

The Versailles Landscape Planning Organization: Landscape Planning as Advocacy

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The systemic nature of environmental racism has historically led to the exclusion of racial minorities from environmental decision-making. This design research project explores New Orleans East's history as a sacrificial landscape and proposes the creation of a more equitable community through landscape planning that incorporates environmental data and community self-determination. This proposal aims to create economic and ecological benefits through landscape planning strategies. The site of focus is the neighbourhood Versailles, which is home to the densest Vietnamese diaspora population in America. The design proposal outlines an operational framework for a community-based organization, The Versailles Landscape Planning Organization (VLPO), that allows the residents of Versailles to determine the environmental uses of community land, to monitor the health of these lands, and to bring this data to that table with regional authorities so that their voices can be directly heard in environmental decision making in the future.

There are 300,000 m² of vacant lots owned by the Catholic Church, the City of New Orleans, and privately throughout the neighbourhood of Versailles; they will become the sites where a network of air quality, groundwater, and stream water monitors are embedded by the VPLO. The monitors are a way to strengthen the already present environmental knowledge in the neighbourhood. The VPLO will catalogue data collected from monitors, as well as elevation and lot size to create an environmental assessment of the vacant lots in the neighbourhood. Then, with this knowledge, the residents of Versailles can collectively choose the kind of productive landscape programming that will be implemented on site. Individual lots can be converted over short, medium, and long terms, with each productive landscape contributing to the food security, economic enrichment, and/or environmental health of the neighbourhood. As the lots are transformed, they provide environmental feedback data to increase the environmental knowledge in the neighbourhood, and can be used by the residents as a tool for their own environmental advocacy when in dialogue with regional authorities.

PROJECT BACKGROUND

Environmental racism can be defined as the unequal distribution of environmental benefits and pollution burdens based on race.¹ The effects of climate change, in particular land loss, are accelerated in New Orleans East in part by the presence of industrial and extractive land uses.² Louisiana faces extensive problems because of its 125 oil and chemical plants along the chemical corridor dubbed "Cancer Alley", between Baton Rouge and New Orleans.³ The exclusion of voices of racial minorities from environmental decision making has been one of the causal factors in the declining health of the area's disproportionately racialized residents. In the near future the threat of sea level rise and storm surges will be felt disproportionately by marginalized communities.

The residents of New Orleans East fall below the city average in proportion of the population possessing college education, median income, and the percentage of those with health coverage. This historically underserved portion of the city remained separated from the city centre, making New Orleans East a perfect site for the city and the petrochemical industry to contain their undesirable materials and processes. Historically, people of colour made up the majority of those living within two miles of the United States's hazardous waste facilities.⁴ These populations have limited resources and lack the political clout needed to protect themselves and their neighborhood from the effects of hazardous land use. This unfortunate pattern continued following Hurricane Katrina when as the residents of Versailles were returning at a rate higher than the vast majority of other neighbourhoods, the city of New Orleans planned to send 6.5 million cubic yards of storm debris, composed of toxic housing and construction materials in New Orleans East. The Old Gentilly Landfill and Chef Menteur Landfill were proposed, both within two miles of Versailles.⁵ New Orleans East continues to be the site of numerous waste management facilities that service the city.

Environmental racism refers not only to the disparity of pollution effects, it also refers to the larger systemic problems that caused it, such as the exclusion of voices and perspectives of racial minorities and working-class populations from environmental policy-making.⁶ This pattern of using New Orleans East as a marginal dumping ground continues a decade later as Entergy has proposed the construction of a combustion Gas Plant in

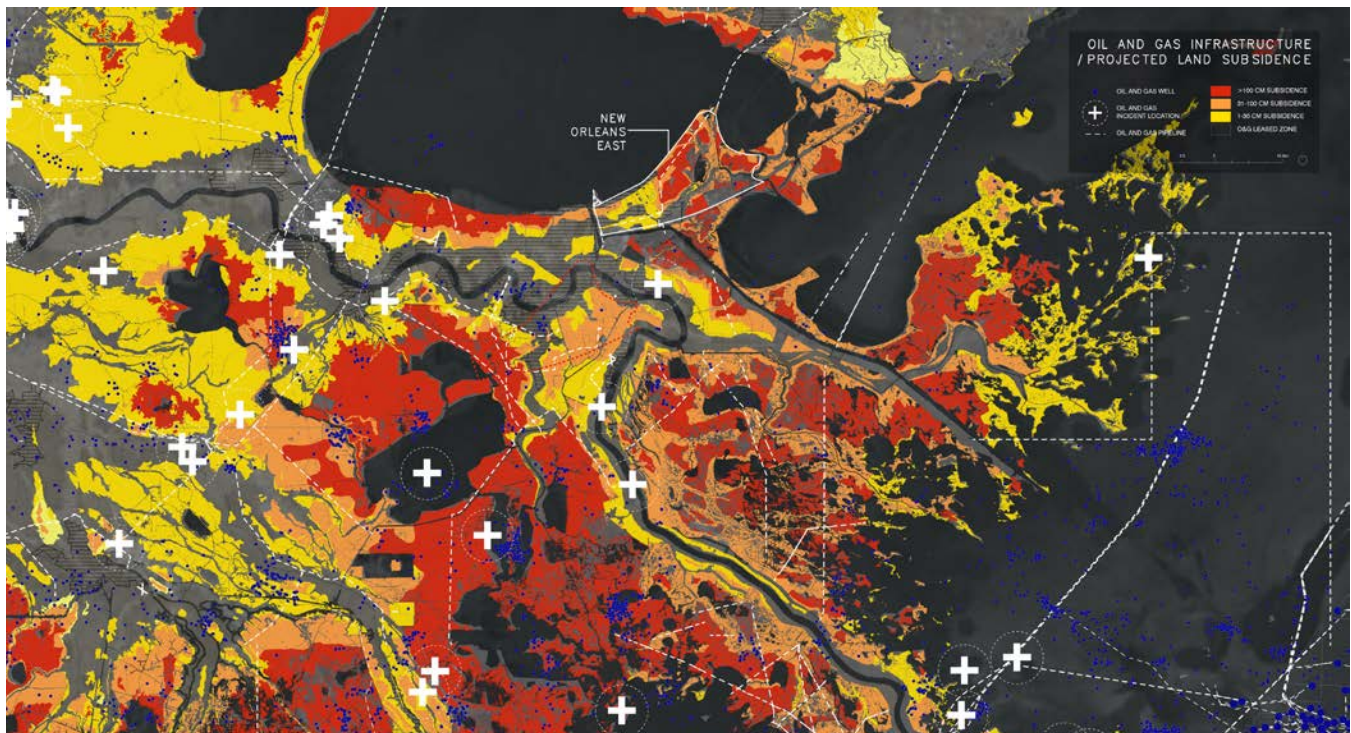


Figure 1. Relationship between oil and gas infrastructure and projected land subsidence in Louisiana. Jennifer Chau Tran.

New Orleans East at the cost of \$216 million.⁷ The residents have expressed anger towards a project that will reduce the value of their property and will negatively impact the health of their neighbourhood and surrounding environments, but have been shut out of public outreach meetings.⁸

The people of Versailles have found ways to exercise a measure of control and autonomy in their landscapes that create economic and ecological benefits for the community. Following the Vietnam War, Vietnamese refugees settled in Versailles, a public housing project located in between new suburban sprawl and floodplains that experienced white flight during the 70s.⁹ New Orleans had a tropical climate and fishing opportunities which the refugees found similar to Vietnam's. "For better or worse, New Orleans East is now their home," Father Vien said. "This place gave them a chance to replant some old roots."¹⁰

In the decades following resettlement, the refugees would find steady work as gulf coast shrimpers. One-third of all of the self employed Vietnamese immigrants in Louisiana are in the fishing industry.¹¹ Many refugees, including Sang Ho and Theresa Nguyen came from two Catholic fishing villages in northern vietnam before the Vietnam war and were able to make a living in the Gulf. In the wake of the BP Deepwater Horizon Oil Spill, many fisherfolk were affected by both the environmental repercussions and also the lack of governmental assistance following the event.¹² In response, The Viet Village Urban Farm Sustainable Aquaculture Park and the Veggi Farmers

Cooperative Garden were created by Khai and Daniel Nguyen to create jobs for the fisherfolk whose livelihoods were affected.¹³

The work of the Viet Village Urban Farm is a direct descendent of the intensive 30 acre network of community-farmed gardens that existed in the Versailles neighbourhood prior to Hurricane Katrina. Traditional Vietnamese fruits and vegetables, including taro (*Colocasia esculenta*), cassava (*Manihot esculenta*), water spinach (*Ipomoea aquatica*), thai basil (*Ocimum basilicum*), turmeric, (*Curcuma longa*), smooth loofah, (*Luffa aegyptiaca*), arrowroot (*Maranta arundinacea*), and other herbs. The gardens are tended by the neighborhood's sixty- to ninety-year-olds, who were part of the first wave of refugees to resettle to the neighborhood.¹⁴ The elderly population of Versailles, like Phuc Nguyen, are highly-skilled farmers and gardeners. "The vegetables [we] are growing might not be available in a grocery store," Khai says. "And for the community members here, it's natural to grow food. It's a deeply cultural form of resilience."¹⁵

The residential neighbourhood of Versailles, with its churches, temples, and vegetable gardens, is located along an industrial channel where there is a high concentration of petrochemical industries, construction and demolition processing sites, and municipal waste sites. The USGS's limited and often outdated set of environmental monitors detect the presence of soil, water, and air pollutants which contribute to real and negative physical, environmental results for those living in New Orleans East.



Figure 2. Ecologies and communities affected by waste and pollution . Jennifer Chau Tran.

DESIGN RESEARCH METHODS

My design proposal outlines the operational framework for the Versailles Landscape Planning Organization, a community body that allows the residents of Versailles to determine the environmental uses of the neighbourhood’s vacant land, to monitor the success and health of these lands through environmental sensing, and to use this data as a tool to bring to the table when discussing with regional planning authorities about the future of their community. My proposal channels the existing political motivation of the Versailles neighbourhood into a community organization the: The Versailles Landscape Planning Organization, or Cong Dong Kien Truc Canh Quan Versailles, that builds upon the already present environmental knowledge and agricultural/aquacultural skills of the neighbourhood, expanding those activities using environmental sensing data.

The VPLO will catalogue data collected from monitors, as well as elevation and lot size to create an environmental assessment of the vacant lots in the neighbourhood. Then, with this knowledge, the residents of Versailles can collectively choose the kind of productive landscape programming that will be implemented on site. Individual lots can be converted over short, medium, and long terms, with each productive landscape contributing to the food security, economic enrichment, and/or environmental health of the neighbourhood.

The residents will be able to monitor the health and success of these lands using environmental sensing equipment. These experimental co-ops will be used to collect evidence and expertise that Versailles can bring to the table when discussing with regional planning authorities about the future of their

community. “They want to know what they are up against so they can do what they have always done: plan, adapt, and build more resilient systems.”¹⁶

DESIGN OUTCOMES

My proposal channels the existing political motivation of the Versailles neighbourhood into a community organization: The Versailles Landscape Planning Organization. From an analysis of the imagery in the seals and logos of regional authorities such as the NOLA city council, USGS, and BP, I extracted symbols representing the sources and sinks of the waste flows in the existing site condition and also to represent the proposed interventions on site.

The first step of the Versaille Landscape Planning Organization’s work is the establishment of a network of air quality, groundwater, and stream water monitors embedded in the neighbourhood. The monitors are a way to strengthen the already present environmental knowledge in the neighbourhood, and their data can be used to plan better and more resiliently. Streamwter monitors provide data on water temperature and flood risk, which is important for the residents planning water distribution in their farms and reservoirs. Groundwater monitors record data on the water table, important to know when planning future land-use. It also provides data on groundwater pollutants such as arsenic and diesel-organics. The environmental data will also be a tool that can hold extractive industry accountable for the real effects of their practices. Air quality monitors sense the concentration and types of particulates in the air, which can have negative effects on respiratory health of those affected. Creating a detailed and comprehensive record of these

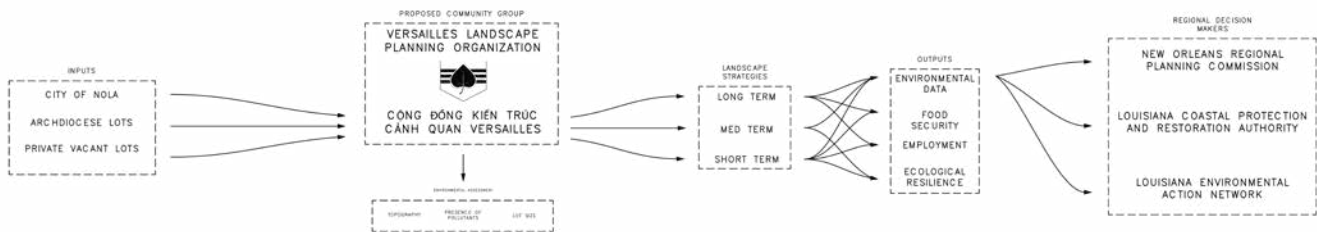


Figure 3. Operational Framework for the Versailles Landscape Planning Organization . Jennifer Chau Tran.

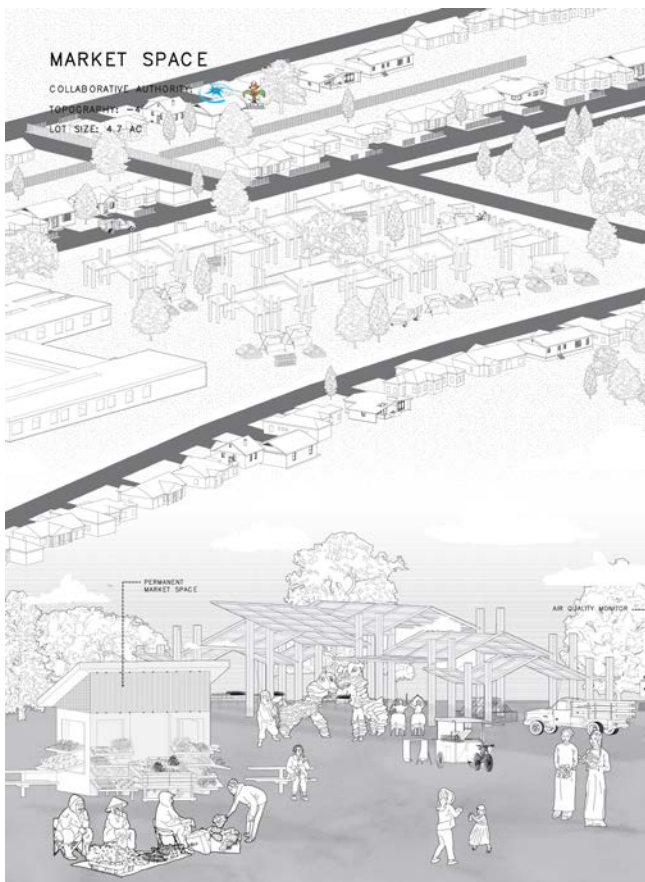


Figure 4. Market Space. Jennifer Chau Tran.

environmental indicators will be a way to advocate for the health and wellbeing of their own community when consulting with regional authorities who act on a larger scale of intervention.

There are a large number of vacant lots clustered throughout the neighbourhood of Versailles. There are 300,000m² of vacant and blighted lots, an amount that skyrocketed following Katrina and with the period of economic disinvestment that followed. These lots are owned largely by the Catholic Church, the city of NOLA, and privately, like the abandoned Jazzland amusement park. The VPLO will assemble these lots and using data collected from monitors, as well as elevation and lot size, they will create an environmental assessment of the vacant lots in the neighbourhood. Then, with this knowledge, the residents

of Versailles can choose the kind of productive landscape programming that will be implemented on site. Individual lots can be converted over short, medium, and long terms. Each productive landscape contributes to the food security, economic enrichment, and environmental health of the neighbourhood. Short term strategies are extensions of the food and economic security initiatives of existing community organizations like VEGGI Farmers Co-op and the Vietnamese American Youth Leadership Alliance. The VPLO will be responsible for the matching of funding from city and regional authorities.

SHORT TERM STRATEGIES

Short term strategies are extensions of the food and economic security initiatives of existing community organizations like VEGGI Farmers Co-op and the Vietnamese American Youth Leadership Alliance. Over the short term, aquaponic and traditional agriculture methods can be implemented on vacant lots which are low in elevation and small in lot size. These productive landscape programs will create job opportunities for the elderly, first generation residents within the community and provide food security for the neighbourhood. Streamwater gauges will be able to tell VEGGI farmers the height, speed, and salinity of water, factors that will help the farmers decide which crops to grow, and where they are planted. Larger vacant lots can be transformed into permanent market and community spaces where produce from the aquaponic farms throughout the neighbourhood can be gathered and sold at the weekly farmers market, creating essential cultural hubs.

MEDIUM TERM STRATEGIES

Medium term strategies will establish district energy and stormwater management systems with the funding of the Louisiana Regional Planning Authority, and the NOLA City Council, reducing dependency on the extractive oil and gas infrastructure adjacent to the neighbourhood, replacing them with renewable forms of energy. Using the agricultural waste from the network of community gardens and aquaponic farms in the neighbourhood as a fuel source, biomass energy generation can begin to provide energy for the neighbourhood. These biomass energy generation facilities can be located on smaller lots located at higher elevations. Additionally, homes in the neighbourhood can be equipped with rooftop solar panels, and larger lots on high elevation can be used as large-scale solar farms.

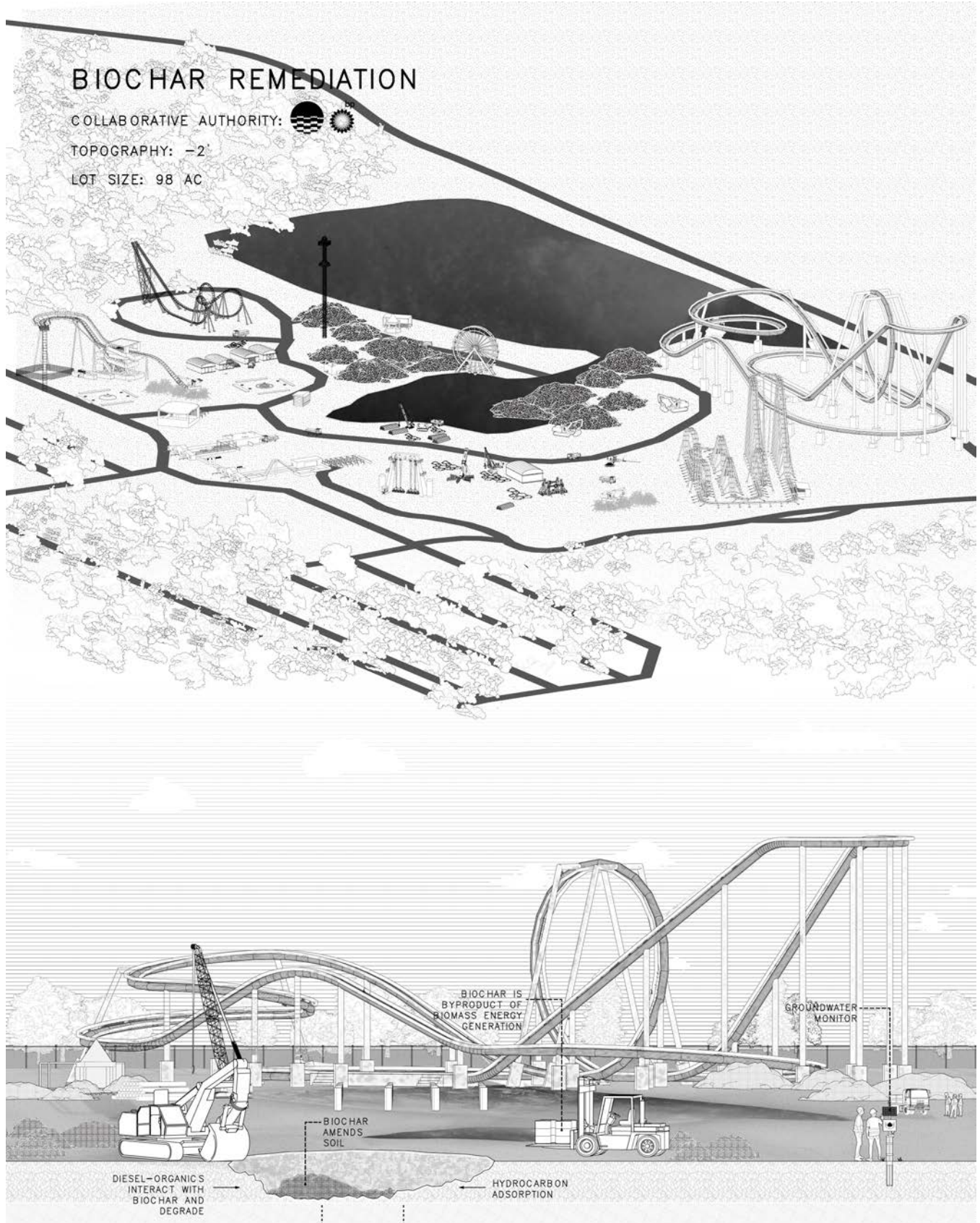


Figure 5. Biochar Remediation. Jennifer Chau Tran.

LONG TERM STRATEGIES

Long term strategies will establish remediation of groundwater and soil strategies funded by petrochemical and industrial polluters with the consultation of the community. Biochar is a byproduct of the biomass energy generation process and can be used as a method of remediating diesel organics and hydrocarbons, which are present at the abandoned Jazzland site. On lots where arsenic has been detected by the groundwater monitor, in-situ ferric precipitation can occur. These remediated sites will eventually be able to be reassessed by the Versailles Landscape Planning Organization and the residents of Versailles and transformed into one of the previous productive programs over the long term. As the lots are transformed, they continue to provide environmental feedback data to increase the environmental knowledge in the neighbourhood, and can be used by the residents as a tool for their own environmental advocacy when in dialogue with regional authorities.

CONCLUSION

Despite the large amount of media attention garnered from the resilient adaptation of the residents of Versailles, community leaders have made sure to note the need for top-down funding from the state and federal government, and the challenges the community have faced without it. Through landscape planning and empowerment through environmental knowledge, the Versailles Landscape Planning Organization creates autonomy in the landscape planning process when historically there has been none for marginalized communities, so that the environmental experiences and knowledge of those who live on “so called sacrificial lands” cannot be ignored.

My proposal attempts to use landscape planning as an additional tool for residents to use when negotiating with regional authorities. The systemic nature of environmental racism has historically led to the exclusion of racial minorities from environmental decision-making, and this proposal has aimed to create economic and ecological benefits for the community in Versailles through landscape measures that allow for community autonomy. The field of landscape architecture must analyze and understand the ways in which it can perpetuate environmental racism and work towards the incorporation of practices which provide voices for those who have historically been underrepresented in landscape design and research.

ENDNOTES

1. Simms, Patrice Lumumba, “On Diversity and Public Policy Making: An Environmental Justice Perspective,” *Sustainable Development Law & Policy*, Vol 13, no. 1 (2012): 14-19, 57-59.
2. Julie Sze, “*Toxic Soup Redux: Why Environmental Racism and Environmental Justice Matter after Katrina*.” Social Science Research Council, 2006. <https://items.ssrc.org/understanding-katrina/toxic-soup-redux-why-environmental-racism-and-environmental-justice-matter-after-katrina/>.
3. Ibid.
4. Robert D. Bullard, Paul Mohai, Robin Saha, and Beverly Wright. “*Toxic Wastes and Race, 1987-2007*.” United Church of Christ, 2007.
5. Matthew P. Weaver. “*Fear and Loathing in Post-Katrina Emergency Debris Management: According to Whom, Pursuant to What, and You Want To Dump That Where?*” *Tulane Environmental Law Journal*, Vol. 20, no. 2, 2007, pp. 429–446.
6. Peter Newell, “*Race, Class and the global Politics of Environmental Inequality*.” *Global Environmental Politics*, vol. 5 no. 3, 2005, p. 70-94.
7. Christiana Botic. “*Meet The Refugees Fighting for the Future of New Orleans*.” National Geographic, 2018. <https://blog.nationalgeographic.org/2018/03/06/meet-the-refugees-fighting-for-the-future-of-new-orleans/>.
8. Ibid.
9. Sarah Sax. “*A Vietnamese Farmers’ Cooperative in New Orleans Offers a Lesson in Resilience*.” *Civil Eats*, 2020. <https://civileats.com/2020/05/01/a-vietnamese-farmers-cooperative-in-new-orleans-offers-a-lesson-in-resilience/>.
10. Eric Tang. “*A Gulf Unites Us: The Vietnamese Americans of Black New Orleans East*.” *American Quarterly*, vol. 63, no. 1, Johns Hopkins University Press, 2011, pp. 117–49.
11. Christopher A. Airriess and David L. Clawson. “*Vietnamese Market Gardens in New Orleans*.” *Geographical Review*, Vol. 84, No. 1 (Jan., 1994), pp. 16-31.
12. David E. Guggenheim. “*The War, The Exodus, The Hurricane, The Oil Spill: One Gulf Community’s Determination to Endure*.” *Ocean Doctor*, 2010. <https://oceandocor.org/the-war-the-exodus-the-hurricane-the-oil-spill-one-gulf-communities-determination-to-endure-part-1/>
13. Sarah Sax. “*A Vietnamese Farmers’ Cooperative in New Orleans Offers a Lesson in Resilience*.” *Civil Eats*, 2020. <https://civileats.com/2020/05/01/a-vietnamese-farmers-cooperative-in-new-orleans-offers-a-lesson-in-resilience/>.
14. Eric Tang. “*A Gulf Unites Us: The Vietnamese Americans of Black New Orleans East*.” *American Quarterly*, vol. 63, no. 1, Johns Hopkins University Press, 2011, pp. 117–49.
15. Ibid.
16. Ibid.