



Nature and Human Health Utah  
Landscape Assessment  
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**Background**

There has been a societal shift from spending time outdoors to a more indoor-oriented and sedentary lifestyle, resulting in a disconnect between humans and the natural world. This disconnect is a result of interrelated individual and societal barriers and drivers of this disconnection which includes philosophical, sociocultural, institutional, political, material, experiential, cognitive, and emotional factors.<sup>1</sup> Another important barrier to mention is inequitable access to nature for underserved and marginalized communities. People of color are 74% more likely to live in an area that is nature deprived.<sup>2</sup> This growing disconnection poses challenges for both human health as well as the health of the environment. Evidence highlights the importance of spending time in nature, as it offers an array of mental health benefits, including exposure a reduction in symptoms of anxiety and depression, and enhancement of overall mental well-being.<sup>3</sup> Physical, cognitive, and social benefits also result from spending time outside.<sup>4</sup> Additionally, studies indicate that time spent outside in “wild nature” throughout childhood result in positive environmental attitudes and behaviors in adulthood.<sup>5</sup>

Increasing demands on the healthcare system in the United States has precipitated calls for innovative approaches to the prevention and treatment of chronic illnesses. A growing body of research supports nature as a viable particularly regarding mental health.<sup>4,6-9</sup> However, much about how nature exposure affects human health must still be explored, including the definition of nature, the type of nature with which to engage, the amount of time needs in nature for better health outcomes, who does and does not have ready access to nature, and how to best integrate nature into healthcare delivery systems. A major question concerns social issues, as underserved individuals and communities are disproportionately negatively affected.<sup>10</sup> Lack of answers to these questions has made incorporation of it into standard medical practice has been slow.

With the escalating risk of climate change, rising chronic illnesses, and declining mental health, it is crucial to better understand and communicate the intricate connections between our well-being and the environment, and encourage more outside time for everyone.

**Nature and Human Health Utah**

In 2019, [Nature and Human Health Utah \(NHH-UT\)](#) was formed to address these issues and enhance and communicate knowledge about nature and human health in Utah. The group has articulated mission and vision statements (see Appendix x). The organizational structure consists of three co-leaders (University of Utah (UU) faculty and an educational/conservation organization (Tracy Aviary)), a Program Manager and Program Assistant, and non-paying membership. Funds are administered through the UU Department of Parks, Recreation, and Tourism; it does not hold an independent non-profit status, but can accept donations through the fiscal sponsor. Financial support from an anonymous donor and the REI Cooperative Action Fund has enabled the creation of an arena for exchange of information and inspiration; pilot grants for research on nature and human health, and the opportunity to connect with national efforts in this area.

## **Purpose of Landscape Assessment and this report**

A central precept of NHH-UT is to avoid being redundant or competitive with the efforts and activities of existing groups working in nature and human health. An initial task was to learn about ongoing efforts and identify gaps in the resources and capacity in the field of nature and health, specifically in Utah and the Salt Lake Valley. We conducted a landscape assessment of individuals, organizations, and institutions in the Salt Lake Valley. This report will be used to contribute to NHH UT's strategic plan, and to inform NHH-UT leadership, its members, and other individuals and groups concerned with nature and human health about existing efforts and gaps in this area.

## **Methods**

### Membership Survey

In Spring 2023, there were 209 members who had subscribed to the informal NHH-UT mailing list, of these 209 members, 40 were identified as 'active members,' due to their consistent involvement in NHH-UT efforts through attending events, sharing events and opportunities, and expressing interest in greater involvement in NHH-UT. Despite a substantial and growing membership, NHH-UT lacked information on members' characteristics, existing resources, and needs. NHH-UT co-leaders and program manager created a survey to answer these questions. The survey consisted of 11 questions with a mixture of short answer and multiple-choice queries that addressed two topics: 1) what members hoped to get out of their involvement, and 2) what they would like to see on the website. Survey respondents were given the option to share context with their answers. It was distributed to 209 email addresses via MailChimp and later re-shared multiple times through the mailing list and newsletter as well as during a membership meeting. Analysis of results took place in June 2023 through reviewing Mailchimp statistics and translating the information given in the summary of results into appropriate graphs and infographics.

### Interviews

To gain deeper insights from people and organizations that were not currently associated with NHH-UT, as identified in a membership inventory (government, health, environment, recreation, and EDI), the Program Manager conducted interviews with organizational representatives. In May 2023, email invitations were sent to 50 organizations. Of these, 29 interviews were conducted (27 in person, two interviews remotely). These interviews were centered around a set of six questions that addressed the scope of work and potential supportive roles that NHH-UT might play (Appendix II):

The Program Manager reviewed notes and summarized key points after each interview. The summary was then sent to the interviewee to ensure accuracy of the notes, any feedback that required changes to the notes was accounted for. After completing all interviews, each summary was revisited and reread to identify recurring themes and patterns in the overall landscape. For questions concerning "challenges and gaps," keywords were extracted from each interview and compiled and categorized into a comprehensive list. For questions concerning suggestions for NHH-UT, responses were collected and tallied in a tracking sheet, which were categorized into 7 categories. Some interviewees provided more than one suggestion.

## Results

### Membership Survey

We received a response rate of 10% out of our larger 209 membership pool. Of our “active members” (40), the response rate was 52%. Respondents included leaders from non-profit organizations, ecologists, therapists, representatives from the University of Utah and U Health, local volunteers, and students at the University of Utah (Appendix III).

The greatest interest in NHH-UT was to provide connections among groups and expertise, in the form of providing opportunities to collaborate on projects and programming (85%), respondents also desired networking opportunities (71%), and would like for NHH-UT to provide resources and information about the connection between nature and human health (62%). Most respondents (62%) wished to be involved with NHH-UT to enhance accessibility to nature for all people (Fig. 1).

Respondents were primarily interested in access to toolkits, educational resources, and an events calendar (71%) on the NHH-UT website. They also expressed interest in academic articles (57%) and information about pilot grants (52%). Additionally, one contextual answer provided for this question indicates an interest in NHH-UT providing a clearer description of the group and its long- and short-term goals (Fig. 2).

Members also expressed, in short-answer comment areas, their interest in better understanding what NHH-UT does (mission, vision, scope of work). Additionally, many respondents would like to engage with leaders within black, indigenous, people of color (BIPOC) communities, both in member meetings as speakers, and as ongoing collaborators.

### Interviews

#### Participants

Organizations represented in the interview portion of the landscape assessment include nonprofit organizations, University departments, Health-related organizations (both medical and preventative health), recreation-centered organizations, EDI (equity, diversity, and inclusion)-focused organizations, environmental organizations, and government agencies/policy-oriented organizations (Appendix IV).

After reviewing notes from each interviews, the current landscape showcased 4 areas of concern and focus:

- 1) Underserved Communities:** A significant emphasis was placed on underserved communities in Salt Lake City, especially those residing on the westside. These communities are disproportionately affected by environmental hazards, particularly air pollution, due to the industrialization in that area. This issue is a pressing concern as it impacts the health and well-being of the residents. Additionally, it was voiced that there is an inadequacy of parks in comparison to the local population, especially on the westside. This scarcity of green spaces is a matter of concern, compounded by the fact that many individuals report not feeling safe in the parks within these underserved areas. Safety concerns further restrict access to nature and outdoor activities for the local population.

- 2) **Lack of Cross-Sector Collaboration:** While there is evident collaboration within specific sectors, there is a notable lack of cross-sector collaboration. This fragmentation hinders comprehensive efforts to address nature and health issues in an interdisciplinary manner. Enhanced collaboration between sectors is essential for fostering effective and sustainable solutions.
- 3) **Active Transportation:** Active transportation is a major area of focus within the current landscape, specific to nature and health efforts. Many initiatives currently exist to create better infrastructure for bike lanes and increase access to public transportation. The primary goal is to reduce carbon emissions from cars, contributing to a healthier environment and improved public health through increased physical activity.
- 4) **Barriers to Nature-Based Programming:** There is a substantial interest in implementing nature-based programming, particularly in Title 1 schools. However, a critical barrier to these initiatives is the lack of sufficient funding. More specifically, there is a lack of busses and bus drivers to be able to transport children from school to a nature-based program.

#### *Challenges and Gaps*

The predominant challenge and/or gap identified during the interviews was equity, diversity, and inclusion (EDI) issues in the context of outdoor accessibility, equitable outdoor access, environmental concerns impacting west-side residents, and the need for more advocacy concerning EDI nature-related matters. In addition, organizations struggle with multiple capacity-related issues, including insufficient staffing or high staff turnover, inadequate funding, and reduced capacity for cultivating relationships and collaborative initiatives. Transportation surfaced as another significant challenge/gap, encompassing both the absence of public and active transportation options and decreased accessibility to green spaces due to transportation-related constraints. Notably, transportation posed a substantial barrier to implementing youth and school programs specifically in Title 1 schools and other underserved populations, where nature-based programming is most needed. Lastly, policy and education were identified as coexisting challenges/gaps, which included both the lack of policymakers championing nature and health-related initiatives and a lack of education pertaining to policy-related issues. Save Our Canyons, one of the interviewed organizations, emphasized:

“...there is not a policy advocate in the realm of nature and health who is working during legislative sessions and lobbying for/against bills.”

#### *Suggestions for NHH UT*

Moving forward, participants of the interview portion of the landscape assessment were interested in seeing NHH-UT focus on 7 main areas: networking, nature-based programming, research, education, technical assistance, mental health, and policy (Fig. 3) During the interviews, networking opportunities included (but were not limited to) coalition building, initiating collaborative projects, and informal networking events. Nature-based programming included both the initiation of new programs dedicated to increasing accessibility to the outdoors and taking youth/adults into nature, as well as supporting organizations that are already doing nature-based programming with capacity-related issues. Research included both the generation of new research projects to better understand the health benefits of spending time outside, and disseminating research to non-profits, policymakers, and the lay public to better inform nature-based initiatives and preventative health efforts. Educational efforts were

primarily focused on stewardship, how to recreate responsibly, and informing more people on the health benefits of spending time outside.

### **Discussion**

The results from the landscape assessment affirm the need for a collaborative and interdisciplinary arena in the realm of nature and health to increase equitable access to nature, develop innovative ways for promoting preventative health measures through nature, and increase pro-environmental behaviors through connecting more people to nature. The current landscape lacks cross-sectoral collaboration, a gap that NHH-UT aims to fill with its unique positioning at the University of Utah with access to all six sectors involved in this landscape assessment.

The top priority that emerged from this assessment both in the survey and interviews, is providing collaboration and networking opportunities for our members as well as our partners. Second was disseminating research and nature and health information to the lay public and community leaders. Lastly, participants of the interviews were interested in NHH-UT generating new research projects.

Although many representatives were interested in the implementation of more nature-based programming, NHH-UT does not currently have the resources to implement such projects, but it does have the capacity to facilitate partnerships and be a catalyst for collaborative projects through connecting organizations to one another, sharing evidence-based research to justify funding approval, and providing technical assistance in creating those outdoor programmatic initiatives.

NHH-UT is also well positioned to disseminate research and conduct new research projects in nature and health. The dissemination of scientifically sound information on nature and health has the potential to change policy, increase funding, and shift narratives surrounding preventative health in western medicine. NHH-UT has the responsibility to share the research by translating the data and findings in a way that is accessible for a layperson and community leaders. Additionally, with NHH-UT's funding for pilot grant projects, it is an additional responsibility to ensure those who are awarded these funds are specifically looking into innovative ways to increase access to the outdoors and connect underserved communities with opportunities to spend time in green spaces.

The landscape assessment has given many insights showcasing a path forward, but there are still many unanswered questions. First, due to the absence of EDI-focused organizations in the interviews, it is imperative for NHH-UT to engage with and prioritize marginalized voices and indigenous knowledge in the field of nature and health. Furthermore, as recommended by multiple interviewees, the creation of an Advisory Board can offer guidance and strategic insights by leveraging the expertise of a diverse group. The opportunity exists to establish this board from those who participated in the landscape assessment interviews. Lastly, the intentional choice during the landscape assessment was to focus on community efforts, rather than engaging with academic institutions. However, looking ahead, it's crucial to involve and gain perspective from various academic institutions and departments, both at the University of Utah and beyond. This effort will showcase opportunities for research partnerships and educational collaborations, enriching NHH UT's knowledge foundation.

Furthermore, deepening engagement with current collaborators can strengthen existing partnerships and fulfil the expectation of NHH-UT to be a clearinghouse for information and a conduit for networking and initiating collaborative projects. Lastly, NHH UT should apply the lessons learned from the landscape

assessment to inform its strategic planning, ensuring that community-informed decisions and collaboration remain at the heart of its mission.

### **Conclusions**

NHH UT plans to share the landscape assessment with key partners and members of NHH UT to ensure our findings coincide with the expectations and desires of those who participate in the landscape assessment.

NHH UT will then create and implement a strategic plan in January 2024. Based on the results of the landscape assessment, the strategic goals of NHH-UT are:

- NHH-UT should be a *networking hub* that connects people within NHH-UT and in the field of nature and health.
- NHH-UT should *disseminate* NHH information and opportunities (e.g., papers, articles, presentations, op-eds, reports, briefs)
- NHH-UT should *engage in research* directly and indirectly (e.g., pilot grants, conference presentations, collaborations with other researchers, publish papers)
- NHH-UT should *develop* and sustain the organizational capacity to serve Utah, our membership, and the world at large.

### **Acknowledgments**

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## Figure Legends

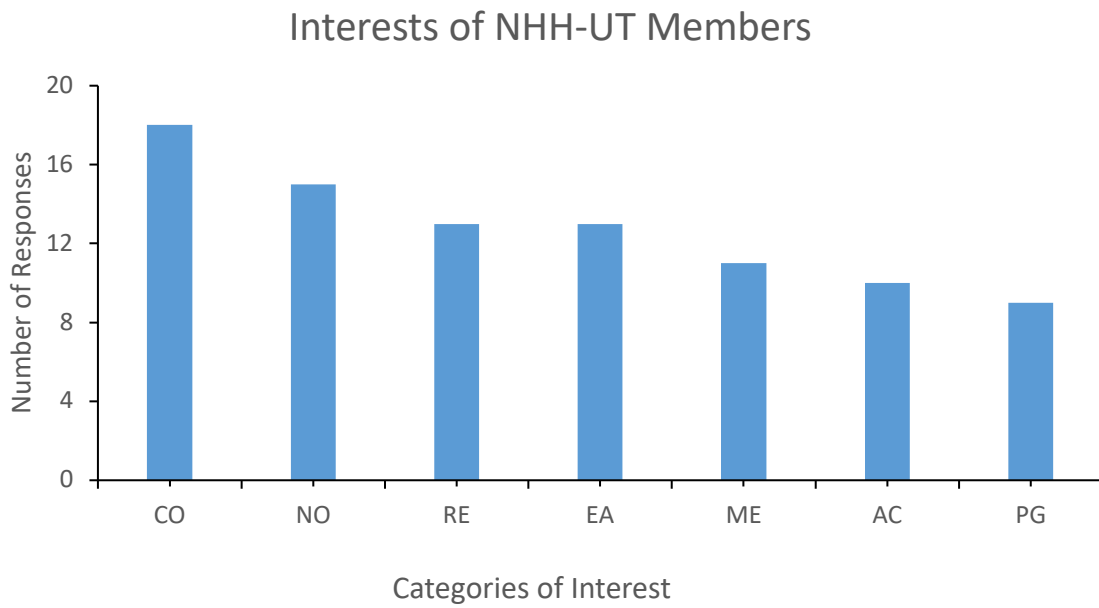
Figure 1. Interests of survey respondents most interested in NHH-UT (22), as indicated by the number of respondents who chose each category. Categories included opportunities to collaborate on projects/programming (CO), networking opportunities (NO), resources on nature and health (RE), enhance accessibility of nature for all people (EA), attend membership events (ME), participate in annual NHH-UT conference (AC), apply for, and implement NHH-UT grants (PG).

Figure 2. Preferences of survey respondents most interested in NHH-UT (22) for website content. Categories included toolkits/educational resources (TE), events calendar (EC), academic articles (AA), information on pilot grants (FO).

Figure 3. Future Directions for NHH-UT was derived from the interview portion of the landscape assessment, in question 5, What types of projects would you like to see NHH UT doing in the community? What areas do you suggest NHH-UT focus on? After each interview, interviewer wrote a summary of the notes, and tallied the suggestions given by interviewee. Some participants of the interviews gave multiple suggestions, hence the number of suggestions exceeding the number of interviews. Categories included networking/coalition building (NE), research (RE), nature-based programming (NP), technical assistance (TA), educational programming (EP), policy advocacy (PA), and mental health (MH).



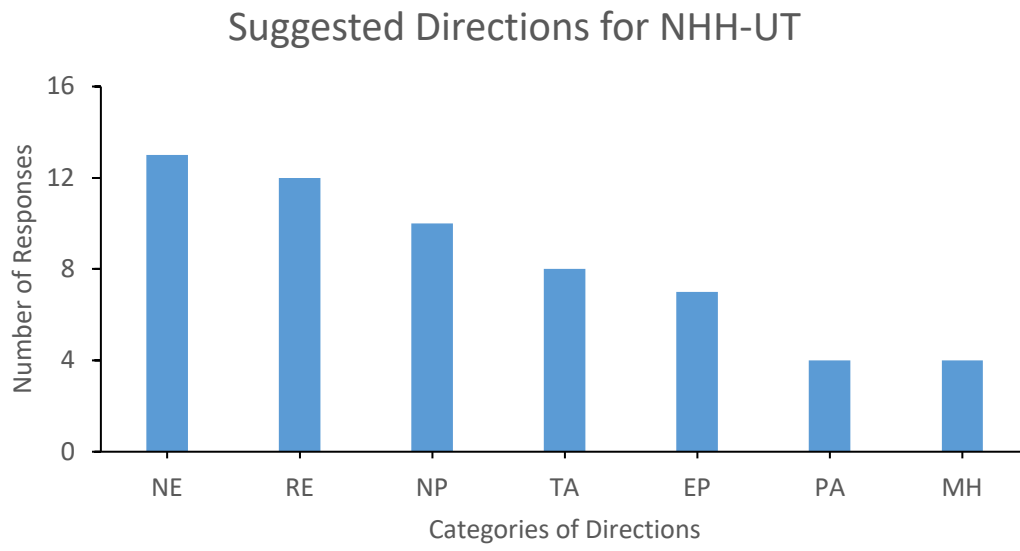
**Figure 1.**



**Figure 2.**



**Figure 3:**



## Appendix I. Nature and Human Health Utah Mission and Vision Statements

Mission: To articulate and foster critical links between nature and human health by providing a collaborative arena in which representatives of diverse societal sectors can equitably engage, share ideas, formulate actions, and implement solutions.

Vision: NHH UT Vision Statement

All Utahns understand the critical links between people and nature and help to ensure those critical links are accessible to everyone in our community.

## Appendix II. Interview questions

1. Provide an overview of your organization and its mission,
2. Describe the work that your organization does in relation to the general field of nature and human health.
3. What are the primary gaps or challenges that your organization currently experiences related to nature and human health? If your organization does not specifically address nature and human health, what gaps do you see in this field in the SLC area?
4. In what ways do you envision NHH UT supporting your organization's goals and objectives?
5. What types of projects would you like to see NHH UT doing in the community? What areas do you suggest NHH-UT focus on?
6. Whom else (organizations, individuals, institutions) do you suggest we contact? Please provide introductions, if appropriate.

## Appendix III. Survey Respondents

- Association of Nature and Forest Therapy- certified guide; Quiet Oak Nature Therapy- owner, guide
- Audubon Society Member, Tracy Aviary volunteer, Tree Utah volunteer
- HEAL Utah, Executive Director
- Healthy West Valley Committee, Chair, and Co-Founder
- LiveAstonished.org, Managing Director
- PhD student in PRT
- Sageland Collaborative, Ecologist
- Save our Canyons
- Tracy Aviary, Director of Education
- TreeUtah, Executive Director
- University Neighborhood Partners
- University of Utah, College of medicine
- University of Utah, College of Social Work
- University of Utah, Parks, Recreation, and Tourism
- University of Utah, Sculpture Intermedia
- Wilderness Guides Council, Co-Executive Director

## Appendix IV. Organizations Represented in Interviews

- Bike Utah
- City of Millcreek, Millcreek Promise
- Department of Health and Human Services
- Department of Public Lands

- Division for Outdoor Recreation
- Get Healthy Utah
- Healthy Environment Alliance of Utah
- Huntsman Cancer Institute
- Intermountain Community Health
- Kem C. Gardner Policy Institute
- Ogden Nature Center
- Save Our Canyons
- Summit County Health Department
- The Nature Conservancy
- Trails Utah
- TreeUtah
- University Neighborhood Partners
- University of Utah Health WISE Program
- Utah Clean Energy
- Utah Physicians for a Healthy Environment
- Wasatch Community Gardens
- Wasatch Mountain Institute
- Wildlands Network