

Adaptation Resilience Training (ART) Program 2024-2025, Cohort 5.0

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How to Apply

Below is a description of the available ART positions for 2024-2025, including the job ID number for that position. **The full description for each position is available only on CampusBridge.**

1. **Step one:** review the ART positions document and find the positions that interest you.
2. **Step two:** go to the Student/Alumni job board on [CampusBridge](#).
 - a. ART projects will also be available on the Arts Work Experience and Science Internship program job boards, for students interested in co-op. You can apply through any of these postings.
 - b. You can login to CampusBridge using your UofA credentials, or create a Guest Login if you are not a UofA student
3. **Step three:** input the job ID for the position you're interested in the search bar on the right-hand side, underneath where it says "Enter the job ID you are searching for."
4. **Step four:** Read more about the position, and apply through the job posting directly.

Position: ART Project Assistant: ANSN Climate Adaptation Strategy - Culture and Food

Host Organization: Alexis Nakota Sioux Nation

Job Posting ID (CampusBRIDGE): 79019

Location: Alexis Nakota Sioux Nation - hybrid

Position Description: In 1877, Chief Aranazhi signed Treaty 6 at Fort Edmonton, marking the beginning of a long and challenging relationship between the British Crown/the Government of Canada and Native peoples. This relationship has often seen the Traditional Territory and Treaty Rights of the Alexis Nakota Sioux Nation (ANSN) relegated to a lower priority in favor of economic and political growth within Treaty Six. This has led to the destruction of Treaty Lands for profit and an increased risk associated with anthropogenic climate change and competing land-use. Despite these challenges, ANSN has gradually gained access and opportunities in modern society. However, they often follow progress models rooted in colonial systems, which are increasingly recognized as failing humanity. In an uncertain climate future, it is crucial for ANSN to research, analyze, and plan for climate change-related risks and opportunities to achieve sovereignty and contribute to innovation efforts to create climate adaptation strategies for the future of Alberta.

In 2023-2024 ANSN WSCI began the development of a Climate Adaptation Strategy focused on 4 themes: water, energy, food, and culture. Two themes, water and energy were completed in 2024. Building upon this previous work, the successful candidate would focus on the theme of food within the ANSN Climate Adaptation Strategy.

The successful candidate will assist Dr. Hughie Jones in conducting an academic literature review focused on food balance and availability, economics of food, politics and Treaties, rights, and risks and opportunities relating to food systems. The successful candidate will be responsible for creating a data analysis plan, and conducting data analysis. The successful candidate will help organize, analyze, and visualize existing datasets, novel datasets, academic sources, and local traditional knowledge relating to food systems and climate adaptation, and will synthesize this information into a co-authored guiding document that will be used to inform ANSN's strategic projects for years to come. The successful candidate will also conduct four Community Presentations to share the findings and data from the research.

Position: ART Project Assistant: Understanding Climate Change in Athabasca Headwaters and Adaptation Needs of Downstream Users

Host Organization: Athabasca Watershed Council

Job Posting ID (CampusBRIDGE): 79021

Location: Remote, some opportunities for in person activities

Position Description: Over 50% of the flow of Athabasca River originates in its mountains headwaters, an area expected to see accelerating impacts from climate change in the coming decades. The Athabasca Watershed Council is seeking an individual to help gain a better



understanding of 1) how climate change is affecting Athabasca River headwater flows (from glaciers, snowpack, and precipitation); 2) how this might be affecting downstream urban, rural and Indigenous communities and industries in achieving the Water for Life goal of reliable water supplies; and 3) what communities and industries need to do to adapt and be resilient to these changes, over the next several decades.

The successful candidate will be responsible for conducting a literature search of climate change studies and reports specific to the Athabasca headwaters from which they will create an annotated bibliography that will outline topics such as glacier melt, changes to snowpack and precipitation patterns, and how climate change might impact reliable supplies in the Athabasca watershed. The successful candidate will additionally be responsible for summarizing data and knowledge relating to the current and future water supply and demand by municipalities in the Athabasca watershed, and for researching how these municipalities and industries have become more resilient by adapting to changes in water supply.

The successful candidate will synthesize the research in a report and PowerPoint presentation to be shared with Athabasca Watershed Council's Board of Directors and partners, including recommendations for communities and industries on how to become more resilient by adapting to predicted changes to water supplies in the future.

Position: ART Project Assistant: Bow River State of the Watershed Report - Understanding Climate Risks in the Basin

Host Organization: Bow River Basin Council

Job Posting ID (CampusBRIDGE): 79022

Location: Calgary, hybrid

Position Description: The Bow River Basin Council (BRBC) is undertaking a State of the Watershed (SOW) assessment for the Bow River Basin (watershed). This is an ongoing project that will be completed in multiple phases, integrating SOW assessments for all sub-watersheds in the basin, and assessing the State of basin-wide parameters. We have a full chapter dedicated to climate change and adaptation across the Basin. This chapter summarizes current models/predictions of climate changes within the basin, a literature review and summary of the current scholarly research as well as policy related to climate change adaptation and mitigation in the basin, and a communication aspect telling stories of on-the-ground adaptation work by our partners across the watershed.

Building upon previous work, the successful candidate would assist with conducting a basin-wide inventory map of climate risks and vulnerabilities, in collaboration with partners across the Bow Basin. This mapping exercise will be used in the online SOW report (integrating in using ArcGIS Online Experience Builder), and inform the next phase of a basin-wide climate adaptation plan. A comprehensive map of climate risks is needed to inform longer term adaptation planning in our watershed.

The successful candidate will be responsible for conducting an initial literature review and data scan of methods for climate risk mapping, collaborating with stakeholders across the watershed,



and working with a sub-committee of topic experts to ensure variables used in the analysis adequately reflect the associated climate risks. Additionally, the successful candidate will host a series of workshops to gather feedback on results and to inform the analysis.

Position: ART Project Assistant: Climate and Health Adaptation Networking in Alberta (CHANA)

Host Organization: Climate Change and Health Hub, University of Alberta

Job Posting ID (CampusBRIDGE): 79024

Location: Edmonton, hybrid

Position Description: The work undertaken by the successful candidate will help mobilize goals of the newly launched Climate Change and Health Hub, including increasing awareness, creating a community of practice, and fostering action on climate change and health adaptation in Alberta. The successful candidate will advance work in two key areas: 1) collaboration, and 2) education and outreach. They will mobilize knowledge, shape climate-health policy, and enhance the culture of adaptation in Alberta. This project will amplify existing climate change adaptation efforts and encourage innovation and collaboration in Alberta.

The successful candidate will help to design and implement an action-oriented climate change and health adaptation seminar series to connect public health practitioners, NGOs, and community groups across Alberta and mobilize transdisciplinary knowledge to drive change across Alberta. Additionally, the successful candidate will work with health professional program instructors and faculty to develop a climate-health adaptation curriculum toolkit to integrate climate-health adaptation knowledge into courses. The successful candidate will work with partners in Alberta to bring a health-lens to their current climate change adaptation initiatives and activities by creating an online knowledge exchange hub, and will support and facilitate hands-on climate-health adaptation lessons offered to Elementary, Junior High and High School students in Edmonton. In addition, they will deliver workshops to climate change adaptation relevant community organizations and be responsible for creating social media campaigns, including news briefs and fact sheets. The successful candidate will also help to develop a strategy for evidence-based climate-health policy advocacy.

Position: ART Project Assistant: Synthesizing Research on Prairie Organic Farming Best Management Practices for Climate Resiliency

Host Organization: Organic Alberta

Job Posting ID (CampusBRIDGE): 79030

Location: Edmonton, remote or hybrid

Position Description: In Alberta, agricultural research is conducted by a number of organizations and institutions, from universities and colleges to applied research associations and sector-specific commodity groups. There is no single organization dedicated to organic agricultural research. Instead, each organization conducts sporadic research related to organic production practices, which results in research findings being widely dispersed across multiple locations and over time. No repository currently exists to house organic-related research. As such, organic producers are often unable to locate pertinent research on best practices in organic systems to adapt and increase resilience to climate change. This project will compile



and synthesize research from the Prairies that is of relevance to organic producers in relation to climate change adaptation.

The successful candidate will work with researchers from various institutes including universities, living labs, and commodity groups to identify adaptation and resilience projects relevant to organic farmers, and will review agricultural research to create a repository of climate adaptation and resilience research studies relating to organic agriculture. They will create a repository of publications and projects, and will synthesize the results of the research in a published document intended for the audience of organic farmers. The successful candidate will additionally develop 8 podcasts used to deliver the synthesized research results in a palatable format to organic farmers and others, and will assist in outlining the content of the podcasts, identifying individuals and/or organizations to interview, and may help host the podcast.

Position: ART Project Assistant: NAIT Centre for Data Management and Visualization - The Northern Landscapes Sensitivity Atlas

Host Organization: NAIT Centre for Data Management and Visualization

Job Posting ID (CampusBRIDGE): 79026

Location: Edmonton, hybrid

Position Description: The Northern Landscape Sensitivity Atlas project is developing a geographic information system (GIS), web-based platform that incorporates a host of local, regional, national, and international datasets where intersections of the natural, social, and built environments can be visualized, overlaid, and compared. The objective is the design and development of a scalable and integrated map-based data visualization tool that combines multiple datasets from an array of topics and a host of institutional silos into one centralized resource. This tool provides a whole-of-society representation of the land from regional to local scale, that will inform decisions in policy-making and planning, as well as prioritization and resource allocation for development and remediation projects.

The successful candidate will help with the final Design Phase of this three-year pilot project. The Design Phase involves the development of the Northern Landscapes Sensitivity Atlas's (NLSA's) User Interface and User Experience (UI/UX) and will be informed by Indigenous community-led approaches and perspectives on the representation of spatial data. In preparation for the final handover of the project to our research partner, the Sahtú Renewable Resources Board (SRRB), the NLSA will be hosted on their newly established ArcGIS Hub geospatial web-portal. Data and content discovered and processed during the previous two project phases will be migrated to this Hub site, and equipped with custom-designed search, filter, query, and analysis functions. Finally, through the ESRI ArcGIS Online suite of software applications (StoryMaps, Dashboards, Instant Apps, etc.) curated data visualizations and data storytelling applications will be created to share engaging multimedia stories both internally and with the wider public about the people of the Sahtú and their histories and their knowledge, whilst asserting their presence on the land, and their stewardship of the landscape.

The successful candidate will have opportunities to collaborate with the SRRB, community knowledge holders, collaborating governments, consultants, and post-secondary researchers, and will assist in coordinating collaborative support for the NLSA with Capstone Student project groups from NAIT and SAIT.

Position: ART Project Assistant: Climate Adaptation Outreach Advisor

Host Organization: Parkland County

Job Posting ID (CampusBRIDGE): 79028

Location: Stony Plain, hybrid

Position Description: In June 2024, Parkland County Council approved a proposal to action a Parkland County Climate Adaptation Plan. This project will be one of the initial stages of the Climate Adaptation Plan. The successful candidate will be responsible for supporting one of the initial deliverables of the project, a Climate Adaptation Engagement and Outreach Plan. The position will play an important role in advancing climate resilience action at the corporate, staff, and community level and overseeing initiatives that propel forward the County's commitment to a more resilient and sustainable future.

The successful candidate will be responsible for researching and developing a rurally focused, locally relevant climate adaptation awareness presentation and delivering it to youth groups (e.g., schools, clubs) in the region, as well as developing an adaptation information booth and materials for Parkland County's Pond Days event. The successful candidate will create and maintain an internal Climate Adaptation Community of Practice interactive Teams chat, and will be responsible for updating staff on key climate resilience training, adaptation plan project updates, and other relevant best practices relating to adaptation and resilience. They will additionally update the Parkland County "Climate Change" website with general information and climate impacts based on the Edmonton Metropolitan Region Board's 2023 Climate Resilience Study: From Risk to Resilience and the Parkland County Newsletter.

Participation in and delivering of additional research and/or briefing duties as required, and attendance at regional climate adaptation-focused committees with the Manager of Environment.

Position: ART Project Assistant: Advancing Low-Tech Process-Based Riverscape Restoration in Alberta

Host Organization: Trout Unlimited Canada

Job Posting ID (CampusBRIDGE): 79029

Location: Calgary

Position Description: Recent studies suggest that two headwater streams in the Bow River basin "currently support a small fraction of their total beaver dam capacity, indicating that human activities have degraded stream habitat over time, and restoration is needed to encourage beavers to build more dams" (Cherie Westbrook, 2023). Similar work suggests this issue is widespread.

Research suggests that beavers could play a pivotal role in climate change adaptation by easing drought conditions, reducing the impacts of wildfire, buffering the effects of floods, creating fish habitat, storing carbon, and improving biodiversity. To address this, Trout Unlimited Canada has added the principles of Low-Tech Process-Based Restoration (LTPBR) to our stream restoration work to improve ecosystem function and health. LTPBR has emerged as a promising field within the stream restoration community with demonstrable positive impact in the

western USA but is just starting to gain momentum in Alberta. LTPBR projects aim to mimic and promote beaver activity by building complexes of beaver dam analogues (human-made beaver dams) and other similar woody debris structures in small streams. Adding "structure" in the form of woody debris forces complexity in riverscapes that have been structurally starved due to land use and the loss of beavers. Not only does this work improve native biodiversity but it improves the resiliency of riverscapes and the fish and wildlife that these systems support. This is becoming increasingly important to help both humans and wildlife adapt to climate change as stochastic events such as flood, drought, and fire are becoming more intense and occurring more frequently. While TUC can continue to carry out LTBPR work, true and meaningful change will require scaling this approach up to a watershed or landscape level. This requires buy-in from landowners and agricultural producers, rural municipalities, and provincial public land agencies as well as training and capacity building among NGOs and restoration practitioners.

The successful candidate will build upon previous work and will assist in outreach related to LTBPR work, workshop planning and delivery, and communications to continue to develop a community of practice and more "champions" to advance climate adaptation in rural landscapes. The successful candidate will be responsible for identifying opportunities to connect with various watersheds, landowners, agricultural producers, rural municipalities, and provincial public land agencies to increase support for and implementation of LTPBR, and will develop assets for use in print and digital media that demonstrate the effectiveness of LTBPR and share these with various audiences. Building upon previous workshop sessions, the successful candidate will be responsible for organizing and implementing a series of online and in-person workshops, as well as updating Trout Unlimited's Stream Rehabilitation Training program to include LTPBR principles and resources. The successful candidate will also support Trout Unlimited Canada with ongoing LTBPR project planning including project proposals, stakeholder engagement, and site identification.