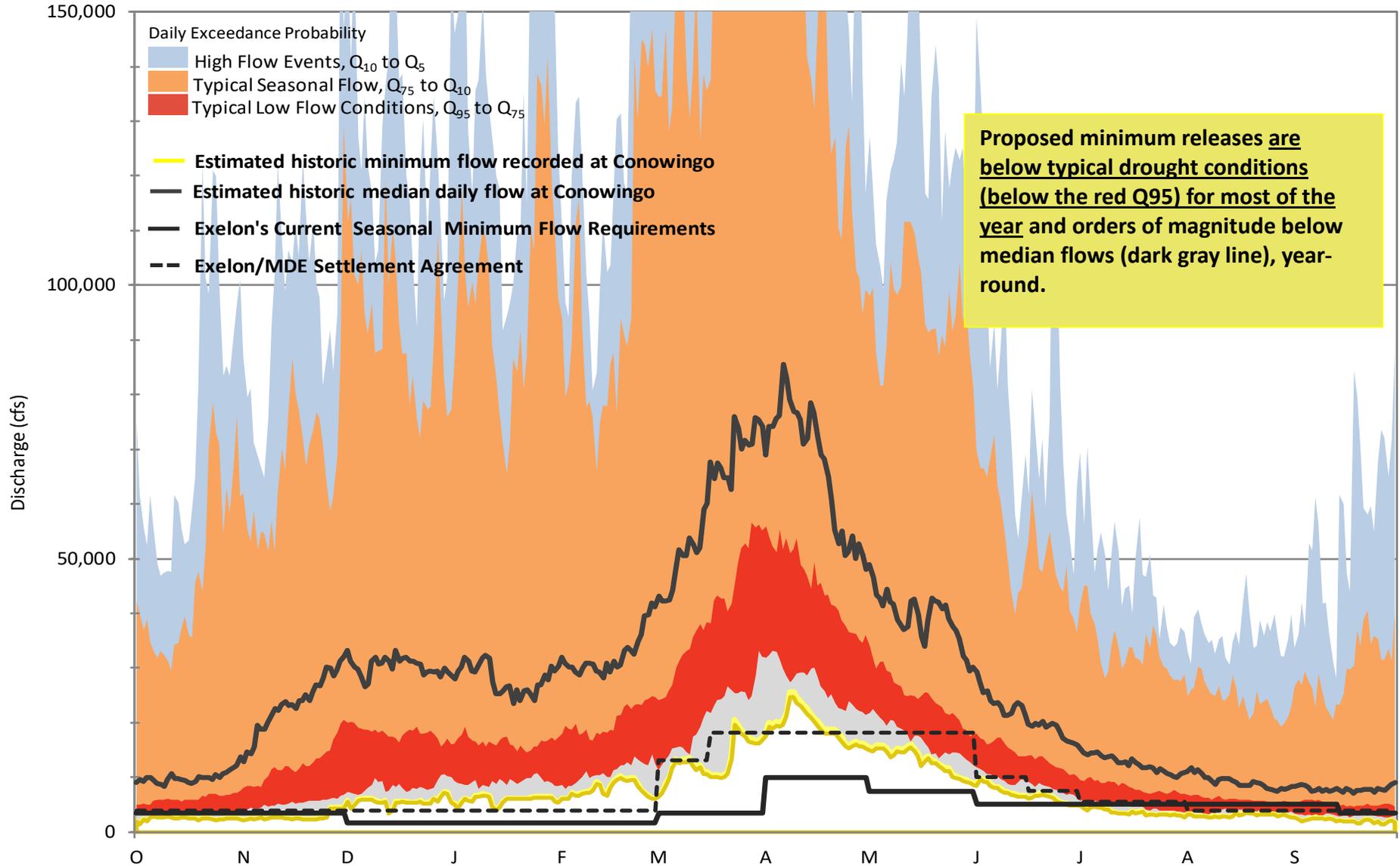
Table 1 continued.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Largemouth Bass												
<i>Spawning (Shallow-Slow, Deep-Slow)</i>												
<i>Fry (Shallow-Slow, Deep-Slow)</i>												
Juveniles (Shallow-Slow, Deep-Slow)												
Adults (Deep-Slow)												
Smallmouth Bass												
<i>Spawning</i>												
<i>Fry</i>												
Juveniles												
Adults												
Walleye												
<i>Spawning (Deep-Fast)</i>												
<i>Fry (Deep-Slow)</i>												
Juveniles (Deep-Slow)												
Adults (Deep-Slow)												
Shortnose sturgeon												
<i>Spawning</i>												
<i>Fry</i>												
Juveniles/Adults												
Atlantic sturgeon												
<i>Spawning (Deep-Fast)</i>												
<i>Fry (Deep-Slow, Deep-Fast)</i>												
Juveniles/Adults (Deep-Slow, Deep-Fast)												
American eel												
Elver (Shallow-Slow, Deep-Slow, Deep-Fast)												
Yellow (Shallow-Slow, Deep-Slow, Deep-Fast)												
Silver (Deep-Slow)												
Alewife floater												
Adults/juveniles												
<i>Spawning</i>												
<i>Larvae</i>												
Eastern elliptio												
Adults/juveniles												
<i>Spawning</i>												
<i>Larvae</i>												
Fingernail clams												
Adults												
<i>Spawning/larvae</i>												
Ephemeroptera-Plecoptera-Trichoptera												
<i>all life stages</i>												

Figure 2. A comparison of interannual variability and minimum flows proposed in the Settlement Agreement Operational Flow Regime (dashed black line).

Proposed Operations through 2070: Susquehanna River at Conowingo*

*Estimated distribution of unaltered daily flows using Marietta Baseflows (1930-2007) - basin area ratio method



3. The frequency and magnitude of peaking operations (combination of minimum and maximum flows) will continue to impair the availability of suitable habitat to support the propagation of fish, wildlife and aquatic vegetation.

The Settlement Offer does not propose a frequency for peaking operations, therefore we expect that the licensee will continue to operate as part of an open-loop pumped storage project and continue to peak with a frequency similar to past operations, so long as energy markets are favorable. Specifically, this means that the project would continue daily peaking operations, in some cases twice per day, with some gaps between days during extreme low flow conditions. Table 2 outlines proposed minimum and maximum peaking flows by month. Illustrations of daily changes in hydraulic habitat conditions (depth and velocity) between minimum flows and maximum generation flows are included in Enclosure 2.

Table 2. Daily minimum and maximum peaking flows and differences in stages as estimated at USGS Gage 01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD

Month	Minimum flow releases (cfs)	Maximum flow releases (cfs)	Daily difference in stage from minimum to maximum (feet)
Jan	4,000	86,000	7
Feb	4,000	86,000	7
Mar	13,100 18,200	86,000	6 5
Apr	18,200	86,000	5
May	18,200	75,000	4
June	10,000 7,500	75,000	6
July	5,500	79,000	6
Aug	4,000	79,000	7
Sept	4,000	79,000	7
Oct	4,000	86,000	7

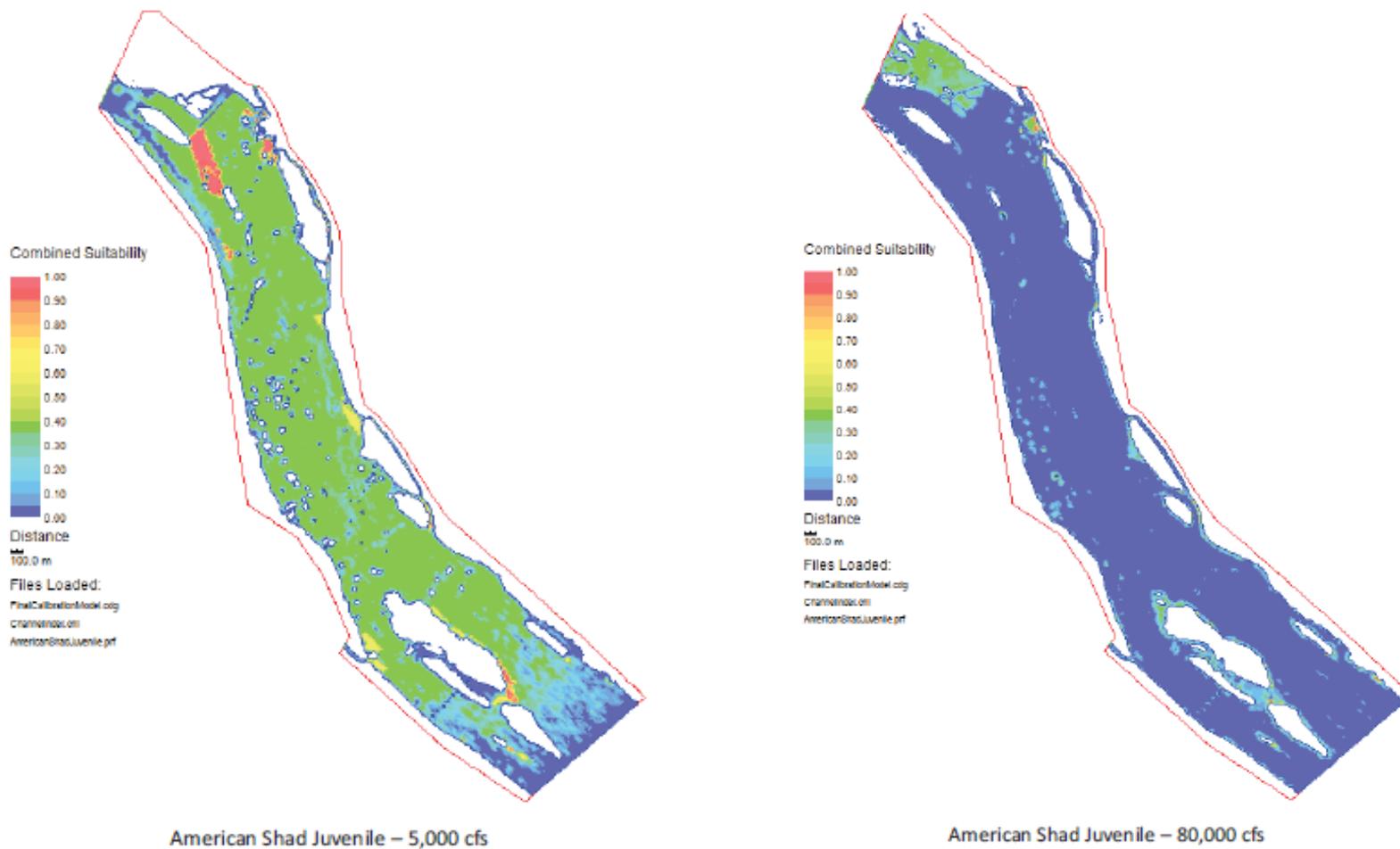
Nov	4,000	86,000	7
Dec	4,000	86,000	7

With these operations, the distribution of suitable depths and velocities within the river will continue to vary significantly on a daily basis, with those swings being most dramatic in the months with the greatest difference between minimum and maximum flows. In most cases, what is suitable habitat under daily minimum flow releases, is not suitable habitat under daily high flow releases. Using juvenile shad as an example, Figures 3a and b illustrate how habitat suitability changes significantly between daily minimum flow releases and maximum generation flows. Figure 3a illustrates habitat suitability on the lower river under the proposed flow regime for minimum flows of 5,000 cfs, with light green, yellow, orange and red areas having habitat above the suitability threshold and light and dark blue areas having habitat below the suitability thresholds. In Figure 3a, we see a significant portion of the study area has suitable habitat – and know that this is translated to an estimate of 92% of maximum weighted usable area (RSP 3.16 Table 5.1-2). However, in Figure 3b, under maximum generation flows of 80,000 cfs, we see that suitability changes significantly. What was suitable habitat under minimum flow releases is not suitable habitat (has transitioned to light and dark blue) under maximum generation flows. Further, under maximum generation flows, the majority of the suitable habitat for juvenile shad now exists in the tailrace. The tailrace is dewatered under minimum flows (Figure 3a).

This example illustrates that with a daily peaking operation, minimum flows alone, cannot be used to estimate habitat availability. Rather, we must look at the habitat available under minimum *and* maximum flows to understand whether or not a flow proposal will result in

functional habitat improvements that would be expected to result in biologically meaningful outcomes.

Figure 3a and b. Example of the change in daily habitat suitability for juvenile shad from minimum flows of 5,000 cfs to maximum generation flows of 80,000 cfs. **Light blue and dark blue areas are unsuitable (source RSP 3.16).** These figures are the best publicly available representation of July proposed flows of a minimum of 5,500 cfs and a maximum of 79,000 cfs.



As discussed in detail in our comments on the final EIS (*see* Enclosure 1, Exhibit A, Attachment 4), and written testimony by Dr. Claire Stalnaker (*see* Enclosure 1, Exhibit A, Attachment 3), given Conowingo dam’s hydroelectric peaking operations, a habitat time series analysis is necessary to compare habitat persistence across species and life stages. Absent this analysis, we use data provided in RSP 3.16 to provide a best estimate of habitat suitability, including percent of maximum weighted usable area (mobile life stages) and persistent habitat (immobile life stages) to summarize habitat availability across species and life stages based on the proposed minimum flows and maximum daily generation flows (Table 3a). We compare this to estimated habitat availability under unregulated median monthly flow conditions (Table 3b).

Upstream migration. Under the proposed operational flow regime, we estimate that improved flow conditions during diadromous fish migration during March, April and May, would provide more than 70% maximum weighted usable area (WUA) for adult fish. Relative to existing conditions, this could improve the far field attraction flows for American shad and the probability of entering the fish lift, resulting in a functional benefit relative to existing conditions (Table 3a).

Diadromous fish spawning, egg and larval and juvenile development. The Lower Susquehanna was once the most productive spawning ground for striped bass on the east coast (Dovel and Edmunds 1971)²⁶ and similarly supported robust shad, river herring and sturgeon recruitment (Enclosure 1, Attachment 2). As documented in RSP 3.18, under existing conditions, there is little evidence of successful egg and larval development for diadromous fish. For the proposed operational flow regime, it is estimated that 8 to 30% of suitable habitat would be available during American shad spawning and egg development, 46 to 51% during sturgeon

²⁶ Available at <https://www.jstor.org/stable/1350500?seq=1> (last accessed Jan. 17, 2020).

spawning and 5 to 52% during striped bass spawning (Table 3a). This is an incremental improvement from existing conditions which support 2 to 40% spawning habitat across those species (Enclosure 1, Table 5). Habitat conditions during fry development are also marginally improved relative to existing conditions, however, relative to maximum available habitat, they are still extremely restricted, with 3 to 23% of available habitat supported in June and only 1 to 14% supported in July (Table 3a). Under unregulated flow conditions, 70 to 99% of habitat would be available for fry development (Table 3b). During late fall and winter less than 70% MWUA would be supported for overwintering of juvenile and adult fish.

While the proposed operational flow regime will marginally increase spawning habitat during the spring months, re-establishing successful recruitment of diadromous fish below Conowingo dam, will require a flow regime that supports all life stages. As proposed, habitat conditions would provide minimal suitability from July through February. Further, the Settlement Offer makes no proposal to restore or mitigate the impact of the loss of coarse sediments (sand and gravel) on spawning habitat loss in the Lower River. As proposed, habitat conditions supported under the Settlement Offer would not be expected to result in restored recruitment of diadromous fish below the dam over the license term.

Macroinvertebrates. Changes to the operating regime in 1980 were focused on addressing impairments to the macroinvertebrate community. Under existing conditions, the macroinvertebrate community continues to be dominated by tolerant taxa (RSP 3.18) and is characterized as impaired (RSP 3.18). Under the proposed operating flow regime, an estimated 12 to 19% of habitat would be supported in spring months and an estimated 6 to 8 % of available habitat would be supported in summer, fall and winter months (Table 3a). Restricted habitat

conditions under the proposed operating flow regime would be similar to existing conditions and would not be expected to restore the impaired macroinvertebrate community.

Table 3a. – Periodicity of species and life stages with estimated percent (%) of habitat availability under the proposed Operational Flow Regime using weighted usable area (mobile life stages) and persistent habitat (*immobile life stages*) for maximum and minimum daily flows. For habitat conditions providing > 70% habitat availability, cells are shaded in green, 25 to 70% in light red and < 25% in dark red. For mobile life stages, the limiting flow condition (minimum generation/maximum generation) is indicated in **bold**.

		Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Proposed operational flow regime	Minimum flow (cfs)	13,000/ 18,200	18,200	18,200	10,000/ 7,500	5,500	4,000	4,000	4,000	4,000	4,000	4,000	4,000
	Max generation (cfs)	86,000	86,000	75,000	75,000	75,000	75,000	75,000	86,000	86,000	86,000	86,000	86,000
American shad	<i>Spawning & Inc</i>		26%	30%	8%								
	<i>Fry</i>			29%	23/17%	14%							
	Juvenile					96/49%	90/49%	90/49%	90/46%	90/46%			
	Adult		78%/79	78%/86	59/51%/86								
Shortnose sturgeon	<i>Spawning & Inc</i>		46%	51%									
	<i>Fry</i>			27%	19/14%	3%							
	Juvenile	85/92/76%	92/76%	94/80%	82/80%	69%/80	59%/80	59%/80	59%/76	59%/76	59%/76	59%/76	59%/76
	Adult	85/92/76%	92/76%	94/80%	82/80%	69%/80	59%/80	59%/80	59%/76	59%/76	59%/76	59%/76	59%/76
Striped bass	<i>Spawning & Inc</i>		44%	52%	14/5%								
	<i>Fry</i>		35%	41%	9/3%	1%							
	Juvenile				75/71%	62%/71	54%/80	54%/80	54%/71	54%/71	54%/71		
	Adult	50/85%/99	85%/99	85%/99	44/35%/99	30%/99	21%/99	21%/99	21%/99	21%/99	21%/99	21%/99	21%/99
Smallmouth bass	<i>Spawning & Inc</i>			8%	3%								
	<i>Fry</i>				6%	5%							
	Juvenile						99/13%	99/13%	99/11%	99/11%	99/11%		
	Adult	99/43%	97/43%	97/48%	98/48%	82/48%	75/49%	75/49%	75/43%	75/43%	75/43%	75/43%	75/43%
Macroinvertebrates	<i>Trichop</i>	14/12%	14%	19%	14/12%	11%	8%	8%	6%	6%	6%	6%	

Table 3b. – Periodicity of species and life stages with estimated percent (%) of habitat availability under median monthly unregulated flow using weighted usable area (mobile life stages) and persistent habitat (*immobile life stages*) for minimum and maximum daily flows. For habitat conditions providing > 70% habitat availability, cells are shaded in green, 25 to 70% in light red and < 25% in dark red (note there are no months with <25% habitat availability).

		Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Median monthly unregulated flow		61,744	63,752	38,768	20,661	13,045	9,201	7,995	9,845	22,927	30,672	27,732	32,617
American shad	<i>Spawning & Inc</i>		97%	98%	68%								
	<i>Fry</i>			99%	80%	70%							
	Juvenile					99%	99%	98%	99%	97%			
	Adult		95%	99%	83%								
Shortnose sturgeon	<i>Spawning & Inc</i>		99%	92%									
	<i>Fry</i>			82%	96%	86%							
	Juvenile	87%	87%	97%	97%	86%	80%	79%	82%	96%	96%	96%	96%
	Adult	87%	87%	97%	97%	86%	80%	79%	82%	96%	96%	96%	96%
Striped bass	<i>Spawning & Inc</i>		97%	99%	81%								
	<i>Fry</i>		98%	99%	70%	43%							
	Juvenile				89%	78%	75%	70%	75%	89%	95%		
	Adult	98%	99%	91%	68%	48%	45%	36%	44%	68%	80%	80%	82%
Smallmouth bass	<i>Spawning & Inc</i>			35%	44%								
	<i>Fry</i>				52%	63%							
	Juvenile						92%	96%	91%	64%	40%		
	Adult	58%	56%	73%	95%	99%	95%	93%	98%	95%	80%	83%	80%
Macroinvertebrates	<i>Trichop</i>	52%	52%	70%	92%	96%	95%	92%	96%	96%	81%	81%	81%

Freshwater mussel diversity and recruitment. As detailed in our filings, the combination of minimum flows, generation flows and loss of coarse sediment transport has impaired the freshwater mussel diversity and recruitment below Conowingo dam (Enclosure 1, pp. 6, 17). Specifically, generation flows create unsuitable scour conditions inhibiting spawning and larval development and the lack of persistent habitat for host-fish further limits successful larval development. The Settlement Offer does not provide evidence that the operational flow regime will address these Project impacts to habitat for Eastern Elliptio, Alewife floater, Eastern Floater, Tidewater Mucket and Eastern Lampmussl, nor does it connect these impacts with proposed off-license mitigation measures.

Comparison to NGO-Stakeholder Alternative. Lastly, the Settlement Offer does not provide any comparative analysis of the proposed operational flow regime and alternatives in the record. Given the unmitigated impacts under the proposed operational flow regime, we expect OEP Staff to undertake such analysis or direct the Settling Parties to do so prior to making a decision on the Settlement Offer. In particular, the proposed operational flow regime should be compared to the NGO-Agency alternative flow regime using an appropriate scientific method for peaking operations.²⁷ As described above, the Conservancy, in consultation with resource agencies and other stakeholders developed ecological performance goals and used best available data, including habitat models and literature, to identify an alternative operational flow regime that would support the continued generation of economically viable, low carbon energy, while restoring the ecological and ecosystem service values of the river. The NGO-Agency alternative flow regime relies on information learned from the operational scenario analysis to identify the combination of scenarios that is most likely to meet both objectives. It is based on a detailed

²⁷ Dr. Stalanaker previously described appropriate methods. See Enclosure 1, Exhibit, Attachment 3. *TNC's Comments re Offer of Settlement Exelon's Conowingo Project (P-405-106, -121)*

analysis of hydrology, operations and habitat availability. In addition, this alternative takes into account settlement discussions between the agencies/stakeholders and Exelon. To be clear, it is a negotiated proposal that reflects significant compromise.

Consistent with the findings of our scenario analysis and relevant literature review, the NGO-Agency alternative flow regime includes three components (a) a two-tiered monthly minimum flow requirement to meet biological objectives at those times of greater water availability (streamflows are above normal) and lower cost to the licensee; (b) a maximum flow customized to habitat suitability spawning and rearing season for fish, mussels, macroinvertebrates, reptiles and amphibians and SAV to support persistent habitat and restore recruitment; and (c) up- and down-ramping rates to improve the availability of aquatic habitat and reduce stranding during peaking events.²⁸

4. The proposed operational flow regime does not include downramping rates to mitigate fish stranding from daily peaking flows generation flows > 30,000 cfs.

The Settlement Offer proposes downramping measures to reduce the potential for fish stranding at flows below 30,000 cfs. More specifically, the Settlement Offer proposes (Attachment A, Table (b)) to implement a ramping rate of up to 12,000 cfs/hour when flows are less than 30,000 cfs. It does not propose ramping rates when flows are between 86,000 cfs and 30,000 cfs. The Settlement Offer does not show this proposal will mitigate fish stranding under the full range of project operations.

Evidence in the record demonstrates that fish stranding and mortality occur in a portion of the channel that is dewatered at flows above 30,000 cfs,²⁹ and that this impact is significant

²⁸ See Enclosure 1.

²⁹ Final Study Report. Downstream Flow Ramping and Stranding, RSP 3.8.
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(Figures 1a &b, 2a&b). Extrapolating from the discrete stranding study days to seasonal peaking events, it is estimated that more than 420,000 fish may have been stranded over the course of the year. Mortality from stranding was highest in the spring and summer months and is expected to be an underestimate, as significant avian predation was observed but not incorporated into estimates of mortality. These impacts are significant. For example, it is estimated that more than 1,400 American shad were stranded (Figure 1a) during the 2011 spawning and migration season, which was about 7% of the American shad that passed that year.³⁰

The Settlement Offer does not propose any measures to mitigate stranding mortality as flows drop from 86,000 cfs to 30,000 cfs despite record evidence that the impact to shad is significant. Accordingly, the Settlement Offer does not show the proposed downramping measure will “mitigate any potential impacts” (Settlement Offer, p. 10) or “provide additional benefits and protection by reducing the potential for fish stranding” (*id.* at 11).

In order to better understand the relationship between mitigation proposed in the Settlement Offer and impacts, we request that the settling parties provide written responses to the questions below:

Q.1. Under existing conditions, effective spawning and rearing of diadromous fish, including American shad, herring, striped bass and sturgeon is not currently supported in the Lower River. How will the Settling Parties ensure that investments in the operational flow regime will mitigate the impacts of project operations on spawning and rearing?

Q.2. How will the Settling Parties ensure that investments in the operational flow regime will mitigate the impacts of project operations on the impaired macroinvertebrate community?

³⁰ TNC MOI, Attachment 1, Table 4-Column III; *see also* Pennsylvania Fish and Boat Commission, “Suquehanna River American Shad: YTD Passages,” available at <https://www.fishandboat.com/Fish/PennsylvaniaFishes/Pages/SusquehannaShad.aspx> (last accessed Jan. 17, 2020).

Q.3. What is the basis for Settling Parties' claim that the operational flow regime will provide suitable habitat to restore freshwater mussel recruitment below the dam, including Eastern Elliptio, Alewife floater, Eastern floater, Tidewater Mucket and Eastern Lampmussel?

Q.4. What benefits will the Settlement Offer provide to state and Federally threatened and endangered species, including the map turtle?

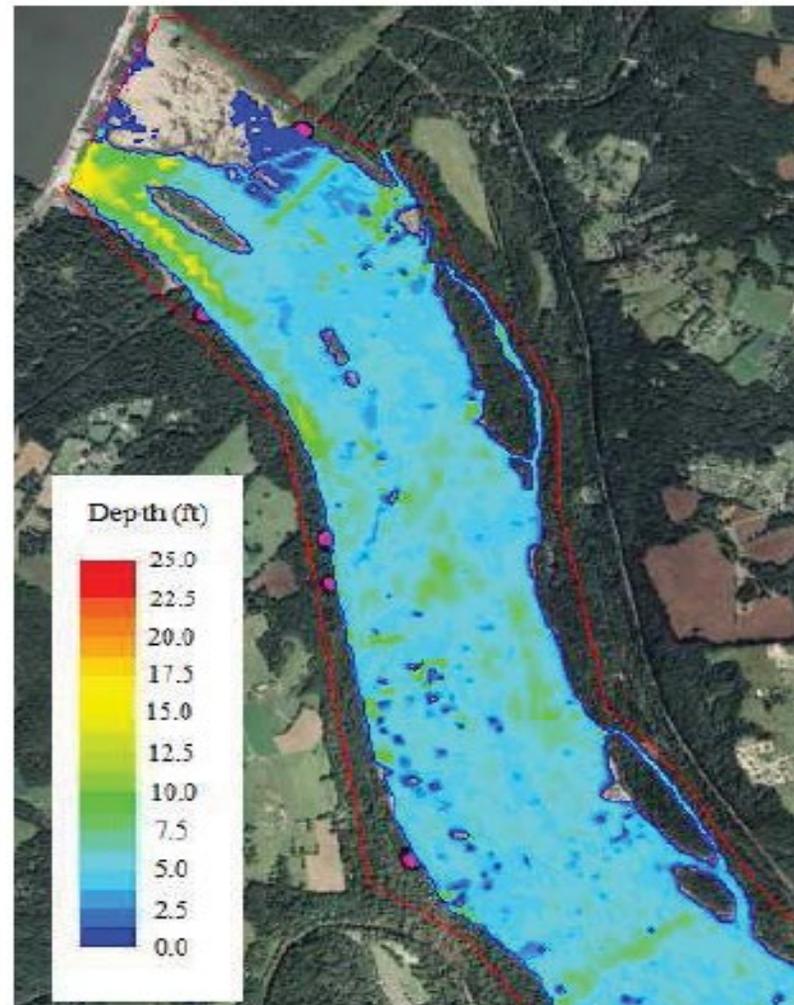
Q.5. SAV depends on the availability of relatively stable shallow habitats during the growing season. How will the proposed flow fluctuations of several feet per day during the growing season affect efforts to restore SAV in the project area?

Q.6. The Lower Susquehanna River was recently listed as an impaired waterbody for flow alteration by the State of Maryland. What evidence can the Settling Parties provide that the proposed operational flow regime will address the Project as a source for this impairment and achieve attainment of the relevant water quality standards?

Q.7. What quantitative benefits will the proposed operational flow regime have for stranded fish, particularly for downramping flows between 86k and 30k?

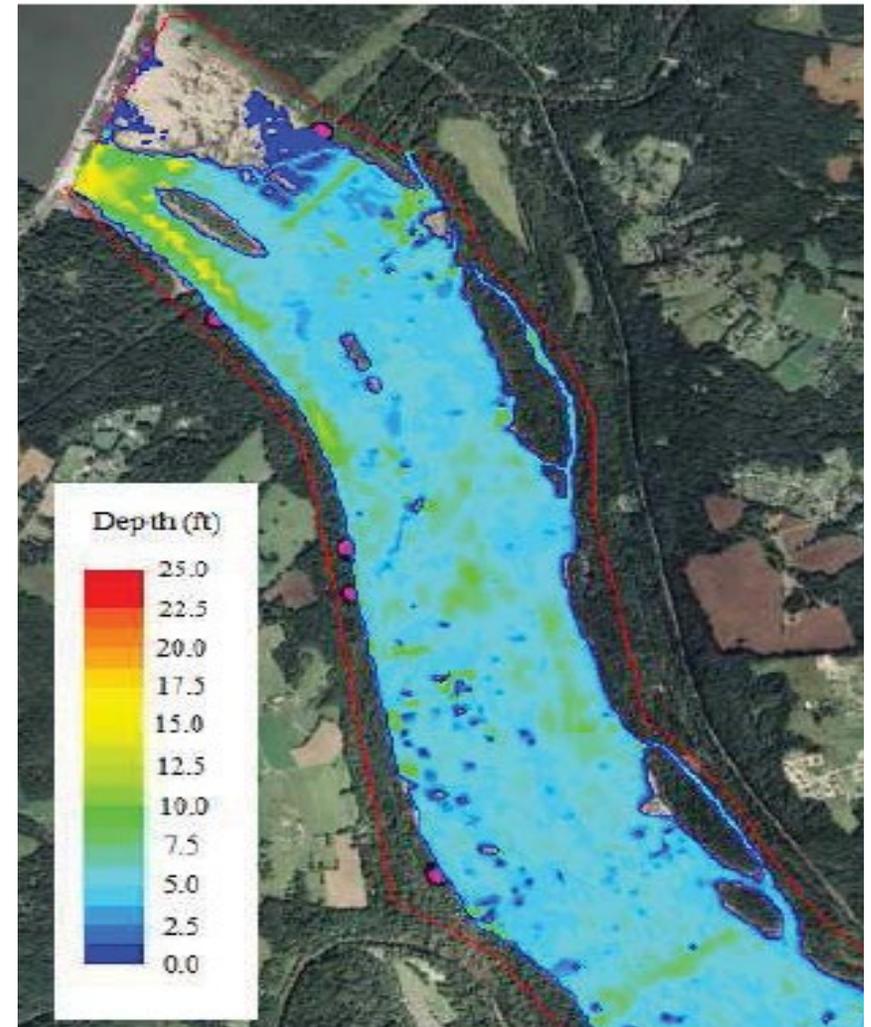
Q.8. What is the basis for the Settling Parties recommendation to defer implementation of the second phase of the flow regime for three (3) years after license issuance? What are the ecological impacts of not implementing phase 2 for the three years? Does the Settlement Offer consider and/or include mitigation for impacts associated with this delay?

Figure 1 a & b. As documented in RSP 3.8 Figure 4.1-2-2, during the Spring, fish stranding and mortality was documented (a) in a portion of the channel that is dewatered during downramping between 86,000 cfs and 30,000 cfs (b). Downramping rates below 30,000 cfs would not be expected to mitigate these stranding and mortality impacts.



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Figure 2 a & b. As documented in RSP 3.8 Figure 4.2-2-2, during the Summer, fish stranding and mortality was documented (a) in a portion of the channel that is dewatered between 86,000 cfs and 30,000 cfs (b). Downramping rates below 30,000 cfs would not be expected to mitigate these stranding and mortality impacts.



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B. The Settlement Offer Does Not Show It Will Protect Water Quality in the Lower Susquehanna River and Chesapeake Bay.

The Settlement Offer does not propose license terms to address the Project’s impacts on water quality in the lower Susquehanna River and Chesapeake Bay. Rather, the Settlement Offer proposes only off-license terms related to water quality impacts. These terms include making payments intended for mussel restoration (Settlement Offer, p. 6), resiliency projects (such as SAV restoration, aquaculture, clam and oyster restoration and living shoreline creation) (*id.* at 7), mitigation of impacts of high-flow scour events (*id.*), and other projects that will have benefits to water quality (including agricultural practices such as cover crops and forest buffers) (*id.* at 7-8).

The Explanatory Statement states the following in support of these terms:

- “The eastern elliptio mussel provides important ecosystem services, including filtration and transformation of sediment and nutrient pollution. A significant mussel restoration initiative is needed to re-establish the eastern elliptio population in the lower River. Exelon has agreed to support MDE’s efforts to undertake such an initiative...” (Explanatory Statement, p. 19).
- “Exelon has agreed to provide MDE with financial support for projects to make the River and the Bay more resilient to severe weather events... MDE intends to use these funds for projects such as submerged aquatic vegetation restoration, oyster restoration, clam restoration, aquaculture, and living shoreline creation (*id.*).
- “Exelon has agreed to provide MDE with financial support for other water quality improvement projects, including forest buffers and agricultural projects such as cover crops.” (*id.* at 20).

The Settling Parties have not provided adequate information to show that the above measures will mitigate the project’s water quality impacts, namely because the terms do not specify quantifiable biological or ecological objectives or outcomes.

Evidence has been presented in the record that provides a clear basis for the quantification of the Conowingo Project’s incremental impact on water quality and

corresponding mitigation needs.³¹ This evidence documents that project operations alter the form and timing of pollutant delivery, and that significant mitigation is needed to reduce these pollutants. Because the proposed non-license terms described in the Settlement Offer and Explanatory Statement are simply payments into a Fund, there is no basis to estimate how much the proposed mitigation would achieve towards addressing the water quality impacts traceable to the project.

In order to better understand the relationship between mitigation proposed in the Settlement Offer and the project impacts, we request that the Settling Parties provide written responses to the questions below.

Q.9. What quantitative benefits, specifically annual amounts of “filtration and transformation of sediment and nutrient pollution,” could be reasonably expected to result from investments in the construction and operation of a mussel hatchery?

*Q.10. What plans have the Settling Parties made to compensate for this expected mitigation should the hatchery fail, and/or if plantings of hatchery-bred mussels are unsuccessful? In particular, the Explanatory Statement indicates that a “significant mussel restoration initiative is needed to re-establish the eastern elliptio population **in the lower River**” (emphasis added). What evidence exists that transplanted mussels could persist in the lower River under the proposed flow regime and current habitat conditions?*

Q.11. How many acres of resiliency projects could be reasonably expected to result from the proposed investments? What are the quantitative water quality and/or resilience benefits anticipated from these projects?

Q.12. Section 2.3 (b) of the Settlement Offer states that Exelon will make annual payments of \$250,000 to MDE’s Clean Water Fund which will be used to “mitigate the impact of high-flow events that may result in scour of sediment impounded by the Dam...”. What is the Settling Parties estimate of the magnitude of the impact of these high-flow events, and what do the Parties estimate this annual payment will accomplish with regards to that impact?

Q.13. Hydrologic conditions are predicted to change significantly over the next 50 years, with equally significant implications for sediment dynamics in the Conowingo reservoir. How are the Settling Parties planning to evaluate changes to these conditions, estimate their impacts on high-flow scour events, and adjust the needed mitigation from those impacts?

³¹ See letter from Alison Prost to Elder Ghigiarelli, Jr. (Jan. 16, 2018) (CBF’s WQC Comments), pp. 1-3. *TNC’s Comments re Offer of Settlement Exelon’s Conowingo Project (P-405-106, -121)*

Q.14. What process will MDE follow to ensure that water quality and resilience projects selected and implemented from Clean Water Fund payments will maximize desired benefits over the course of the license?

C. The Settlement Offer Does Not Show the Proposed Adaptive Management Provision Will Improve Ecological Outcomes over the Proposed 50-year License Term.

The Settlement Offer includes a provision for “Adaptive Management,” which allows MDE to seek to modify the new license to comply with more stringent regulatory requirements that may be enacted over the term of the new license:

MDE may seek to modify the New License to achieve compliance with any applicable effluent limitation, other limitations, or water quality standards or requirements issued or approved under Sections 301, 302, 303, 306, and 307 of the CWA or applicable State Law if the limitation, standard, or requirement so issued or approved contains different conditions or is otherwise more stringent than any requirements of the Incorporated License Articles.

Settlement Offer, p. 12. However, there are several restrictions on MDE’s right to seek modification. Under the Settlement Offer, MDE is prevented from seeking to:

- modify Flow Regime if it would have “detrimental economic impact,”³²
- impose fish passage measures that are additive to, or different from, the requirements of the Fish Passage Prescription;
- impose additional nutrient or sediment-related measures or nutrient or sediment funding requirements associated with nutrients or sediment originating from sources outside the Project; or
- impose any additional requirements related to PCBs or chlorophyll-a associated with pollution originating from sources outside of the Project.

The “Adaptive Management” provision could be better characterized as MDE’s right to seek reopening of the new license before the Commission in limited circumstances where it is

³² Settlement Offer, § 3.6(d). We understand “detrimental economic impact” to be based primarily on a projected decrease in combined energy revenues at the Conowingo and Muddy Run Projects from what Exelon would expect to receive absent a modification. *See id.*
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necessary to comply with a more stringent water quality requirement enacted post-license and it would not adversely affect anticipated project revenues.

Whether MDE can prospectively waive its authority to regulate the Conowingo Project under Sections 301,302,303, 306, and 307 of the CWA as a matter of contract is outside the scope of the Commission’s authority to resolve, and so we reserve those comments for another venue. The Conservancy previously responded in opposition to Exelon’s arguments that the Commission should find that MDE has inadvertently waived its authority under CWA section 401.³³

The provisions limiting MDE’s right to seek modification to the operational flow regime appear designed to prevent actions to adaptively manage mitigation investments in order to optimize restoration objectives, and contrary to standard adaptive management guidance.³⁴ The Conservancy is very concerned by the Settlement Offer’s omission of an adaptive management program and additional restrictions on reopener given our improved understanding of how climate change is likely to affect the Susquehanna River Basin over the term of any new license. Hydrologic conditions are already changing in the Susquehanna River watershed, with predictions indicating the next 30 years will bring even more intense and frequent storms leading.³⁵ The inability of the proposed settlement terms to adapt to these changes, particularly since the Project alters the form and timing of pollutants moving through the river, indicates additional, unmitigated impacts to natural resources are likely during the term of the new license.

³³ TNC, “Motion to Intervene and Opposition to Exelon Generation Company, LLC’s Petition for Declaratory Order,” eLibrary no. 20190328-5189 (Mar. 28, 2019).

³⁴ U.S. Department of Interior, “Technical Guide to Adaptive Management” (2009), *available at* <https://www.doi.gov/sites/doi.gov/files/migrated/ppa/upload/TechGuide.pdf> (last accessed Jan. 17, 2020).

³⁵ Chesapeake Bay Program, “Climate Change,” *available at* https://www.chesapeakebay.net/state/climate_change (last accessed Jan. 17, 2020).
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IV.
Request for Settlement Technical Conference

The Conservancy requests that OEP Staff convene a technical conference pursuant to Rule of Practice and Procedure 601, 18 C.F.R. § 385.601, to address the disputed or otherwise unresolved issues identified in Section III. As stated above, the explanation provided in the Settlement Offer does not show that the proposed terms will mitigate the Project's impacts on ecological resources in the Lower Susquehanna River and Chesapeake Bay, and there remain disputes regarding which measures *will* mitigate project impacts consistent with the Commission's comprehensive planning responsibility under FPA section 10(a). These disputes remain even though the relicensing has been pending for over a decade, and are more likely to carry over into litigation if OEP Staff do not provide an opportunity for a technical conference or other dispute resolution procedures prior to license issuance.

V.
Conclusion

The Conservancy thanks OEP Staff for considering these comments. We request that OEP Staff order additional procedures, including directing the settling parties to provide written responses to the questions herein and convene a technical conference, prior to taking final action on the Settlement Offer.

Respectfully submitted,



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Attorneys for THE NATURE
CONSERVANCY

DECLARATION OF SERVICE

Exelon Generation Company, LLC's Conowingo (P-405)

I, Tiffany Poovaiah, declare that I today served the attached "The Nature Conservancy's Comments on Offer of Settlement," by electronic mail, or by first-class mail if no e-mail address is provided, to each person on the official service list compiled by the Secretary in this proceeding.

Dated: January 17, 2020

By:



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