EXHIBIT AA

WEST OAKLAND ENVIRONMENTAL INDICATORS PROJECT

SUPPLEMENTAL ENVIRONMENTAL PROJECT PROPOSAL FORM

Project Name: Adapt Oakland: Greening Prescott		
Organization Name: West Oakland Environmental Indicators Project		
Contact Name: Brian Beveridge		
Mailing Address: 349 Mandela Parkway		
City: Oakland	**State**: CA	**Zip Code**: 94607
Street Address (if different from above): N/A		
City:	State:	Zip Code:
Telephone Number: 510.282.2565		
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Company Email Address: brian.woeip@gmail.com		

SIGNATURE

I declare that I have examined this statement, and to the best of my knowledge and belief, it is true, correct, and complete.

SEP Submitter Name: Brian Beveridge	**Title**: Co-Executive Director
Signature of Submitter: 	**Date of Signature**: 02/01/2021

ORGANIZATION DESCRIPTION

☒ nonprofit 501(C)(3)
☐ government
☐ local agency
☐ tribal government
☐ business
☐ other (if other, please explain):

Provide a brief history of the organization (mission, vision, and goals):

Organization Overview
The West Oakland Environmental Indicators Project (WOEIP) is a local, resident-led, community-based environmental justice nonprofit organization working to improve air quality and public health, and to encourage neighborhood vitality and sustainable development in the community. WOEIP has over 20 years of experience in collaborative problem solving and community-led policymaking. They were the first pilot community under AB617 to complete a Community Air Action Plan, which is now being implemented. WOEIP's work centers on indoor and outdoor air pollution in West Oakland and working towards long-term sustainable solutions at the local scale.

Mission
WOEIP's mission is to enhance the quality of life in West Oakland by building grassroots capacity for leadership and positive change, while maintaining the historical and cultural integrity of the neighborhood. WOEIP's work aids residents in understanding the political, social and natural forces that impact their lives and empowers residents to take an active part in leading the change they want to see.

Urban Biofilter
This project will be completed through Urban Biofilter, the long-term collaboration between WOEIP and Hyphae Design Laboratory, an interdisciplinary design and engineering firm based in Oakland addressing the integrated challenge of human and environmental health by developing novel, effective urban green infrastructure. Hyphae is a national expert in urban greening and has worked on greening projects across the country.

ORGANIZATION EXPERIENCE

Provide information on the organization's ability and capacity to complete the proposed project. Describe previous project management experience, including a list of completed projects/dates and who funded the project:

Hyphae has been in existence for 12 years, has a staff of ten, and has capacity and experience to manage the technical and project management aspects of this project. Hyphae's interdisciplinary team is made up of biologists, environmental engineers, geospatial data analysts, landscape architects and urban planners that apply multidisciplinary systems-thinking to challenging problems. Hyphae has designed landscapes and managed planting for many projects, including large scale projects, over the last ten years; has experience working with large, complex teams of academic health researchers in partnership with community groups, agencies, urban designers, ecologists, and engineers; and has developed and managed teams with some of the nation's leading medical and environmental health exposure researchers and have received funding from the National Institute of Health (NIH), the Federal Highway Administration (FHWA) and National Science Foundation (NSF) programs to advance the design, engineering, modelling and monitoring of near road green infrastructure. As a mission-driven firm, Hyphae is committed to and at the frontier of researching, designing, modeling, advocating for and delivering health-driven urban design projects.

WOEIP has over twenty years of experience and national recognition as an expert in collaborative problem solving and policymaking that centers residents' voices and leadership. WOEIP's advocacy, citizen science, and collaborations with government, industry, and researchers have culminated in the passing of AB 617 to mandate Community Air Action Plans in environmental justice communities throughout California. West Oakland is the first pilot community statewide under AB617 doing a Community Air Action Plan. WOEIP, with the Bay Area Air Quality Management District (BAAQMD), co-led the creation and facilitation of a multi-stakeholder Steering Committee to write their plan which includes a list of broad-reaching recommendations with the goal to reduce the disparity in air pollution and related health impacts. The plan focuses on priority impact zones within West Oakland. The plan was approved by BAAQMD and CARB in late 2019 and the Steering Committee in collaboration with the City of Oakland, Alameda County government, and regional and state agencies is currently leading the plan's implementation.

In addition to the numerous community, nonprofit, technical, and government partners through the AB617 Steering Committee, this project also has particular project partners that will strengthen our collective expertise and capacity. These include: CalTrans, Alameda County Public Health Department, Environmental Defense Fund, Green Heart Louisville, East Bay Asian Local Development Corporation, Bay Area Air Quality Management District, Oakland Planning Department, Environmental Protection Agency, Cornell University Engineering Zhang Lab, and Aclima.

Urban Biofilter Past Projects:

- Greenheart (Louisville, KY): A rigorous longitudinal study on the impact of urban greening on cardiovascular health that involves extensive planting along roadways and in residents' yards; funded through a multi-year grant from the National Institute of Health
- Green for Good (Louisville, KY): A completed vegetated barrier pilot at a Louisville elementary school that found significant reduction in exposure to pollution and student blood inflammatory marks after a densely vegetated buffer was planted. Funded by the Funders' Network for Smart Growth and Livable Communities, Owlsey Brown II Family Foundation
- Adapt Oakland (West Oakland): An extensive data collection, analysis, community engagement, and development of a neighborhood wide greening plan for West Oakland. Funded by the Strategic Growth Council.
- Prescott Greening Feasibility (West Oakland): the initial feasibility and modeling phase of this project, completed in partnership with the Cornell Engineering Zhang Lab. Funded by the Strategic Growth Council

PROJECT INFORMATION

Project Name: Adapt Oakland: Greening Prescott
Organization Name: West Oakland Environmental Indicators Project
Project Location(s): Provide the address or GPS coordinates of where the proposed project will take place: City right of way land on the neighborhood side of Frontage Road between 7th Street and 10th Street in West Oakland, CA

ENVIRONMENTAL ISSUE TO BE ADDRESSED

☐ Air Monitoring
☐ Indoor Air Filtration
☐ Human Health and Asthma Outreach
☒ Green Projects
☒ Community Engagement and education
☒ Other (if other, please explain): Outdoor air quality; improved stormwater management and water quality; green jobs; reduced heat island effect

PROJECT DESCRIPTION

Provide a scope of work for the project and explain how the proposed project will benefit air quality. If applicable, explain how the project benefits disadvantaged communities:

Need: Environmental Justice: Air Pollution & Air Quality Efforts in West Oakland

West Oakland experiences disproportionately high levels of air pollution, more than three times higher than the Bay Area average.[1] Pollution has been linked to serious and long-term health impacts that include asthma hospitalization and emergency department visit rates almost twice as high as rates for all of Alameda County[2]; life expectancy for West Oakland residents seven years less than residents of the Oakland hills[2]; and statistically significant connections between air pollution and higher risk for heart attack, heart surgery and coronary disease in West Oakland's elderly population[3]. Oakland's recently released Oakland Equity Indicators Report also scored racial equity in childhood asthma emergency department visits as a one out of one hundred, indicating higher rates for African American children, who make up a significant portion of West Oakland residents, than white children[4]. Block by block data, collected by a collaborative project[5] between Google, the Environmental Defense Fund and the community organization West Oakland Environmental Indicators Project (WOEIP), shows areas within the neighborhood that are hotspots of pollution, with levels of particulate matter as high as 150 to 300% more than the ambient measurements inside West Oakland.[6]

As one of the most impacted neighborhoods in the Bay Area, West Oakland has long been a focus of the Bay Area Air Quality Management District (BAAQMD)'s Community Air Risk Evaluation (CARE) program as a priority area to improve air quality, public health and environmental justice. In 2018, West Oakland was identified as a first-year priority in a state Community Air Protection Program under Assembly Bill 617, facilitated by the California Air Resources Board. WOEIP and BAAQMD co-led the development of the resulting West Oakland Community Air Action Plan (WOCAP) with 89 strategies to reduce disparities in resident exposure to air pollution.

Urban Greening to Reduce Resident Exposure to Air Pollution

Formally approved in late 2019, the WOCAP includes three urban greening strategies as a way to reduce exposure to pollution, alongside strategies that aim to reduce sources of pollution. Urban Biofilter is represented on the AB617 Steering Committee and is supporting the further development and implementation of effective greening strategies. The WOCAP aims to initiate implementation within the seven impact zones, or areas of highest resident exposure within the neighborhood.

From a greening perspective, we decided to start with the Prescott neighborhood, one of the most polluted of the impact zones that borders the freeway, Port and Post Office, and has a high density of existing and planned affordable housing. In 2019-2020, Urban Biofilter collaborated with BAAQMD to complete the planning phase of a greening pilot along the residential-freeway interface in the Prescott neighborhood. The Prescott neighborhood In collaboration with diverse stakeholders, including community members,

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[1] CARB. (2008). Diesel Particulate Matter Health Risk Assessment for the West Oakland Community. State of California Air Resources Board Final Report. https://www.arb.ca.gov/ch/communities/ra/westoakland/documents/westoaklandreport.pdf. October 16th 2017.

[2] Alameda County Public Health Department. (2015). East and West Oakland Health Data Existing Cumulative Health Impacts. acphd.org/media/401560/cumulative-health-impacts-east-west-oakland.pdf. January 25th 2019.

[3] Alexeeff, SE et al. (2018). High-resolution mapping of traffic related air pollution with Google street view cars and incidence of cardiovascular events within neighborhoods in Oakland, CA. *Environmental Health.* 17:38.

[4] City of Oakland. (2018). Oakland Equity Indicators Report. oaklandca.gov/documents/2018-oakland-equity-indicators-report. January 25th 2019.

[5] Environmental Defense Fund. 2019. How Pollution Impacts Health in West Oakland. edf.org/airqualitymaps/oakland/pollution-and-health-concerns-west-oakland. February 25th 2019.

[6] Environmental Defense Fund. (2018). How pollution impacts health in West Oakland. edf.org/airqualitymaps/oakland/pollution-and-health-concerns-west-oakland. January 25th 2019.

landowners, the City of Oakland, Port of Oakland, County, CalTrans, and technical experts, the project partners used 3D modelling to assess feasibility and effectiveness of various greening options and identified the following viable strategies to block and mitigate air pollution:

- Freeway vegetated buffers in CalTrans Right of Way land along the freeway from 7th to 15th streets
- Vegetated buffers on either side of the existing sound wall between Frontage Road and existing and planning affordable housing (City of Oakland Right of Way and privately owned land) from 7th to 15th streets
- Vegetation integrated into the new mixed income housing development at Phoenix Ironworks to buffer the existing soundwall and protect future residents and serve as a pilot for future housing
- Greening along 7th Street in the Port of Oakland to mitigate pollution from the Port being concentrated and directed into the neighborhood through the 7th Street corridor

Proposed Project Overview

This proposal builds off of the planning phase for the Prescott Project and aims to pilot the freeway buffer strategy on the southern portion of Frontage Road (between 7th and 10th Streets). This phase of the project will further develop site specific freeway vegetated buffer strategies and design; collaborate with City officials to permit the buffers and develop Best Management Practices; and develop a stewardship model for urban green infrastructure that integrates job training and development. In doing so this project will begin to implement the WOCAP greening strategies and create the necessary infrastructure to refine and expand greening strategies at scale across Prescott and all of West Oakland.

The implementation phase will include: construction drawings and permit review, bidding and value engineering, CEQA environmental review, construction contract negotiations, collaboration with a local job training organization, construction, and initial maintenance and stewardship. Because we just completed the planning phase, we have not currently conducted CEQA and this will be a part of this proposed project phase. Urban Biofilter will oversee the project and sub-contract the design team, necessary consultants, contractors, job training organization, and others as needed. WOEIP will leverage the relationships and networks created through the planning phase to facilitate implementation, procure matching funds, and ensure the success of long-term maintenance. And WOEIP will lead a robust community engagement, design, and education process throughout the course of the project.

Project Evaluation:

WOEIP strongly believes in evidence and data based decision making, is a national leader in citizen science and has long-standing relationships with researchers across the country. We intend to work with a team of researchers, Aclima, and the Alameda County Public Health Department to measure before and after air quality levels and health markers. This will enable us to accurately understand the success and impact of the implementation strategies. While there is significant research suggesting the benefits of green infrastructure, we aim to increase this body of knowledge with site and strategy specific data collection. There is also significantly less data on the direct connection between health improvement and green infrastructure. Urban Biofilter is working in collaboration with the Green Heart project in Louisville, Kentucky that conducted one of the first studies to show blood inflammation marker reduction in students after the construction of a green buffer at a school on a busy roadway.[7] Green Heart is currently conducting a neighborhood scale research study in Louisville on the impacts of greening on health and will provide technical assistance and monitoring equipment for the West Oakland project.

[7] Louisville Metro Government Office of Sustainability. 2017. Green for Good: Assessing the Health Returns of Green Investment. Partners for Places. louisvilleky.gov/sites/default/files/sustainability/pdf_files/green_for_good_final_report.pdf. February 25th 2019.

PROJECT TIMELINE

Provide a timeline for project implementation. Provide a breakdown of the major milestones required to implement the project, including completion dates:

Tasks and Expected Timeline:

- Design and Permitting: Month 1 -18
- Bid and Contractor Process: Month 18-24
- Planting: Month 24-30
- Initial Stewardship: irrigation, plant maintenance, performance monitoring: Month 30 to grant end

Total Estimated Cost: $650,000

The estimated total cost for the initial Prescott showcase is $1,100,000. This includes a feasibility phase that has already been completed and fully funded by the Transformative Climate Communities (Strategic Growth Council) for $150,000. We have secured a $300,000 commitment from the Metropolitan Transportation Commission, but it requires a minimum 2:1 match. We therefore need to secure the remaining $650,000 from this SEP proposal.

SELECT THE BENEFIT THAT BEST APPLIES TO THE PROPOSED PROJECT

☒ Reduction of exposure to air pollution
☐ Emissions reductions
☐ Air quality violations preventions

ENVIRONMENTAL BENEFITS

Describe the specific benefits/drawbacks to the environment and/or the community:

This project is motivated by air quality and our primary goal is to significantly reduce resident exposure to air pollution in the Prescott area of West Oakland and thereby improve community health. Research shows that buffering the source of pollution as close to the source as possible is the most effective at reducing downwind resident exposure. In this case the sources of pollution for the Prescott residents are largely the freeway and additional pollution from the Port of Oakland and Union Pacific Railroad upwind of the Prescott neighborhood. Our greening strategies will be based on and build off of the latest national research on vegetated buffer plant choices and plant layout to maximize exposure reduction.

There are also a multitude of additional benefits that green infrastructure would provide with this project including: carbon sequestration, stormwater treatment and flooding mitigation, mitigating urban heat island effect and protecting and improving outdoor spaces, and aesthetics.

Regional Significance:

While this project is site specific, the aim is to leverage the project and the relationships formed through it to inform healthy housing and neighborhood adaptation and development across Oakland, Alameda County, California, and the Country. We are intentionally bringing CalTrans and the Oakland Planning Department in from the beginning of the planning phase with the goal of informing CalTrans Design Guidelines and City code requirements for housing built in high pollution areas. We are also working with the East Bay Asian Local Development Corporation (EBALDC)'s Healthy Housing development team to inform their design guidelines for new affordable housing projects. We also want to understand the barriers to widespread implementation of green infrastructure during the planning phase (ie. not enough data, site specific examples, effective design tools, etc.) and use the implementation phase and associated research to address those barriers.

The project will also be able to support and inform the statewide AB617 process and the numerous communities and Air Districts across the state working on Community Air Action Plans. The lessons, process, and tools will also be shared locally and nationally through WOEIP's relationships to various environmental justice organizations and networks.

Emission Benefits: For projects with a direct emissions benefit, please provide an analysis of the emissions prevention or reduction that result from the proposed SEP, and specify the pollutants addressed by the project.

This project focuses on exposure reduction and will not involve significant emission reduction benefits.

ITEMIZED BUDGET

Task	Secured or Pending	Fund Source	SEP Funds Requested	Total Cost
Feasibility and Modeling	$150,000	Strategic Growth Council	$0	$150,000
Project Management & Administration	-		$100,000	$100,000
Planting Design	-		$50,000	$50,000
Community Engagement, Education, & Design	-		$50,000	$50,000
Permitting, including CEQA	-		$50,000	$50,000
Site Preparation	$50,000	Pending MTC	$0	$50,000
Planting (labor included)	$200,000	Pending MTC	$0	$200,000
Soil Amendments & Mulch	$50,000	Pending MTC	$0	$50,000
Irrigation	TBD		-	-

Developing stewardship model with training infrastructure	-		$150,000	$150,000
Training and hiring	-		$50,000	$50,000
Initial Project Stewardship	-		$200,000	$200,000
TOTAL:	**$450,000**	**-**	**$650,000**	**$1,100,000**

(For amendments to projects in implementation phase, include up-to-date project costs to justify funding amounts.)

INSTRUCTIONS FOR COMPLETING THIS FORM

Use this form to submit detailed supplemental environmental project (SEP) proposals. Complete this SEP proposal form cover page, and attach the supplementary proposal documents as requested below. Questions may be directed to SEP@arb.ca.gov.

Project proposal submissions shall be directed to either SEP@arb.ca.gov or mailed to:

Air Resources Board
Enforcement Division
ATTN: SEP Program
P.O. Box 2815
Sacramento, CA 95812-2815

PRIVACY STATEMENT

Please note that under the California Public Records Act (Gov. Code, § 6250 et seq.), your submissions, including associated contact information (e.g., your address, phone, email, etc.) become public records and may be released to the public upon request. Personal information will be protected from disclosure as required by law, including under the Information Protection Act (Cal. Civ. Code, § 1798, et seq.). Information that is claimed to be confidential should be submitted as provided in CARB's regulations for submitting confidential data, California Code of Regulations, title 17, section 91011.