



### **ECO AmeriCorps Service Year 2021-2022**

Environmental Careers and Opportunities (ECO) AmeriCorps is an AmeriCorps program within the Vermont Department of Environmental Conservation (VTDEC). The emphasis of the program is on building capacity in nonprofit organizations and municipalities throughout rural Vermont communities. Program focus areas include the following:

- engagement, outreach, and education
- improvement of water quality
- protection and restoration of public lands

ECO AmeriCorps is funded in part by an AmeriCorps state grant provided through SerVermont from the Corporation for National & Community Service.

All ECO AmeriCorps members have some college education (preference given to college graduates with a science background) and will receive technical training and mentorship from VTDEC throughout their term of service. VTDEC handles the administrative components of the program, including providing living stipends, health insurance, and monthly trainings to members.

**Full-Time Member Benefits** *Living Stipend: \$17,300 Education Award: \$6,345*

*Other Benefits:* Training, networking opportunities, health care, childcare assistance, program support, mileage reimbursement for ECO AmeriCorps–related travel.

VTDEC administers the member’s living stipend, health care benefits, childcare benefits, time sheets, activity reports, and other AmeriCorps and employee-related benefits and documentation.

Applicant Information		
Name of Organization or Municipality: <b>Rich Earth Institute</b>		
Primary Supervisor Name: <b>Ivan Ussach</b>	Primary Supervisor Title: <b>Executive Director</b>	
Mailing Address: <b>355 Old Ferry Road</b>		
City: <b>Brattleboro</b>	State: <b>VT</b>	Zip: <b>05301</b>
Phone: <b>(802) 490-8853</b>	Fax:	
Email: <b>Ivan@ricearthinstitute.org</b>	Website: <b>www.ricearthinstitute.org</b>	
Sponsoring Organization’s Mission:		
<p>The Rich Earth Institute engages in research, education, and technological innovation to advance the use of human waste as a resource. We envision a world with clean water and fertile soil achieved by reclaiming the nutrients from our bodies as elements in a life sustaining cycle.</p> <p>Through research, demonstration, and education projects, our team strives to illustrate the positive effect of this approach in important areas including water quality, food security, energy use, soil health, economic sustainability, carbon footprint, public health, and emergency preparedness.</p>		

Please provide a brief description of your role at your site:
<p>As the Executive Director of the Rich Earth Institute, my leadership and organizational strengths maintain a high-performance team and a robust platform for educating the public about the possibilities and practicalities of nutrient recycling. Specifically, my role at Rich Earth focuses on coordinating and implementing all aspects of Rich Earth's programs and services, including:</p> <ul style="list-style-type: none"> <li>-Urine Nutrient Reclamation Project</li> <li>-Eco-sanitation portable toilet service</li> <li>-Research partnerships</li> <li>-Pioneering Regulatory Pathways</li> <li>-Presentations for community groups and institutions</li> <li>-Stakeholder engagement events</li> </ul>

What is the title of the position you are requesting? **Research Assistant**

Describe your proposed service position:

-Gain solid knowledge base about potential for eco-sanitation through integrating in all Rich Earth activities such as our technological development, social and agronomic research, educational programs, community Nutrient Reclamation Program, Eco-Sanitation Portable Toilet Service, and public engagement efforts.

-Represent Rich Earth Institute at events, meetings, and outreach efforts in the Windham County Region.

Essential Functions. Functions that the applicant must be able to perform. These may be listed in bullet form:

This position will be tailored to the skill set of the Service Member. Some directions include:

-Assist with testing, fabrication, data collection, and data analysis to support development of proprietary urine collection/treatment/storage technology.

-Help maintain Rich Earth's constant stream of innovation by working with novel and innovative technologies that create measurable environmental impacts.

-Promote safe and efficient tools and educational events that enable new communities to understand and practice nutrient recycling.

-Support Rich Earth's portable Toilet service, public engagement, and network building activities.

Marginal Functions. These are secondary to Essential Functions, may be negotiable, and can be completed as time allows. These may be listed in bullet form:

-Strengthen network with current community program participants (including urine donors, farmers, local leaders and Rich Earth staff Board of Directors) and other key stakeholders (including local leaders in the wastewater, agricultural, and village planning sectors). Events are primarily digital during the pandemic. /// Collect, organize, and manage data by working with spreadsheet calculations and graphing as well as taking notes about the set up and execution of different experiments. //// Assist with peer-review publications based on technical, agronomic, and/or social research and communicate research results to public audiences

Please list any clothing/equipment the member will need that you cannot provide (e.g., hiking boots, waders, rain gear, etc.). As the host site, you are responsible for providing all tools and technical equipment needed for the position (e.g., computer, phone, GPS, etc.).

Appropriate clothing for three seasons (Spring/Summer/Fall) of outdoor agricultural research in the field.

Desired qualifications:

Bachelor's degree or higher in one or more of the following fields: Chemistry, Biology, Research, Water Quality, Engineering, Environmental Science, Ecology, Community Organizing

\*Ability to work with a collaborative team, to take initiative, and to engage in open communication

\*Laboratory or field experience; precise & consistent execution of procedures and data management

\*Commitment to ongoing learning about the field of nutrient recycling and related ideas

\*Computer coding, academic writing, scientific research, or mechanical electronic systems

\*Mechanical or carpentry skills, and familiarity with basic shop tools and materials  
NOTE - The position will be tailored to meet the skill set of the Service Member.

Describe how the position will contribute to the program's National Performance Measures:

1. Number of individuals educated on environmental stewardship; number of individuals with an intention to change behavior
2. Number of miles of trails/streams/rivers improved
3. Number of acres of publicly owned or managed land improved

1. Approximately 300 individuals will be educated through direct engagement in events and the dissemination of educational resources; 50 new urine donors will be added to Rich Earth's community program. Additionally, depending on the feasibility of public events, up to 5,000 individuals will be engaged through Rich Earth's portable toilet service and accompanying education.

2. By diverting around 10,000 gallons of urine from the waste stream, Rich Earth's program prevents roughly 500 pounds of nitrogen pollution and 30 pounds of phosphorous pollution each year. If not reclaimed for beneficial use on local farms, these nutrients would have fertilized over approximately 10,000 pounds of wet algae. Instead, they are used to fertilize 10 acres of hay field in Brattleboro, VT.

3. N/A

### Focus Areas

Provide approximate impact numbers (e.g., miles of rivers treated) in each focus area. Refer to the 2021–2022 Performance Goals document for an explanation on each focus area.

Focus Area	Projected Impact Numbers	
Water Quality Improvement	Miles of river/stream/trail treated and/or improved	410 Miles of CT River
Protection and Restoration of Public Land	Acres of parks or public land treated and/or improved	N/A
Engagement, Outreach, and Education	Number of individuals receiving environmental stewardship education or training	25,000 people engaged

Provide additional information (data, statistics, reports, etc.) that demonstrates the compelling need for the proposed position(s).

A growing network of Vermonters support Rich Earth's efforts to protect our waterways and close local nutrient cycles. This network consists of farms, municipal agencies, academic institutions, public events, media outlets, and legislators. Our work is also directly supported by over 200 regular urine donors and our fleet of urine diverting portable toilets. RichEarth's capacity has been on a constant growth trajectory, beginning with an initial \$1,000 seed grant in 2012. Our organization has since recruited a robust staff team, published many peer-reviewed papers, and built an international presence as experts in the fields of Productive Sanitation and Resource Recovery.

Rich Earth continues to expand our network and design new platforms for public engagement. We know that urine constitutes 80% of the nitrogen and 55% of the phosphorus found in wastewater. In 2020, Rich Earth captured over 10,000 gallons of urine, and diverted over 500 pounds of Nitrogen from the Connecticut River Watershed. Our work has attracted significant federal funding to expand the practice of urine diversion in Windham County. The work of our ECO

Americorps Service Member will directly support all of the activities related to building our regional network, and gathering data about the outputs of our activities.

Describe how the supervisor has adequate time and leadership experience to manage an ECO member?  
Please explain how:

As the supervisor of this service project, Ivan Ussach has adequate time and leadership experience to manage an ECO Americorps member. Ivan has played an active role in supervising Rich Earth's existing service member, Ryan Homeyer, for the 2020 - 2021 term. Our growing team of personnel at Rich Earth will also assist Ivan with managing the training and workflow for our 2021 - 2022 ECO AmeriCorps Service Member. Members of Rich Earth's staff team will also support this service position by representing our organization during AmeriCorps activities across the state throughout the service term. Working with different members of the Rich Earth team will provide opportunities for our Service Member to learn about a wide range of topics including public engagement, project management, science/research, agricultural practices, environmental stewardship, and technology development.

The Rich Earth team has extensive experience providing training to new staff members, and we have developed a functional model for managing our division of labor. As one of Rich Earth's co-directors, Ivan's leadership continues to develop and sustain Rich Earth's daily operations, staff team, public image/branding, 5-year strategic plan, and network of project partners/supporters.

Describe networking opportunities that will be available to the member during service?

As a community-based organization, Rich Earth presents different opportunities for networking and public engagement. Rich Earth's ECO AmeriCorps Service Members develop community relationships across southern Vermont through working with our organization. As part of a collaborative research team, our ECO AmeriCorps Service Member builds relationships with farmers, representatives from installation sites, Rich Earth's institutional partners, local media outlets, and participants at both public and digital events. Specifically, the ECO AmeriCorps Service Member at Rich Earth will have access to networking opportunities as they:

- Represent our team at digital events including webinars, conferences, and meetings
- Help coordinate urine diversion system installations at public and private facilities
- Contribute to organizing Rich Earth's stakeholder engagement events and community outreach
- Be a part of the team that fields inquiries from different groups around the world and represents Rich Earth within our community
- Develop working relations with a high functioning Board of Directors
- Assist with tabling at festivals/public events served by Rich Earth's portable toilet service (on hold due to pandemic)
- Network with the multitude of arenas for additional public engagement in the Brattleboro area as utilized by current Service Member - 350.org meetings, Root Justice Center, classes and workshops, etc.

Does your organization currently host or plan to host a member from a different AmeriCorps program? If yes, explain the duties of the other AmeriCorps position(s).

Rich Earth does not currently host or plan to host a member from a different AmeriCorps Program.

In what ways does your organization support diversity, equity, inclusion, and environmental justice?

The long-term impact of our work advances the global movements for food and water sovereignty by providing resources to communities that enable water conservation and low-cost fertilizer production. On the short-term scale, Rich Earth serves as a hub of information to foster the development of localized nutrient recycling networks, prioritizing community control through feedback systems. Our website's repository of educational documents and videos are available to the public free of charge, including open-access simple technological designs. Almost every day, our staff receives and responds to inquiries from diverse constituents in the global community asking questions about Rich Earth's research and implementation efforts. Our team has also worked to maintain the accessibility of our technology by distributing low-tech household collectionsystems (which we work to make accessible to people of all genders, ages, and abilities) on a donation basis and using grant funding to subsidize nutrient recycling installations.

The service year will begin early-to-mid September 2021 and end in August 2022. We look forward to meeting you!

