19TH JUDICIAL DISTRICT COURT
PARISH OF EAST BATON ROUGE
STATE OF LOUISIANA

RISE ST. JAMES, LOUISIANA BUCKET BRIGADE, SIERRA CLUB, CENTER FOR BIOLOGICAL DIVERSITY, HEALTHY GULF, EARTHWORKS, and NO WASTE LOUISIANA, Petitioners,	*	Case No.: 694,029
v.	*	Section: 27
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY, Defendant.	*	Judge: Trudy White

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PETITIONERS' SUPPLEMENTAL BRIEF
IN SUPPORT OF THEIR PETITION FOR JUDICIAL REVIEW

Petitioners RISE St. James, Louisiana Bucket Brigade, Sierra Club, Center for Biological Diversity, Healthy Gulf, Earthworks, and No Waste Louisiana (collectively, "Petitioners") respectfully submit this supplemental brief that addresses the Louisiana Department of Environmental Quality (LDEQ) Supplement to its Basis for Decision, approving air permits allowing FG LA, LLC ("Formosa Plastics"[1]) to build a 14-plant, petrochemical complex near the community of Welcome, Louisiana. LDEQ's Supplement addresses the U.S. Environmental Protection Agency's 2019 environmental justice screening ("EJScreen") Report for the community of Welcome, which the Court ordered the agency to take into the record. In its Initial Basis for Decision, LDEQ had ignored the 2019 EJScreen Report and misapplied older EJScreen data, in an effort to dismiss Black St. James Parish residents' environmental-justice concerns.[2]

INTRODUCTION

The 2019 EJScreen Report for the Welcome community sounds a blaring alarm: this Black and primarily low-income community *already* faces some of the most disproportionate environmental impacts in the nation – especially the risk of cancer from toxic industrial air

[1] FG LA LLC, the entity to which LDEQ issued the permits, is part of Formosa Plastics Group, a Taiwanese-based conglomerate and chemical manufacturing giant.

[2] *See* Petitioners' Brief in Support of Their Petition for Judicial Review ("Petitioners' Initial Brief"), Nov. 5, 2020, pp. 42-49 (detailing the flaws in LDEQ's environmental justice analysis in its Initial Basis for Decision).

pollution. Formosa Plastics would exacerbate that burden, exposing area residents to two- to three-times the cancer-causing air pollution that exists there now.[3] But even though LDEQ was given a second chance and 90 days to properly use EJScreen (this time with the 2019 EJScreen data that the agency overlooked initially) and fix its flawed environmental justice analysis, the agency simply compounded its errors. LDEQ still misuses EJScreen and ignores undeniable disproportionate environmental impacts to maintain its unfounded and arbitrary conclusion that Formosa Plastics' chemical manufacturing complex would provide benefits that outweigh the harm to human health and the environment.[4] If the addition of Formosa Plastics' cancer-causing toxic pollution on top of the extreme, disproportionate pollution burden Welcome already bears is not enough to tip the scale in favor of protecting human health and the environment, it is hard to imagine what would in the eyes of the agency.

Even with this second chance, LDEQ fails to conduct a fair environmental justice analysis pursuant to its public trustee duty. *Save Ourselves v. La. Envtl. Control Comm'n*, 452 So. 2d 1152, 1157 (La. 1984) (requiring the agency to "act with diligence, fairness and faithfulness" in carrying out its constitutionally mandated duty). LDEQ continues to cherry-pick data, ignore race and income—the very foundation of *any* credible environmental justice review—and point to irrelevant emission trends to defend its decision. The agency even dismissed the same, selective EJScreen data that it embraced in its initial Basis for Decision, apparently only because the 2019 version of this data no longer supports the agency's position that Welcome is not disproportionately harmed. LDEQ also fails to assess the full burden Welcome residents would bear if Formosa Plastics emits into the air what the permits allow on top of the existing and other newly permitted industrial air pollution in the area. *See In re Am. Waste and Pollution Control Co.*, 633 So. 2d 188, 194 (La. App. 1st Cir. 1993) (requiring the agency to assess the "potential and real adverse environmental effects" of the proposed project as a first step in the required public trustee analysis). Without this assessment, LDEQ has failed to determine the environmental costs and cannot engage in the required balancing process. *Save*

[3] R. Vol. 30, p. 7435, EDMS 11960006, Petitioners' Nov. 26, 2019 Supp. Comments, n.18 (Lylla Younes, What Could Happen if a $9.4 Billion Chemical Plant Comes to 'Cancer Alley', ProPublica, Nov. 18, 2019, https://www.propublica.org/article/what-could-happen-if-a-9.4-billion-chemical-plant-comes-to-cancer-alley).

[4] 3rd Supp. R. 8965, Supp. Basis for Decision, p. 4.

Ourselves, 452 So. 2d at 1157 (explained that while "the constitution does not establish environmental protection as an exclusive goal, [it] requires a balancing process in which environmental costs and benefits must be given full and careful consideration along with economic, social and other factors"). As the Supreme Court instructed, a court should reverse a decision where "the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental protection." *Id.* at 1159.

The Court should vacate the permits and order LDEQ to conduct a legally compliant environment justice analysis to determine the full burden Welcome residents would bear if Formosa Plastics builds and operates.

BACKGROUND & FACTS

Procedural Background

On May 12, 2021, the Court remanded back to LDEQ its January 6, 2020, decision to issue air permits[5] for the construction and operation of Formosa Plastics' planned chemical complex in Welcome, Louisiana pursuant to La. R.S. 30:2050.21(E) upon a motion filed by petitioner-intervenor Beverly Alexander.[6] The Court ordered LDEQ to supplement the administrative record with the 2019 EJScreen Report for the community of Welcome (attached as Exhibit A to Alexander's motion) within 90 days of the remand.[7] The Court also gave LDEQ the option to modify its "reasons and decision" in light of the 2019 EJScreen Report within this 90-day period.[8] On August 5, 2021, LDEQ issued a supplement to its initial Basis for Decision ("Supplemental Basis for Decision") where it addressed the 2019 EJScreen Report.[9] On August 10, 2021, LDEQ filed the Third Supplemental Record of Decision ("3rd Supp. R.") with the

[5] LDEQ issued a Prevention of Significant Deterioration ("PSD") Permit and 14 Title V/Part 70 Air Operating Permits to Formosa Plastics for the construction and operation of 14 separate plants in Welcome, Louisiana pursuant to one permit decision. R. Vols. 31-34, pp. 7569-8436 (final permit approvals for all air permit); R. Vols. 34-35, pp. 8437-8618 (Initial Basis for Decision and Public Comment Response Summary).

[6] Alexander filed a motion for judicial notice of adjudicative facts and to admit procedural irregularities on October 6, 2020, and later supplemented and amended the motion on April 14, 2021. The court remanded the permit decision back to LDEQ at the hearing on Ms. Alexander's supplemented and amended motion held May 12, 2021. The court entered a written judgment on June 8, 2021 ordering the remand with instructions. 3rd Supp. R. 8959-8960, June 8, 2021 Order.

[7] 3rd Supp. R. 8959-8960, June 8, 2021 Order.

[8] *Id.*

[9] 3rd Supp. R. 8962-9865.

Court, which included the 2019 EJScreen Report[10] and the agency's Supplemental Basis for Decision.[11]

EJScreen & NATA Data

EJScreen is the U.S. Environmental Protection Agency ("EPA") environmental justice screening and mapping tool that uses a "nationally consistent dataset and approach" to assist government agencies, the public, and other stakeholders in evaluating environmental justice concerns.[12] EJScreen provides demographic and environmental datasets for communities, referred to as "demographic indicators" and "environmental indicators."[13, 14] There are six demographic indicators, which include, among others, the percentage of "people of color" and percentage of "low-income" people for each block group considered in an EJScreen report.[15] There are eleven environmental indicators, some of which quantify the proximity of a community to heavy industrial sites such as hazardous waste sites, while other indicators provide estimates of certain kinds of air pollution or incorporate the National-Scale Air Toxics Assessment ("NATA") data.[16] The NATA is another EPA tool "that provides information on

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[10] 3rd Supp. R. 8956-8967.

[11] 3rd Supp. R. 8962-9865.

[12] R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69, n.279 (citing EPA, EJSCREEN: Environmental Justice Screening and Mapping Tool, https://www.epa.gov/ejscreen (click on What is EJSCREEN? and Purposes and Uses and also available directly here at https://www.epa.gov/ejscreen/what-ejscreen and https://www.epa.gov/ejscreen/purposes-and-uses-ejscreen).

[13] *Id.*, What is EJScreen?, https://www.epa.gov/ejscreen/what-ejscreen.

[14] "All indicators are calculated for each block group. The only exception is certain environmental indicators for air quality (PM, ozone, and NATA indicators). Those air data were obtained for each Census tract, so each block group in a tract was assigned the same environmental indicator value." 3rd Supp. R. 8963, Supp. Basis for Decision, p. 2, n.3 (citing http://www.epa.gov/ejscreen/how-does-epa-use-ejscreen (click on Limitations and Caveats in Using EJSCREEN and also available directly here at https://www.epa.gov/ejscreen/limitations-and-caveats-using-ejscreen)).

[15] R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69, n.279 (citing EPA, EJSCREEN: Environmental Justice Screening and Mapping Tool, https://www.epa.gov/ejscreen (click on Demographic Indicators and also available directly here at https://www.epa.gov/ejscreen/overview-demographic-indicators-ejscreen)).

[16] The 11 environmental indicators are:

1. NATA Air Toxics Cancer Risk
2. NATA Respiratory Hazard Index
3. NATA Diesel PM
4. Particulate Matter (PM2.5)
5. Ozone
6. Lead Paint Indicator
7. Traffic Proximity and Volume
8. Proximity to Risk Management Plan Sites

potential health risks from breathing air toxics."[17] As EPA explains, the NATA "suggests the long-term risks to human health if air toxics emissions are steady over time."[18] The environmental indicators that incorporate the NATA data are "actual estimates of air toxics-related cancer risk or a hazard index," which reflect the level of toxic pollutants in the air compared to established health-based concentrations or limits.[19] EPA has compiled NATA data every three years or so since 1996, with the most current NATA data from 2014.[20]

EPA uses the demographic and environmental indicators to create 11 Environmental Justice (EJ) Indexes.[21] That is, each EJ index is created by combining demographic indicators with a single environmental indicator.[22] The "demographic indicators are often used as proxies for a community's health status and potential susceptibility to pollution."[23] So an area that has a

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9. Proximity to Treatment Storage and Disposal Facilities
10. Proximity to National Priorities List Sites
11. Wastewater Discharge Indicator

Id.

[17] 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.8 (citing 2014 National Air Toxics Assessment: Fact Sheet, https://www.epa.gov/sites/default/files/2018-08/documents/2014_nata_overview_fact_sheet.pdf).

[18] R. Vol. 29, p. 7116, EDMS 11817927, Petitioners' Aug. 12, 2019 Comments, Attach K, pdf. 256. (citing EPA NATA, https://www.epa.gov/national-air-toxics-assessment) (click on Overview and also available directly here at https://www.epa.gov/national-air-toxics-assessment/nata-overview)).

[19] Supp. R. 8963, Supp. Basis for Decision, p. 2, n.5 (citing https://www.epa.gov/ejscreen/overview-environmental-indicators-ejscreen). Other environmental indicators indicate different things. For example, "[s]ome . . . quantify proximity to and the numbers of certain types of potential sources of exposure to environmental pollutants, such as nearby hazardous waste sites," and some others "are estimates of ambient levels of air pollutants, such as $PM_{2.5}$." *Id.*

[20] R. Vol. 29, p. 7116, EDMS 11817927, Petitioners' Aug. 12, 2019 Comments, Attach K, pdf. 256. (citing EPA NATA, https://www.epa.gov/national-air-toxics-assessment).

[21] The 11 EJ Indexes in EJScreen, reflecting the 11 environmental indicators, are:

1. National Scale Air Toxics Assessment Air Toxics Cancer Risk
2. National Scale Air Toxics Assessment Respiratory Hazard Index
3. National Scale Air Toxics Assessment Diesel PM (DPM)
4. Particulate Matter (PM2.5)
5. Ozone
6. Lead Paint Indicator
7. Traffic Proximity and Volume
8. Proximity to Risk Management Plan Sites
9. Proximity to Treatment Storage and Disposal Facilities
10. Proximity to National Priorities List Sites
11. Wastewater Discharge Indicator

3rd Supp. R. 8954, Initial Basis for Decision, p. 63, n.175 (citing https://www.epa.gov/ejscreen/environmental-justice-indexes-ejscreen).

[22] *Id.*

[23] EJScreen Technical Documentation 2014, p. 8, https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf. R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69, n.279 (citing EPA, EJSCREEN: Environmental Justice Screening and Mapping Tool,

high person-of-color and/or low-income population would have an EJ Index that is higher (more concerning) than an area that is predominantly white and/or not low income, even if the environmental indicators were the same. This is because race and income are factors when determining the overall EJ Index for the area.[24]

In its Initial Basis for Decision, LDEQ relied on an outdated 2018 version of EJScreen for its so-called "environmental justice analysis" even though the updated 2019 EJScreen Report was publicly available months before LDEQ issued its decision.[25] As LDEQ admits, the more current 2019 EJScreen data that LDEQ was required to add to the administrative record on remand uses the latest demographic and environmental data.[26] The outdated 2018 version of EJScreen that LDEQ relied on in its Initial Basis for Decision incorporates 2011 NATA data, whereas the 2019 EJScreen Report incorporates 2014 NATA data. As discussed in detail below, the 2014 NATA data is consequential because the relative cancer risk for Welcome residents from exposure to toxic air pollutants is much worse than shown in the 2018 EJScreen Report, incorporating the 2011 NATA data.

ARGUMENT

While LDEQ acknowledges that "environmental justice" is "the fair treatment . . . of all people regardless of race, color, national origin, or income" and that "[f]air treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial operations,"[27] and purports to have conducted an

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http://www.epa.gov/ejscreen (click on Technical Information and then EJSCREEN Technical Documentation)).

[24] EPA explains that "[t]he demographic portions of the EJ Index can be thought of as the additional number of susceptible individuals in the block group, beyond what you would expect for a block group with this size total population. The terms 'susceptible' or 'potentially susceptible individuals' are used informally in these examples, as a way to think of the Demographic Index times the population count in a block group. This is essentially the average of the count of minorities and count of low-income individuals. . . . As a result, "[t]he EJ Index is higher in block groups with large numbers of mainly low-income and/or minority residents with a higher environmental indicator value." 3rd Supp. R. 8954, Initial Basis for Decision, p. 63, n.175 (citing https://www.epa.gov/ejscreen/environmental-justice-indexes-ejscreen).

[25] LDEQ never stated in its Initial Basis for Decision how or when it obtained the EJScreen data that it relied on for the community of Welcome, but it is consistent with the 2018 version of EJScreen. R. Vol. 29, pp. 7116-7118, Petitioners' Aug. 12, 2019 Comments, Attach. K (EPA EJScreen Summary Report for Welcome).

[26] 3rd Supp. R. 8963, Supp. Basis for Decision, p. 2.

[27] R. Vol. 34, p. 8471, Initial Basis for Decision, p. 34.

environmental justice analysis – two times – LDEQ's approach is deficient and fails environmental justice principles on several grounds. LDEQ completely ignored race and other demographic information, failed to consider the impact of Formosa Plastics' operations—along with other major industrial sources in the area that received permits but are not yet operating—when assessing environmental burden, misused EJScreen data, and failed to provide rational support for its findings.

The purpose of an environmental justice analysis is to determine whether a minority group and/or low-income population bears the brunt of harmful environmental impacts as compared to other communities in the state and elsewhere. *See Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs*, 255 F. Supp. 3d 101, 140 (D.D.C. 2017) (explaining that the "purpose of an environmental justice analysis is to determine whether a project will have a disproportionately adverse effect on minority and low income populations"). An environmental justice analysis, therefore, must evaluate the demographics of the impacted population. *See Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 93 (4th Cir. 2020) (overturning the agency's decision for "fail[ing] to make any findings regarding the demographics of [the community] that would have allowed for a meaningful assessment of the likelihood of disproportionate harm"). A competent environmental justice analysis must also necessarily consider the impacts of the project at issue on minority communities. *See, e.g.*, *Sierra Club v. Fed. Energy Regul. Comm 'n*, 867 F.3d 1357, 1370 (D.C. Cir. 2017) ("The goal of an environmental-justice analysis is satisfied if an agency recognizes and discusses a project's impacts on predominantly-minority communities.").

As public trustee, LDEQ must ensure that "the rights of the public [] receive active and affirmative protection" when making decisions that affect the environment. *Save Ourselves*, 452 So. 2d at 1157. The Louisiana Supreme Court made clear that LDEQ's "role as the representative of the public interest does not permit it to act as an umpire passively calling balls and strikes for adversaries appearing before it." *Id.* Indeed, the agency must "act with diligence, fairness and faithfulness." *Id.* LDEQ "is required to make basic findings supported by evidence and ultimate findings which flow rationally from the basic findings; and it must also articulate a rational connection between the facts found and the order issued." *Id.* at 1159. When an agency

reaches a decision "without individualized consideration and balancing of environmental factors conducted fairly and in good faith, it is the courts' responsibility to reverse." *Id.* ; *see also In re W. Pearl River Navigation Project*, 94–2260, p. 3 (La. App. 1 Cir. 6/23/95), 657 So.2d 640, 641-42 (reversing and remanding agency decision as arbitrary and capricious and characterized by an abuse of discretion where record evidence did not support conclusion that the proposed activity would not pose environmental harm); *In re Oil & Gas Expl., Dev., & Prod. Facilities, Permit No. LAG260000*, 2010-1640, pp. 2-3, 13-14 (La. App. 1 Cir. 6/10/11), 70 So. 3d 101, 103, 110-111 (remanding decision where record as a whole did not support agency's "determination by a preponderance of the evidence that the proposed permit has minimized or avoided potential and real adverse environmental impacts to the maximum extent"); *Vecinos para el Bienestar de la Comunidad Costera v. Fed. Energy Regul. Comm'n*, 6 F.4th 1321, 1330 (D.C. Cir. 2021) (remanding for redress where "analyses of the projects' impacts on climate change and environmental justice communities were deficient"); La. R.S. 49:964(G)(1)&(5)(6) (Louisiana Administrative Procedures Act providing for reversal of an agency decision that violates the state constitution, is arbitrary or capricious, and/or not supported and sustainable by a preponderance of the evidence). Indeed, where LDEQ has failed to comply with its public trustee duty, the First Circuit has made clear that "any action taken not in compliance therewith, e.g., the issuance of the permit herein, *is null and void and must be vacated*." *In re Rubicon, Inc.*, 95-0108, p. 9, (La. App. 1 Cir. 2/14/1996); 670 So. 2d 475, 488-89 (emphasis added) (rejecting the agency's request for a simple remand).

LDEQ had a second chance to conduct a fair and meaningful environmental justice analysis, but instead of fixing the flaws in its first analysis, the agency doubled down on its deficient and arbitrary approach in its Supplemental Basis for Decision. Although it claims to have performed an environmental justice analysis, the agency failed to consider the racial makeup or *any* demographic information for the community of Welcome—the community located closest to Formosa Plastics' site. The agency also failed to consider the toxic burden that Formosa Plastics would add to Welcome, which EJScreen shows is already disproportionately burdened by toxic air pollutants. LDEQ continued to misuse EJScreen by cherry-picking data and ignoring undeniable disproportionate impacts. LDEQ also chose to focus on random

emissions data to dispute EJScreen data that it once embraced. These errors render LDEQ's environmental justice analysis arbitrary and capricious, and thus invalidate the agency's ultimate conclusion that "the social and economic benefits of the proposed facility will greatly outweigh its adverse environmental impacts."[28] Because LDEQ reached its decision arbitrarily and without a fair and careful analysis in accordance with its public trustee duty, the Court should reverse the agency's decision and vacate the permits.

I. LDEQ's so-called environmental justice analysis remains deficient, arbitrary, and unfounded.

A. LDEQ continues to ignore race and other demographic data.

LDEQ never took the first step towards a competent environmental justice analysis because the agency did not acknowledge race or any demographic information in either its Initial Basis for Decision or its Supplemental Basis for Decision. *See Standing Rock*, 255 F. Supp. 3d at 140; *Friends of Buckingham*, 947 F.3d at 93 (4th Cir. 2020). LDEQ has ignored all evidence in the administrative record that relates to race.[29] It ignored U.S. Census Bureau data showing that District 5 where the agency has authorized Formosa Plastics to build its chemical complex, is 90 percent Black.[30] It has also ignored the St. James School Board report showing the elementary school located a mile from the Formosa Plastics' site serves a student population of up to 480 children that is 99 percent Black.[31] And LDEQ continues to ignore EJScreen's demographic information.

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[28] 3rd Supp. R. 8965, Supp. Basis for Decision, p. 4.

[29] LDEQ did not even address Formosa Plastics' disingenuous claim that the "neighborhood" closest to its site "is 90% white" when referring to a tiny census block that is not a neighborhood at all as it only has a total population of two people. R. Vol. 19, p. 4757, EDMS 11457119, Formosa's Supplemental EAS, p. 26, n.23, Figure E, pdf. 27 (citing to www.Justicemap.org, and referring to the tiny census area (block 2098) shaded in magenta that when clicked on shows a population of two).

[30] R. Vol. 28, p. 6931; p. 6951, EDMS 11817927, Petitioners' Aug. 12, 2019 Comments, p. 69; Attach. A, Kray Aff., Ex. 2, p. 2 (citing US Census Bureau, American Community Survey 2017).

[31] R. Vol. 28, p. 6917, EDMS 11817927, Petitioners' Aug. 12, 2019 Comments, p. 54-55, n. 220 (discussing the Fifth Ward Elementary School's (now St. Louis Academy) enrollment capacity of 480 and citing St. James Parish School Board, Comprehensive Annual Financial Report, Year Ended June 30, 2017, p. 94, pdf. 115, https://app.lla.state.la.us/PublicReports.nsf/BEA52CCC6288664D86258210007BCC87/$FILE/00017138.pdf.115). *See also U.S. v. St. James Parish School Board*, 2:65-cv-16173, Consent Order, p. 13 (E.D. La. Jan. 20, 2017) (showing enrollment at the Fifth Ward Elementary School is 99% black), https://www.justice.gov/opa/press-release/file/933961/download).

LDEQ ignored every indication of race in EJScreen. For example, EJScreen plainly shows that Welcome has a 99 percent minority population.[32] EJScreen also shows that Welcome has a larger percentage of lower-income residents than most areas of the state, EPA region,[33] and nation.[34] EJScreen uses this race, income, and other demographic data to determine an area's Demographic Index, which is "an indicator of potential susceptibility to environmental pollution."[35] Welcome's Demographic Index is in the 88th percentile for the state, 87th percentile for the EPA region, and 92nd percentile for the nation, making it an area with a population that is potentially more susceptible to environmental pollution than the vast majority of other places in the state, region, and nation.[36]

But while LDEQ chose to use EJScreen in its analysis, the agency used it arbitrarily. The agency ignored all of the demographic information, including the EJ Indexes that are created by incorporating demographics into the environmental indicators. As in its Initial Basis for Decision, LDEQ arbitrarily chose to look *only* at the environmental indicators. By isolating the environmental indicators, LDEQ overlooked Welcome's potential susceptibility to environmental pollution.[37] In fact, the reason that the EJ Index for NATA Air Toxics Cancer Risk is higher (i.e., 95th percentile for the state) than its corresponding environmental indicator (i.e., 86th percentile for the state) is because of Welcome's high demographic index that accounts for a 99 percent minority population that is mostly low income. LDEQ ignored all of

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[32] 3rd Supp. R. 8957, 2019 EJScreen Report, p. 2 (showing minority population for Welcome is 99 percent under Demographic Indicators).

[33] EPA Region 6 includes Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribal Nations. EPA Region 6, https://www.epa.gov/greeningepa/region-6-office#:~:text=EPA%20Region%206%20covers%20Louisiana,Texas%20and%2065%20Tribal%20Nations.

[34] 3rd Supp. R. 8957, 2019 EJScreen Report, p. 2 (showing Welcome has a 52 percent low-income population under Demographic Indicators).

[35] R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69, n.279 (citing EPA, EJSCREEN: Environmental Justice Screening and Mapping Tool, https://www.epa.gov/ejscreen (click on Demographic Indicators and also available directly here at https://www.epa.gov/ejscreen/overview-demographic-indicators-ejscreen)).

[36] R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69, n.279 (citing EPA, EJSCREEN: Environmental Justice Screening and Mapping Tool, https://www.epa.gov/ejscreen (click on What is EJSCREEN? and also available directly here at https://www.epa.gov/ejscreen/what-ejscreen)).

[37] R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69, n.279 (citing EPA, EJSCREEN: Environmental Justice Screening and Mapping Tool, https://www.epa.gov/ejscreen (click on What is EJSCREEN? and Purposes and Uses and also available directly here at https://www.epa.gov/ejscreen/what-ejscreen and https://www.epa.gov/ejscreen/purposes-and-uses-ejscreen).

this information. By stripping race from its review, LDEQ simply did not conduct an environmental justice analysis that is meaningful in any way and certainly not in conformance with its duty as public trustee, which requires the agency to "act with diligence, fairness and faithfulness." *Save Ourselves*, 452 So. 2d at 1156-57. Furthermore, by ignoring race, LDEQ is perpetuating a system of environmental racism that has created Cancer Alley, with toxic industrial facilities clustered in Black communities.

B. LDEQ never considered the toxic emissions from the Formosa Plastics' planned chemical complex in its analysis.

To carry out its constitutional public trustee duty, LDEQ must assess the "potential and real adverse environmental effects" of the proposed project. *See In re Am. Waste and Pollution Control Co.*, 633 So. 2d 188, 194 (La. App. 1st Cir. 1993) (requiring the agency to assess the "potential and real adverse environmental effects" of the proposed project as a first step in the required public trustee analysis). And as the D.C. Circuit has expressed, "[t]he goal of an environmental justice analysis is satisfied if an agency recognizes and discusses a project's impacts on predominantly-minority communities." *Sierra Club v. Fed. Energy Regul. Comm'n*, 867 F.3d 1357, 1370 (D.C. Cir. 2017). But LDEQ failed to assess the impact of Formosa Plastics' massive chemical complex on the Welcome community in its so-called environmental justice analysis. Even though the permits allow Formosa Plastics to emit over 800 tons per year (or 1,600,000 pounds per year) of 22 different toxic air pollutants,[38] including a trio of known human carcinogens (ethylene oxide, benzene, and formaldehyde),[39] nowhere does LDEQ consider the combined effect of these emissions with the toxic pollutants that already overburden the communities in the area.[40]

Moreover, LDEQ failed to consider how Formosa Plastics' enormous complex would affect the character and future development of Welcome, which the parish has designated for "Residential Growth."[41] *See In re CECOS Int'l, Inc. ("CECOS") Livingston Facility Permit*

[38] R. Vol. 34, pp. 8440-8441, LDEQ Basis for Decision, pp. 4-5 (listing all 22 toxic air pollutants that the permits allow Formosa Plastics to emit).

[39] *See* R. Vol. 28, p. 6903, EDMS 11817927, Petitioners' Aug. 12, 2019 Comments, p. 42 & n.160 (citing LAC 33:III.5112, Table 51.1).

[40] *See* Petitioners' Initial Brief, pp. 35-42.

[41] *See* Petitioners' Initial Brief, pp. 30-31, 34.

Application No. LAD00618298, 574 So. 2d 385, 392 (La. 1st Cir. 1990) (explaining that the public trustee analysis requires "[a] balancing [] to insure protection of the environment without too high a cost to the economy *and our way of life*") (emphasis added); *Matter of Dravo Basic Materials Co., Inc.*, 604 So. 2d 630, 635 (La. 1st Cir. 1992) (finding "DEQ's inquiry is not limited to the discharged substance," but includes "the entire activity which results in the discharge, as well as the effect of the discharge on the environment in general").

C. LDEQ misused EJScreen by cherry-picking raw values from EJScreen to improperly dismiss environmental justice concerns.

LDEQ chose to use EJScreen for its so-called environmental justice analysis but used it arbitrarily. As shown in Figure 1, LDEQ pulled out values for certain indicators and compared the difference in those values between the 2018 EJScreen Report and the 2019 EJScreen Report.[42] By plucking out indicators from the EJScreen Report and ignoring the EJ Indexes that incorporate demographics, LDEQ repeats a flaw that it made in its Initial Basis for Decision.

Indicator	Value [4]	State Average	Change from 2011 NATA
Particulate Matter ($PM_{2.5}$ *in* $\mu g/m^3$)	8.66	8.62	-0.56
Ozone (*ppb*)	35.5	36.8	-1.5
NATA Cancer Risk (*risk per million*)	65	51	+17
NATA Respiratory Hazard Index	0.6	0.61	-1.2

Figure 1 – 2019 EJScreen data examined by LDEQ in its Supplemental Basis for Decision

In fact, the EJ Indexes LDEQ ignores are the very screening metrics that EPA provides to assess whether a community might face an environmental justice problem. But LDEQ asserted that "the import of the EJ Index is questionable," and stated that while "it is a common assumption that communities with a high 'EJ Index' are disproportionately impacted [], this is not necessarily the case."[43] These statements only highlight the deficiencies of LDEQ's so-called environmental justice analysis. That is, by purposely excluding demographics (the very point of an environmental justice analysis), LDEQ arrived at the same flawed conclusion as in its Initial Basis of Decision—that "residents of the community closest to the [proposed Formosa Plastics] Complex do *not* bear a disproportionate share of the negative environmental consequences

[42] *See* 3rd Supp. R. 8953, Initial Basis for Decision, p. 40 (showing table with raw values for certain environmental indicators without any percentile data or any other information from the 2018 EJScreen Report).

[43] 3rd Supp. R. 8952, Initial Basis for Decision, p. 39.

resulting from industrial operations."[44] LDEQ also does not offer any explanation for how EJScreen's demographic data might be "questionable." Instead, LDEQ uses this blanket excuse to circumvent any meaningful examination of Welcome from an environmental justice standpoint.

Furthermore, not only did LDEQ exclude EJ Indexes and avoid all demographic information, the agency also wrongfully focused on the raw values for the environmental indicators instead of the percentiles. As EPA explains, percentiles actually show how a community compares to others in the state, region, or nation, while raw pollution values may actually obscure the disproportionate burdens the community faces:

> It is also useful to note that although the raw numbers for some indicators do not represent current conditions, the percentiles are much more likely to be reasonably representative of today's conditions in most locations. This is because even if emissions have been significantly reduced overall, for example, the differences between various locations are unlikely to have changed as dramatically, especially when the reductions have come from national regulations and other trends affecting entire industries or sectors in many locations. For this reason, *the percentiles may be more representative of current conditions than the raw values of the indicators.*[45]

EPA further clarifies:

> Percentiles are a way to see how local residents compare to everyone else in the United States. Instead of just showing numbers out of context, EJSCREEN lets you compare a community to the rest of the state, EPA region and nation, by using percentiles. The national percentile tells you *what percent of the US population has an equal or lower value*, meaning less potential for exposure/ risk/ proximity to certain facilities, or a lower percent minority.[46]

The percentiles, thus, are what matters because they show the *relative* difference.

Here, looking at the percentile data for the NATA Air Toxics Cancer Risk indicator makes a big difference as shown in Figure 2 below, which provides the full data associated with the NATA Air Toxics Cancer Risk indicator from the 2019 EJ Screen Report:

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[44] *Id.* (emphasis original).

[45] EJScreen Technical Documentation 2014, p. 10, https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf. R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69, n.279 (citing EPA, EJSCREEN: Environmental Justice Screening and Mapping Tool, https://www.epa.gov/ejscreen (click on Technical Information and then EJSCREEN Technical Documentation)).

[46] R. Vol. 28, p. 6931, Petitioners' Aug. 12, 2019 Comments, p. 69 (citing https://www.epa.gov/ejscreen/how-interpret-standard-report-ejscreen).

Environmental Indicator	Value	State Average	Percentile in State	EPA Region Average	Percentile EPA Region	USA Average	Percentile in USA
NATA Air Toxics Cancer Risk (risk per MM)	65	51	86	36	95-100th	32	95-100th

Figure 2 – 2014 NATA Air Toxics Cancer Risk Environmental Indicator from 2019 EJScreen Report[47]

Welcome's NATA Air Toxics Cancer Risk is 86th percentile for the state, 95-100th percentile for the EPA region, and 95-100th percentile for the whole nation. This is a far cry from LDEQ's finding in its Initial Basis for Decision that Welcome's cancer risk is "comparable with or less than state averages."[48] But instead of revealing that crucial data and confronting the fact that the percentiles upend the agency's conclusion that Welcome residents do not bear disproportionate environmental burdens, LDEQ just left the percentiles out of its analysis. This is another way that LDEQ compounded its arbitrary use of EJScreen.

D. LDEQ's fails to rationally assess the higher cancer risk values in the 2014 NATA data.

The 2014 NATA Air Toxics Cancer Risk value in the 2019 EJScreen Report has a +24 percentage difference between Welcome and the state average.[49] LDEQ even acknowledges that "based on the results of the 2014 [] NATA, the NATA Cancer Risk for the area did increase" "relative to the state average" for Welcome.[50] But instead of conceding that the 2014 NATA Cancer Risk value for Welcome does not support its initial (albeit arbitrary) conclusion that area residents do not suffer a disproportionate risk of cancer from industrial air pollution, LDEQ now disputes NATA's risk assessment method and offers other arbitrary and baseless arguments to dismiss the data that it had embraced in its Initial Basis for Decision.

1. LDEQ's decision to now attack NATA's underlying risk assessment method further highlights the agency's inconsistent and arbitrary approach to evaluating environmental justice concerns.

In its Initial Basis for Decision, LDEQ embraced the 2011 NATA Cancer Risk value to arrive at a conclusion (however flawed) that Welcome residents do not suffer a disproportionate

[47] 3rd Supp. R. 2957, 2019 EJScreen Report for Welcome, p. 2.

[48] R. Vol. 34, pp. 8477-8478, Initial Basis for Decision, pp. 41-42.

[49] *See* 3rd Supp. R. 2957, 2019 EJScreen Report for Welcome, p. 2.

[50] 3rd Supp. R. 8963, Supp. Decision, p. 2.

environmental burden from industrial activities.[51] EPA provides new NATA data every few years or so. And the more recent 2014 NATA Cancer Risk value contradicts LDEQ's conclusion in its Initial Basis for Decision. LDEQ now asserts that the NATA Cancer Risk value "overestimates actual cancer risk" because "the assumed exposure scenario does not reflect 'real world' conditions'" and is "simply not realistic."[52] In short, LDEQ finds fault with the NATA's underlying risk valuation method where that method now produces a value that undermines, rather than supports, the agency's decision to allow Formosa Plastics to construct its chemical complex in a Black community that is already overburdened with toxic pollutants. LDEQ did not raise any concerns about NATA's risk valuation method when it chose to rely on the NATA Cancer Risk value for Welcome in its Initial Basis for Decision, and it does not adequately support the reasons for raising concerns now. That LDEQ has now chosen to call into question the validity of the NATA value just highlights the fact that the agency has no process or any kind of consistent approach for evaluating environmental justice concerns. As shown, the agency will use data to make one point, and then discount the same data to make another point to arrive at a self-serving conclusion.

LDEQ complains that the NATA Cancer Risk value is overestimated because it "does not reflect 'real world' conditions'" since "it is simply not realistic" "[t]hat any person would be continuously exposed to the concentrations of pollutants modeled by EPA to estimate cancer risk for the area for 70 years."[53] But LDEQ fails to recognize that EPA designed NATA's lifetime exposure scenario to incorporate "real world" human behavior, i.e., an individual's activities, commuting behavior, etc., and does not assume constant exposure to outdoor air, as LDEQ implies.[54] Indeed, EPA designed its model to reflect a realistic estimate of a typical individual's

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[51] 3rd Supp. R. 8952-8953, Initial Basis for Decision, pp. 39-40.

[52] 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3.

[53] *Id.*

[54] *See* NATA Technical Support Document, p. 123, 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.7 (citing https://www.epa.gov/sites/default/files/2018-09/documents/2014_nata_technical_support_document.pdf). More specifically, the NATA Technical Support Document provides:

> [The model] uses a general approach of tracking representative individuals of specified demographic groups as they move among indoor and outdoor microenvironments and between locations. As described in the following section, personal-activity and commuting data, specific to a hypothetical person's demographic groups, are used to

movements over the course of a lifetime to determine risk. LDEQ offers no credible evidence to support its misleading critique of NATA. Moreover, it offers no alternative.

2. LDEQ's argument that the 2014 NATA data does not account for recent emission reductions is not rationally supported and is irrelevant to determining disproportionate impact.

LDEQ inappropriately discredits the 2014 NATA Cancer Risk value, claiming that it does not reflect a recent reduction of certain toxic emissions.[55] As an initial matter, LDEQ failed to provide the absolute emission figures. For example, it claims that benzene emissions in the entire parish have declined in recent years by 19 percent and that ethylene oxide emissions have declined 44 percent within 100 miles of the parish. But what does that mean to the people who breathe the air? In other words, are these percentages significant or do they represent a miniscule amount as compared to what is still being emitted into the air? LDEQ does not say. Furthermore, LDEQ only looked at a few of the cancer-causing pollutants, leaving others out by arbitrarily drawing a line at a cancer risk of 0.5 and higher. In addition, LDEQ failed to establish whether these reductions actually impacted air quality in Welcome or put the emissions reductions in the context of any emission changes in the rest of the state, to evaluate disproportionate impacts.[56] Moreover, LDEQ's focus on these reductions is disingenuous at best because the agency did not account for the pollutants that Formosa Plastics' would be allowed to add back into the air if built or the emissions from other new facilities in the area that received permits but are not yet operating.

LDEQ's argument that that the increased 2014 NATA Cancer Risk value does not reflect a recent reduction of these toxic pollutants has no rational basis and should be given no weight. LDEQ chose to look at only the three toxic air pollutants (ethylene oxide, chloroprene, and benzene) that it says "result in an estimated cancer risk greater than or equal to 0.5 [additional

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> determine the census tracts containing residential and work locations and the microenvironments within each tract. […] To estimate long-term [exposure concentrations] for a hypothetical person, the pollutant concentrations in each microenvironment visited are first combined into a daily-average concentration. The daily averages are then combined with proper weighting for season and day type to calculate a long-term average.

Id.; *see also id.* at p. 11, Figure 1-4.

[55] 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3.

[56] *See* 3rd Supp. R. 8964-8965, Supp. Basis for Decision, pp. 3-4.

cancer] cases per million persons" in both the 2011 and 2014 NATA data for the census tract that includes Welcome.[57] LDEQ's focus on just three pollutants is arbitrary since LDEQ omitted dozens of other toxic pollutants that contribute to cancer risk for the census tract and that are also part of the NATA.[58] Then, because there are no facilities in St. James Parish that emit ethylene oxide and chloroprene, LDEQ looked at industrial facilities within 100 miles of St. James Parish. But selecting emissions from facilities within 100 miles of St. James Parish is arbitrary because LDEQ failed to determine whether pollutants from these facilities could impact the air in Welcome, and to what extent if they do. Similarly, LDEQ included all facilities within the parish that emit benzene without analyzing whether emissions from each of those facilities impact the air in Welcome and to what extent if they do. LDEQ certainly has the ability to analyze the effect of all of these emissions on the air in Welcome if it wanted to provide a true update to the NATA data, but it chose not to do this analysis, rendering its argument that emissions have decreased irrelevant.[59] LDEQ merely plucked the data out of context, grasping for any shred of information to try to support its decision to dismiss the environmental justice risks to Welcome.

Further, an environmental justice analysis requires determining disproportionate impacts. *See, e.g.*, *Standing Rock,* 255 F. Supp. 3d at 140. Therefore, it is inconsequential to an environmental justice analysis that chloroprene ethylene oxide pollutants have decreased within 100 miles of the parish line, or that benzene emissions have decreased within the parish, without providing data for other areas of the state. That is, other areas of the state may have also experienced reductions in these toxic emissions,[60] but LDEQ does not provide emissions data for the rest of the state, so this information is unknown. To determine disproportionate impacts as compared to the rest of the state, LDEQ would have to look at emissions for the whole state and

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[57] 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3 (showing table with "Point Source Cancer Rise (per million) for Census Tract 22093040500).

[58] 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.10&11 (citing Data per the MS Access file "ConcExpRisk_tract_poll_State_LA_09Dec15.accdb" at https://www.epa.gov/national-air-toxics-assessment/2011-nata-assessment-results#state and Data per the MS Access file "ConcExpRisk_tract_poll_LA.mdb" at https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results#state).

[59] *See* LDEQ's Air Quality Modeling Procedures, https://deq.louisiana.gov/assets/docs/Air/ModelingProcedures0806.pdf.

[60] For instance, new regulations governing pollution controls may have been implemented, resulting in emission reductions throughout the state.

determine whether the emissions that could impact Welcome have decreased relative to emissions statewide.

In addition, LDEQ unreasonably fails to account for the pollutants Formosa Plastics would add back into the air once operating just one mile from an elementary school and residential neighborhoods, while focusing instead on facilities up to 100 miles away. LDEQ failed to even mention that the permits it issued to Formosa Plastics allow the company to emit up to 15,400 pounds per year of ethylene oxide. Indeed, despite the fact that ethylene oxide is a potent carcinogen that EPA is trying to reduce,[61] LDEQ has greenlighted this massive new source of ethylene oxide (one of the largest sources in the whole country)[62] just a mile from an elementary school.[63]

Moreover, LDEQ ignores that the NATA data only includes emissions reported by facilities that are in operation.[64] This means that the 2014 NATA data does not include emissions from major new industrial facilities that LDEQ has permitted but have not yet begun operations, which include two of the country's largest methanol plants that have permits to emit cancer-causing toxic pollutants in St. James (YCI Methanol and South Louisiana Methanol).[65] Therefore, while LDEQ dug into the emissions inventory to find recent declines, it arbitrarily failed to account for any foreseeable future emissions—easily discernable from the permits that LDEQ itself issued—from the glut of new and expanded facilities that have received recent permits for construction in and near the Welcome and St. James communities.

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[61] *See* R. Vol. 30, pp. 7439-7440, Petitioners' Nov. 26, 2019 Comments, pp. 9-10.

[62] *See* R. Vol. 28, p. 6912, Petitioners' Aug. 12, 2019 Comments, p. 51, n.203 (discussing and citing *TRI On-Site and Off-Site Reported Disposed of or Other Released Top 100 Facilities for Ethylene Oxide*).

[63] R. Vol. 28, p. 6968, EDMS 11817927, Petitioners' Aug. 12, 2019 Comments, Attach. B; R. Vol. 14, p. 3505, EDMS 11230529, Formosa Plastics' EAS, July 19, 2018, Ex. D.

[64] The NATA Cancer Risk is based on the National Emissions Inventory (NEI) which relies on reported (or actual) emissions. "The NEI is based primarily upon emission estimates and emission model inputs provided by State, Local, and Tribal air agencies for sources in their jurisdictions, supplemented by data developed by EPA. […] To build as complete an NEI as possible, EPA augments the S/L/T-submitted data using various sources of information, including the Toxics Release Inventory (TRI)." NATA Technical Support Document, pp. 28-29, 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.7 (citing https://www.epa.gov/sites/default/files/2018-09/documents/2014_nata_technical_support_document.pdf).

[65] R. Vol. 28, p. 6867, EDMS 11817927, Petitioners' Aug. 12, 2019 Comments, p. 6, n.304-305 (citing emissions data and providing links to Air Permit Briefing Sheets for both facilities).

3. LDEQ's assertion that the new values are not statistically significant is unsound and has no merit.

LDEQ asserts that there is no "statistically significant increase" between the previous NATA Cancer Risk value (48-in-a-million) and the new value (65-in-a-million).[66] But this assertion has no rational support. EPA cautions against comparing risk values between different NATA years, and LDEQ's attempting to convert cancer risk values into specific cancer cases is inappropriate.

First, EPA specifically cautions users to not compare data from different NATA years. That is, EPA says:

> NATA results from different assessment years generally should not be compared to each other. From one assessment to the next, EPA has improved its methodology and incorporated additional data. *These improvements make comparing assessments inappropriate.* Differences in emissions, ambient or exposure concentrations, or risks between two assessments may be due to improvement in the assessment methodology or to actual changes in emissions, populations or other "real-life" characteristics – or to some combination of all these.[67]

Accordingly, LDEQ's comparison of cancer values between NATA years is inappropriate and should receive no weight. While comparing values is inappropriate, according to EPA's guidance, it is appropriate to compare the *relative* risk between the census tract and the state average. This appropriate comparison shows that the cancer risk in Welcome is in the 86th percentile relative the state. Yet LDEQ irrationally chose to ignore this very high disproportionate risk, counter to EPA's guidance.

Second, the approach that LDEQ took to translate the NATA Cancer Risk value into specific cancer cases is inappropriate.[68] EPA explains in detail how the NATA cancer risk value is intended to illustrate the risk for an "average" (not specific) individual in a given census

[66] 3rd Supp. R. 8963, Supp. Basis for Decision, p. 2 ("While this risk value did increase relative to the state average, this change does not represent a statistically significant increase in the overall cancer risk to those living in the vicinity of the FG LA Complex.").

[67] NATA Technical Support Document, p. 8, 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.7 (https://www.epa.gov/sites/default/files/2018-09/documents/2014_nata_technical_support_document.pdf).

[68] 3rd Supp. R. 8963, LDEQ simply multiplied the cancer risk value with Welcome's population of 891 and found 0.04 (rounded from 0.0428) cases of cancer for the previous cancer risk value and 0.06 (rounded from 0.0579) cases of cancer for the new cancer risk value.

tract.[69] The NATA Cancer Risk value is an estimate of the added *risk* (not *incidence*) of cancer in a geographic area based on that area's reported air emissions, ambient concentration of air toxics, and general inhalation exposure concentration (based on age and commuting behavior).[70] What matters is the higher cancer *risk* for the area of Welcome relative to the state, but that is something LDEQ ignored.

Lastly, LDEQ's focus on the small population size of Welcome rather than the risk values and the percentiles is inappropriate. LDEQ's approach of multiplying the NATA Cancer Risk value with the population size of Welcome (891 people) also obscures the fact that this community is in the 86th percentile of cancer risk relative to the state.[71] Based on LDEQ's logic, a higher cancer risk value would be acceptable in a small population community but could be deemed unacceptable in a more densely populated area. This logic effectively discriminates against smaller population areas and undermines principles of environmental justice. But the estimated NATA Cancer Risk value is the same for the area of Welcome whether there are 891 people living there or 100,000 people. The NATA Cancer Risk does not change with population size; the added risk of developing cancer from one or more sources of pollutants is the same for

[69] NATA Technical Support Document provides:

> Some people in these census tracts would be expected to have a risk above [N]-in-1 million. Although a person may live in a census tract where the typical or average risk is less than [N]-in-1 million, that person may live nearer the source than the average person in the census tract, may have an activity pattern that leads to greater exposure, or may be more susceptible. All these factors could cause that individual to experience a risk above the typical value for that census tract. Conversely, the individual could have a lower risk by living farther from the source, having an activity pattern that produces lower exposures, or being less susceptible.

NATA Technical Support Document, p. 143, 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.7 (citing https://www.epa.gov/sites/default/files/2018-09/documents/2014_nata_technical_support_document.pdf).

[70] NATA Technical Support Document, p. 1, 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.7 (https://www.epa.gov/sites/default/files/2018-09/documents/2014_nata_technical_support_document.pdf).

[71] NATA Technical Support Document provides:

> This approach is used only to determine geographic patterns of risks within counties, and not to pinpoint specific risk values for each census tract. We are reasonably confident that the patterns (i.e., relatively higher levels of risk within a county) represent actual differences in overall average population risks within the county.

NATA Technical Support Document, p. 13, 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.7 (citing https://www.epa.gov/sites/default/files/2018-09/documents/2014_nata_technical_support_document.pdf).

each individual regardless of population size in a given area.[72] The lower the risk value in a given area, the lower the chances for any one person in that area is to become sick. In focusing on population size rather than risk, LDEQ devalues the well-being of the people of Welcome.

II. An objective review of the 2019 EJScreen Report shows that Welcome suffers serious disproportionate environmental harms, especially for cancer risk related to exposure to toxic pollutants.

The 2019 EJScreen Report shows that Welcome is a lower income, minority community that is overburdened with harmful environmental impacts. Figure 4 below is a full image of the EJ Indexes from the 2019 EJScreen Report.[73] These indexes provide the most significant data for a comprehensive environmental justice review because the indexes combine demographics with environmental indicators to flag environmental justice concerns.[74] In other words, the EJ Indexes weigh environmental impacts more heavily if they occur in a community of color or low-income community. The higher the color-coded bar, the worse Welcome's impact as compared to the state (orange), EPA region (green), and nation (blue). Most alarming for Welcome residents is its EJ Index for NATA Air Toxics Cancer Risk, which puts Welcome residents at the 95th percentile in the state, 93rd percentile for the EPA region, and 96th percentile for the entire country.[75] To put it another way, only five percent of people in the state, seven percent of the people in the EPA region, and four percent of people in the whole country have a higher cancer risk value associated with exposure to toxic air pollution when demographics are included. And this is without including Formosa Plastics' massive addition of toxic air pollutants. Several other EJ Indexes are also extremely concerning, with indexes for exposure to particulate matter (i.e., soot or other particles from the industrial combustion processes), ozone, respiratory hazard index, hazardous waste proximity, and wastewater discharge proximity all over the 90th percentile as compared to the rest of the state.[76] This means that the Welcome community is

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[72] NATA Technical Support Document, p. 152, 3rd Supp. R. 8964, Supp. Basis for Decision, p. 3, n.7 ("For the purposes of estimating and reporting risk, EPA assumes that individuals within a census tract have the same exposure and risk.") ("For the purposes of estimating and reporting risk, EPA assumes that individuals within a census tract have the same exposure and risk."),

[73] 3rd Supp. R., 8956-8957.

[74] 3rd Supp. R. 8954, Initial Basis for Decision, p. 63, n.175, https://www.epa.gov/ejscreen/environmental-justice-indexes-ejscreen.

[75] *See* 3rd Supp. R. 8956, 2019 EJScreen Report.

[76] 2019 EJScreen Report, 3rd Supp. R. 8956.

currently stressed by *multiple* environmental factors, which comes as no surprise as it exists in the center of the most polluted region of the country – Cancer Alley.[77]

EJSCREEN Report (Version 2019)
City: Welcome CDP
LOUISIANA, EPA Region 6
Approximate Population: 891
Input Area (sq. miles): 5.12

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	91	82	89
EJ Index for Ozone	91	80	86
EJ Index for NATA* Diesel PM	80	73	79
EJ Index for NATA* Air Toxics Cancer Risk	95	93	96
EJ Index for NATA* Respiratory Hazard Index	91	88	91
EJ Index for Traffic Proximity and Volume	66	55	65
EJ Index for Lead Paint Indicator	86	84	84
EJ Index for Superfund Proximity	74	67	73
EJ Index for RMP Proximity	87	82	89
EJ Index for Hazardous Waste Proximity	91	88	86
EJ Index for Wastewater Discharge Indicator	92	88	91

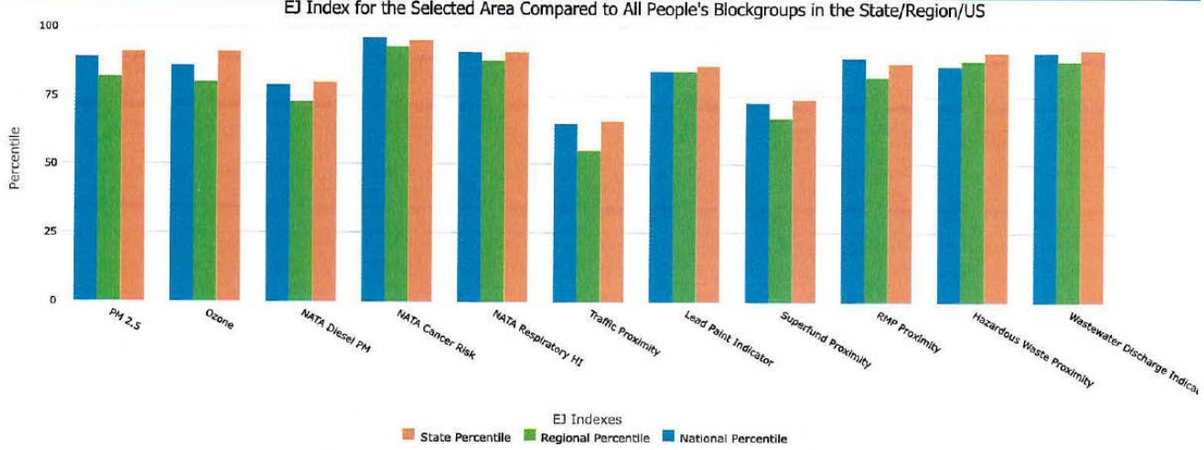

Figure 4 – EJ Indexes from 2019 EJScreen Report

Figure 5 below is an image of the separate environmental and demographic indicators, which EJScreen combines to create the EJ Indexes in Figure 4. In Welcome, both sets of indicators are high as compared to the state, region or nation, showing relatively high levels environmental impacts on a community with a relatively high percentage of low-income residents and residents of color. The environmental indicator for the NATA Air Toxics Cancer Risk shows that the residents of Welcome are in the 86th percentile for the state, 95-100th percentile for the EPA region, and 95-100th percentile for the whole nation for this cancer risk. The demographic indicators show that Welcome has a 99 percent minority population, which is much higher than the state which has a 41 percent minority population. The demographic indicators also show that more than half of Welcome residents are low income, which is another

[77] R. Vol. 30, p. 7435, EDMS 11960006, Petitioners' Nov. 26, 2019 Supp. Comments, n.18 (Lylla Younes, What Could Happen if a $9.4 Billion Chemical Plant Comes to 'Cancer Alley', ProPublica, Nov. 18, 2019, https://www.propublica.org/article/what-could-happen-if-a-9.4-billion-chemical-plant-comes-to-cancer-alley) (finding that "the air around Formosa's site is already more toxic with cancer-causing chemicals than 99.6% of industrialized areas of the country" pursuant to a ProPublica-Times-Picayune study).

measure that is significantly higher than other areas of the state, EPA region, or country. The reason that the EJ Index for NATA Air Toxics Cancer Risk in Figure 4 is higher than its environmental indicator in Figure 5 is because of the high minority and demographic values for Welcome. But even without the demographic information, the environmental indicator for Welcome's NATA Air Toxics Risk is still high as compared to other communities.

Selected Variables	Value	State		EPA Region		USA	
		Avg.	%tile	Avg.	%tile	Avg.	%tile
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	8.66	8.62	61	8.37	59	8.3	60
Ozone (ppb)	35.5	36.8	21	39.4	18	43	12
NATA* Diesel PM (µg/m³)	0.266	0.454	32	0.401	<50th	0.479	<50th
NATA* Air Toxics Cancer Risk (risk per MM)	65	51	86	36	95-100th	32	95-100th
NATA* Respiratory Hazard Index	0.6	0.61	64	0.45	90-95th	0.44	80-90th
Traffic Proximity and Volume (daily traffic count/distance to road)	22	330	24	400	17	750	16
Lead Paint Indicator (% pre-1960s housing)	0.16	0.21	57	0.17	66	0.28	47
Superfund Proximity (site count/km distance)	0.019	0.086	20	0.081	26	0.13	17
RMP Proximity (facility count/km distance)	0.89	0.9	67	0.82	70	0.74	73
Hazardous Waste Proximity (facility count/km distance)	1.2	0.75	77	0.75	79	4	67
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.0087	27	77	9.8	78	14	78
Demographic Indicators							
Demographic Index	75%	40%	88	44%	87	36%	92
Minority Population	99%	41%	96	51%	95	39%	97
Low Income Population	52%	40%	72	37%	73	33%	80
Linguistically Isolated Population	0%	2%	63	6%	36	4%	45
Population with Less Than High School Education	20%	16%	70	16%	68	13%	78
Population under Age 5	5%	7%	41	7%	35	6%	44
Population over Age 64	11%	14%	39	13%	49	15%	39

Figure 5 - Environmental & Demographic Indicators from 2019 EJScreen Report

In sum, the 2019 EJScreen Report clearly shows that the minority community of Welcome is forced to endure some of worst cancer-causing toxic air pollution in the state, EPA region, and country. LDEQ ignored this bleak situation and has issued air permits to Formosa that could greatly worsen this already egregious situation.

CONCLUSION

For all the foregoing reasons, and the reasons expressed in Petitioners' initial brief, Petitioners ask the Court to reverse LDEQ's January 6, 2020, final Decision granting the PSD Permit and 14 Title V/Part 70 Air Operating Permits, vacate the permits, and order LDEQ on remand to conduct the environmental justice analysis required as a public trustee, and address the other errors discussed in Petitioners' initial brief.

Respectfully submitted this 8th day of October 2021, by,

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Corinne Van Dalen (La. Bar No. 21175)
Michael Brown (La. Bar No. 35444)
EARTHJUSTICE
900 Camp Street
New Orleans, LA 70130
T: 415.283.2335 // F: 415.217.2040
cvandalen@earthjustice.org // mlbrown@earthjustice.org
Counsel for Petitioners

CERTIFICATE OF SERVICE

The undersigned counsel hereby certifies that on this 8th day of October 2021, a true and correct copy of the foregoing was served by email in accordance with La. Code of Civ. Pro. Art. 1313.A(4) to all counsel of record.

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Corinne Van Dalen