



**Joint Comments from the Sierra Club and Environment Texas on Draft Pesticide General Permit TXG870000.**

**Submitted via TCEQ e-Comments on July 12, 2021**

**(1) Introduction**

The Sierra Club Lone Star Chapter and Environment Texas (“Commenters”) submit the following comments regarding the renewal and amendment of the Texas Pesticide General Permit, TXG870000.

The Sierra Club is the nation’s oldest and largest conservation organization. The Lone Star Chapter of the Sierra Club was established in 1965 and has 28,000 members across the state and 160,000 members and supporters. Environment Texas promotes core environmental values in Texas, and along with Environment America is a member of The Public Interest Network.

**(2) The Texas Pesticide General Permit is Not as Protective as EPA’s Pesticide General Permit Because of its NOI Thresholds.**

In order for the Texas Pollution Discharge Elimination System (TPDES) Pesticide General Permit (PGP) to be sufficiently protective of the environment, it should be at least as protective as the PGP used by EPA. There are two pesticide use patterns under the TPDES PGP that are not as stringent as those used by EPA: Weed and Algae (termed “Vegetation and Algae” by TCEQ) and Animal Pest Control. The threshold for pesticide use patterns for Weed/Vegetation and Algae, and for Animal Pest Control are both larger than EPA’s threshold in EPA’s draft 2021 Pesticide General Permit as well as EPA’s currently effective 2016 PGP.

Specifically, TX6870000 triggers the Notice of Intent (NOI) requirement for Weed/Vegetation and Algae for those “operators treating a treatment area greater than or equal to 100 acres in water or greater than or equal to 200 linear miles at water's

edge.”<sup>1</sup> This differs from EPA’s permit, which triggers the NOI requirement at a substantially smaller threshold of 80 acres or 20 linear miles of pesticide application.<sup>2</sup>

In addition to the pesticide use pattern threshold for weed/vegetation algae, the thresholds for EPA and Texas differ in the Animal Pest Control pattern as well. Again, TCEQ’s permit would use the same threshold for Animal Pest Control as for Vegetation and Algae: “100 acres in water or greater than or equal to 200 linear miles at water’s edge.”<sup>3</sup> The discrepancy in TCEQ and EPA’s Animal Pest Control is also exactly the same, as EPA’s thresholds are 80 acres or 20 linear miles for Animal Pest Control.<sup>4</sup>

TCEQ should adopt at least those same thresholds that EPA does. These differences in Texas’s permit compared to EPA would allow fairly large operators that discharge pesticides into Texas’s waters to bypass the NOI requirement. This opens the door for potentially harmful pesticide impacts to human health or the environment.

### **(3) The Less-Stringent Thresholds Set by the Draft Permit Allow Greater Risks to Human Health to go Unsupervised and Insufficiently Documented.**

Many pesticides have been shown to cause health problems including but not limited to: miscarriage, developmental disabilities, and cancer.<sup>5</sup> Therefore, it is vitally important to take all possible precautions when discharging such pesticides. The use of pesticides that pose significant risks to human health by contaminating drinking water should be monitored by TCEQ regardless of whether arbitrary thresholds are met. Notably, Louisiana’s Pollutant Discharge Elimination System (LPDES) general permit has no analogous system of thresholds; there is no tiered system of oversight under the Louisiana Department of Environmental Quality PGP.

Under this draft permit, many pesticides would fall through the cracks of prudent regulation, including those for which the EPA has set no human health benchmarks for either acute or chronic exposure. For example, the EPA does not have an acute exposure benchmark for the pesticide chemical chlorsulfuron even though its

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<sup>1</sup> Part II(A)(1)(b)(ii) of Texas Draft Pesticide General Permit

<sup>2</sup> 2021 EPA Proposed PGP at 1-6 (EPA-HQ-OW-2020-0005-0057) (<https://www.regulations.gov/document/EPA-HQ-OW-2020-0005-0057>). This requirement is identical to the requirement currently in effect under EPA’s 2016 PGP (EPA-HQ-OW-2015-0499-0118) (<https://www.regulations.gov/document/EPA-HQ-OW-2015-0499-0118>).

<sup>3</sup> Part II(A)(1)(b)(iii) of Texas Draft Pesticide General Permit

<sup>4</sup> Supra n. 2.

<sup>5</sup> Cent. for Disease Control, REPRODUCTIVE HEALTH AND THE WORKPLACE, Pesticides (<https://www.cdc.gov/niosh/topics/repro/pesticides.html>).

reproductive toxicity study had “numerous deficiencies” and was “classified unacceptable.”<sup>6</sup>

Moreover, the EPA lacks sufficient data to complete a risk assessment for chlorsulfuron in drinking water.<sup>7</sup> None of the pesticides containing this ingredient are classified as restricted-use by either the EPA or Texas. This means that under the draft permit, the most-regulated class of operators – those who exceed the thresholds set in A(1)(b)(ii) – are not required to submit an NOI or compile an annual report. Furthermore, operators falling below the threshold would not even have to submit a self-certification form to a TCEQ regional office. It is alarming that this permit would allow a permittee to discharge pesticide which has had no risk assessment in drinking water and has no acute exposure benchmark to be applied to waters of the United States without requiring even the most basic minimums of recordkeeping.

Chlorsulfuron is not the only potentially hazardous chemical that would fall through the cavernous cracks in this permit. Scientists have criticized the EPA’s lack of scrutiny over pesticides’ impacts on human health, saying that pesticide companies have too much of a hand in their own oversight.<sup>8</sup> Additionally, the EPA’s own Scientific Advisory Board wrote that the EPA’s redefinition of waters of the United States in 2019 “neglect[ed] established science.”<sup>9</sup> Seeing as how the EPA’s own regulations may not be strong enough to adequately protect human health, the TCEQ should not take further liberties when it comes to protecting Texans.

#### **(4) Pesticides Pose Risks to Aquatic Wildlife – More Information is Needed**

EPA presently has incomplete Aquatic Life Benchmarks and ambient water quality criteria for pesticides. Of EPA’s Aquatic Life Benchmarks and Ecological Risk Assessments for Registered Pesticides, 313 of the registered pesticides and/or their degradates are lacking ambient water quality criteria for chronic toxicity to fish, and 302 registered pesticides and/or their degradates are lacking ambient water quality

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<sup>6</sup> 67 Fed. Reg. 52866 (<https://www.federalregister.gov/documents/2002/08/14/02-20229/chlorsulfuron-pesticide-tolerance>) (Aug. 14, 2002).

<sup>7</sup> Id.

<sup>8</sup> Lianne Sheppard et al., *Flawed analysis of an intentional human dosing study and its impact on chlorpyrifos risk assessments*, Environment International vol. 143, (Oct. 2020) (<https://www.sciencedirect.com/science/article/pii/S0160412020318602#>).

<sup>9</sup> EPA Science Advisory Board, (Oct. 16, 2019) ([https://yosemite.epa.gov/sab/sabproduct.nsf/ea5d9a9b55cc319285256cbd005a472e/5939af1252ddadfb852584e10053d472/\\$FILE/WOTUS%20SAB%20Draft%20Commentary\\_10\\_16\\_19\\_.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/ea5d9a9b55cc319285256cbd005a472e/5939af1252ddadfb852584e10053d472/$FILE/WOTUS%20SAB%20Draft%20Commentary_10_16_19_.pdf)).

criteria for chronic toxicity to invertebrates.<sup>10</sup> These numbers are both higher if they include values that are derived and either overestimate or underestimate toxicity. This makes widespread use of any of those pesticides inappropriate for a general permit. Commenters encourage that pesticide applications for pesticides that may be lacking EPA ambient water quality criteria for chronic toxicity to wildlife be processed through individual TPDES permits rather than under this general permit.

It's evident that chemical contaminants such as pesticides and herbicides contribute to water quality impairment and are a major reason for the decline of freshwater mussel species such as the Texas Hornshell Mussel.<sup>11</sup> Freshwater mussels are generally considered to be “umbrella species,” which means that protecting them indirectly protects many other species in their ecosystem.<sup>12</sup> The Texas Hornshell is also seen as an indicator for wider ecosystem health, as the filter-feeder's acute sensitivity to changes in water quality acts as an early warning signal.<sup>13</sup> This animal is classified as an endangered species and the U.S. Fish and Wildlife Service is currently considering designating over 400 miles of river as critical habitat, primarily in Culberson, Brewster, Terrell, Pecos, Val Verde, Kinney, Maverick and Webb Counties.<sup>14</sup> This endangered umbrella species needs protection, and operators in these areas should be required to apply for individual permits.

Permethrin is classified as a restricted use pesticide by the EPA for wide area applications, except for wide area mosquito adulticide use. Permethrin is highly toxic to freshwater aquatic organisms, but when it is used in mosquito abatement products, the EPA's aquatic buffer zone restriction is removed. Most public health models produced results exceeding the acute risk quotient for freshwater fish, invertebrates, and

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<sup>10</sup> EPA, Aquatic Life Benchmarks and Ecological Risk Assessments for Registered Pesticides ([https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/aquatic-life-benchmarks-and-ecological-risk#ref\\_1](https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/aquatic-life-benchmarks-and-ecological-risk#ref_1)) (last visited Jul. 12, 2021).

<sup>11</sup> 83 Fed. Reg. 5720 (<https://www.federalregister.gov/documents/2018/02/09/2018-02672/endangered-and-threatened-wildlife-and-plants-endangered-species-status-for-texas-hornshell>) (Feb. 09, 2018).

<sup>12</sup> Richard Conniff, Conservation Conundrum: Is Focusing on a Single Species a Good Strategy?, Yale Environment360, May 17, 2018, (<https://e360.yale.edu/features/conservation-conundrum-is-focusing-on-a-single-umbrella-species-a-good-strategy>).

<sup>13</sup> Madlin Mekelburg, Nearly 500 miles of Rio Grande could be deemed critical habitat for endangered mussel, June 28, 2021, (<https://www.statesman.com/story/news/environment/2021/06/28/texas-hornshell-mussel-critical-habitat-rio-grande-river/5305836001/>).

<sup>14</sup> U.S. Fish and Wildlife Service, Questions and Answers: Proposed Texas Hornshell Critical Habitat, June 9, 2021, (<https://www.fws.gov/southwest/docs/TexasHornshell-proposedCH-FAQs.pdf>).

sediment organisms.<sup>15</sup> This creates a situation where protective measures are removed just when they are crucially needed and highly toxic chemicals may be discharged into the very ecosystems they harm. Scenarios like this make it all the more important for the TCEQ to treat its monitoring responsibilities with gravity. The TCEQ should eliminate the permit's stratified system of reporting; that way, operators using chemicals which are known to be toxic to aquatic life may at least be flagged in an NOI and perhaps required to apply for an individual permit.

The most widely used class of pesticides in the world, neonicotinoids (neonics), have recently been shown to be extremely damaging to aquatic life.<sup>16</sup> Nithiazine, a neonicotinoid, is one of the many pesticides mentioned above that lacks chronic toxicity criteria for both invertebrates and fish. The National Academy of Sciences recently published a study showing that neonics pose a broad risk to biodiversity that spreads through food webs from plants to pests to their natural enemies.<sup>17</sup> While neonics are widely accepted as contributing to colony collapse disorder in honeybees and several neonics have been banned in outdoor use by the European Union for this reason, there is a growing body of proof that these insecticides are toxic to aquatic ecosystems.<sup>18</sup> As these pesticides are already known to harm non-target plants and animals and are being linked more closely to declines in aquatic biodiversity, TCEQ should take all steps necessary to ban the use of neonicotinoids. And at the very least, they should be classified as restricted-use pesticides.

#### **(5) The Use Patterns Outlined in the Draft Permit Raise Environmental Justice Concerns that Should be Further Investigated.**

Disease-carrying mosquitoes are often found in urban areas and low lands that flood frequently.<sup>19</sup> Those mosquitoes are often treated by spraying aerial larvicides and

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<sup>15</sup> EPA, Permethrin fact sheet, Aug. 2009, ([https://www3.epa.gov/pesticides/chem\\_search/reg\\_actions/reregistration/fs\\_PC-109701\\_1-Aug-09.pdf](https://www3.epa.gov/pesticides/chem_search/reg_actions/reregistration/fs_PC-109701_1-Aug-09.pdf)).

<sup>16</sup> Masumi Yamamuro et al., *Neonicotinoids disrupt aquatic food webs and decrease fishery yields*, *Science*, Nov. 1, 2019, (<https://science.sciencemag.org/content/366/6465/620>).

<sup>17</sup> S. D. Frank & J. F. Tooker, *Opinion: Neonicotinoids pose undocumented threats to food webs*, Sept. 15, 2021, (<https://www.pnas.org/content/117/37/22609>).

<sup>18</sup> European Commission, *Food Safety*, ([https://ec.europa.eu/food/plants/pesticides/approval-active-substances/renewal-approval/neonicotinoids\\_en](https://ec.europa.eu/food/plants/pesticides/approval-active-substances/renewal-approval/neonicotinoids_en)) (last visited July 12, 2021).

<sup>19</sup> EPA, *Joint Statement on Mosquito Control in the United States*, Sept. 2012, (<https://www.epa.gov/mosquitocontrol/joint-statement-mosquito-control-united-states>) (last visited July 12, 2021).

adulticides to large areas of land.<sup>20</sup> However, low-income housing in the United States is disproportionately placed in flood zones.<sup>21</sup> This raises environmental justice concerns because disease-carrying mosquitoes are likely to be found in land that floods frequently, making it possible that low-income communities have a higher likelihood of being exposed to the pesticides used to treat them there. This means that the potential effects from insufficient thresholds or reporting requirements would likely disproportionately affect lower-income communities.

## **(6) Conclusion**

For the foregoing reasons, Commenters encourage TCEQ to adopt more stringent thresholds regarding NOI requirements based on pesticide use patterns, that are at least as protective as those in the PGP used by EPA. Additionally, Commenters encourage TCEQ to adopt more stringent reporting requirements of permittees wishing to be permitted under this permit. Finally, Commenters urge TCEQ to evaluate Environmental Justice concerns raised in this comment.

Respectfully,

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<sup>20</sup> Cent. for Disease Control, *What You Need to Know About Aerial Spraying*, Sept. 24, 2020, (<https://www.cdc.gov/westnile/vectorcontrol/aerial-spraying.html>).

<sup>21</sup> *Flood Risk for Low-Income Housing in U.S. Could Triple by 2050*, Yale Environment360, Dec. 1, 2020, (<https://e360.yale.edu/digest/flood-risk-for-low-income-housing-in-u-s-could-triple-by-2050>).