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Via email: water.permits@tn.gov; Robert.d.baker@tn.gov

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Division of Water Resources
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William R Snodgrass Tennessee Tower
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Re: Comments on Proposed General Aquatic Resource Alteration Permits

Dear Mr. Baker:

The Southern Environmental Law Center (SELC), with the Harpeth Conservancy, Tennessee Chapter Sierra Club, and Tennessee Clean Water Network, submits the following comments regarding the proposed revisions of fifteen general Aquatic Resource Alteration Permits ("general ARAPs" or "general permits") and the proposed issuance of two new general ARAPs by the Tennessee Department of Environment and Conservation (TDEC). Although we have concerns about the protectiveness of general permits generally and many of the proposed permits specifically, these comments focus on two of the proposed general ARAPs: Minor Water Withdrawals (proposed Minor Water Withdrawals Permit) and Recreational Prospecting (proposed Recreational Prospecting Permit). Our focus on these two permits in no way implies acquiescence in the general permit regime or any of the other proposed permits and revisions. In the third section of this comment, we also list a few specific questions where it would be helpful for TDEC to provide an explanation for its changes on some of the other permits.

I. Minor Water Withdrawals

A. Background

In December 2018, the previous governor of Tennessee, Bill Haslam, working in conjunction with TDEC and a group of stakeholders, released a statewide water plan: *TN H_2O*.[1] Although Tennessee is a state blessed with many water resources, those resources are not unlimited, and should not be taken for granted.[2] The plan was developed in recognition of the

[1] **Att. 1** - *TN H_2O: Tennessee's Roadmap to Securing the Future of Our Water Resources* (Nov. 2018), https://www.tn.gov/content/dam/tn/environment/documents/TN_H2O_REPORT.pdf (*TN H_2O*).
[2] **Att. 2** – TDEC, *Haslam, TDEC Release Statewide Water Plan, Request Public Feedback – Press Release* (Dec. 7, 2018), https://www.tn.gov/environment/program-areas/wr-water-resources/tn-h2o/tn-h2o-news-page/2018/12/7/haslam--tdec-release-statewide-water-plan--request-public-feedback.html.

reality that Tennessee is a state with a growing population that has historically not effectively monitored or measured water withdrawals and is now facing a threat of uncertain water availability and droughts.[3]

One of the main recommendations to come out of *TN H_2O* was the need to develop "a comprehensive water resources planning process and planning cycle based on good science and information (consistent monitoring, data collection, modeling, trending, and reporting) that includes all major users and stakeholders."[4] Specific and up-to-date information about where, when, and in what amount water is being taken from surface water is necessary in order to plan for the future water needs of Tennessee. Unfortunately, as the situation currently stands, there are "significant data gaps" about water usage and withdrawal in the state, which make any kind of long-term planning much more difficult.[5]

With the proposed Minor Water Withdrawals Permit, TDEC is taking an important step in increasing the oversight of water usage in the state. However, general permits can sometimes operate as a "one-way ratchet," offering less-protective standards than individual permits might, and they therefore must be designed to be as protective as possible from the first time they are issued:

> [B]ecause general permits often represent a relaxing of regulation that would otherwise require an individual permit, they can act as a one-way ratchet on regulation, especially if they are not designed to give notice to the regulated parties. Once an agency has put a general permit in place and adjusted its budget to incorporate the reduced permitting load, it may create a type of inertia that will discourage the agency from voluntarily tightening regulation through the general permit, which would thereby increase its individual permitting load.[6]

In order to avoid this inertia, TDEC must ensure that the proposed Minor Water Withdrawals Permit is sufficiently protective from the beginning and it has not done so here. The proposed Minor Water Withdrawals Permit does not fully consider cumulative impacts from many different permittees, particularly for Class 1 activities, which require neither application nor notification to TDEC. Necessary data about the location, extent, and frequency of water withdrawals is therefore not being collected through this permit, which renders any assurance by TDEC about a lack of cumulative effects on water quality difficult to trust, or even evaluate.

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[3] *See* **Att. 3** - U.S. Environmental Protection Agency, *What Climate Change Means for Tennessee* (Aug. 2016), https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-tn.pdf ("Although rainfall during spring is likely to increase during the next 40 to 50 years, the total amount of water running off into rivers or recharging ground water each year is likely to decline 2.5 to 5 percent, as increased evaporation offsets the greater rainfall. Droughts are likely to be more severe, because periods without rain will be longer and very hot days will be more frequent.").

[4] **Att. 1** - *TN H_2O*, 12.

[5] *Id*. at 3.

[6] **Att. 4** - Travis O. Brandon, *A Wall Impervious to Facts: Seawalls, Living Shorelines, and the U.S. Army Corps of Engineers' Continuing Authorization of Hard Coastal Armoring in the Face of Sea Level Rise*, 93 TUL. L. REV. 557, 589–90 (2019).

TDEC may only issue general permits "for water withdrawals that cause no more than de minimis degradation."[7] TDEC cannot adequately demonstrate that the activities that would be authorized by the proposed Minor Water Withdrawals Permit would cause no more than de minimis degradation. Although TDEC may be correct that there is a need for a general permit for minor water withdrawals,[8] the permit as proposed is not protective enough of the waters of the state, and its issuance would violate TDEC's anti-degradation regulations.

B. Proposed Issuance of the General ARAP for Minor Water Withdrawals

1. <u>The proposed Class 1 permittees should be required to provide notice to TDEC prior to initiating any water withdrawal.</u>

In the proposed Minor Water Withdrawals Permit, TDEC would allow "Class 1 minor withdrawals" to proceed without ever providing any notification of the withdrawals. As proposed, Class 1 minor withdrawals include: (1) withdrawing up to 15% of a stream's instantaneous flow, for up to 30 days per year; and (2) withdrawing from a reservoir of at least ten surface acres at a rate not exceeding 50 gallons per minute. TDEC does not explain why no application for coverage or notification of intent is required for Class 1 minor withdrawals under this permit, but it is presumably intended to reduce the amount of resources TDEC must expend in processing such applications or notifications, as well as reducing the potential burden on permit applicants. These reasons are not sufficient to justify turning a blind eye to Class 1 minor withdrawals.

In order for citizens of the state to make informed water planning decisions, they must know how much water exists and where, as well as knowing how much water is being extracted, where, by whom, and for what purpose. This information is "fundamental to water planning and the prevention of drought, as well as to gauging the efficiency of users' systems and the impacts of various uses to our State's water resources."[9] TDEC has an obligation to prevent degradation of the state's waters, and an opportunity to, at the same time, collect this vitally important data.[10] Therefore, at a minimum, TDEC should require submission of a notification of intent to TDEC before initiating Class 1 operations.

If Class 1 permittees may withdraw up to 15% of the instantaneous flow of a stream on any given day without any prior notice, TDEC has no way of ensuring that multiple permittees along a particular stream are not planning on withdrawing this maximum amount on the same days. If this were to occur, the stream could experience drastic flow restriction for many days in

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[7] Tenn. Comp. R. & Regs. 0400-40-07-.04(2).

[8] TDEC, *2020 General Aquatic Resource Alteration Permit Rationale* (Jan. 22, 2020), 3.

[9] **Att. 5** - SELC Comments on TN H_2O (Feb. 28, 2019), 2.

[10] *See* **Att. 6** - Eric Biber & J.B. Ruhl, *The Permit Power Revisited: The Theory and Practice of Regulatory Permits in the Administrative State*, 64 DUKE L.J. 133, 189 (2014) ("One key function of general permits is to collect needed information, so that regulators are able to gain "an understanding of how widespread particular impacts from permitted programs are… and where those impacts are located.").

a row, which has the potential to severely harm aquatic life. Similarly, withdrawing water from a reservoir at a rate of up to 50 gallons per minute, per permit, has the potential to cumulatively severely strain the capacity of the reservoir.

Without knowledge of when, where, and to what extent these withdrawals are being made, TDEC will not able to fulfill its duty to prevent degradation to waters of the state, because it will lack the information needed to make any reliable determination about whether that degradation is likely to occur. If TDEC plans to use the definition of de minimis from the water quality standards regulations, which sets the regulatory upper limit of de minimis water withdrawals at 10% of the 7Q10 flow absent a specific finding by TDEC that there is a scientific basis for finding "that the additional degradation has an insignificant effect on the resource,"[11] that should be clearly expressed in the permit. However, since TDEC does not monitor or approve Class 1 activities, it is not at all clear how any exceedances of the de minimis standard, either cumulatively or individually, would be discovered or compliance enforced. The de minimis standard by regulation for water withdrawals also does not have a straightforward upper limit for reservoir withdrawals, because it is based on 7Q10 low flow, which is a measurement more clearly applicable to flowing, lotic systems.

Additionally, several of the General Conditions in the proposed Minor Water Withdrawals Permit, such as the prohibition withdrawals in Exceptional Tennessee Waters, trout streams, streams impaired for flow regime modification, or streams that support state or federally listed endangered or threatened species, require particular knowledge of the stream segment in question in order to determine if a minor water withdrawal could be authorized through the general permit. Class 1 permittees would not necessarily be aware that the stream they are planning to withdraw from might fall into one of these prohibited categories.[12] Requiring Class 1 permittees to submit a notification of intent prior to beginning the withdrawal would allow TDEC to check the location against its own databases to ensure the withdrawal could be authorized under the proposed Minor Water Withdrawals Permit. Submitting an application or notification of intent also puts the permittee on notice about the requirements of the permit, which has the potential for increasing compliance with the permit terms.

Finally, requiring notice would greatly facilitate enforcement of the permit, and knowledge about the greater possibility of enforcement could also increase compliance with the permit terms. Without any notice requirement, there is a possibility that some might take advantage of TDEC's lack of knowledge about where and when theoretically-permitted activities are taking place, because "it is unclear how different the situation is from a regulated party's

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[11] Tenn. Comp. R. & Regs. 0400-40-03-.04(4)(a)(3). The proposed permit defines the 7Q10 flow "as the lowest seven-day average flow with a 10-percent probability of occurring in any given year."

[12] Indeed, they may not be aware that they are under any regulatory requirements at all. *See* **Att. 4** - Travis O. Brandon, *A Wall Impervious to Facts: Seawalls, Living Shorelines, and the U.S. Army Corps of Engineers' Continuing Authorization of Hard Coastal Armoring in the Face of Sea Level Rise*, 93 TUL. L. REV. 557, 588 (2019) (noting that when a general permit has no notice requirement, permittees "may in fact be unaware that they are making use of the general permit….").

perspective, between a rule that grants a general permit for an activity with no notice or conditions requirements, and a rule that flat-out exempts the activity from regulation."[13]

2. <u>For both Class 1 and Class 2 withdrawals, TDEC should set a clear, science-based limit on the cumulative amount of water that can be withdrawn from a stream segment or reservoir which accounts for both classes of the proposed Minor Water Withdrawals Permit as well as any other known or likely water withdrawals.</u>

TDEC is legally prohibited from issuing a permit "for an activity that would cause a condition of pollution either by itself or in combination with others."[14] TDEC must therefore consider "cumulative impacts" in deciding whether or not issuance of a permit would cause more than de minimis degradation to waters of the state. "Cumulative impacts" are defined as "the impact on resource values which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."[15] The proposed Minor Water Withdrawals Permit does not adequately specify how cumulative impacts will be accounted for in determining whether to issue a notice of coverage to Class 2 permit applicants, and does not at all address how cumulative impacts are accounted for in Class 1 permits.

Per the proposed Minor Water Withdrawals Permit, Class 1 water withdrawals may take "up to 15% of the instantaneous flow from a stream or river" for 30 days, or 50 gallons per minute from a reservoir of ten surface acres or greater on an ongoing basis. Class 2 withdrawals are water withdrawals "of a rate less than 5% of the 7Q10 flow from a stream or river on a long-term basis, provided that the total authorized and proposed discharges [sic] in the stream segment do not exceed 10% of the 7Q10 flow."[16] The permit itself does not set limits on water withdrawals due to cumulative impacts, but there is an implied limit by reference to the necessity of compliance with Tennessee's water quality standards regulations in General Condition 14. Degradation resulting from water withdrawals may only be considered de minimis, and thus potentially eligible for general permit coverage, if "the total of the authorized and proposed impacts uses no more than 10% of the ... 7Q10 low flow," or "if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource."[17]

The limit on cumulative withdrawals imposed by this regulation should be explicit within the proposed Minor Water Withdrawals Permit itself. A hard cap numeric limit on cumulative withdrawals is necessary, because TDEC has not demonstrated any scientific basis for finding that additional degradation would have an insignificant effect on the resource, and its ability to make such a finding in the context of a general permit is inherently limited.

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[13] **Att. 6** - Eric Biber & J.B. Ruhl, *The Permit Power Revisited: The Theory and Practice of Regulatory Permits in the Administrative State*, 64 DUKE L.J. 133, 200 (2014).

[14] Tenn. Code Ann. § 69-3-108(g)(2).

[15] Tenn. Comp. R. & Regs. 0400-40-07-.03(9).

[16] "Discharges" here seems meant to be "withdrawals," as the permit is about withdrawals. If TDEC did intend "discharges," this should be more fully explained in the permit.

[17] Tenn. Comp. R. & Regs. 0400-40-03-.04(4)(a)(3).

Furthermore, we question whether 10% of the 7Q10 flow is the appropriate cumulative limit for the proposed Minor Water Withdrawals Permit, because it does not appear to account for any individual ARAPs for water withdrawals in the same stream segment, or for any known water withdrawals exempted from permitting requirements, such as withdrawals existing on July 24, 2000 "which do not adversely alter or affect the classified use of the source stream," or withdrawals that "are part of an established (i.e., on-going) farming, forestry, or livestock management operation, unless there is a point source discharge."[18] Although TDEC may not have specific information about all of these withdrawals due to a lack of reporting requirements for exempt activities, it could account for this uncertainty by setting a lower cap on cumulative withdrawals in the permit.

3. TDEC should consider using a more conservative percentage of the 7Q10 flow in order to include a margin of safety in accounting for climate change.

Several aspects of the proposed Minor Water Withdrawal Permit rely on low flow calculations—specifically, the 7Q10 flow. The proposed permit defines the 7Q10 flow "as the lowest seven-day average flow with a 10-percent probability of occurring in any given year." This is to "be determined using United States Geological Survey (USGS) published gage data where a nearby gage is available," or, if no gage is nearby, by using a USGS Geographic Information Systems application for streamflow statistics (StreamStats).

Because calculations for 7Q10 flows rely on historical data, they do not necessarily reflect changing climate trends. Tennessee, like the rest of the Southeast, is expected to experience more unpredictable and extreme precipitation trends in coming decades as a result of climate change.[19] This includes increased frequency and severity of drought.[20] Low-flow predictions based on historical data large may not account for changes in yearly precipitation trends caused by climate change.

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[18] Tenn. Comp. R. & Regs. 0400-40-07-.02. In its response to comments regarding the 2019 amendments to the anti-degradation rules, TDEC stated: "The [de minimis] provision has previously been publicly-reviewed; promulgated by the Board; approved by EPA; and in place in the rules for many years. Given that EPA and court cases have supported the idea of 10% as being the upper maximum for cumulative de minimis degradation in a waterbody, 5% seemed like a reasonable amount to allow a single withdrawer. Withdrawals above that amount can still be authorized, they just aren't de minimis." **Att. 7** – TDEC, *Response to Comments on Anti-Degradation Rule Changes* (June 18, 2019), https://publications.tnsosfiles.com/rules_filings/06-18-19.pdf, Comment 102. Nothing in this discussion indicates that the 10% figure accounts for the impact of individual and/or exempt water withdrawals from a river or stream. This is particularly concerning given TDEC's acknowledgement that the 10% figure has not been updated in many years.

[19] **Att. 3** - U.S. Environmental Protection Agency, *What Climate Change Means for Tennessee* (Aug. 2016), https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-tn.pdf.

[20] *Id*.

Basing the acceptable amount of water withdrawals on the predicated 7Q10 of a stream segment may therefore not be adequately protective of water quality and aquatic life, since actual low-flow conditions may be significantly less than the predicted 7Q10. Since these permits are for five-year terms, a significant amount of damage may be done before the cumulative impact of stream withdrawals is realized. It is true that the impact of climate change on stream low flows is difficult to predict with certainty, and may vary depending on the region and river in question.[21] However, this uncertainty is a reason to be even more conservative in setting withdrawal limits, particularly for general permits where TDEC has not had the opportunity to fully evaluate the impacts of climate change on the stream being affected.

The proposed Minor Water Withdrawal Permit does prohibit withdrawals from streams during severe, extreme, or exceptional droughts for both Class 1 and Class 2. However, a changing climate can result in persistent dry conditions that do not rise to the level of official drought. A cap on cumulative water withdrawals based on a 7Q10 calculated using historic data, with no adjustment to account for rapidly changing precipitation trends due to climate change, may not be sufficiently protective. Tennessee's decision to "grandfather" certain types of water withdrawals, including those associated with farming and livestock operations that do not have a point source discharge and withdrawals that were occurring as of July 24, 2000 if they meet certain criteria,[22] provide additional justification for a more conservative cumulative limit on minor water withdrawals.

The uncertainty introduced by climate change is compounded for water withdrawals from streams with no nearby gages. USGS frankly admits that using StreamStats to make estimates of streamflow statistics at ungaged sites can be erroneous, because the application uses "very large, complex datasets" that were "mostly developed by other entities internal and external to the USGS," which "can contain occasional errors."[23] USGS recommends that users "carefully check all results for accuracy and to exercise their own professional judgment in evaluating the appropriateness of the results for their application."[24] This sort of situation, which requires particular judgments about specific places, is not one that is suited to a general permit, which should only encompass substantially similar activities with similar impacts.

4. <u>Minor water withdrawals should not be allowed through a general permit in streams that are listed as impaired for any reason, not just flow regime.</u>

Water quantity and water quality are inextricably linked. This link is recognized in the TNH2O report, which stated than an area of concern for Tennessee's institutional and legal framework around water was "understanding the scale and frequency of water withdrawals and

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[21] *See, e.g.*, **Att. 8** – Se-Yeun Lee *et al., Impacts of Climate Change on Regulated Streamflow, Hydrologic Extremes, Hydropower Production, and Sediment Discharge in the Skagit River Basin*, NORTHWEST SCIENCE, 90(1): 23-43.

[22] Tenn. Comp. R. & Regs. 0400-40-07-.02.

[23] **Att. 9** – USGS, *StreamStats, Version 4*, Fact Sheet 2017-3046 (Oct. 2017), https://pubs.usgs.gov/fs/2017/3046/fs20173046.pdf, 4.

[24] *Id*.

their potential to affect water availability and quality."[25] One of the recommendations was also to "[f]ormally recognize the inherent relationship between water quality and water availability by integrating and coordinating policies and actions under the state's Water Quality Control Act with those established under the Water Resources Act."[26] The impacts of water pollution are more acutely felt, by humans and all other life, when there is less of that water to go around.

The basic principle that water quantity affects water quality is one of the foundations for both the federal Clean Water Act and the Tennessee Water Quality Control Act. When issuing National Pollutant Discharge Elimination System (NPDES) permits the state must also consider setting water-quality-based effluent limitations if necessary to protect water quality, and these limitations are based on state water quality criteria.[27] Water quality criteria are often based on allowable concentrations—the arsenic water quality criteria for recreational use, for examples, sets an upper limit of 10 micrograms per liter to protect human health.[28] In calculating how much arsenic a NPDES permit holder may discharge, TDEC therefore must take into account the physical quantity of water in the receiving stream, as well as any existing arsenic contamination. Effluent limits set for arsenic would be based on assumptions about water quantity.

For this reason, TDEC must prohibit the use of a general permit to authorize water withdrawals for any stream that is listed as impaired, not just streams impaired for flow regime modification (General Condition 8). By regulation, TDEC may not authorize any "new or increased water withdrawals" in waters with unavailable parameters (listed as impaired) if those withdrawals "will cause additional measurable degradation of the unavailable parameter."[29]

Prohibiting use of a general permit to authorize water withdrawal for a stream impaired for flow regime modification is clearly correct, because any withdrawal would have the potential to cause additional degradation, and so would need to be evaluated on an individual basis. However, this same logic applies to streams impaired for any pollutant for which concentration is a relevant criterion. If a stream had several permitted NPDES dischargers which had set effluent limits assuming a particular stream flow, and that stream flow was in actuality always lower than that assumption, the same quantity of pollutant would create a concentration that could violate water quality standards. This effect would be more intense in smaller streams, or those with more variable natural flow. TDEC must evaluate these situations on a location-specific basis in order to determine whether the proposed withdrawal would cause further degradation in a stream with *any* unavailable parameters, not just flow regime modification.

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[25] **Att. 1** - *TN H_2O*, 24.
[26] *Id*.
[27] Tenn. Comp. R. & Regs. 0400-40-05-.10.
[28] Tenn. Comp. R. & Regs. 0400-40-03-.03(4)(j).
[29] Tenn. Comp. R. & Regs. 0400-40-03-.06(2)(b).

II. Recreational Prospecting

A. Background

Although Tennessee is long past the days of its brief initial gold rush, the last decade has seen a renewed interest in prospecting for gold in the state's rivers. Gold prospecting, even when small-scale and "recreational," can severely damage the habitat of rivers and streams through increased siltation and sedimentation.[30] In Coker Creek, where gold was first discovered almost two hundred years ago, "recreational gold collecting has significantly altered the habitat," such that "[f]ine sediment deposits are well outside the normal range for mountain streams and indicate a serious disturbance within the watershed."[31] This increased sedimentation harms aquatic life, including macroinvertebrates, and Coker Creek is currently listed as an "impaired" stream for excess sediments.[32]

As a result of this increased popularity, and the accompanying environmental degradation, TDEC developed a general ARAP for Recreational Prospecting, which was released in August 2014.[33] TDEC published a revised draft of the permit in May 2015, and, after taking comments and scheduling a public hearing, published a final version of the permit, along with responses to comments, in December 2015 ("2015 Responses to Comments").[34]

SELC and other conservation organizations submitted extensive comments on the May 2015 proposed general ARAP for Recreational Prospecting.[35] In these comments, SELC expressed its position that recreational prospecting as regulated in the general permit may lead to more than de minimis impacts, and so should not be authorized under a general permit.

In particular, SELC's comments noted that the U.S. Forest Service (USFS), the U.S. Fish and Wildlife Service (FWS), and the Tennessee Wildlife Resources Agency (TWRA) have all commented on proposed individual permits for the kind of prospecting allowed by the general permit—such as use of dredges and suction devices—as being highly disruptive to aquatic species. These devices move around large amounts of streambed substrate and release large amounts of sedimentation, damaging spawning habitat. TWRA stated unequivocally that "in high quality, biologically diverse streams, mechanical dredging is straight-forward destruction of

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[30] *See* **Att.10** - Conservation Groups Comments on General ARAP Recreational Prospecting (July 3, 2015).

[31] **Att. 11** – U.S. Forest Service, *Fact Sheet – Gold Collecting* (2018), https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd569590.pdf.

[32] *Id*.

[33] **Att. 12** – *TDEC Notice of Determination and Response to Comments ARAP General Permit* (Dec. 9, 2015) ("2015 Responses to Comments"), https://www.tn.gov/content/dam/tn/environment/water/documents/water_permit_arap-gp_general-arap-nod-combined.pdf, 1.

[34] *Id*.; **Att. 13** – Final 2015 Recreational Prospecting General ARAP, https://www.tn.gov/content/dam/tn/environment/water/documents/water_permit_arap-gp_recreational-prospecting.pdf.

[35] **Att.10** - Conservation Groups Comments on General ARAP Recreational Prospecting (July 3, 2015).

habitat for fish and aquatic life."[36] FWS was "very concerned that these activities could result in direct mortality to mussels, fish eggs, and larvae and indirectly have impacts on substrate stability, fish and mussel food sources, and reproductive success of fish and mussels," and also noted that the cumulative effects of these activities could be significant.[37] USFS reiterated the concerns about damage to aquatic resources, and added that "[o]ther recreational activities (fishing) will be adversely affected and public health could be at risk."[38] TDEC itself has noted in the public notice for this proposed individual ARAP that "mechanized prospecting with dredges will result in degradation to water quality."[39]

Although these comments and determinations were made in the context of an individual recreational prospecting ARAP, the same concerns applied to the 2015 general permit, and they continue to apply to the proposed 2020 general permit. Mechanized prospecting, at any scale, is simply too likely to lead to more than de minimis damage to waters of the state to allow in a general permit, which may only be issued for habitat alterations if TDEC can show that the permitted activities "do not result in an appreciable permanent loss of resource values."[40] TDEC has not provided sufficient evidence or explanation to demonstrate that the individual or cumulative impacts of the proposed general permit will not result in such a permanent loss.

In the 2015 Response to Comments and the final ARAP, TDEC responded to some of these comments by making changes to the proposed permit to better protect the waters of the state. Many of these changes made between the 2015 proposed and final permits have, in the proposed 2020 permit, been rolled back to the proposed 2015 version without any explanation from TDEC. We reiterate our objection to the inclusion of any form of mechanized recreational prospecting in the proposed Recreational Prospecting Permit and address the 2020 changes specifically below.

B. Proposed Revision of the General ARAP for Recreational Prospecting

As a preliminary matter, the redlined version of the proposed Recreational Prospecting Permit does not reflect all of the proposed changes from the December 2015 final Recreational Prospecting Permit. For example, in in the proposed 2015 Recreational Prospecting Permit, TDEC had set the maximum plume length for Class 1 and Class 2 activities as 300 feet, but in response to comments changed this in the final 2015 permit to 100 feet for Class 1 activities and 200 feet for Class 2 activities; in the current proposed Recreational Prospecting Permit the maximum plume length for both Class 1 and Class 2 activities has been re-set to 300 feet without any explanation. We have attempted to reconstruct the differences between the December 2015 Recreational Prospecting Permit and the proposed permit. As explained below, TDEC has not

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[36] *Id*. at 3.
[37] *Id*.
[38] *Id*.
[39] *Id*.
[40] Tenn. Comp. R. & Regs. 0400-40-07-.04(2). "'Appreciable permanent loss of resource values' means a reduction in resource values that is expected to continue without fundamental change and is large enough to be observed and measured as resulting in more than minimal adverse effects." Tenn. Comp. R. & Regs. 0400-40-07-.03(3).

provided any explanation for its reversion to many of the standards it previously found insufficiently protective of water quality in the December 2015 Recreational Prospecting Permit. TDEC should not only maintain the protections in the December 2015 permit, it should strengthen those protections by eliminating general authorization for mechanized gold prospecting and otherwise limiting the permitted activities as described below.

1. Class 1 permit applicants should also be required to submit an application and receive a Notice of Coverage before commencing operation.

In its 2015 Responses to Comments, TDEC indicated that Class 1 "non-mechanized" prospecting activities, as distinct from Class 2 "mechanized" prospecting activities, are likely to cause less impact.[41] However, even if likely to cause less impact, the potential impact of Class 1 operations can still be severe, particularly when considered cumulatively. Class 1 permit applicants should also be required to submit an application and receive a notice of coverage before commencing operations.

As with the Minor Water Withdrawals General ARAP, TDEC's decision to allow these activities to proceed without any application, approval, or even notice, stems from a desire to "avoid an unnecessary regulatory burden."[42] Requiring permit applicants to submit a brief application indicating that they have read and agreed to the terms of the general permit, and noting where, how, and when they will be prospecting, does not seem overly burdensome.

More importantly, it is, in fact, necessary. If TDEC has no way of tracking where Class 1 permittees are operating, how can it possibly determine whether those permittees are causing negative impacts, either individually or cumulatively? In the 2015 Responses to Comments, TDEC justified the decision not to require Class 1 permittees to submit any application, or even notice of intent, by stating that "[i]f information arises that shows that review and approval is needed for non-mechanized prospecting, the general permit can be revised."[43] However, absent knowledge of the size or location of these operations, TDEC's ability to actually gather such information is severely limited.

Furthermore, without even a notification requirement, TDEC cannot be sure that permittees have been put on notice regarding their obligations under the general permit, and does not have the opportunity to check that the permittee is abiding by the permit's terms. In the General Conditions section, prospecting is outright prohibited in several circumstances, including in Outstanding Natural Resource Waters, in streams listed as impaired for contaminated sediments on the state's 303(d) list, and in streams or stream segments managed for brook trout. Prospecting is also not allowed in areas with state or federally listed endangered or threatened species, or species deemed in need of management or of special concern, without prior coordination with TDEC and the Tennessee Wildlife Resources Agency (TWRA).

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[41] **Att. 12 -** 2015 Responses to Comments, 2.

[42] *Id*.

[43] *Id*.

At an absolute minimum, Class 1 permit applicants must be required to inform TDEC where they will be operating prior to beginning operation would allow TDEC to check that the activity is not taking place in one of these prohibited areas, or without appropriate coordination and approval. Requiring submission of notices of intent would at least allow TDEC to better monitor permit locations and stream segments for individual and cumulative impacts, and would also express the permit applicant's knowledge of and assent to the general permit conditions.

2. <u>At minimum, Class 1 requirements should be more stringent, to prevent more than de minimum degradation to waters of the state.</u>

Remove Wetted Width Exemption (Class 1 Special Condition 2)

In the 2015 Responses to Comments, TDEC agreed that, because "impacts [to waters of the state] are independent of property ownership," it would remove the wetted width exemption for Class 1 permittees who were private landowners, or their family members, operating on their own property.[44] The final general ARAP issued in December 2015, accordingly, has this exemption removed.[45] However, the five-foot wetted width exemption for private landowners has reappeared at Class 1 Special Conditions 2 in the proposed permit. TDEC has not explained why it now believes that private landowners need not comply with a general condition that TDEC has deemed necessary to protect the waters of the state from degradation. Whether the owner of the land is the same as the person prospecting has no bearing on impacts to water quality, and TDEC should remove this exemption in the final permit.

Exclude Use of #2 Shovels (Class 1 Special Condition 4)

Use of #2 shovels during prospecting can cause significant damage to stream beds. TDEC acknowledged in the 2015 Response to Comments that there is "evidence of damage using these tools in the past," but stated that it "believe[d] such tools when used responsibly under the conditions established in the general permit (including the prohibition on disturbing stream banks) will result in no more than de minimis impact."[46] TDEC has not given the basis for this belief, and, since Class 1 permittees need not provide the location of their operations to TDEC, it is not clear how TDEC will gather the information to either prove or disprove it. Without further evidence to support this belief, and considering TDEC's primary duty of protecting waters of the state from degradation, the use of #2 shovels in Class 1 permits should be prohibited.

Limit Number of Pans and Sluices at Each Site (Class 1 Special Conditions 6 and 7)

The proposed permit explicitly states that "[m]ore than one [pan/sluice] may be in use at a given dig site." This is a change from the final 2015 permit, which limited the numbers of sluices operating at a single site to three.[47] The three-sluice-limit was a result of comments on the

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[44] *Id*. at 12.

[45] **Att. 13** – Final 2015 Recreational Prospecting General ARAP.

[46] **Att. 12** - 2015 Responses to Comments, 8.

[47] **Att. 13** – Final 2015 Recreational Prospecting General ARAP.

proposed 2015 permit, with TDEC agreeing that "the number of sluices should be restricted."[48] TDEC has not explained why it now believes that unlimited numbers of sluices operating at a single site pose no danger of more than de minimis degradation to waters of the state. The previously established limit of three sluices should be restored, and a limit placed on the number of pans, to prevent damage to streambeds and disturbance to aquatic life.

Limit Plume to Maximum 100 Feet (Class 1 Special Condition 10)

In the 2015 Response to Comments, TDEC agreed with the comments "that a 300 foot plume," the initial length given in the proposed 2015 permit, "may be excessive," because "for a plume to travel 300 feet downstream without dispersion would indicate a relatively high concentration of suspended solids."[49] Additionally, such a plume "could result in a continuous plume of an even greater distance since sluices and dredging operations can be within 200 feet of each other."[50] In the final 2015 permit, the plume length was restricted to 100 feet for Class 1 operations.[51] TDEC should restore this maximum plume length of 100 feet, or explain why the reasoning given in the 2015 Response to Comments no longer applies.

Prohibit prospecting in any stream on 303(d) impaired waters list for channel, physical substrate, or habitat alteration

Prospecting on streams listed by the state as impaired for channel, physical substrate, or habitat alteration is prohibited to Class 2 permittees, but not Class 1. In the 2015 Response to Comments, TDEC did not address this comment adequately, and the concern animating the initial comment remains. Although non-mechanized dredging may not be as severely destructive as mechanized dredging, it can still harm aquatic habitat. Prospecting in streams designated as impaired for contaminated sediment are forbidden for both Class 1 and Class 2 permits in the General Conditions section; this condition should be expanded to include streams impaired for channel, physical substrate, or habitat alteration.

3. <u>The prohibition on prospecting in stream segments designated as Exceptional Tennessee Waters because of exceptional biological diversity or stream segments with outstanding ecological or recreational value should be restored.</u>

General Condition 4 of the final 2015 general Recreational Prospecting ARAP states:

> Prospecting is not permitted in stream segments listed as Exceptional Tennessee Waters because of exceptional biological diversity or stream segments with outstanding ecological, or recreational value as determined by the Department (Rule 0400040-03-.06(4)6.7.)[52]

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[48] **Att. 12** - 2015 Responses to Comments, 11.
[49] **Att. 12** - 2015 Responses to Comments, 5-6.
[50] *Id*. at 5.
[51] **Att. 13** – Final 2015 Recreational Prospecting General ARAP.
[52] *Id*.

This condition has been removed from the proposed 2020 general Recreational Prospecting ARAP, and TDEC has not supplied any reason for this change in the Rationale.[53] In the 2015 Response to Comments, TDEC noted that, because more restrictive water quality criteria are required for sensitive waters, this provision should be added to the general permit in order to prevent a more than de minimis impact.[54]

4. <u>The plume for Class 2 operations should be revised downward to at least 200 feet, which was the standard for the final 2015 permit.</u>

In the proposed 2020 permit, the plume for Class 2 operations, like that of Class 1 operations, has been reset at 300 feet without any explanation by TDEC. In the final 2015 permit, the maximum plume length for Class 2 operations was set at 200 feet.[55] TDEC should, at minimum, change the proposed maximum plume length from 300 feet to 200 feet for Class 2 operations.

III. Specific questions on provisions in other permits

- What is the reasoning for changing the prohibition on "adversely affecting" wetlands to "directly impacting" wetlands in several permits (for example, the Surveying and Geotechnical Exploration Permit)?

- In the General Condition prohibiting use of streams as linear transportation routes, why has "construction equipment" been replaced with "mechanized equipment" in some, but not all, the permits (for example, the Minor Stream Grade Stabilization Permit)?

- Why is a general permit authorizing underwater blasting acceptable in the context of the new Structural Discharges permit?

- Why are the "General Conditions" different across the various permits?

- In the revised Sediment Removal and Stream Remediation permit, why has TDEC removed the General Condition noting that activities in a component of a Natural Wild and Scenic River System or waters designated as Outstanding Natural Resource Waters are not covered?

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[53] TDEC, *2020 General Aquatic Resource Alteration Permit Rationale* (Jan. 22, 2020).

[54] **Att. 12** - 2015 Responses to Comments, 5-6.

[55] **Att. 13** – Final 2015 Recreational Prospecting General ARAP.

IV. Conclusion

Thank you for the opportunity to provide these comments.

Sincerely,

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Attachments provided on ShareFile:
https://southernenvironment.sharefile.com/d-s9344cc662894629a

List of Attachments

Attachment 1 - TN H_2O: Tennessee's Roadmap to Securing the Future of Our Water Resources
Attachment 2 - Haslam, TDEC Release Statewide Water Plan, Request Public Feedback
Attachment 3 - EPA: What Climate Change Means for Tennessee
Attachment 4 - Travis O. Brandon - A Wall Impervious to Facts
Attachment 5 - SELC Comment Letter on TN H_2O Plan
Attachment 6 - Biber & Ruhl - The Permit Power Revisited
Attachment 7 - TDEC Response to Comments on Anti-Degradation Rule Change
Attachment 8 – Se-Yeun Lee – Impacts of Climate Change on Regulated Streamflow
Attachment 9 – USGS StreamStats Fact Sheet
Attachment 10 – Conservation Groups Comments on General ARAP Recreational Prospecting
Attachment 11 – USFS Fact Sheet – Gold Collecting
Attachment 12 – 2015 Responses to Comments
Attachment 13 – Final 2015 Recreational Prospecting General ARAP