

**Climate Change Pilot Grant Application: Establishing Proof-of-Concept  
Autumn 2023 Cover Sheet**

**Project Information**

<b>Project Title</b>	Developing an Environmental Evaluation Framework for Community Land Trusts
<b>Budget Request from Initiative</b>	\$50,000
<b>Budget Match (if applicable)</b>	\$2,000 (hopefully from CSDE)
<b>Total Project Budget</b>	\$52,000

**Applicant Information**

- Lead Co-Investigator: Dr. Vince Wang
- Title: Assistant Professor
- School/Department: University of Washington, Runstad Department of Real Estate, College of Built Environments
- Email: [vrwang@uw.edu](mailto:vrwang@uw.edu)
  
- Co-Investigator 1: Dr. Dylan Stevenson
- Title: Assistant Professor
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- Co-Investigator 2, Community Partner: Ms. Sandy Bishop
- Title: Executive Director
- Organization: Lopez Community Land Trust
- Email: [lclt@rockisland.com](mailto:lclt@rockisland.com)
  
- Co-Investigator 3, Community Partner: Ms. Jackie Keogh
- Title: Executive Director
- Organization: RootedHomes
- Email: [jackie@korlandtrust.org](mailto:jackie@korlandtrust.org)
  
- Finance Point-of-Contact: Ms. Melissa Best
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**Abstract**

Communities in the United States increasingly face long-lasting housing affordability crisis. At the same time, rapid increase in frequency and intensity of disasters due to climate change has caused substantial loss of housing stock, resident displacement, and exposure to environmental hazards. These events lead to adverse health outcomes, especially among lower-income residents and people of color, who already experience limited affordable housing opportunities. Collective action to climate adaptation has attracted heightened interest from practitioners, scholars, and policymakers alike, yet experience with collective approach in the United States is extremely sparse. Community land trusts (CLTs), which aim to keep homes and other types of space permanently affordable and community controlled through collective ownership of land, hold transformative potential to address the compounding risks of housing and environmental crises.

The goal of this project is to develop a CLT-specific environmental evaluation framework that is universally applicable and can be tailored to local contexts and needs. We first aim to identify domains and metrics of the framework by reviewing relevant documents and websites. We will then conduct key informant interviews in two partnering CLTs – Lopez CLT and RootedHomes – to incorporate varying stakeholder needs into the tracking of environmental efforts. Our partnership with two CLTs facilitates informant recruitment and ensures timely adoption of project products. This work will build a strong community-academic partnership, provide a theoretically sound and practical framework, and foster future research with respect to the effect of collective approach on environmental resilience and justice.

**Commented [VW1]:** Please provide a description of your project appropriate for a lay reader. Limit your description to no more than 250 words.

## Research Plan

**Description of Problem:** Thousands of communities and millions of people suffer from compounding threats, particularly detrimental health impacts, posed by climate change and a lack of affordable housing, which are deeply intertwined with global patterns of inequality. Building societal resilience to climate change depends on increased adaptation. A collective approach to climate change has been highlighted in recent literature as it is seen to have the potential to facilitate transformative climate adaptation through social change.<sup>1,2</sup> However, experience with collective action in the United States is extremely sparse, with some limited examples existing among the governmental activities of Tribal Nations, and empirical studies are even sparser. This proposal studies community land trusts (CLTs) as a commons approach<sup>3</sup> towards long term housing security, climate resilience, and social justice.

CLTs are independent community-controlled nonprofit organizations that provide community assets, and especially, permanently affordable housing for lower income households and people of color. By putting land and assets under CLT's stewardship, CLTs can address major community concerns, including issues exacerbated by the climate crisis. However, there has been little research on how CLTs evaluate their environmental efforts. With the support from PHI's Climate Change Planning Grant, the interdisciplinary UW research team visited Lopez CLT in Lopez Island, Washington and RootedHomes in Bend, Oregon – two national CLT leaders in promoting environmental sustainability. In conversation with staff from both CLTs (whose Executive Directors are our community partners), we discussed program-relevant research gaps that could be used to inform practices to support and encourage CLT engagement in environmental efforts. High-priority knowledge gaps include:

- The domains through which CLT's environmental efforts shall be tracked;
- The measurements that can be adopted to systematically evaluate the process and impacts of CLT's environmental efforts; and
- Varying evaluation criteria of environmental efforts from different stakeholders of CLTs.

In response, our collaborative research will develop a CLT-specific environmental evaluation framework through interviews with key stakeholders to help CLTs monitor and assess their environmental efforts. Our partnership with both CLTs will ensure the project's success by facilitating participant recruitment and ensuring timely adoption of project products. This work, which represents new research directions for the UW-based team, will yield an innovative framework and provide vital preliminary data to inform broader applicability across CLTs nationwide and guide extramural research proposals.

### Project Aims:

**Aim 1:** Identify domains and metrics that track the process and outcomes of environmental efforts specific to CLTs.

RQ1.1- What are the domains of evaluating CLT's environmental efforts?

RQ1.2- What are the measurements of CLT's environmental efforts under each domain?

**Aim 2:** Develop a universal environmental evaluation framework that can incorporate local context and needs.

RQ2.1- How do various stakeholders (e.g., CLT staff, residents, board of directors, members/homeowner committee, funders, contractors, local government officials) evaluate CLT's environmental efforts differently?

RQ2.2- Which measurements of CLT's environmental efforts can be applied across CLTs nationwide (compared to context-specific metrics)?

**Proposed Plan/Design:** We consider developing a CLT-specific environmental evaluation framework as a process of conducting a needs assessment. Needs assessment is used in social sciences to identify gaps between current states and desired outcomes.<sup>4</sup> It is a systematic way to approach a problem by thoroughly investigating different points of view, understanding its cause, and prioritizing optimal resource allocation. Witkin and Altschuld (1995) identified over twenty mixed methods for conducting needs assessment, including literature reviews, surveys, and interviews. Given the existing publications on this topic, we will first conduct desk-based document analysis. While document review offers a broad view of CLT's environmental efforts tracking needs, it is limited in providing depth, clarification, and an explanation for how CLTs identify and engage with information provided by environmental efforts tracking. A challenge for desk-based reviewing is distinguishing between comments on general gaps in achieving environmental sustainability and the articulation of the tracking needs and gaps of environmental efforts. Hence, document review will be followed

**Commented [VW2]:** Please provide a narrative description of your proposed project. Your description must include your project aims, description of the problem to be addressed, and your proposed plan, design, and methods. Limit of two pages, including tables and visuals, but excluding references.

References, if needed, should be included as an appendix to the two-page research plan. Optional letters of support should also be included as an appendix to the two-page research plan.

by semi-structured interviews in Lopez CLT and RootedHomes to examine stakeholder needs for organizational-level tracking of environmental efforts.

**Methods:**

Desk-based research process: We will review three sets of publications to develop a preliminary CLT-specific environmental evaluation framework that can be applied universally across CLTs nationwide. The first set of publications are included in a seminal volume published in 2018 by United Nations Environment Programme (UNEP) Copenhagen Climate Centre (formerly the UNEP DTU Partnership).<sup>5</sup> Eleven studies included in this volume provide comprehensive assessments – both conceptual perspective and practical lessons – about how to measure climate change adaptation needs and results. The purpose of reviewing this volume is to: 1) identify preliminary domains and measurements related to climate change adaptation, and 2) set up parameters and criteria for the development of our CLT-specific environmental evaluation framework within a global, cross-sector context.

The second set of information will be derived from an exhaustive review of documents and websites from Lopez CLT and RootedHomes, focusing on collecting any writings about their environmental efforts and needs. Specifically, we will cover all webpages of both organizations and publications/media articles presented on their websites. During the pre-interview site visits (supported by PHI's Climate Change Planning Grant), we have obtained strategic plans from both organizations which are not yet available to the public. We will conduct a web search to gather additional media articles featuring these two CLTs' environmental efforts and needs. And we will ask staff from both CLTs if they have collected additional publications or media reports that are not available on their websites.

The third set of publications will be selected by conducting a document-sampling process for 55 CLTs that reported: 1) being affected by at least one extreme climate event in the past, and 2) adopting at least one climate change adaptation strategy. The list of CLTs is derived from a national CLT database collected by the PI of this proposed research.<sup>6</sup> Documents will be selected using the embedded search engines on the CLT's websites using the following search string: "adapt\*", "climate", "monitor\*", "evaluat\*", "assess\*", "gap\*", "sustain\*", and "resilien\*". Among the top results, the most relevant one or two publications were selected for further analysis. The most recent publications were preferred when two or more documents were found on relevant topics. Both the second and third sets of information will be used to inform the development of a CLT-specific environmental evaluation framework.

Interview process: We will conduct semi-structured interviews with stakeholders in both Lopez CLT and RootedHomes to gain deeper insights into environmental efforts tracking needs and gaps not presented in desk-based document analysis. Based on our pre-interview site visits, we have identified CLT stakeholders including CLT staff, board of directors, CLT residents, members (homeowner committee members in RootedHomes), residential project contractors, funders, and public agency officials. Both CLTs have agreed to provide us a list of recommended informants for each stakeholder category and help us make the connections. And we will interview at least one informant in each stakeholder category for up to ten informants per CLT. Interviews will be conducted either onsite or via Zoom based on the interviewee preference and availability. We will either use Zoom's transcription function or onsite recording to transcribe interviews into scripts. We have already obtained IRB exempt for this proposed study. The open-ended questions were designed to understand, among other things, the stakeholders' main interests in adaptation, their preferences for environmental metrics, existing needs and gaps in information and practices, their perception of the CLT's role in adaptation, and their views on the major challenges in the field of adaptation.

Analysis: We will create a set of codes that represent the collected data. The coding process will treat interviews and documents the same way. We will group codes into preliminary themes (domains of the framework). This method assigns the same weight to interviews and documents, which allows us to estimate how often a theme is associated with a particular type of stakeholder.

Adaptation is a complex issue, and we anticipate that it will be challenging to present adaptation tracking needs and gaps as clear-cut, reductive conclusions. We will draw up qualitative descriptions and elaborations from documents and interviews. Each of the themes will be further explored to identify specific tracking needs and indicators of CLT's environmental efforts. In collaboration with both CLTs, the framework created through this study will be integrated into their practices. In addition, aim findings will be compiled into a peer-reviewed manuscript that will build on current knowledge about CLT's environmental efforts.

**Evaluation Plan**

1. What are your measures of success for this project?

The following table describes measures of success and associated monitoring strategies:

Measure of Success	Monitoring Strategy
Set up parameters for environmental evaluation framework and identify CLT-specific domains and measurements for climate change adaptation based on desk-top document review.	Complete document collecting and review as specified under Methods section by month 3.
Engage CLT stakeholders in describing environmental efforts tracking needs and gaps.	- Complete 14-20 key informant interviews – at least one informant in each stakeholder category in each CLT partner – by month 6. - Develop a CLT-specific environmental evaluation framework by month 12
Develop recommendations for tracking environmental efforts to both CLT partners.	Compile a program memorandum and share it with each CLT partner by month 12.
Expand knowledge on how CLTs as a collective approach can play a transformative role in promoting climate resilience and justice through environmental efforts.	Develop one peer-reviewed manuscript for publication and present findings at an interdisciplinary conference by month 12.

2. How do you plan to leverage your pilot data or proof-of-concept into a subsequent funding or concept-development opportunity?

This proposed research will result in a CLT-specific, universal environmental evaluation framework adaptive to local context and needs. Once developed, this framework will be incorporated into both CLT partners’ ongoing programmatic operation and existing data collection efforts (refer to the support letter from both CLT partners). We will be able to collect pilot data to quantitatively evaluate both CLTs’ environmental efforts. We plan to use these findings to inform grant proposals that will be submitted to the Lincoln Institute of Land Policy, the Unsolicited Research Program under U.S. Department of Housing and Urban Development’s Office of Policy Development and Research, and the Humans Disasters, and the Built Environment Program under the National Science Foundation. Specifically, we plan to collaborate with CLTs across the nation with large or fast-growing residential portfolios. These CLTs are members of Grounded Solutions Network, which is the leading national organization of the CLT network in the U.S. (the PI of this proposal is the former research head of this organization). These partnering CLTs will incorporate our framework into their programs to track their environmental efforts (refer to the support letter from Grounded Solutions Network). We plan to use data collected through this national partnership to comprehensively evaluate environmental impacts of the CLT field. These quantitative analyses will provide critical information about the effectiveness of CLT’s environmental implementation, which can inform resource allocation and responsive program solutions.

**Commented [VW3]:** The following questions should be specifically addressed to explain how you will evaluate whether your project was successful.

**Project Timeline**

Project Milestone	Month												
	1	2	3	4	5	6	7	8	9	10	11	12	
Pre-award: IRB Exempt Status Approval (Completed)													
Pre-award: Pre-interview site visits (Completed)													
Interview Protocol Design: Interview Guide Development, Consent and Recruitment Material Developed													
Desk-Based Websites and Documents Collected and Reviewed													
Interview Participants Recruited and Interviews Conducted													
Interview Data Transcribed, Codebook Developed (both interview data and desk-based research data), Data Analyzed													
Outputs: Manuscript and Program Memo Materials Developed and Submitted													

**Commented [VW4]:** Please include a brief description of the timeline for the major milestones of the project you are proposing.

**The Evaluation Plan and Project Timeline both must fit on the same page.**

**Biographies**

**Dr. Vince Wang** is an Assistant Professor in the Runstad Department of Real Estate in the College of Built Environments at the University of Washington. He studies spatial justice and inclusive communities, including their impacts reflected in the built environment, human behaviors, and policy interventions. Vince joined the University of Washington after serving six years as the research head of Grounded Solutions Network – the leading national nonprofit organization to support local community land trusts (CLTs). He has designed and conducted a U.S. census of CLTs, a U.S. Census of inclusionary housing policies, and a national performance evaluation of CLTs. His academic publications include evaluations of affordable housing policies and programs, land use planning and adaptation in response to climate change, and the connection between affordable housing, neighborhood change, and population health. Dr. Wang has worked directly with local public agencies and nonprofits on multiple research projects including expanding mobility and associated outcomes, a software application for low-income households searching for suitable housing, and a web-based mapping tool for the nation’s inclusionary zoning policies. Dr. Wang holds a PhD in Urban and Regional Planning from the University of Florida.

**Dr. Dylan Stevenson** is an Assistant Professor in the Department of Urban Design and Planning in the College of Built Environments at the University of Washington. Dr. Stevenson’s (Prairie Band Potawatomi descent) research examines how culture informs planning strategies and influences land relationships. More specifically, he investigates how tribal epistemologies structure notions of Indigenous futurities by centering Indigenous cultural values at the forefront of environmental stewardship and cultural preservation. He is currently working on a project researching how governments (Federal, State, and Tribal) embed cultural values in Water Resources Planning strategies, drawing from ethnographic research he conducted in the joint territory of the United Keetoowah Band of Cherokee Indians and Cherokee Nation in Oklahoma. His other research interests include ecological restoration, intangible cultural heritage, and food systems planning. Previously, Dr. Stevenson has worked for public and quasi-public entities dealing with the implementation and compliance of local, state, and federal legislation in California and has forthcoming work analyzing Diversity, Equity, and Inclusion (DEI) initiatives in planning programs. Dr. Stevenson holds a PhD in City and Regional Planning from Cornell University.

**Ms. Sandy Bishop** is Executive Director of Lopez Community Land Trust. She has served this position for over 25 years. She was a founding board member and the first executive director of the organization. She also served as project manager for five out of six CLT neighborhood developments. Her first affordable housing project was considered the premiere community land trust project on the west coast and was featured in the New York Times in 1993. She has 23 years of project management for local community based developments and is the project manager of five affordable housing neighborhoods. She was honored during the 2010 GreenBuild Chicago conference as the winner of the Home Depot Award of Excellence for Affordable Housing Built Responsibly for her first net-zero housing project Common Ground, a net-zero community utilizing earthen plaster, straw bale construction, rainwater catchment, solar hot water, and grid-tied solar. She has been the guest presenter at the National Housing Forum in New Zealand, Affordable Housing Conference on Hornby Island, BC, and the President’s Symposium on Sustainability at the University of Idaho.

**Ms. Jackie Keogh** is Executive Director of RootedHomes, a community land trust that provides environmentally sustainable and permanently affordable homeownership opportunities for those who contribute to the fabric of the Central Oregon economy and community. For over a decade, Ms. Keogh has scaled grassroots non-profit organizations by diversifying their revenue sources for sustained organizational performance. She began her career on a three-person affordable housing non-profit that grew into a nationally-recognized, regional community development corporation in Massachusetts. Since, she has grown her affordable housing experience at the Portland Housing Bureau and for four years as Deputy Director at Proud Ground – the largest Community Land Trust in the Pacific Northwest. In these roles, Ms. Keogh has engaged with culturally and economically diverse communities to develop community-led strategic, communications, and fundraising plans that are centered in diversity, equity, inclusion, and justice.

**Commented [VW5]:** Please include a brief biography for each investigator listed on the cover sheet of this application that highlights relevant experience in terms of the work proposed. Please use the biographies to illustrate how each investigator’s experience will contribute to the overall collaborative effort. Limit of 250 words per investigator.

**Project Budget**

	<b>Requested from Initiative</b>	<b>Funding Match by:</b> <u>CSDE</u>	<b>Funding Match by:</b> _____	<b>Funding Match by:</b> _____
<b>Salaries</b>				
Faculty	\$35,768			
Staff				
Student				
<b>Benefits</b>				
Fringe Benefits Based on Payroll Load Rate In Effect	\$8,084			
<b>Supplies and Materials</b>				
Supplies, Equipment Under \$2,000, etc.	\$900			
<b>Equipment</b>				
Equipment Over \$2,000				
<b>Travel</b>				
Per Diem Lodging/Meals/Expenses, Air Fare, Mileage, Car Rental	\$248	\$2,000		
<b>Tuition</b>				
For graduate students				
<b>Other</b>				
	\$5,000			
<b>Total Direct Costs</b>	\$50,000	\$2,000		

**Budget Justification**

**Salary**

*Vince Wang PhD* (1.7 Summer months) will contribute expertise on community land trusts, co-develop the interview guide, co-conduct desk-based document review and interviews, provide feedback on qualitative data analysis, and co-develop final manuscript and policy memorandums. Requesting \$19,654 in salary and \$4,442 for fringe benefits.

*Dylan Stevenson PhD* (1.7 Summer months) will contribute expertise on environmental sustainability and qualitative methodology, co-develop the interview guide, co-conduct desk-based document review and interviews, conduct qualitative data analysis, and co-develop final manuscript and policy memorandums. Requesting \$16,114 in salary and \$3,642 for fringe benefits.

**Fringe benefits**

The University of Washington's federally negotiated fringe benefit rate has been applied to salaries at the rate of 22.6% for faculty. Fringe benefit rate will be adjusted as needed when the new amounts are published for the 2024/2025 fiscal year.

**Supplies**

\$900 is requested for professional transcription of 12 60-minute interviews at \$1.25/min. We plan to conduct 8 additional interviews via Zoom using Zoom's transcription function.

**Travel**

\$833 is requested for two-day trip in Lopez Island, Washington for up to six one-hour, in-person interviews. This includes two-day rental of UW's UCAR at \$22.75 per day, \$67.75 round-trip ferry fares, \$90 per diem per person, and two rooms for one night at \$180 per night.

\$1,415 is requested for two-day trip in Bend, Oregon for up to six one-hour, in-person interviews. This includes round-trip airfare at \$180 per person, \$200 per person ground transportation, \$73.75 per diem per person, and two rooms for one night at \$180 per night.

**Other**

\$2,000 is requested for a subcontract to each of partnering CLTs (\$4,000 in total) to support Sandy Bishop and Jackie Keogh's participation in the project. Specifically, both Executive Directors will provide expertise on the operation and management of their respective organizations and feedback on research design (e.g., codebooks, interview guide). They will also support recruitment of informants and reviewing research outputs including manuscript and the program memorandum.

\$1,000 is requested to provide a \$50 honorarium to each informant (up to 20 informants in both CLTs).

**Matching funds:** TBD

**Commented [VW6]:** Detail expenses listed above and explain how funds will be used. For example, please describe how faculty salary is being allocated, purposes and types of supplies, each piece of proposed equipment over \$2,000, the number of proposed trips, travel destinations and purpose, total travelers, "other" expenses, and so forth.

Please describe the source(s) of matching funds if included (and include confirmation as an additional page: a .pdf of an email from the individual making the commitment is sufficient). If other sources of funding are being combined with this award to carry out the proposed research, it is critical to address the ways in which the other funding will be used to complete the study or complement the Population Health Initiative award.

**Budget Justification is limited to one total page.**



**Appendix**

**References:**

1. Berrang-Ford, L., Siders, A. R., Lesnikowski, A..., and Abu T. Z. (2021). A Systematic Global Stocktake of Evidence on Human Adaptation to Climate Change. *Nature Climate Change*, 11, 989-1000.
2. Wilson, R. S., Herziger, A., Hamilton, M., and Brooks, J. S. (2020). From Incremental to Transformative Adaptation in Individual Responses to Climate-Exacerbated Hazards. *Nature Climate Change*, 10, 200-208.
3. Dietz, T., Ostrom, E., and Stein, P. C. (2003). The Struggle to Govern the Commons. *Science*, 302(5652), 1907-1912.
4. Witkin, B. R., and Altschuld, J. W. (1995). *Planning and Conducting Needs Assessments: A Practical Guide*. Thousand Oaks, CA, USA: Sage Publications.
5. Christiansen, L., Martinez, G., and Naswa, P. (2018). *Adaptation Metrics: Perspectives on Measuring, Aggregating, and Comparing Adaptation Results*. Copenhagen, Denmark: UNEP DTU Partnership.
6. Wang, R., Wandio, C., Bennett, A., Spicer, J., Corugedo, S., and Thaden, E. (2023). *The 2022 Census of Community Land Trusts and Shared Equity Entities in the United States*. Working paper. Cambridge, MA, USA: Lincoln Institute of Land Policy.