NEARBY NATURE
FOR HUMAN HEALTH
SITES TO SYSTEMS

Nature Sacred

By Kathleen L. Wolf, Ph.D.; Weston Brinkley, M.U.P.
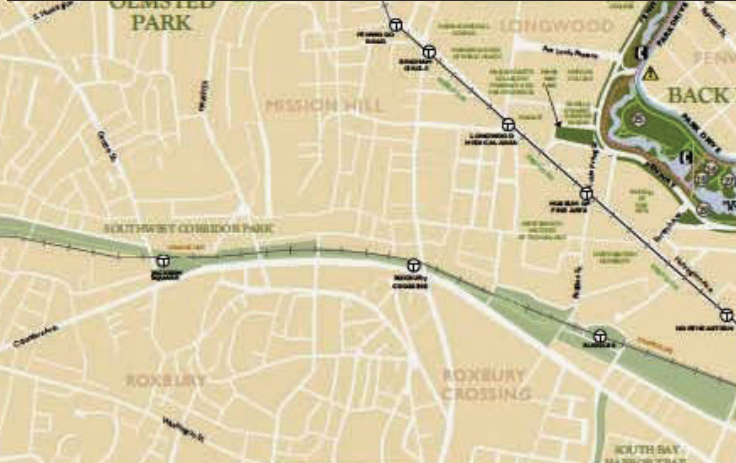
I. NEARBY NATURE AND HEALTH BENEFITS

Nearly forty years of research confirms that contact with nearby nature is profoundly important for human health and wellness. From the earliest hours to the final days of our lives, studies show a surprising range of health benefits across the human life cycle. Examples include better child development, better work performance, faster healing in hospitals, and increased social capital in communities.

Given the evidence, agencies and organizations are working to create more greenspace in cities. Yet in some communities there is little land available for parks, or it is prohibitively expensive for public purchase. A growing trend is to think about all lands as potential greenspace using a co-design for co-benefits approach. Of course there should be large parks and open spaces, but even the smallest bit of nature can benefit people. For instance, bioswales and green streets are being installed to improve stormwater management; such spaces can also be designed to serve as micro-parks that offer respite and delight.

Research on Nearby Nature and Human Health

The TKF Foundation has prepared a series of research briefs that explain the human health benefits of time spent in urban nearby nature. These compelling documents explain the value of sacred experiences, and how nature helps reduce stress, improves mental health, is important for older adults' quality of life, and the importance of environmental equality. The documents can be downloaded at: http://naturesacred.org/natures-impact/research-briefs/.
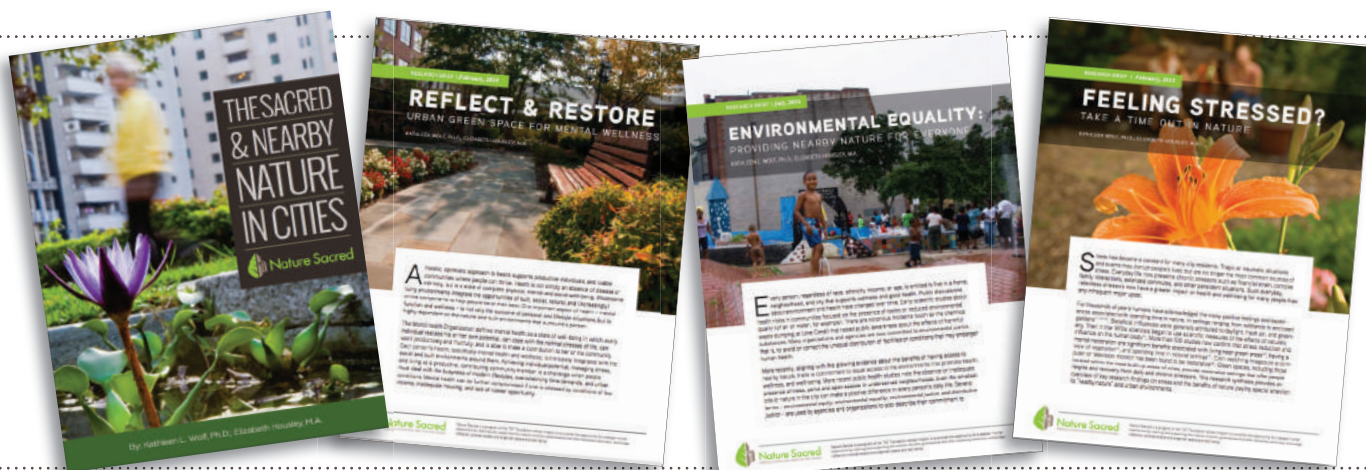
II. SITE DESIGN

The TKF Foundation has funded the design and construction of more than 130 urban gardens and parks across the U.S., called Open Spaces, Sacred Places (OSSP). While nature and health advocates promote large parks for recreation and physical activity, these smaller, intimate greenspaces offer sanctuary, solace, and opportunities for mindful reflection. The Foundation asserts that such experiences of 'civic sacred' are essential to counter the challenges felt by urban residents in their busy lives. Each space has been designed by local community participants (with assistance from designers and landscape architects) and a pattern of design elements has emerged that are adaptable for use in any community. The elements help to set the identity and character of a space, and include: portal, path, destination, and surround.

Portal: When one passes through an archway, a gate, a stand of trees, a pergola, or other marker there is a clear transition by movement from the space of everyday life and functioning. One enters a reflective space and encounters the fascinations of nature.

Path: Whether linear and well-defined, or more meandering, a path allows one to focus attention and achieve mindfulness within the surroundings. A path can ground one with the earth and offers a connecting route to the nature elements that are particularly interesting or fascinating. Labyrinths promote contemplative walking, and can be installed in fairly small places to expand the use of a modest site.

III. CITY SYSTEMS

Historically, parks and gardens in many cities were not created with a big picture in mind. They may be bits of green scattered here and there. The result is that greenspaces are often disconnected and lack a sense of coherence or connection across a city. Meanwhile, cities and urban neighborhoods have developed complex infrastructure and services systems, such as water management and transportation. Such lands, usually thought of as being dedicated to one use, may include opportunities to insert smaller parks and greenspaces, including OSSPs, making them multi-purpose. Thinking about a merge or co-design of purposes can tease out greater benefits from even the smallest of spaces.

Surround: Design elements — such as plantings, fencing, or trees — provide an encompassing sense of boundary, safety, and enclosure. Portal, path, and destination invite one to experience a space; the sense of surround ensures that one experiences a sense of being away and an emotional separation from the stress and challenges of life.

Destination: An appealing feature or end point draws a person into the welcoming space. The sojourn, however brief, is rewarded by the experience of a feature that can encourage quiet, fascination, joy, and spiritual connection with nature.

IV. NEARBY NATURE: BUILDING NETWORKS

Cities are diverse and complex landscapes. Some cities contain vacant or surplus properties suitable for smaller parks. Other cities have little vacant land or parcels, so co-design is needed to merge uses in innovative ways. Studies about nature and human benefit are now focusing on 'dosage' that is, the realization that ongoing contact with nature, multiple times a day or week, provides the greatest health benefit. Some doctors even give parks prescriptions to their patients.

City officials, planners, and community residents should think about how to stitch together existing greenspace and potential new sites to provide ongoing opportunities to experience 'Vitamin N'. Having one park or greenspace near your home, office or school is certainly beneficial. Having a network of places in an around a community and city can make for more accessible, interesting and beneficial nature experiences.

In these pages you'll find sketch level ideas about the distribution and spatial linkages of smaller parks - suggestions for how to plan for nearby urban nature benefits. In these pages, green indicates a smaller park such as an OSSP or connecting green (such as a green street), and grey symbolizes a built element such as a building, commercial development or parking lot.

Spatial Understanding

Quality design of individual sites is important. Planning that unifies sites into systems of green spaces provide more opportunities for access, enjoyment and benefit.

These sketches suggest possible spatial linkages of smaller parks. Green indicates a smaller park and connectors (such as streetscapes or waterways). Grey symbolizes built elements such as a building, commercial development or parking lot.

Green Necklace
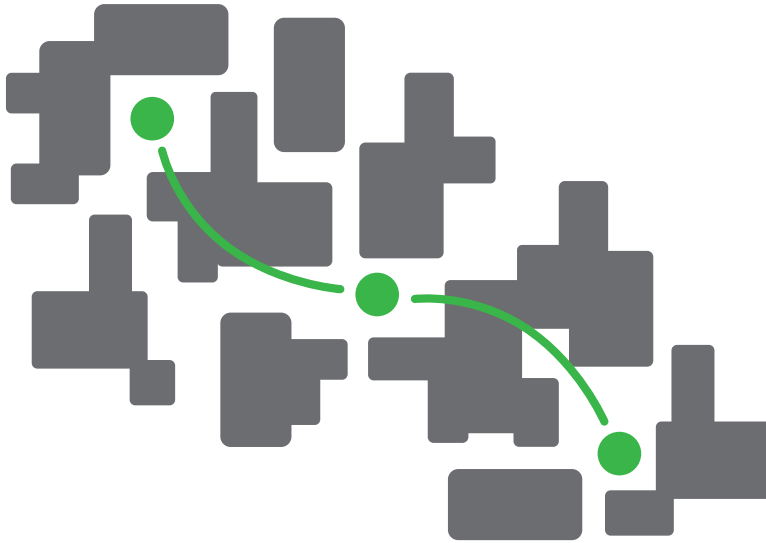
A linear, connected series of greenspaces (such as pocket parks or OSSPs) provide a corridor of opportunities as one moves around the city, particularly if walking or cycling. Repeated connections with nature might be a part of green streets, trails, rivers or streams, or green infrastructure. Sites that are not adjacent to each other can be visually connected by paving materials or attractive signage so that a person knows they will find welcoming spaces beyond what is within immediate view.
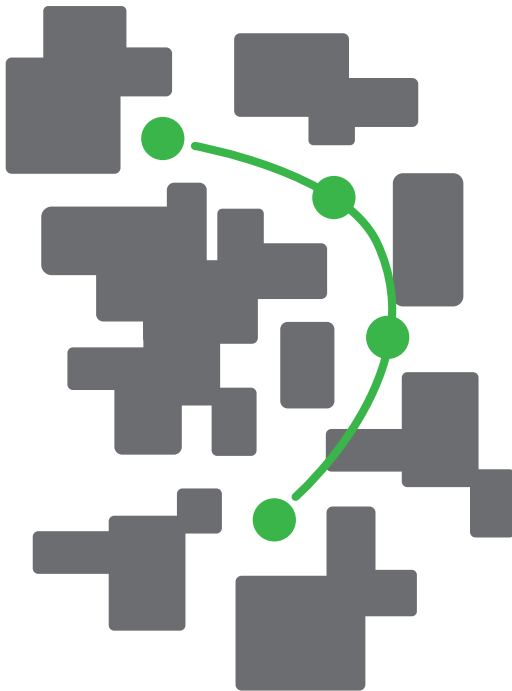
Hub and Spoke

There may be large parks or open spaces within a city that are fairly large hubs offering diverse facilities and programs. Then, in closer proximity to neighborhoods, could be a collection of nearby nature spaces that are smaller, have features that enhance the nature experience overall, and offer safe and secure 'flow' to the central hub. These spaces would be more convenient and accessible for nearby residents and visitors. A person might also move around the 'outside of the wheel' as they become more familiar with the system, and enjoy exploring the outer reaches of the system.

Fill in the Squares

Western cities have often been laid out in a grid pattern. Studies show that gridded streets are more walkable, as a pedestrian has many choices of how to move through the community and reach destinations. Some gridded cities included small parks distributed at routine intervals within the grid. London and Savannah, GA are examples. New towns or redeveloped districts could incorporate a greenspace grid within new and existing streets.

Nested with Links
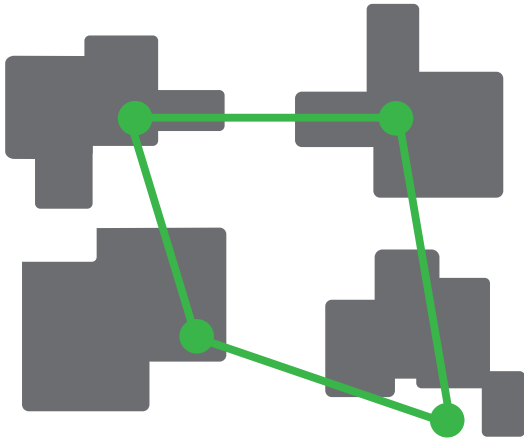
Some cities may have limited space for parks, but embedded within the matrix of built structures are smaller, comfortable spaces that could be converted and used for quiet, contemplative experiences. Examples are office building courtyards, spaces within multi-family housing, or within school yards. With creative design, adjoining green walls and landscaped indoor spaces can become nature niches that enable more people to experience the benefits of nature. Both visual and walkable linkages can help people navigate in and around the system.

Edges with Coves
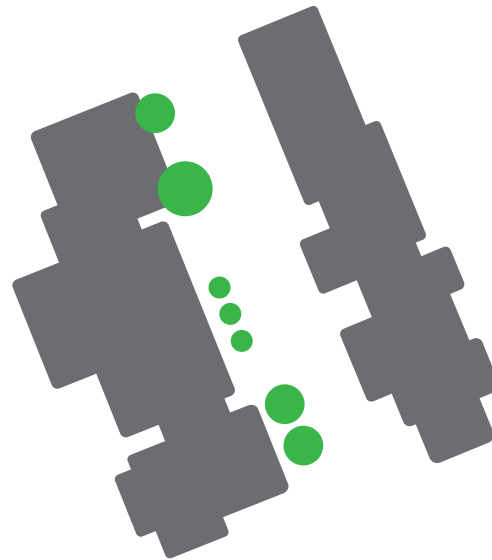
Cities often contain edges, divided by streets, where adjacent land uses such as office or retail buildings back up to residential neighborhoods. Many zoning codes require vegetation screens in these buffer areas. More recently however, street edges are being configured to include green stormwater infrastructure. A little extra design effort can translate required, often unremarkable, plantings into a series of smaller greenspaces that provided respite opportunities.

Leapfrog Spaces
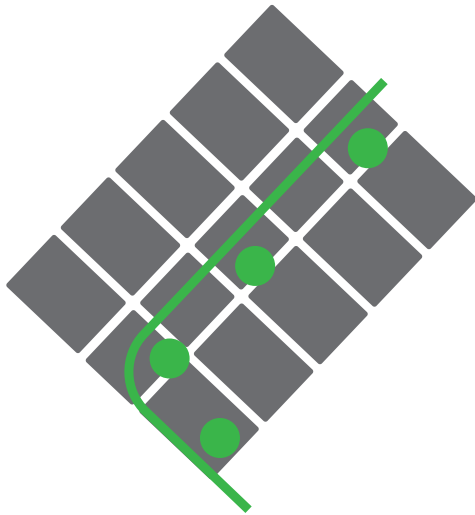
Moving about the city can be stressful. Small nature spaces, experienced briefly and frequently, are restorative. Transit systems have service stops and stations where small gardens can offer a restful interlude. While a person may not be able to visually 'connect the dots', a transit system with dedicated OSSPs within can set up a mental map of calming spaces associated with urban services. The same idea can be used for any service system such as medical clinics or schools. It could even be used by retail merchants; multiple small gardens within a business district can enhance customer appeal.

Touchstones
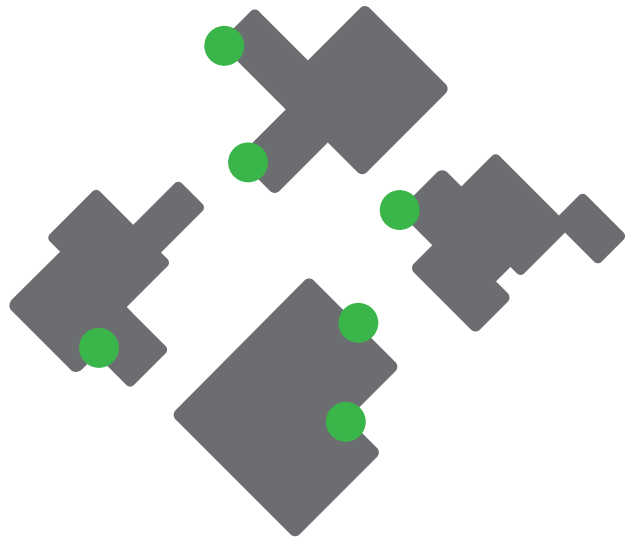
Many cities are adopting multi-use or performance zoning approaches that include a mix of diverse land uses to create vibrant, highly livable communities. These innovative developments often include intermittent nature niches or micro parks. Rather than being ignored, or treated as leftover space, they are intentional spaces within the built matrix. Greater attention to design creates memorable spaces as there are often opportunities to incorporate art, local cultural references or memorials. In this way, an infill network of novel spaces takes shape as new construction and development occur across a city.

Network Density

Higher density of greenspaces is an important goal as a network of smaller gardens is planned and visualized. Having multiple parks and greenspaces in close proximity to one another helps visitors to envision the network, including points of access. Sites that are close together may encourage people to walk and explore across the system, activities that contribute to better mental and physical health.

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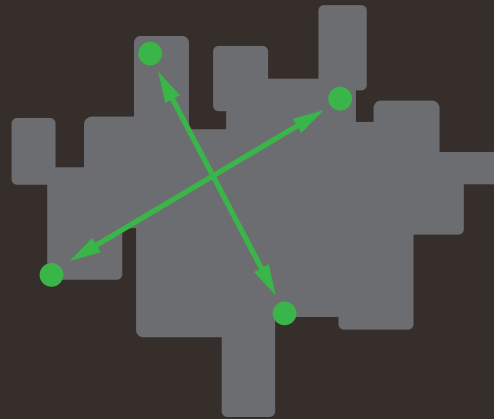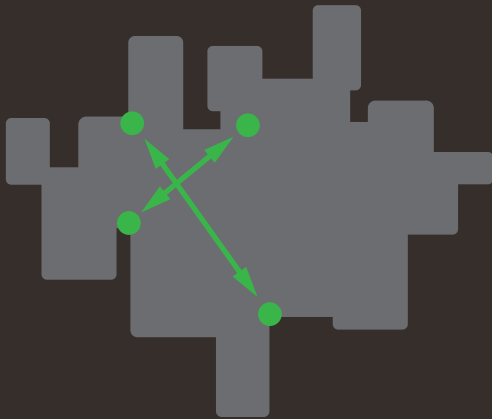
V. URBAN SYSTEMS OPPORTUNITIES

Where would these systems of linked spaces be placed? Most cities contain ample opportunity to integrate Open Spaces, Sacred Spaces (OSSPs) and smaller parks in general, into their existing community systems layouts. Here are suggestions and a variety of opportunities.

Parks, Natural Areas, and Open Space

Existing natural areas and large open spaces in cities are obvious targets for OSSP development. They may contain OSSPs already, or have less well-used landscapes tucked in and around existing networked paths, trails, and walkways. Adapting existing gardens and natural area parks to encourage OSSP principles of portal, path, destination, and surround could be done with relative ease to create open spaces that are more beneficial to human health and well-being. Linear corridors, such as shorelines, waterfronts or rails-to-trails, are particularly good opportunities.

Institutional Landscapes

Land uses such as institutions that may be privately owned, but are dedicated to public use and services, may have spaces that are easily redesigned and connected into a network. Large institutions could include health centers and hospitals, as well as schools and other campuses. Small institutions, such as museums and elder or child care facilities also provide excellent opportunities.

Storm Water

Green stormwater infrastructure (GSI) facilities are being installed in many cities as an ecological innovation to supplement gray infrastructure drains and pipes for better water management. GSI provides an interesting opportunity to insert OSSPs into communities. GSI is developed in networks along roadways and buildings, and so are natural areas and open spaces inserted within traditionally hardscaped built environments. GSI features such as rain gardens or bioswales, are designed to collect and process rainfall, but can be co-designed for the co-benefits of OSSP-like experiences.

GREEN CODE

Progressive cities are adopting Green Code as part of their development codes and ordinances. These rules require a greater proportion of greenery and open space on and around buildings when they are built or being renovated. Cities such as Seattle, WA have adopted a Green Factor calculation that specifies the degree of coverage of plants and greenery design for a development. With care, OSSP principles could be expressed within Green Code designs.

Transportation

A city's transportation infrastructure is also a place where smaller nature spaces could be developed. Transportation networks are highly diverse facilities, containing major roads, community service roads, parking areas, and transit systems. The pervasive built transportation networks, which can cover over 25% of the land area of a city, often include active, yet under-used, public spaces. These spaces provide huge potential for improvement of the pedestrian experience using OSSP principles. Service corridors including alleys and narrow lanes also set up opportunities for linked networks of OSSPs.

Residential

Residential buildings are places where people spend a majority of their time, particularly free time, and therefore have the best opportunity to experience urban nature. High-density residential development should incorporate OSSP ideas as part of green codes. Edges of lower density residential development could provide spaces for quasi-public gardens, building in opportunities for greater social cohesion.

SYSTEMS OPPORTUNITIES

Insertion of OSSP design principles into each of these urban systems can better serve urban residents and communities. Ample opportunity exists for OSSP features to flourish if placed within the many and ever-evolving ecological innovations that are emerging in cities. There are many ways that smaller nature spaces can be integrated with future infrastructure policy, building and development guidelines, and open space codes.

VI. THE ELEGANCE OF SYSTEMS

Psychologists have studied how people react to everyday environments. People are mentally and emotionally more comfortable when there is pattern in their surroundings. Coherent layouts help us to predict and understand places, even those we have not visited before. Patterns also make wayfinding easier, as people use cues to navigate spaces and find what they want or need.

The urban environment is made up of interconnected systems which are built patterns that help cities run more efficiently and effectively. Planners and designers actively make decisions that can connect or disconnect buildings, streets, and parks. Deliberately considering the human health and well-being potential of the arrangement and connectedness of greenspace in our cities introduces patterns that improve people's lives. A systems outlook in planning offers many advantages.

Systems are Dynamic

Urban communities are not static places. They are living, changing, complex systems. The interplay of new policies, property owner decisions, everyday construction and development, and the movement of people and businesses changes communities. OSSP networks should be a part of these system changes, growing and adapting as a city changes.

Cities are never complete. As urban spaces and networks are reconstructed, revised, and maintained there are constant new opportunities to insert OSSP principles into development. Integration with ongoing design, construction, and mitigation activities makes it possible to encourage healing spaces across diverse types of urban areas.

Systems Inherently Contain OSSP Opportunities

Existing systems in our cities are full of the components that could support systems of small parks. Transportation and utility corridors are built paths, within which parks and open spaces could become destinations. Existing urban structures, boundaries, walls, roads, and the edges of adjacent land uses can be modified to be portals and surrounds. By seeking out and building upon the inherent design elements of city systems, OSSPs can be integrated into the urban fabric more simply and seamlessly.

Community Specific Design

Though the city is dynamic, it contains existing, distinct communities and their cherished spaces. Processes of integration, including participatory design, is much better than imposing cookie-cutter designs that don't respect current land uses or local

values. Local assessments that include OSSP opportunities within underused lands, and evaluations of community values and needs can achieve new open spaces and have fewer unanticipated impacts. For instance, care must be taken to introduce OSSPs into communities in ways that limit the possibility of gentrification and displacement.

Environmental Equity Possibilities

Access to spaces that promote human health is a growing desire within urban communities. The goal of fair distribution of trees, parks, gardens, and urban greening is being pursued by many cities across the country. OSSP installations and principles are a particularly effective way to address this goal. Local government policies are driving efforts to identify communities and locations that encourage improved resident access to quality open spaces. The concept of networked systems of smaller parks, designed based on OSSP principles, would be an effective way to address both infrastructure and human health benefits in places where they are most needed.

VII. READINGS AND RESOURCES

TKF Foundation, Nature Sacred Program research briefs and monographs:
http://naturesacred.org/natures-impact/research-briefs/

Green Cities: Good Health research outreach web site at the University of Washington:
www.greenhealth.washington.edu

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ABOUT THE AUTHORS

Kathleen L. Wolf, Ph.D.

Dr. Wolf is a Research Social Scientist with the College of the Environment, University of Washington (Seattle) and serves as TKF Foundation's Research Advisor for its Nature Sacred program. She is also a primary collaborator in the Green Cities Research Alliance, a research program about urban natural resources stewardship that is sponsored by the USDA Forest Service, Pacific Northwest Research Station. Her studies are based on the principles of environmental psychology. Her research and scholarly works are an effort to better understand the human dimensions of urban forestry and urban ecosystems. Dr. Wolf's professional mission is to discover, understand and communicate human behavior and benefits, as people experience nature in cities. She is also interested in how scientific information can be integrated into local government policy and planning. Dr. Wolf has presented her research throughout the United States, in Canada, Europe, Australia and Japan.

Weston Brinkley, M.U.P.

Weston brings success as a published author and professional speaker on urban environmental stewardship, citizen engagement, and the social dimensions of urban natural resources. His research includes work in volunteerism, natural resource economics, and urban environmental functions.

Weston provides over a decade of experience in the urban forestry and natural resource fields. His background includes work with all levels of government, non-profit, and for profit organizations. He has worked extensively with natural resource managers, urban forest scientists, policy makers, planners, educators, and a range of communities to develop a better understanding of the natural world in our cities.

Weston Brinkley is the principal and owner at Street Sounds Ecology, LLC, the Director of the Seattle Trails Alliance, and is Adjunct Faculty at Antioch University Seattle.

Nature Sacred
Helping communities heal from the outside.