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Dear Mr. Higdon:

Thank you for the opportunity to comment on the draft environmental impact statement ("DEIS") for TVA's floating houses policy review. The Southern Environmental Law Center ("SELC") is a non-profit, regional environmental organization dedicated to the protection of natural resources throughout the Southeast. SELC works extensively on issues concerning water quality and its impact on the people, culture, environment and economy in six Southeastern states—Tennessee, Virginia, North Carolina, South Carolina, Georgia and Alabama.

TVA has taken an important step forward with this proposal to regulate the impacts and address the environmental, safety, and socioeconomic concerns related to the proliferation of floating houses (FHs) and nonnavigable houseboats (NNs) on its reservoirs. This DEIS makes a strong case that new policies and regulations regarding the FHs and NNs are needed to protect water quality, public health and safety, and recreational uses on reservoirs managed by TVA. New policies or mechanisms for enforcement of those regulations are needed as well.

We further appreciate that TVA has tentatively selected Alternative B1 (Grandfather Existing and Prohibit New) or Alternative B2 (Grandfather but Sunset Existing and Prohibit New) as the preferred alternatives. These two alternatives have the fewest environmental impacts and offer the most protection to our waters.

As more fully discussed below, we suggest that because of the probable significant water quality impacts of FHs and NNs, TVA should select Alternative B2. After all FHs and NNs come into compliance with new protective regulations, TVA should gather water quality data (or require the licensed marinas to do so) in the areas where the FHs and NNs are moored to determine their actual impact on the quality of those waters. If the impacts are found to be negligible, then TVA could at that time move forward to allow compliant FHs and NNs to remain (Alternative B1). At this time, however, there is no basis for a decision that allowing them to remain will not adversely and unacceptably impact water quality.

A. Background

In this DEIS, TVA has considered the significant environmental impacts of an updated floating houses policy. Although TVA ceased to issue new permits for NNs in 1978, these

structures –now referred to as FHs–have proliferated on TVA reservoirs. TVA estimates there are currently 1800 such structures on TVA reservoirs, only about half of which are permitted.[1] They are located in sixteen TVA reservoirs, with the largest number at Norris Lake in Tennessee (921) and Fontana Lake in North Carolina (357).[2]

In scoping meetings and in public comments, residents in the TVA territory have expressed concerns related to the disposal of wastewater, the impacts of the eventual sinking of abandoned or decrepit floating houses, litter, the impacts of electric cables along the lake bed in the water, noise effects on wildlife both on lakes themselves and on adjacent shore areas, shoreline erosion, aesthetics, and impacts from increased traffic as owners travel to and from their floating houses.[3] The issue of greatest concern is the disposal of wastewater. The majority of commenters emphasized the need for better TVA regulation. While specific data on discharges is lacking, TVA notes in the DEIS that many owners are regularly discharging all of their grey water directly into reservoirs.[4] Adopting either of the alternatives that TVA prefers (B1 or B2) would address this issue by eventually preventing direct, untreated discharges into its reservoirs.[5] Because there are potential adverse impacts from even treated discharges, however, TVA should select Alternative B2, where all discharges would end after 30 years.

B. National Environmental Policy Act (NEPA) Requirements

The National Environmental Policy Act (NEPA) is "our basic national charter for protection of the environment."[6] Other environmental statutes focus on particular media (air, water or land, for example), specific natural resources (such as wilderness areas, or endangered plants and animals), or discrete activities (such as mining, introducing new chemicals, or generating, handling or disposing of hazardous substances). In contrast, NEPA applies broadly "to promote efforts which will prevent or eliminate damage to the environment."[7] "[NEPA] has 'twin aims. First, it places upon [a federal] agency the obligation to consider every significant aspect of the environmental impact of a proposed action. Second, it ensures that the agency will inform the public that it has indeed considered environmental concerns in its decision-making

[1] *Floating Houses*, TENNESSEE VALLEY AUTHORITY, http://www.tva.gov/floatinghouses/index.htm (last visited Jul. 24, 2015); TENNESSEE VALLEY AUTHORITY, FLOATING HOUSES POLICY REVIEW DRAFT ENVIRONMENTAL IMPACT STATEMENT (*DEIS)* 21 tbl.1.4-1 (2015).
[2] *Id.*
[3] *See e.g.*, TENNESSEE VALLEY AUTHORITY, TVA FLOATING HOUSES POLICY REVIEW ENVIRONMENTAL IMPACT STATEMENT SCOPING REPORT (*Scoping Report)* (2015) (NEPA Comment System – Comment 1 (disposal of wastewater, litter in the lake, traffic, abandoned floating houses); Comment 16 (aesthetic concerns, litter, wastewater disposal); Email Comment 8 (underwater electric cables); Email Comment 16 (wastewater, littler, shoreline erosion, electrical hazards, noise)).
[4] *DEIS*, *supra* note 1, at 43 n.4 ("Based on anecdotal information, many owners of permitted NNs and unpermitted FHs routinely discharge all of their grey water without any treatment directly into the reservoir, even if they are located on a No Discharge reservoir.").
[5] *DEIS*, *supra* note 1, at 41.
[6] 40 C.F.R. § 1500.1(a).
[7] 42 U.S.C. § 4321.

process.'"[8] As a result, "NEPA is one of our most important tools for ensuring that all federal agencies take a 'hard look' at the environmental implications of their actions or non-actions."[9]

In addition to the substantive goals that it sets for environmental protection, NEPA creates a procedural obligation for federal agencies "to ensure a fully informed and well-considered decision."[10] This obligation is reflected in the Council on Environmental Quality's NEPA regulations, which require both that the agency generating an Environmental Impact Statement (EIS) must "[r]igorously explore and objectively evaluate all reasonable alternatives," and "[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits."[11] A draft EIS must satisfy these final requirements to "the fullest extent possible."[12]

As noted above, we believe that TVA is taking an important step with this policy review, its description of the alternatives, and its analysis of the resulting environmental impacts of those alternatives. We note, however, that information on the actual—not theoretical—impact of the FHs and NNs on the waters is lacking. Given this deficiency, TVA should move forward with the most protective alternative, Alternative B2. If TVA chooses Alternative B1, TVA should gather water quality data that supports the continued existence of the FHs and NNs, and if their impact on water quality is found to be unacceptable, TVA should move forward at that time to permanently prohibit them.

We focus our brief comments below on two issues: first, the identified need for better regulation of discharges, as well as for more information on water quality in the affected areas; and second, the identified need for better enforcement policies and fee structures to support enforcement costs.

C. The Need for Better Regulation of Discharges and Water Quality Information

The DEIS states that the largest potential source of water quality impacts is from the discharge of wastewater, including sewage. The DEIS focuses on sewage discharges, both black water and grey water. Black water is wastewater from toilets, kitchen sinks, dishwashers and garbage disposals, and grey water is wastewater from bathroom sinks, bathtubs, showers and washing machines.

Discharge of grey water from FHs/NNs directly to the reservoirs is quite common, even in No Discharge reservoirs.[13] In fact, TVA estimates that as much as half of the grey water generated by FHs/NNs may be discharged without treatment. Grey water is known to have

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[8] Kern v. Bureau of Land Management, 284 F.3d 1062, 1066 (9th Cir. 2002) (quoting Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc., 462 U.S. 87, 97 (1983)) (internal quotations and citations omitted, alteration in original).

[9] Sw. Williamson Cnty. Cmty. Ass'n, Inc. v. Slater, 243 F.3d 270, 278 (6th Cir. 2001) (quoting Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976)).

[10] Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc. 425 U.S. 519, 558 (1978).

[11] 40 C.F.R. § 1502.14; *see also* 42 U.S.C. § 4332(2)(C)(iii) (stipulating that agencies reporting on proposals for legislation must include a "detailed statement" on "alternatives to the proposed action").

[12] *See* 40 C.F.R. § 1502.9.

[13] *DEIS*, *supra* note 1, at 197-198.

increased salinity, total dissolved solids and alkalinity, to contain fecal coliform, bacteria and other organisms, and to have localized adverse impacts.[14]

Discharge of black water is not allowed on No Discharge reservoirs, and while it may be allowed after treatment on Discharge reservoirs, such discharge is widely considered undesirable by those who recreate on the reservoirs. And even though black water is required to be treated before discharge on Discharge reservoirs, because there is disinfection but no reduction in organic strength, that discharge likely contributes to low dissolved oxygen conditions.[15] Further, TVA estimates that up to 5% of black water may be discharged without treatment.[16]

The currently estimated volume of discharge on the reservoirs is large. TVA estimates that FHs/NNs on the five reservoirs with the largest number of these structures generate as much as 35,191 million gallons per day of black wastewater, and as much as 121,826 million gallons per day of grey wastewater.

TVA does not have a specific program to monitor water quality at or near marinas where the FHs/NNs are located, and it has very little water quality data associated with marine activities and FHs/NNs.[17] Further, because the wastewater discharges from FHs/NNs are intermittent, any samples collected are unlikely to be representative unless they are collected at the time of the discharge. The DEIS states, however, that "it is well established in scientific research that sewage and its constituents adversely affect water quality and freshwater aquatic life."[18] Further, the DEIS notes that the ecological health of most of the tributary reservoirs is rated as only fair or even poor, and even the mainstream reservoirs where there are higher flows and shorter residence times are rated as only fair or good.[19]

The DEIS also notes that potential impacts on water quality are increased when there is little flushing or mixing capacity from stream flows. Because most FHs/NNs are located at marinas in coves and embayments, the water quality impacts from those wastewater discharges are increased.[20]

The existing relevant state laws and regulations allow sewage discharges from FHs/NNs only in accordance with a permit. Indeed, the Tennessee Department of Conservation and Environment has stated that discharges from FHs/NNs are "comparable to discharges from houses on the shore with untreated discharge straight-piped into the reservoir."[21] TVA proposes new wastewater standards for Alternatives A, B1 and B2. The DEIS notes that the proposed "new wastewater standards . . . would align with all applicable federal, state, and local regulations governing wastewater management," but it fails to articulate what those standards

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[14] *DEIS*, *supra* note 1, at 199-200.
[15] *DEIS*, *supra* note 1, at 201.
[16] *DEIS*, *supra* note 1, at 201.
[17] *DEIS*, *supra* note 1, at 107.
[18] *DEIS*, *supra* note 1, at 107.
[19] *DEIS*, *supra* note 1, at 107.
[20] *DEIS*, *supra* note 1, at 201.
[21] *DEIS*, *supra* note 1, at 202.

will be.[22] The final EIS must describe what standards for wastewater discharge—both black water and gray water—will be required.

We urge TVA to create and impose standards for the discharge of wastewater that are consistent with applicable law, as protective of the waters as possible, and enforceable against violators. We further urge TVA to undertake a water quality monitoring program (or to require its licensed marinas to do so) to ascertain the effect of these discharges on water quality. If the effects of these discharges—although in accordance with TVA regulations—on water quality is adverse and unacceptable, then TVA should immediately require the removal of the FHs/NNs.

D. Policies for TVA Enforcement and Fee Structure

Enforcement is critical both to guaranteeing the success of a new floating houses policy, and to ensuring the long-term environmental integrity of TVA's reservoirs. Although FH/NNs have been banned by TVA since 1978, they have nevertheless proliferated, almost doubling in number since that time. The FHs/NNs will continue to increase in number—and violate whatever new regulations are adopted—unless TVA makes enforcement a priority.

TVA states in the DEIS that it will "create and actively enforce" new standards regarding wastewater discharge, but it does not describe how it will do so.[23] As a preliminary matter, TVA needs to allocate sufficient resources and personnel to institute a rigorous enforcement program, or its new policies and regulations will be meaningless. TVA notes it may charge various fees to marinas and owners of FHs/NNs; this seems appropriate and may provide some of the funding for an enforcement program.

Without more detail from TVA on any change in enforcement policy, we are unable to evaluate whether and how TVA's proposed enforcement would address the undeniably significant impacts caused by FHs/NNs. The final EIS must describe in detail how TVA plans to enforce its new policies and regulations.

E. Conclusion

This policy review represents an important step toward ensuring that the reservoirs these floating houses are situated on remain vibrant and ecologically sound. Decisive action to address the issue of wastewater discharge into TVA reservoirs is appropriate. TVA's timely decision to review its floating houses policy creates an opportunity to improve the way in which these structures are managed, benefitting the environmental integrity of its reservoirs.

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[22] Marine Sanitation Devices ("MSDs"), for example, are a tool to manage wastewater in marine discharges which is regulated by the Coast Guard. MSD regulations describe three types of MSDs, corresponding to significantly different levels of bacteria in the effluent that the device produces. See 33 C.F.R. Section 159.53 (2005). The corresponding potential standard that the DEIS contemplates simply states that floating houses would "[t]reat grey water and black water through a marine sanitation device (MSD) on Discharge reservoirs," without specifying which type would be required.

[23] *DEIS*, *supra* note 1, at 44-46.

We urge TVA to select Alternative B2; to promulgate protective regulations regarding wastewater discharges from the FHs/NNs; to adopt (or require its marinas to do so) a water quality monitoring program to ascertain the true impact of FHs/NNs on water quality in the reservoirs; to immediately remove all FHs/NNs if the water quality data indicates unacceptable adverse impacts; to institute a rigorous enforcement program for the new policies it adopts; and finally, to impose fees on marinas and FHs/NNs as necessary to support its regulatory and enforcement program.

Respectfully Submitted,

Delta Anne Davis

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