National Center for Sustainable Transportation

**CALL FOR PROPOSALS FOR**
**2022 UVM FEDERAL RESEARCH GRANTS**

**RFP Issued: November 16, 2021**

**Cover Page Due Date: December 16, 2021**

**Full Proposal Due Date: January 7, 2022**
(proposals will be externally peer-reviewed and decisions made in February 2022 for one-year project starts between May and September 2022)

**INTRODUCTION**
The National Center for Sustainable Transportation (NCST) is a United States Department of Transportation (USDOT) National University Transportation Center. The Institute of Transportation Studies, University of California, Davis (ITS-Davis) leads the NCST in partnership with:

> University of California, Riverside (UCR),
> University of Southern California (USC),
> California State University, Long Beach (CSULB),
> Georgia Institute of Technology (Georgia Tech), and
> University of Vermont (UVM).

The NCST is committed to advancing the sustainability of transportation through cutting edge research, direct policy engagement, and education of our future leaders.

**ELIGIBILE APPLICANTS**
Project awards will be made to individuals or teams of researchers at UVM. **You must be approved to serve as a Principal Investigator (PI) at UVM to apply for an NCST faculty research grant.** Other UVM researchers may be included in the proposal as well; however, the PI remains responsible for the project and submission of the final report. PIs may submit only one proposal in any competition, though they may participate in other proposals as a co-investigator.

**ELIGIBLE PROJECTS**
The goal of the NCST is to produce research that directly supports the efforts of policy makers and professionals to improve the sustainability of the transportation system. Proposed research projects, SEED projects and white paper projects at UVM must fall under one or more of the following **NCST research foci**:

- Environmentally Responsible Infrastructure and Operations
- Multi-Modal Travel and Sustainable Land Use
- Zero-Emission Vehicle and Fuel Technologies
- Institutional Change

Within the NCST team, UVM contributes specifically to the following topics as advised by our external advisors as the NCST was formed in 2013:
- Adaptation planning and resiliency
- Long distance or intercity travel
- Non-motorized transportation
- Vehicle emissions
- Workforce development

Proposals in these areas are particularly encouraged from UVM. Proposers are encouraged to send and discuss a short description of their research project idea with Dr. Britt A. Holmén, NCST's Associate Director at UVM (bholmen@uvm.edu).

Applicants are encouraged to review NCST's current portfolio of research projects https://www.uvm.edu/cems/trc/national-center-sustainable-transportation. Note that UVM's research foci are only a portion of the full sustainability topics covered by the broader research consortium.

Three types of proposals will be considered:
1. **Seed grant proposals** for new ideas that are not well developed but address an important topic with potentially large impact, for a maximum of $23,000 (total costs = direct + indirect costs)
2. **White paper** proposals to synthesize existing evidence and identify research gaps for critical policy questions, for a maximum of $37,000 (total costs = direct + indirect costs). White papers are aimed at a broad audience of professionals and policy-makers. The proposal should include a meeting with policy-makers, researchers, and/or practitioners as part of the white paper development process.
3. **Research Project** proposals by one or more PIs for a particular project, for $85,000 (total costs = direct and indirect costs) for one year.

**BUDGET, FUNDING LEVELS, GUIDELINES, AND RESTRICTIONS**

Funding of 3-4 projects using federal fiscal year 2022 funding is expected. Budgets for project proposals may include salary for one tenure-track faculty member for one half month, staff researchers for up to four months per year; teams of investigators may receive pro-rated shares of these salary levels (e.g., 0.25 months for two tenured faculty or 2 months for each of two staff researchers). Project proposals that include funding for one graduate student researcher for 12-months and the associated UVM tuition will be given preference. If a graduate student is not funded, the PI should discuss other types of student involvement or the reason why student involvement is not appropriate.

An amount not to exceed $4,000 may be included for office/lab supplies and travel support necessary for the conduct of the research and presentation of research findings at one academic or professional meeting. Permanent equipment and international travel are not allowed.

As described below, all proposals must include a Policy and Practice Impact Plan, and PIs are expected to actively participate in the Center's engagement activities. **Project budgets must include researcher time associated with these activities.**

As described below, all funded projects will be subject to federal data management requirements and the NCST data management plan. **Project budgets must include research time associated with preparing data according to these requirements.**

**Full UVM federal indirect charges, at 56% for the main grant award's start date in fiscal year 2018, are applied to all projects.**

**PROJECTS MUST CONTRIBUTE TO MEETING THE REQUIRED 1:1 NON-FEDERAL COST SHARE OF THE USDOT PROGRAM**. Both the Direct and Indirect grant funding must be cost shared. The Budget Justification should clearly document all cost share sources.

**PERIOD OF PERFORMANCE**

Successful applicants for project proposals receive **one-year grants**, with funding provided for the Fall 2022 term or earlier. Project completion dates will be one year from the start date and will end, without exception, before August 31, 2023. As discussed in more detail in the "Reporting Requirements" section below, **each annual grant must produce useful products** including a final research report for the work and a 2-page Policy Brief (see NCST website for examples). **Proposals are not accepted from any PI with outstanding deliverables to the NCST.**

**PROPOSAL CONTENT**

Proposals must include the following:

1) Cover Page – see attached. [Submission due **December 16, 2021**. The Cover Page's list of suggested reviewers will assist in setting up timely proposal reviews.]
2) Title Page and Abstract (not to exceed 200 words)
3) Project Description of proposed research – **not to exceed five pages, single-spaced, with minimum 11-pt font and 1" margins**. Include page numbers on each page. The description of the research **must** include the following subheadings:
    - Project Purpose: Give a brief description (no more than 1 page) of the problem the project will address and state the goals of the project in relation to this problem. For collaborative projects, explain the purpose and value of the collaboration.
    - Relevance to Sustainable Transportation: Briefly describe (no more than ½ page) how achieving the goals of the project will help to enhance the sustainability of the transportation system.
    - Methodology: Give an overview (2-2 ½ pages) of the methodology to be employed and key features of the approach in sufficient detail that reviewers can evaluate your approach. In particular:
        - If the study relies on existing data, describe the data to be used and its sources.

- o If the study involves original data collection, explain the methods for collecting data, including site selection, sampling, and measurement methods (e.g., observations, surveys).
- o If the study involves the development of a model, explain the process for developing as well as validating the model.
- o If the study involves the application of a model, explain the nature of the model in terms of inputs and outputs as well as its internal workings (briefly, in easily understandable terms).
- o If the study involves scenario testing, explain the process for defining the scenarios.
- Task Descriptions: Provide detailed descriptions of each of the distinct tasks of the project (½ – 1 page) and include a Task Schedule.   For collaborative proposals, provide a brief explanation of the relationship of the tasks to the tasks being proposed by collaborators.
- Products and Deliverables: Products and deliverables must include but are not limited to a final research report and 2-page Policy Brief (see below).
- References (not included in the 5 page limit)

4) Policy and Practice Impact Plan – **not to exceed one page, single-spaced, with minimum 11-pt font and 1" margins**. The plan must include the following subheadings:
- Relevant Policies and Agency Activity:  Provide a brief description of the policy landscape and current or anticipated government agency activity relevant to your proposed research here (including regulations, pending legislation/decisions, specific federal agency plans/initiatives, protocols or standards, etc.). Describe the need, opportunity, and/or urgency for science-based input to inform policy or practice development, and the probable impacts your research will have.
- Engagement Strategy: Provide description of how you will communicate the research and engage with policy-makers and /or practitioners to maximize the impact and understanding of your research. Description should include: target audience (e.g. public agencies, industry, environmental NGOs, etc.); engagement activities (e.g. providing briefing(s) to state and/or federal policymakers, presenting via NCST webinar, establishing an external advisory board for your project, presenting at practitioner-focused conferences (please name specific conference), etc.); expected use of the research by decision makers and/or practitioners; and desired outcomes. It is expected PIs will include funding in their budget to support engagement activities.

5) Project Budget and Budget Justification – proposal routing is required, but will be conducted <u>outside of</u> UVMClick-Grants, as these projects are sub-grants to an existing grant.  Faculty should contact Sylvie Butel in CEMS (Sylvie.Butel@uvm.edu) to initiate and develop their internal budgets before the **December 16, 2021 Cover Page** due date.

6) Staffing and Collaboration Plan – not to exceed one page. The plan must include the following:
- Describe the proposed role of each of the research participants, including student participants, including both budgeted and *pro bono* time on the project.

- Describe project-related collaborations with other NCST researchers, researchers at the partner institutions of the NCST, and/or other organizations.
7) 2-page CV for the Principal Investigator(s)
8) Letters of participation, or match funding commitment (if applicable, attached, any number and length). Letters of participation are required for any project that involves data collection from private or public entities, access to private or public facilities, or cooperation of private or public entities.

**PROPOSAL SUBMISSION**

**Proposals may be submitted at any time prior to the January 7, 2022 deadline.** Proposals must be emailed as a single PDF file with filename "**NCST_Proposal _<last-name>**". Email your single PDF proposal file with the correct file name and final budget to: bholmen@uvm.edu and sbutel@uvm.edu.

**The NCST program will reject proposals that: (1) do not conform to eligibility requirements, (2) are incomplete, and (3) do not conform to thematic requirements.**

**REVIEW PROCESS AND SELECTION CRITERIA**

Projects selection will be competitive and based on a peer-review evaluation, programmatic priorities, and prior performance of the PI. Proposals will compete both within topics and across topics. The NCST does not guarantee that proposals will be funded in all topic areas, or that any proposal will be funded. **The UVM total budget per year is limited and only 2-4 sub-projects per year are expected.**

Proposals will be reviewed by at least two qualified individuals, including university researchers, senior research professionals with expertise broadly relevant to the topic addressed by the proposal, and/or transportation practitioners. The NCST has built a list of reviewers with expertise in a variety of fields related to the NCST's research tracks and will draw upon this list in selecting reviewers. In addition, each applicant is required to submit names of four potential external reviewers from four different institutions with their Cover Page. In view of the diversity of potential topics and the diverse backgrounds of the reviewers, **it will be important for the proposal to make its case in terms that can be understood by non-specialists**.

Reviewers will be asked to rate each proposal as "*definitely should be funded*", "*fund if possible*", or "*lower priority funding*", or "*do not fund*" based on ratings on the following criteria, each evaluated on a five-point scale from "poor" to "excellent":
1. Is the topic addressed by the proposal important for environmental sustainability?
2. Does the proposed project fill an important gap in the research?
3. Is the proposed research methodology scientifically sound as well as feasible?
4. Will the research advance professional practice and/or inform decision making related to current policy opportunities?

Associate Director Britt Holmén will make final project selections taking into account reviewer evaluations, programmatic priorities, prior project performance, and funding availability. Other criteria that will also be considered include:

- Student Involvement: Every research project ideally should include funding for at least one graduate student researcher.
- Commitments of participation (if applicable): Any project that involves data collection, access to facilities, or cooperation of a private or public entity must include a letter of participation from the entity.
- Collaboration: The NCST encourages interdisciplinary proposals, proposals involving collaborations across NCST partner institutions, and proposals that involve outside organizations. Such proposals will receive priority consideration.

Should the UVM Associate Director have proposals pending (or a conflict of interest with any PI), NCST Director Susan Handy makes final decisions for Vermont projects.

Some proposals may be funded at a reduced level or funding may be contingent on a revision to the proposal. The external review comments will be provided to the applicant after the announcement of the awards. Grants will not be awarded to PIs with outstanding deliverables (draft or final report; research policy brief) on prior NCST grants.

**LOGISTICS FOR AWARDS**
Funding decisions are expected to take 1-2 months. Once the budget has been approved by NCST and a start date established, work on the project may commence. Projects must be completed within a year of the start date. Only under special circumstances will no-cost extensions be allowed in this final NCST year (2022 awards) competition. PIs must provide reasonable justification to Associate Director Holmén for any delays in the use of the funds, or the funds may revert to the NCST.

All funds will be administered by the subgrant PI's department with a PeopleSoft account assigned to every project for its grant funds and its cost share. Any expenditures, such as payroll, purchase orders, and/or reimbursements, will be processed through the Awardee's home department following established university policies and procedures. Subgrant PIs are responsible for ensuring expenditures and cost share requirements of the federal grant are met. Subgrant expenditures will be reviewed by the main grant PI and the grant administration team at CEMS. **Expenditures that are deemed unallowable are the responsibility of the subgrant PI's home department. The main grant PI will review the subgrant expenditure reports as provided by the CEMS grant team to ensure adequate spending flow and discuss expenditures with the subgrant PI as needed.**

**ADDITIONAL NCST POLICIES**
Researchers supported by the NCST are expected to actively participate in the Center's engagement activities. In additional to activities outlined in a project's Policy and Practice Impact Plan PIs may be called upon to participate in workshops, forums, webinars, briefings, and other events sponsored by the NCST.

Researchers must acknowledge the support provided by the NCST in all presentations and publications resulting from the research, per instructions to be provided to PIs after the grants have been awarded. *A suggested acknowledgment is "This research was funded by the USDOT thru the UTC program, the National Center for Sustainable Transportation, led by UC Davis in partnership with the University of Vermont."*

Results of the project may not be provided to other funding agencies or firms without full disclosure of NCST funding. In turn, the NCST will not knowingly support research that is being funded or proposed for funding in whole or in part by other agencies or organizations without a specific agreement for joint funding. Failure to disclose other proposed or in-hand research funding for a project substantially similar to an NCST project is grounds for termination of an NCST grant. Multiple sponsors are encouraged, but full disclosure is required.

Graduate student contributions to research projects must be acknowledged in any publication resulting from research using NCST funds. Acknowledgment is generally expected to take the form of co-authorship of reports and articles, but could be by footnote depending upon the nature and extent of student contributions. For further information please contact the NCST Director or Associate Directors.

**REPORTING REQUIREMENTS**
The NCST must submit annual mid-year and year-end reports to USDOT. Each report includes a status update on all research projects. The year-end report also must provide data on all students funded by the NCST, and all publications and conference presentations stemming from NCST research. Accordingly, in accepting an NCST grant, the PI agrees to the following:

- **Project Information:** At the outset of the project, the PI agrees to review and approve a Project Information Sheet prepared by NCST staff.
- **Quarterly Progress Reports**: The PI agrees to submit brief quarterly progress reports until the project is completed, as per the *Progress Report* template to be provided. The PI must submit the quarterly progress report to the NCST Program Manager. Progress reports are due on Jan. 15, April 15, July 15, Oct. 15 of each year in which the project is in progress or producing associated publications.
- **Final Research Report:** The PI agrees to complete a *Final Research Report* using the template to be provided, by the project end date in addition to any other products specified. This report will be posted on the NCST website and submitted to the federal database.
- **Policy Brief:** The PI agrees to prepare a 2-page *Policy Brief* that summarizes the findings and policy implications of the project, using the NCST template. The policy brief will be posted on the NCST website. You can view examples of completed policy briefs via this link.
- **Follow-up Reports:** The PI agrees to submit brief follow-up reports for the project every six months until presentations, publications, and indications of use from the research cease.

- **Papers and Reports Produced with NCST funding:** The PI agrees to provide the NCST with copies of <u>all</u> papers and reports produced with NCST funding, including project-related items that are completed after the grant has ended. The PI is encouraged to forward copies of any media produced about the project, include magazine articles and blog coverage, as these can contribute to outreach efforts by the NCST.
- **Student Information:** The PI agrees to provide information on all students engaged on NCST-sponsored projects, whether funded or unfunded.

The NCST will provide information on the required format for progress reports and final summary reports on its web page or via email, and will send reminders to PIs prior to report deadlines. **PIs must be current on all of their reporting requirements before subsequent NCST grants will be awarded to the PI**.

## DATA MANAGEMENT REQUIREMENTS

All UTC programs, including the NCST, are now required to comply with federal data management requirements. Final data from all federally funded NCST projects must be submitted to a data repository that provides public access to that data. As a condition of funding, PIs are required to prepare their data for the repository, including the removal of all personal identifiers as per the requirements of the Institutional Review Board (IRB), conversion to non-proprietary formats, and preparation of meta-data. PIs are directed to the main NCST data management plan.

## FURTHER INFORMATION

For further information, UVM NCST Associate Director Britt Holmén can be reached at bholmen@uvm.edu and NCST Program Manager Lauren Iacobucci can be reached at liacobucci@ucdavis.edu.

For further information on NCST engagement and outreach activities, contact NCST Policy Director Mike Sintetos at mjsintetos@ucdavis.edu

Visit www.ncst.ucdavis.org for information on current projects, center organization, and more.

**COVER PAGE FOR UVM NCST RESEARCH GRANT PROPOSALS**
<mark>2022 RFP Due Date:  December 16, 2021</mark>

**PROJECT TITLE:**

**PRINCIPAL INVESTIGATOR**
**Name**
**Dept.**
**Phone / Fax**
**E-mail**

**OTHER KEY ACADEMIC PARTICIPANTS**
**Name**
**Dept.**
**Phone / Fax**
**E-mail**

**ABSTRACT** (200 word max)

**Key Words** (provide 5):

**Contribution to Sustainable Transportation** (1 sentence):

**UVM NCST Research Foci Addressed** (check all that apply):
- Environmentally Responsible Infrastructure and Operations ☐
- Multi-Modal Travel and Sustainable Land Use ☐
- Zero-Emission Vehicle and Fuel Technologies ☐
- Institutional Change☐
- Adaptation planning and resiliency ☐
- Long distance or intercity travel ☐
- Non-motorized transportation ☐
- Vehicle tailpipe emissions☐
- Workforce development ☐

**Total Direct Cost:** $_____

**Type of Proposal:** ____ White Paper Proposal ____ Seed Grant ____ Research Project Proposal

Is this a collaborative proposal?  If yes, list collaborators and schools:

**Other Funding for the Proposed Research:**
    Source(s):
    Other Proposal(s) status:    ___ funded       ___ under review     ___ to be submitted

**Potential Reviewers**: Reviewers cannot have direct involvement in proposed research and cannot be former students or advisors of the PI(s).  Include <u>at least two</u> from academia; other reviewers can be practitioners from industry, public sector, or non-governmental organizations:

| Name | Title | Institution/Orgn | e-mail address |
|------|-------|------------------|----------------|
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