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*Via Electronic Mail*

Re: Comments on EPA's Proposed Modification of the 2018 NPDES Permit for Schiller Station (Permit No. NH00014733)

The Sierra Club, on behalf of its nearly five thousand members in New Hampshire, and Conservation Law Foundation ("CLF"), with 765 members in New Hampshire and an active Great Bay-Piscataqua Waterkeeper program devoted to restoring and protecting the health of the Great Bay estuary, including the Piscataqua River (together, "Commenters"), submit the following comments on EPA's proposed modification of the National Pollution Discharge Elimination System ("NPDES") permit for the Schiller Station power plant in Portsmouth, New Hampshire, Permit No. NH0001473. As explained in more detail below, EPA's proposal to weaken protections against entrainment and impingement of aquatic life in Schiller Station's cooling system by granting Schiller Station's operator, Granite Shore Power ("GSP") the option of avoiding otherwise required and overdue installation of intake screen technology is contrary to the requirements of the Clean Water Act and arbitrary and capricious. As such, EPA's proposed modification should not be finalized.

**Factual and Procedural Background**

Schiller Station is a 163 megawatt (MW) facility that consists of two 48 MW coal-fired units, Units 4 and 6, which use oil as a back-up fuel; one 48 MW wood-fired unit, Unit 5; and one 19 MW combustion turbine. Units 4, 5, and 6 began commercial operation in the 1950s. These three units employ once-through cooling systems drawing through two cooling water intakes with a total maximum design intake flow of 125.8 million gallons of water per day ("MGD"). Draft Permit Modification at 3. This water is withdrawn from and discharged back into the Piscataqua River. In the process, aquatic life from the River is impinged and entrained by the cooling water intake system ("CWIS") and suffers mortality thereby. As EPA notes, "the losses from impingement mortality and entrainment at Schiller Station constitute an adverse environmental impact on the Piscataqua River and additional controls are necessary and warranted to minimize that impact consistent with" Clean Water Act requirements. Draft Statement of Basis at 4.

In September of 1990, EPA Region 1 issued NPDES Permit No. NH0001473 to Public Service Company of New Hampshire ("PSNH"), the then-owner and operator of Schiller Station.[1] This 1990 Permit superseded the permit issued on December 31, 1984, and authorized the continued operation of Schiller's once-through cooling system. The Region modified the permit on May 31, 1991, and the permit expired on September 30, 1995, but was administratively continued for over twenty years thereafter.

In September of 2015, EPA noticed for public comment a draft NPDES permit for Schiller Station.[2] As part of this permitting process, EPA considered the Best Technology Available ("BTA") for entrainment and impingement at Schiller. The Sierra Club and CLF submitted comments arguing that closed-cycle cooling represented BTA for Schiller.[3] Finally, on April 6, 2018, EPA released a final NPDES permit for Schiller Station, to go into effect on the first day of the calendar month following 60 days after signature, to expire on June 30, 2023.

The April 2018 NPDES permit for Schiller Station included BTA determinations for entrainment and impingement under section 316(b) of the Clean Water Act and its implementing regulations. Specifically, the permit set a requirement that Schiller "install and operate a fine mesh wedgewire screen intake system for the [cooling water intake systems] of Units 4, 5, and 6" with a "slot or mesh size no greater than 0.8 mm" to satisfy entrainment requirements, and that, in addition to the screens, "[t]o minimize impingement mortality, the permittee shall maintain a through-screen velocity at the wedgewire screens no greater than 0.5 fps." 2015 NPDES Permit at 11-12.

The April 2018 NPDES permit also set forth a compliance schedule for installation of these BTA screens that "shall be completed as soon as practicable but no later than the schedule of milestones," including:

- Pilot design testing design and installation of all pilot testing equipment within 6 months of the effective date of the permit (i.e., by December 1, 2018)
- Completion of pilot testing of wedgewire screens no later than 18 months after the effective date of the permit (i.e., by December 1, 2019)
- Submission to EPA of a demonstration report within 21 months of the effective date of the permit (i.e., by March 1, 2020), including
    - Proposed screen slot size,
    - Proposed material choice for the equipment, and
    - Proposed optimal screen orientation
- Completion of data collection, including topographic and bathymetric surveys, no later than 22 months after the effective date of the permit (i.e., by April 1, 2020)
- Submission of a final design for the wedgewire screens within 26 months of the effective date of the permit (i.e., by August 1, 2020).

[1] *See* AR-002, Schiller Authorization to Discharge Under the National Pollutant Discharge Elimination System NH0001473 (Sept. 11, 1990) (the "1990 Permit").
[2] *See* AR-258.
[3] *See, e.g.*, AR-312, Comments of Sierra Club (Jan. 27, 2016) (hereinafter "Comments of Sierra Club"); AR-311, CLF Comment on NPDES Permit No. NH0001743 (Jan. 27, 2016). Although these comments are already part of the permitting record for Schiller Station, Commenters incorporate those comments and their supporting materials herein by reference.

*Id.* at 13. Within 8 months after submission of the final design, Schiller was to complete submission of all necessary permit applications, complete the permitting process within another 12 months and/or report to EPA on the progress of that permitting process, and finally complete, within 20 months of obtaining permits and approvals, complete installation, testing, startup, and commissioning of the wedgewire screens. *Id.* at 14. Accordingly, the 2018 permit contemplated at the most a timetable of somewhere between 54 and 66 months from the effective date of the permit for screens to be in place and operational, or in other words, completion by late 2022 or 2023.

However, GSP sought, and received, from EPA an extension of this timeline. In March 2020, EPA extended the deadline for the demonstration report another five months from March 1, 2020 to July 30, 2020, the data collection deadline another five months to August 29, 2020, and the deadline for final design submission another five months to December 30, 2020. *See* Letter from K. Moraff to E. Tillotson (March 25, 2020).

Notwithstanding the permit requirement and the extra time EPA afforded to GSP to comply, it does not appear that GSP ever submitted a final wedgewire screen design to EPA. Instead, on March 31, 2021 GSP requested relief from the BTA wedgewire screen requirement and proposed in its place lowered limits on CWIS flows during certain months that would offer nominal "reductions" in system flow levels. However, these proposed limits were significantly in excess of the plant's operations at the time. *See* Letter from E. Tillotson to D. Houlihan (March 31, 2021) at 3-4 (requesting relief from screen requirements and instead proposing monthly CWIS flow reductions April-October), 3 (noting the Schiller units were currently "in a long-term outage status").

On October 4, 2022, EPA released its 2022 Draft Permit Modification and noticed it for public comment. Subsequently, EPA extended the original public comment period from November 2 to November 17; accordingly, these comments are timely.

**Applicable Legal Requirements**

Section 316(b) of the CWA requires that the "location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact."[4] As with all technology-based standards, dischargers must comply with Section 316(b)'s technology-based effluent limitations immediately, meaning that Schiller should have been brought into compliance long ago. The plant now must be brought into compliance with Section 316(b) "as soon as possible," and, in the interim, must be subject to "interim requirements and dates for their achievement."[5]

In 2004, EPA published regulations designed to implement Section 316(b) at existing power plants like Schiller. Following legal challenges, however, the Second Circuit remanded numerous aspects of the rule to the EPA.[6] The U.S. Supreme Court reviewed the Second Circuit's

[4] 33 U.S.C. § 1326(b).
[5] 40 C.F.R. § 122.47(a); *see also* 33 U.S.C. § 1311(b).
[6] *See Riverkeeper Inc. v. U.S. Envtl. Prot. Agency ("Riverkeeper II")*, 475 F.3d 83 (2d Cir. 2007).

decision on the limited issue of whether Section 316(b) authorizes EPA to consider costs in relation to benefits.[7] Other aspects of the Riverkeeper II decision were not addressed by the Supreme court's review. In response to the Second Circuit's remand of extensive portions of the rule, EPA withdrew the entire regulation for existing facilities so that it could revise the rule to be consistent with the Clean Water Act.[8]

EPA's subsequent CWA § 316(b) regulations became effective on October 14, 2014, setting national requirements under Section 316(b) for cooling water intake structures at existing facilities. For entrainment control, these regulations are not a significant departure from the site-specific Best Professional Judgement process that controlled BTA determinations in prior decades. The regulations still require the permit writers to engage in case-by-case BTA selections, but the new rule specifies five factors that the permit writer must consider in establishing the site-specific entrainment standard:

> (i) Numbers and types of organisms entrained... (ii) Impact of changes in [air] emissions ... associated with entrainment technologies; (iii) Land availability inasmuch as it relates to the feasibility of entrainment technology; (iv) Remaining [facility] useful plant life; and (v) Quantified and qualitative social benefits and costs of available entrainment technologies when such information on both benefits and costs is of sufficient rigor to make a decision.[9]

To control impingement, the regulations designate a set of "pre-approved" technologies that a facility can implement to satisfy the BTA standard. The regulations also allow a facility to use other technologies to meet the BTA standard if it can show that they will perform sufficiently.[10] Approval of such an alternative technology would require the permit writer to make a site-specific decision.

**Substantive Comments**

## A. Entrainment

### 1. Unlike the installation of wedgewire screens, the proposed CWIS flow limits in the draft Modification would not actually reduce Schiller's entrainment of aquatic life

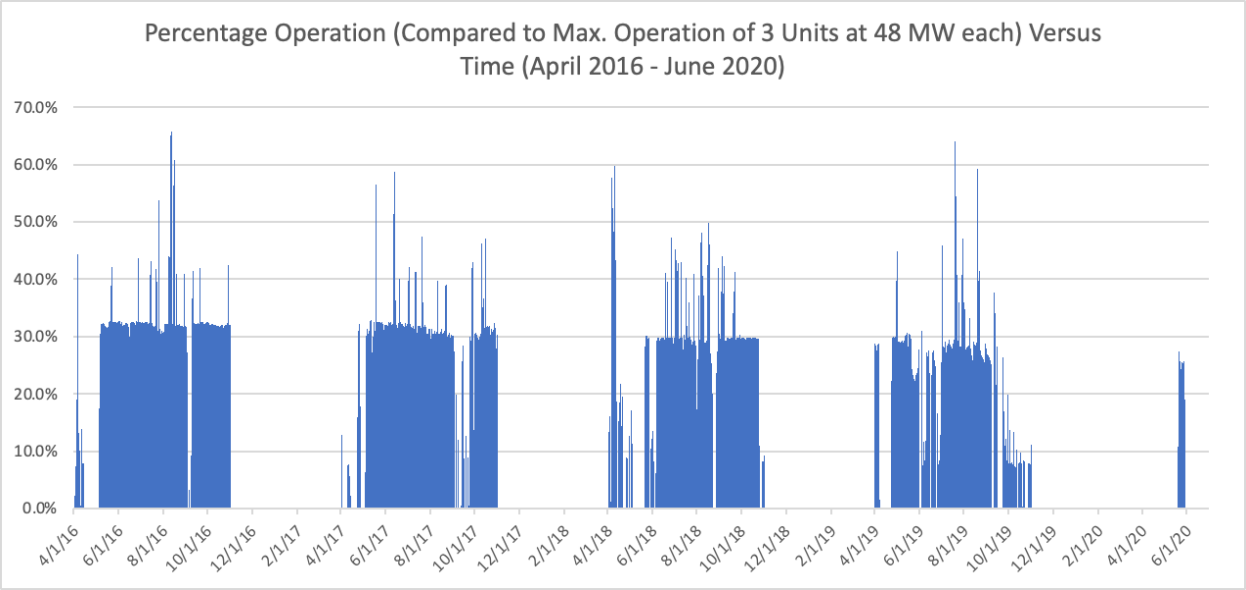
EPA's draft Modification's proposed reductions in permitted limits on CWIS flows for certain months would not result in significant changes in CWIS flows at Schiller Station–or in

[7] *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208 (2009).
[8] *See* EPA, National Pollutant Discharge Elimination System—Suspension of Regulations Establishing Requirements for Cooling Water Intake Structures at Phase II Existing Facilities; Suspension of Final Rule, 72 Fed. Reg. 37,107 (July 9, 2007).
[9] 40 C.F.R. § 125.98(f)(2).
[10] 33 U.S.C. § 1313(d) (requiring states to identify bodies of water for which technology-based thermal controls are insufficiently stringent and to impose "total maximum daily thermal loads" to protect these waters); *see also id.* § 1312 (requiring imposition of water quality-based effluent limitations on the discharge of pollutants when necessary to meet water quality standards).

almost all cases, any changes at all–and accordingly would not provide any "reduction" in entrainment at Schiller.

As was apparent to EPA before it finalized the 2018 NPDES permit, the overall capacity factor at Schiller Station is relatively low (even in the years preceding summer of 2020, when Schiller ceased operating at all). Indeed, Schiller's capacity factor in both 2016 and 2017 was well-below a third of overall capacity, with the two-year average for that period being just 29.8%. Nor does annual capacity factor at Schiller during this period mask particularly higher seasonal or even *daily* plant operations–during the months of April through October from 2016 through 2020, Schiller's generation was consistent with no more than just one unit operating on the vast majority of days it actually operated. As the data in Exhibit 1 - Schiller Operations Data 2016-2020 shows, very rarely during those months has Schiller historically operated at levels above 33% of capacity (and only rarely did days involve operations significantly above 33% capacity), meaning that Schiller's daily CWIS flows almost never exceed the limit EPA proposes in the draft Modification for April-October operations.

***Figure 1: Schiller Daily Percentage Operation (Spring-Fall, April 2016-June 2020)***[11]




Indeed, daily operations above 33% capacity only amount to roughly 5% of overall days, meaning that the proposed 66% reduction in CWIS flows in the draft Modification would, at the very best, only reduce CWIS actual flows by 5% spread out over *five years*. Moreover, during the period examined there were hundreds of days involving much less than 33% capacity, meaning that EPA's proposed CWIS flow limits would allow *increases* in flow levels–and concomitant entrainment–on those days.

The February-March proposed monthly CWIS flow limits are even less likely to amount to any actual change in Schiller's behavior. Operations data from 2016 through 2020 for February and March, even assessing a rolling 30-day average, shows that Schiller never once, in

[11] *See* Exhibit 1, Tab 1. Data taken from U.S. EPA, Clean Air Markets Program Data, *available at* https://campd.epa.gov/data/custom-data-download.

*five years' worth of operations*, exceeded 66% operations. *See* Exhibit 1, Tab 3, Column G (comparing 30-day rolling average megawatt hours reported in EPA's Air Markets Program Database to potential megawatt-hours generated by two out of three 48-MW units operating); *id.* at Column I (comparing percentage of actual megawatt-hours generated to potential generation of all three 48-MW units operating). Accordingly, Schiller's CWIS flows during these periods likewise never exceeded the flow limits EPA contemplates here in the proposed Modification. Indeed, Schiller appears to have only rarely exceeded 40% operations/CWIS flows in the historical data, and to have topped out at 42% back in 2017. The CWIS flow limits in the draft Modification are thus exceedingly unlikely to result in any actual reduction in entrainment at Schiller.

Nonetheless, EPA's proposed justification for these CWIS flow limits is that they would result in hypothetical reductions of flow compared to theoretical 100% capacity factor operations and thus would reduce abstract fish entrainment at greater rates than would the wedgewire screens EPA had previously determined to be BTA. Draft Statement of Basis at 7.[12] However, EPA makes a fundamental error in its assessment: while CWIS flow limits will only reduce entrainment if they actually reduce real-world CWIS flows, wedgewire screens will reduce entrainment *under all CWIS flow scenarios*.

Exhibit 1 illustrates this. Assuming for ease of calculation that each 48 MW unit at Schiller, for the months of April through October, is capable of entraining and killing 100 units of fish per day at full operation/full CWIS flow, Tab 1 Column W sums the maximum entrainment mortality allowed under EPA's proposed CWIS flow limit for 2016-2020. Assuming (as EPA does–*see* draft Statement of Basis at 7, n.6; 79 Fed. Reg. 48,331) that entrainment is proportional to flow, the actual operations at Schiller can be used to scale and calculate by the same ratio the entrainment mortality from April-October for 2016-2020; the resulting total figure is in Column T. The figure in Column T is actually only 67% of the figure in Column W–underscoring that EPA's proposed CWIS flow limits are set significantly higher than Schiller's historical behavior. More importantly, however, Column U scales entrainment mortality by the 37% reduction figured for wedgewire screens that EPA relies on (*see* draft Statement of Basis at 7). The resulting figure is less than half the entrainment mortality EPA's proposed limits would achieve. A similar exercise is undertaken in Tab 2, as regards macrocrustacean impingement, again showing that screens would reduce entrainment due to actual operations more than EPA's theoretical reductions in CWIS flow from an imaginary 100% capacity factor.

Put another way, EPA has wrongly compared the efficacy of screens at Schiller at 100% capacity factor to Schiller without screens at a 33% capacity factor and thus erroneously concluded that its proposed 33% April-October CWIS flow limits are more protective. An apples-to-apples comparison for the purposes of determining BTA should instead compare the impact of screens versus flow restrictions *as compared to actual operations*.[13]

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[12] As EPA notes, the proposed CWIS flow limits would lead to an *increase* in macrocrustacean entrainment. *Id.* at 7. The fact that the proposed flow limits would, even under EPA's flawed baseline assessment, lead to a tradeoff in macrocrustacean life for fish life is yet another reason why the proposed limits fail to be BTA.

[13] EPA's approach would also set a perverse precedent. If BTA screens reduce entrainment by 37%, EPA's analysis here could conclude that flow levels consistent with a 63% capacity factor "reduce" entrainment by just as much,

Finally, EPA does not, in the proposed Modification, conduct the same sort of analysis that led it to conclude, just four years ago, that BTA for Schiller Station was "a fine mesh wedgewire screen intake system" for Schiller's cooling water intake system, and to mandate the installation of such a system in the 2018 NPDES permit. There, EPA conducted benefit-cost analysis to conclude that, while closed-cycle cooling would be far more protective of aquatic life (by virtually eliminating cooling water withdrawals and accordant entrainment and impingement), fine mesh wedgewire screens would be much cheaper. *See* EPA 2018 Response to Comments at 216 ("The closed-cycle cooling option, however, is estimated to cost nearly 40 times more than any of the wedgewire screen options . . . ***wedgewire screen options will also achieve substantial entrainment mortality reductions and will do so at far lower costs***") (quoting 2015 Draft Fact Sheet at 155, emphasis added). EPA thus "based its determination of the BTA for entrainment at Schiller Station on the relative biological effectiveness and costs of wedgewire screens as compared to closed-cycle cooling." *Id.*[14]

However, EPA here never assesses the "cost" of its proposed cooling water discharge "limitations." As noted above, EPA uses theoretical maximal cooling water discharges characteristic of a 100% capacity factor for Schiller Station in determining that "limiting" those theoretical flows by 66% April-October and by 33% February-March would result in fewer entrained fish and macrocrustaceans. This annual roughly 4/9 reduction in operations would (if we are to maintain the fiction that Schiller ever has or ever would operate continuously at full capacity) cost tens of millions of dollars per year in foregone revenue. As the average real-time power price in ISO-NE in 2021 was $44.88 per megawatt-hour,[15] Schiller at EPA's imagined 100% capacity factor would garner some $56.6 million in revenue (48 MW x 3 units x 24 hours/day x 365 days/year x $44.88 per megawatt-hour); reducing that by 4/9 would therefore "cost" over $25 million per year. Such an annual cost would be, of course, far in excess of the comparatively trivial capital and operations cost of wedgewire screens[16] or even cooling towers.

To the extent that EPA considers such foregone revenue "costs" to be phantom–since Schiller's operations have been, as demonstrated above, below *both* a theoretical 100% capacity factor *and* the CWIS flow "limits" EPA now proposes–EPA should likewise concede that the "benefits" of its proposed flow limits are similarly illusory.[17]

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and that since Schiller hasn't operated above a 61% capacity factor since 2009, no screens or other technology need be installed. EPA did not employ such illogic in 2018, and it should not employ it here.

[14] Sierra Club and CLF disagreed with EPA's methodology during the comments process leading to the 2018 permit, and Commenters continue to disagree with it now. *See, e.g.*, AR-312, Comments of Sierra Club.

[15] ISO New England, About Us > Key Grid and Market Stats Fast Stats, *available at* https://www.iso-ne.com/about/key-stats/markets#:~:text=The%20average%20real%2Dtime%20price,was%20%244 4.84%20per%20megawatt%2Dhour.

[16] During the permitting process that resulted in the 2018 Permit, EPA did not make public the actual cost figures that it relied on for its analysis, claiming that they were confidential business information; however, Sierra Club analysis, submitted in our comments at the time, assessed that screens would cost $700,000 to $850,000. Comments of the Sierra Club Exhibit 2, Synapse Energy Economics Report at 2. For its part, EPA indicated that wedgewire screens at Schiller could be installed for "a low seven-figure cost." 2015 Fact Sheet at 158.

[17] It is also worth considering that GSP would be unlikely to have "proposed an alternative to minimize entrainment in which the Permittee would limit operation of Schiller Station to a single unit from April through October (a 66.8% reduction in flow during this period)" (Draft Statement of Basis at 5) in order to avoid the "low seven-figure

2. Even if proposed flow restrictions were to actually reduce CWIS flows at Schiller, the proposed seasonal limits are unlikely to provide necessary protection against entrainment

EPA claims that the majority of entrainment is expected to occur between April and October, and so focuses its proposed CWIS flow limits during those months. However, for a variety of reasons, such calendar-based limits are unlikely to provide protection against entrainment consistent with the requirements of BTA.

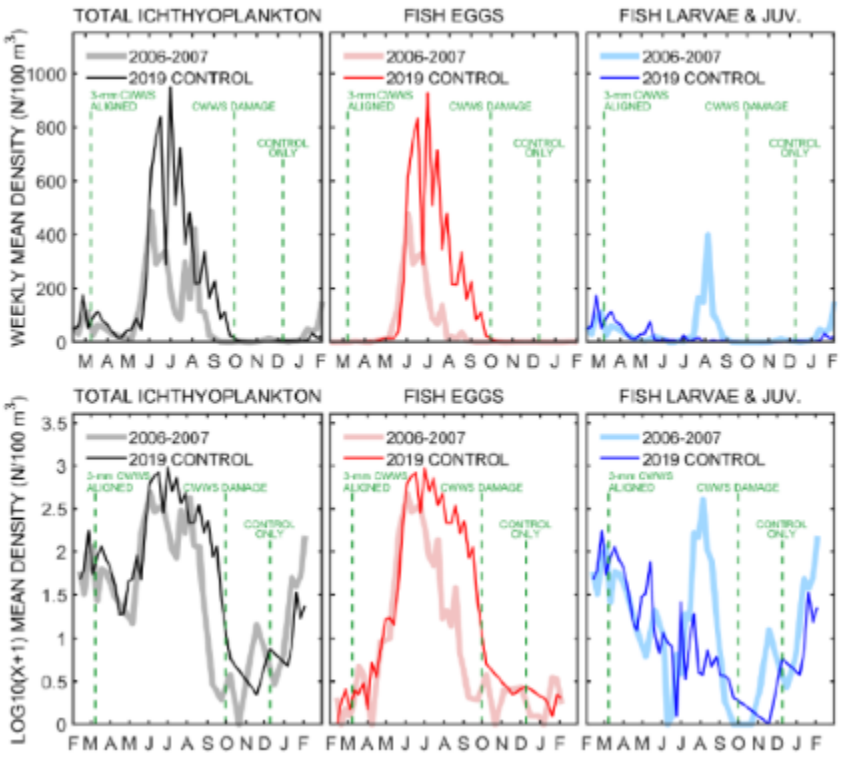
For example, bimodal peaks in cod spawning activity in the Gulf of Maine include both spring (April-July) and winter (October-February) subpopulations. *See* Berrien and Sibunka, (1999), attached hereto as Exhibit 2. As such, the absence of winter CWIS flow restrictions would leave spawning activity vulnerable to harm from Schiller's CWIS that would be, nonetheless, protected to some degree by the screen requirements in the 2018 permit.

Similarly, EPA appears to rely on entrainment data from 2006-2007 (*see* AR-136) in determining that most entrainment occurs between April 1 and October 31. However, a single-year snapshot (particularly one, such as that study, that relied on periodic sampling instead of continuous sampling) from the 2006-2007 season is an unreliable predictor of entrainment density or temporal distribution from year to year, let alone decades later. *See* Staudinger et al. (2019), attached hereto as Exhibit 3 (concerning the Gulf of Maine ecosystem, concluding that the "timing of recurring biological and seasonal environmental events is changing on a global scale relative to temperature and other climate drivers," and citing "direct evidence for shifts in timing").

As an example of climate change and varying annual conditions shifting spawning timelines, Figure 11 of the 2020 Normandeau Report plots data from 2006-2007 as well as "2019 control" data. 2019 was a warmer year than 2006 and 2007, and there is a marked temporal shift in most of the plotted peaks in 2019 towards later months as compared to the earlier, cooler years.

cost" (2015 Fact Sheet at 158) of screens if it really meant giving up on many millions of dollars worth of revenue through foregone operations.

***Figure 2: Weekly Mean Entrainment Density (2020 Normandeau Report)***[18]




Indeed, the 2020 Normandeau Report also does not support EPA's proposed unconstrained CWIS flow limits and lack of BTA screens in December and January. As Figures 17 and 18 in that Report indicate, entrainment densities of eggs and larval and juvenile fish actually increased significantly in those months significantly with the preceding November and December. *See* 2020 Normandeau Report at 79-80. As such, reliance on seasonal CWIS flow limits to reduce harm commensurate with continuously-in-place screens is unsupported and inconsistent with the requirements of BTA.

## B. <u>Impingement</u>

### 1. <u>Further delay in achieving compliance with the impingement mortality standard is incompatible with the requirement that compliance be accomplished "as soon as practicable</u>"

As per 40 C.F.R. § 125.94(b)(1), "[a]fter issuance of a permit that establishes the entrainment requirements under § 125.94(d), the owner or operator of an existing facility must comply with the impingement mortality standard in § 125.94(c) ***as soon as practicable***." (emphasis added). Here, EPA issued a permit in *2018* that established entrainment requirements for Schiller Station, and yet Schiller appears, far from complying with impingement mortality

[18] Taken from Normandeau Associates, Inc., Evaluation of the Entrainment Reduction Performance of 0.8-mm and 3.0-mm Cylindrical Wedgewire Screens at Schiller Station ("2020 Normandeau Report") at 37, Fig. 11.

standards "as soon as practicable," to have taken no concrete steps to address impingement at all. This is improper.

Instead, GSP proposed (three years after the 2018 permit was issued) to address impingement through "a system of technologies, management practices, and operational measures." Draft Statement of Basis at 10. However, GSP has apparently failed to propose just what that system of technologies might be, what management practices would be involved, or what operational measures it will employ. Under 40 C.F.R. § 125.949(c)(6), an applicant seeking approval for such a "system of technologies" to meet its impingement reduction obligations must complete and submit the "impingement technology performance optimization study" discussed in 40 C.F.R. § 122.21(r)(6)(ii). GSP has not done that, either. As EPA notes:

> GSP has not yet completed the two-year optimization study, has not proposed any permit conditions that specify optimal operation of the technology or operational measures, and has not identified which combination of technologies and operational measures it has selected to comply with the impingement mortality standard.

Draft Statement of Basis at 10; *see also id.* at 11 ("GSP has not yet completed ***the required*** evaluation nor has it provided a demonstration of the expected impingement reductions consistent with optimization of a system of technologies.") (emphasis added). On this basis of no information, no required study, and no proposed limits, technologies, management practices, or operational measures, GSP nonetheless requests that the Schiller NPDES permit be modified to relieve it of the impingement obligations it has been well-aware of for the better part of five years. On such a non-record, EPA has no grounds for granting GSP's requested modification.

Nor is further delay in addressing impingement as per the requirements of the 2018 NPDES permit supportable. As the relevant regulations require, the impingement mortality standard must be complied with "as soon as practicable, " 40 C.F.R. § 125.94(b)(1), and as even EPA notes, giving GSP additional time to conduct a two-year study in advance of a presumed additional permit modification request (one that might include an actual proposal to meet the impingement mortality standard) "may create tension with the requirement to achieve compliance 'as soon as practicable.'" Draft Statement of Basis at 12. GSP has operated Schiller Station for nearly five years, and stepped into the shoes of Schiller's prior operator during the permitting process that resulted in the 2018 permit. If GSP wanted to pursue compliance under 40 C.F.R. § 125.949(c)(6), it has had ample opportunity to do so during the past half-decade, and has already requested and received one extension already. GSP's dilatory approach to impingement compliance and its hollow impingement mortality standard proposal should not be rewarded with further multi-year delays.

2. <u>EPA's proposed interim impingement performance standard is unsupported</u>

EPA's proposed "interim 12-month performance standard . . . of no more than 30 percent mortality" is likewise wholly unsupported. Initially, EPA errs in suggesting that its 30% impingement mortality standard is appropriate because it is only "slightly higher than" the 24%

mortality performance standard in 40 C.F.R. § 125.94(c)(7). Draft Statement of Basis at 13. However, 30 is *125%* of 24, not "slightly higher."

Whether or not 30 is nominally "slightly higher" than 24, the proposed Modification contemplates calculating impingement mortality dramatically differently than how the performance standard in 40 C.F.R. § 125.94(c)(7) is calculated. Under the regulatory performance standard,

> The 12-month impingement mortality performance standard is the total number of fish killed divided by the total number of fish impinged over the course of the entire 12 months.

40 C.F.R. § 125.94(c)(7). In other words, the 24% standard is the ratio of [dead impinged organisms] to [all impinged organisms]. By contrast, the proposed Modification would calculate its 30% ratio by "the total number of fish killed by the total number of fish that *would have been impinged at design flow* over the course of 12 months." Draft Modification Statement of Basis at 14, n.14 (emphasis added). The two standards are accordingly wholly incompatible, and EPA's reliance on the 125.97(c)(7) performance standard to support its proposed interim standard as such fails.[19] Indeed, particularly given that EPA assumes "100% mortality of impinged fish," (Draft Modification Statement of Basis at 13), and that the 2006-2007 biological monitoring data that EPA relies on found an impingement mortality rate for fish of *82%*,[20] EPA's proposal here is unsupported by the 24% regulatory impingement mortality standard.

## C. EPA improperly withheld record materials upon which it relies from public review

In its draft Statement of Basis for the proposed permit modification, EPA repeatedly cites the "Wedgewire Screen Site-Specific Study Engineering Evaluation GSP Schiller LLC-Schiller Station, Enercon 2020." EPA asserts that the study results "suggest that full implementation of wedgewire screens at Schiller Station may be more complex than anticipated," and accordingly claims that this will "likely result in increased costs compared to the values evaluated" for the 2018 Permit. Draft Modification Statement of Basis at 4. However, despite this 2020 Enercon report being cited by EPA in support of its proposed Modification, and despite the document being included in the administrative record, EPA has withheld the Enercon report from the public, stating that it is claimed as Confidential Business Information ("CBI") by GSP. In correspondence with Sierra Club, EPA stated that the 2020 report summarizes the results of a 2019 pilot study, which is also not included in the administrative record. *See* Email from Danielle Gato to Zachary Fabish (Nov. 3, 2022).

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[19] This is made even more apparent by EPA's direction that the "number of fish that would have been impinged" for purposes of evaluating the proposed 30% mortality standard "can be calculated using the actual monthly impingement rate times the monthly design flow of the pumps," which presumably turns the entire exercise into a simple ratio of actual pump flow to the pump design flow. Draft Modification Statement of Basis at 14, n.14. Actual levels of impingement mortality are, under EPA's proposal, apparently irrelevant as long as Schiller stays below a 30% capacity factor, a feat it has readily accomplished since 2017 and thus for the entire life of the 2018 permit.

[20] *See* AR-136, Normandeau Associates, Inc., Entrainment and Impingement Studies Performed at Schiller Generating Station from September 2006 through September 2007 (April 2008) at 139, Table 4-22.

Certain information submitted to the EPA may, in certain situations, be claimed as CBI by the submitter. 40 C.F.R. § 122.7(a). However, EPA's own guidance provides that the administrative record should nonetheless include CBI "if that information was considered during the decision-making process." In addition, "*as much of the CBI material as possible* should be made available through redaction or some other technique that shields the confidential information. This approach protects the CBI information while making the general information available to the public and the courts."[21] Indeed, multiple circuit courts have held that withholding information from the public that the agency relies on in its decision making is not allowed because it prevents adequate judicial review of agency action.[22] If CBI is withheld, it can only be omitted in "narrow situations," for example by using limited redaction or providing detailed summaries of the underlying information to "disclose[] as much information publicly as [the agency] can."[23]

Here, neither the 2020 report, nor the 2019 pilot study that the report summarizes, are publicly available, whether in full, redacted, or summary form. While the 2020 report is included in the administrative record, the 2019 pilot study is not. Although EPA claims that the report "is not central to this modification," the cost and feasibility of implementing wedgewire screens are the primary basis for GSP's permit modification request. Draft Statement of Basis at 4. Further, the modification to the permit solely concerns a proposed alternative to the wedgewire screens requirement. Withholding the entire 2020 report therefore goes against EPA's own guidance and judicial decisions on the appropriate use of CBI. Without access to the report or the underlying study, the public and the courts are unable to assess EPA's proposed determination that wedgewire screens are no longer BTA to minimize adverse environmental impacts from impingement and entrainment at Schiller Station. Accordingly, EPA should either abandon the proposed Modification or make the Entercon Report and its underlying data public, and reopen the public comment period to allow the public an opportunity to review and comment on these withheld record materials.

**Conclusion**

For the foregoing reasons, EPA should not weaken the Schiller Station NPDES permit as it has proposed in the draft Modification. Instead, GSP's requested permit modification should be rejected.

/s/
Zachary M. Fabish
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[21] EPA's Action Development Process, Administrative Records Guidance, at 9 (Sept. 2011), https://www3.epa.gov/ogc/adminrecordsguidance09-00-11.pdf (emphasis added).
[22] *See, e.g.*, *Flyers Rts. Educ. Fund, Inc. v. Fed. Aviation Admin.*, 864 F.3d 738, 745-46 (D.C. Cir. 2017); *United States Lines, Inc. v. Federal Maritime Comm'n*, 584 F.2d 519, 535 (D.C. Cir. 1978); *Riverkeeper, Inc. v. U.S. E.P.A.*, 475 F.3d 83, 112 (2d Cir. 2007); *Nat. Res. Def. Council v. Thomas*, 805 F.2d 410, 418 n.13 (D.C. Cir. 1986).
[23] *Flyers Rts. Educ. Fund*, 864 F.3d at 745-46.

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