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The Sustainable Sites Initiative As It Applies To Existing Parks In Logan Utah

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THE SUSTAINABLE SITES INITIATIVE AS IT APPLIES TO EXISTING PARKS IN LOGAN UTAH

by

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1 ABSTRACT

The Intermountain West of the United States consists of a variety of climates and landscapes. Despite their diversity, all of these regions face similar issues, such as water shortage, lack of biodiversity, invasion of non-native plant species, land development, and population growth. The pursuit of sustainability has become imperative in order to meet the needs of the present, while simultaneously safeguarding the ability of future generations to meet their own needs. Many influential landscape architects have advocated for sustainable design; namely, Frederick Law Olmsted, Ian McHarg, and Laurie Olin. However, *sustainability* is used too often as a generic buzzword, diminishing its power and making sustainable design difficult to achieve. The Sustainable SITES Initiative (SSI) gives landscape designers tangible guidelines for sustainable landscape design through "a rating system that guides, evaluates, and certifies a project's sustainability in the planning, design, construction and management of landscapes and other outdoor spaces (SITES)." Owned by the U.S. Green Building Council, it can be a great tool for sustainable advocates; however, its limited scope and certification can make success difficult to achieve when the SITES requirements are strictly observed.

The purpose of this study is to apply the SITES v2 Rating System scorecard to three existing parks in Logan, Utah. Though the system does not allow retroactive certification, this process will reveal a unique perspective regarding the scoring system's limitations and the parks' limited sustainable features. The scorecards will be used to recommend improvements to these parks, which will again reveal the disparity between certification and realistic improvements to existing public spaces.

2 INTRODUCTION

There are many complexities to environmental sustainability, many of which present a challenge to those aiming to balance human well-being with ecological preservation. A key player in this endeavor is landscape architects, known for their commitment to sustainable practices and environmental stewardship. Landscape architects face multifaceted issues, such as the urban heat island effect, and seek to apply effective mitigation strategies, like green spaces for temperature moderation. While society often throws around the term 'sustainability,' the true meaning and achievement of this ideal can often be challenging to accomplish. A tool that helps create and monitor the sustainability of the built environment is a certification program called the Sustainable SITES Initiative, which provides tangible benchmarks to move toward true sustainability.

This thesis focuses on the SITES certification, a program aiding landscape architects and other environmental advocates in taking robust steps toward sustainability. The initiative offers an array of tangible objectives across four certification levels, providing a roadmap for those keen to contribute to environmental conservation. Despite a global footprint with 110 certified and pre-certified projects, there is a noticeable underrepresentation of SITES certification projects within the Intermountain West.

The barriers to achieving this certification are substantial and may discourage many well-intentioned professionals. Firstly, the process requires substantial time and a broad team of experts. Gathering the team alone takes significant coordination efforts and money. In addition, the certification itself requires payment of nearly $10,000. Sadly, the process also does not accommodate already built landscape projects—to qualify for certification, a project must be in pre-construction phases.

This thesis will delve deeper into the context of the Intermountain West region, a diverse landscape comprising iconic Western United States geographic features, such as the Great Basin, Colorado Plateau, Rocky Mountains, and the deserts of northern Arizona and western New Mexico. Home to over 34 million acres of National Forest System land, it provides numerous services to the extensive populations across Idaho, Utah, and Nevada, as well as parts of Washington, Montana, Wyoming, Oregon, California, Colorado, Arizona, and New Mexico.

Figure 1. Intermountain West from the USGS

This work will explore the efforts of landscape architects in these areas, their sustainable practices, and their efforts in overcoming the challenges posed by environmental sustainability initiatives. Furthermore, it will critically examine the principles and effectiveness of SITES and similar certification systems in fostering genuine sustainability.

Problem Statement

There are numerous systems in place to guide landscape architects toward sustainable practices, such as the Climate, Community, & Biodiversity Alliance (CCBA) and the Sustainable SITES Initiative (SSI), but the understanding and application of these frameworks remain underutilized, particularly in the Intermountain West. This underrepresentation may be due to significant barriers, like

time-intensive processes, substantial financial investment, and the inability to certify already built projects. Therefore, there is a critical need to investigate the unique challenges and opportunities within the Intermountain West in order to explore how landscape architects can effectively overcome these hurdles to achieve genuine sustainability in their projects. This research aims to fill this gap by analyzing the extent to which these certification systems are adaptable and practical within the specific context of the Intermountain West, and by proposing strategies for improved application.

Study Purpose

The purpose of this paper is to apply the Sustainable SITES Initiative scorecard to local parks and discuss improvements to help include more projects in the initiative. Through the application of the SITES scorecard to three existing parks, this paper will demonstrate a clear need for changes to the SITES scorecard.

Scope of Study

The scope of this study will primarily encompass an analysis of the Sustainable SITES Initiative and its role within landscape architecture practices, focusing specifically on its application within the Intermountain West in the United States. This will include a review of existing SITES certified and pre-certified projects within the region, identification of barriers to the broader adoption of the certification, and the formulation of strategies to overcome these challenges. While the study will take into account global sustainability trends and other certification programs for comparative analysis, the primary focus will remain on the Intermountain West's unique environmental challenges and opportunities through an analysis of three specifically identified public recreation areas in Logan, Utah.

The structure of this thesis is organized to promote clarity and comprehensibility. It begins with a literature review that examines the significant role of landscape design in fostering environmental sustainability in the Intermountain West, drawing on various scholarly resources to substantiate the discussion. This is followed by a methods section that provides a detailed account of how the research was conducted, including data collection and analysis processes. The subsequent results section presents findings from the assessment of three specific locations using the SITES criteria, providing clear insights into their performance within the context of sustainable landscape design. The penultimate section offers recommendations based on the findings, suggesting potential strategies for enhancing the application of SITES certification within the field of landscape design in the Intermountain West. The thesis concludes with a summary that encapsulates the main discoveries and insights gleaned from the research.

3 LITERATURE REVIEW

Introduction

The purpose of this literature review is to provide an understanding of the current knowledge regarding sustainable open space design and SITES certification. It identifies key principles, methodologies, and findings from previous research in the field of landscape architecture. By critically examining these studies, we can contextualize our research within the broader academic discourse, identifying both its contributions and limitations.

This literature review covers the conceptual understanding of sustainable landscape architecture and extends to the practical application of SITES certification. This review examines

previous research on sustainable design in diverse geographic and ecological contexts, with a specific focus on high desert environments. Additionally, it investigates the processes, benefits, and challenges of pursuing SITES certification in existing projects, offering a holistic understanding of this complex process.

The literature review is organized thematically to provide a structured understanding of the diverse aspects involved in this study. The review begins with a broad discussion of the principles and practices of sustainable landscape architecture, followed by an exploration of high desert environments and their unique challenges and opportunities for sustainable design. The review then narrows down to a detailed analysis of the SITES certification process, highlighting its impact on design processes, project outcomes, and the broader architectural practice. Each section within the review synthesizes key findings from previous studies, establishes their relevance to our research, and identifies gaps that our study aims to fill.

Background

The pursuit of sustainability has become imperative in our rapidly changing world. In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations). This broad definition umbrellas many interpretations. A commonly accepted framework for sustainability, especially among the landscape and construction professions, is the three pillars of sustainability, which are social, economic, and environmental sustainability (Chakrabarti & Chakrabarti, 2017; Toofan, 2014; Purvis et al., 2019). While Sahar Toofan’s (2014) definition of sustainable architecture is in line with previous statements which focus on seeking to minimize negative impact on the environment, Heather

Venhaus (2012) argues that sustainability should also include a push for active aid and repair for damaged ecosystems.

Several landscape architects have had key roles in promoting environmental sustainability: Frederick Law Olmstead (Eisenman, 2013), whose designs demonstrated a deep appreciation for nature and the integration of green spaces within urban environments; Ian McHarg (McHarg & Steiner, 2007), known for pioneering work in ecological planning and design; Laurie Olin (Green; Olin, 1988), a contemporary landscape architect whose work shows a deep understanding of ecological systems and whose projects created harmony with their surrounding environments; Kongjian Yu (Green; Yu, 2020), who is known for his emphasis on ecological infrastructure; and Martha Schwartz (Green; Vance, 1997), whose bold designs used native plants, water-efficient irrigation systems, and ecological restoration.

As the world faces increasing environmental challenges, the role of landscape architects in promoting environmental sustainability becomes ever more critical. Hyejung Chang (2018) defines environmental sustainability as a moral obligation for the landscape architecture profession. She states, “The moral premise of environmentalism is for humans to take care of ecosystems and not take them for granted because healthy ecosystems promote human well-being” (Chang, 2018). By integrating ecological infrastructure and sustainable design practices into their work, landscape architects can help shape a more sustainable and resilient future.

Having understood how landscape architecture plays a vital role in promoting environmental sustainability, it's equally important to discuss how sustainable design can be measured and certified. This brings us to the concept of SITES certification, a recognized tool that landscape architects and other professionals use to ensure their work aligns with sustainability standards. There are many systems in place to help guide sustainable construction, but the Sustainable SITES Initiative (SSI), developed by the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center, and the United

States Botanic Garden (SITES, 2023), is a rating system and set of guidelines specifically for landscape architects, designers, engineers, and other professionals involved in land development and landscape projects. It provides a framework to assess, improve, and certify the sustainability performance of outdoor spaces. Such spaces can include open spaces, streetscapes and plazas, commercial land, residential land, and educational sites. These types of projects are all possible because SITES provides performance measures that can be applied anywhere. According to the SITES v2 Rating System, one of the first steps to SITES certification is to form a diverse, multidisciplinary team (Sustainable SITES Initiative, 2014). This is to ensure expertise on topics that pertain to the certification process, such as soil restoration, water conservation, stormwater management, biodiversity, human health and well-being, and cultural heritage.

The SITES v2 Rating System has 200 points possible and four certification levels of achievement: Certified, Silver, Gold, and Platinum (SITES, 2023). “As of December 2022, more than 290 projects are participating in the SITES program, covering more than 1.2 billion gross square feet of outdoor space. This includes more than 110 certified and pre-certified projects and covers 41 U.S. states and Washington, DC, and 19 countries” (Projects, 2023).

Landscape Architecture in High Mountain Desert Environments

Having delved into the details of SITES Certification and the importance of sustainability measures in landscape architecture, let's now transition to a specific geographical context that presents unique challenges and opportunities—the high mountain desert environments. An understanding of this particular environment will help us appreciate the ways in which landscape architecture practices and sustainability measures must adapt to local ecological conditions. High mountain desert environments can be found all over the world; however, the desert that pertains to this project is The Great Basin. This

desert environment brings extreme heat during summer months and extreme cold during winter months, thus creating many unique environmental challenges. The Intermountain Adaption Partnership (IAP) conducted a two-year study that revealed leading climate change issues facing the region and suggested options for future adaptations (Halofsky) et al., 2018. Chief among these issues is lower snowpack and increased drought in the past years. As a result, "primary adaptation strategies focus on expanding water conservation, increasing water storage, and managing for highly functioning riparian areas, wetlands, and groundwater-dependent ecosystems" (Halofsky et al., 2018). Tactics to implement these strategies include using drought-tolerant plants, helping the public better understand the ecological issues and strategies, maintaining soil cover, and promoting native plant species (Halofsky et al., 2018). For example, the IAP predicts non-native plant species will continue to displace native plant species and alter fire patterns (Halofsky et al., 2018). However, a diverse plant population not only helps conserve water, but the native plant vegetation as well.

Transitioning from the exploration of unique environmental challenges and potential adaptation strategies in high desert environments, the discussion now moves to tangible examples of these sustainable design strategies in action. These case studies provide practical insights into how previously-examined theoretical concepts are put into practice. They highlight the ingenuity of landscape architects in leveraging the constraints and opportunities unique to high mountain desert environments to attain sustainability goals.

SITES Certified Case Studies

The following sites all lie within the boundaries of the Intermountain West. While each project faced unique challenges, there are many similarities between the sites. These creative, eco-centric

designs prove to be great examples of sustainable design within the Intermountain West. The following information may be found on the Sustainable SITES Initiative official website.

Swaner Preserve and Ecocenter | Park City, Utah

The Swaner Preserve and Ecocenter is an example of a SITES certified project in the high mountain desert. This project was created to preserve natural ecosystems from encroaching development in Park City, Utah. The Ecocenter is a 10,000 square foot LEED certified building designed by Soren Simonsen, an accomplished architect and urban planner, and sits on .43 acres of land (SITES, 2023). Its on-site education centers provide insight for visitors about how they can use the same sustainability strategies as the Ecocenter to increase ground water, reduce water usage, and effectively use native plants to combat climate change. This project's budget was $4,969,083.

Figure 2 Swaner Preserve

HP Inc. Campus | Boise, Idaho

The HP Inc. Boise, Idaho Campus was designed by Stack Rock Group, a landscape architecture firm in Boise. To complete this project, Stack Rock Group gathered a team consisting of landscape contractors, biologists, engineers, a soil scientist, a rangeland ecologist, a university student, a general contractor, HP's site facilitator, and HP's stakeholders. Features that contribute to the campus's SITES Gold certification include: 82,900 cubic meters of water saved annually, a 90% reduction in emissions, and a reduction by almost half in landscaping costs. The three biggest changes on this campus were the removal of Kentucky bluegrass, which was composted on-site to be used as soil amendment, the use of native seed mixes to replace the high-water demands of non-native seed, and the collection of rainwater to be re-used as landscape irrigation (SITES, 2023). This major renovation by the campus is a prime example to the public of responsible water management and prioritization of native plants. The project's budget is not listed.

Pete V. Domenici U.S. Courthouse | Albuquerque, New Mexico

The Pete V. Domenici U.S. Courthouse sustainable landscape renovation consisted of about 4.4 acres. This project used regional and site history to reconnect the site to place. The original landscaping for the building was built over one of Albuquerque's last downtown parks. However, 21,000 square feet

Figure 2 Pete V. Domenici U.S. Courthouse

of concrete in extreme heat discouraged many visitors to the site. RIOS, an international design group, designed the new site that ultimately diverted 460 tons of waste, increased site permeability by 120%, reduced the urban heat island effect by 74%, and saved the site about 75% of its original water output. This project focused on five key areas: water, material re-use, energy, habitat, and culture. Along with the sustainable benefits of this project, the end result created extra security and a dignified setting for the courthouse. This project's budget was $2,837,131.

Fort Missoula Regional Park | Missoula, Montana

The Fort Missoula Regional Park was a 156 acre open space project championed by David Koga of The Land Group. As of March 2022, this park is the largest SITES certified developed park. The main focuses for this project were to protect historic values, encompass diverse activities, serve people of all abilities, ages, and incomes, encourage environmental construction, support wildlife and open space, maintain views, and remain sensitive to surrounding neighborhoods. This park contains a large pavilion, three picnic shelters, 10 multi-sport turf fields, 7 softball diamonds, concessions, 8 tennis courts, 22 pickleball courts, 3 playgrounds, a fitness center, over 5 miles of trails, and a commons area with basketball courts, lawn volleyball, hammocks, and oversized yard games.

Master planning for this project began in 2001, and construction was completed in 2019. The park focuses on water efficiency through smart irrigation systems and bioswales; soil restoration with 30

Figure 3. Fort Missoula Regional Park

acres of revegetated soils and 24.7 acres of restored soils; locally sourced materials like recycled plastic bottles, salvaged timber, and river stones; and community-defined values through an extensive public process. The project's budget is not listed.

Mesa Verde Visitor and Research Center | Mesa Verde National Park, Colorado

The Mesa Verde Visitor and Research Center encompasses 105 acres. The Mesa Verde National Park's mission is to educate the public about the connection of the archeological, biological, and physical resources of the park. The building is surrounded by native, drought-tolerant plants that also address wildfire danger. This project's budget was $14 million.

Figure 4. Mesa Verde Visitor and Research Center

The Relationship between Design Process and Environmental Sustainability

The relationship between the landscape architect and nature begins with the original formation of the profession itself, but it has changed through the years. Frederick Law Olmstead, widely known as the father of landscape architecture, was the designer of Central Park in New York. Meg Calkins describes his use of on-site materials, which demonstrates a clever use of resources. Regarding the contrast of his work to modern landscape architecture, she said:

> *"Materials of site construction have evolved in response to many twentieth-century trends: the shift from skilled craftsmen to cheap labor in construction, increasingly nationalized standards that do not specifically address regional materials or conditions, centralized production of building materials and products, cheap and abundant resources where 'real' costs of ecosystem destruction and pollution are not factored in, increasing use of composite materials, and huge growth in the global materials industry." (Calkins, 2008)*

In Ian McHarg's (1995) article, "Design with Nature," he coins the idea of designing built environments while heavily considering the natural environments and even, at times, changing designs based on the existing environment. George Thompson and Frederick Steiner (1997) argue that landscape architecture will have a leadership role in the contemporary global society if it embraces ecological design and planning. Today, the American Society of Landscape Architects (ASLA) declares:

> *"Landscape architects are uniquely qualified to design vibrant, resilient, equitable, and just communities for all through their education in environmental and social sciences and the use of cutting-edge technologies. Landscape architects join together with other planning, architecture, engineering, and ecology professionals and allied organizations*

to call for more ambitious climate action on the part of local, state, and national governments." (Landscape Architecture)

While the relationship between the landscape architect and environmental sustainability has existed since the start of the profession, the word *sustainability* wasn't coined until the book *A Blueprint for Survival*, written primarily by Edward Goldsmith and Robert Allen (Goldsmith, 1972). Sustainability can be seen as a form of ecolabeling, which is "a way to shift producers away from an environmentally undesirable production practice of method (PPM) by harnessing the power of consumer choice" (Hicks, 2013). Unfortunately, sustainability has now become a buzzword in mainstream society, which has led some to criticize its overuse and subsequent depletion in significance (Antrop, 2006; Kidd, 1992). Yet to a well-intended landscape developer, sustainability remains as important as ever. When designing a sustainable landscape, the end result is a bit ironic in that it should appear as though there were no designer involved. Steven Rodie and Anne Streich (2009), horticulturalists from the University of Nebraska, published an article entitled "Landscape Sustainability" that illustrates different components of an environmentally conscious design. They said, "A well-designed sustainable landscape reflects a high level of self-sufficiency. Once established, it should grow and mature virtually on its own – as if nature had planted it (Rodie & Streich, 2009).

The mainstream oversaturation of the word *sustainability* can still leave developers confused or uncertain about how to achieve historically-defined sustainable goals. This disorientation led to the need for tangible steps and goals for landscape designers—thus, the creation of the Sustainable SITES Initiative. Today, SITES is being used all over the world.

The Impact of SITES Certification on Landscape Architecture

The Sustainable SITES Initiative (SITES) certification program, widely recognized as a landscape architecture industry standard, has substantially influenced the way landscape projects are designed, developed, and maintained. It fosters an enhanced focus on sustainability, setting the benchmark for what it means to landscape architects to create truly environmentally friendly outdoor spaces.

Benefits of SITES Certification

One of the major benefits of SITES certification is that it provides a comprehensive framework for sustainable landscape design. This framework underpins every stage of the project—from conception and planning to design, construction, and maintenance. It encourages the use of systems thinking, prioritizing the preservation and regeneration of ecosystem services, including water regulation, carbon storage, and habitat provision.

Moreover, SITES certification gives landscape architects an edge in a competitive market, demonstrating a firm commitment to sustainability, which, despite its buzzword status, continues to be an increasingly valued attribute in today's society. Projects that achieve certification are also likely to have lower long-term maintenance and resource costs, as sustainable design inherently supports the efficient use of resources. In addition, certified projects often provide tangible benefits for end-users, such as improved health and well-being through better air quality, increased opportunities for physical activity, and enhanced aesthetic value.

Challenges and Critiques of SITES Certification

While the SITES certification brings numerous benefits, it also presents some challenges. Firstly, the certification process can be demanding, requiring a diverse team of experts and a substantial amount of time for detailed documentation and verification procedures. This may be discouraging for small firms or projects with limited budgets.

The registration and certification costs associated with SITES, ranging from $6,500 to $9,000 with an additional cost for the SITES Reference Guide, may also be a hurdle for many projects. This financial barrier may impede the uptake of the SITES certification, particularly in contexts where the direct return on investment may not be immediately evident.

Critiques of SITES certification often revolve around its inability to accommodate already completed projects. Because the system is designed to be incorporated from the very inception of a project, it doesn't have the flexibility to certify existing designs that might otherwise meet many of its sustainability goals.

Furthermore, some critics argue that the one-size-fits-all approach of SITES may not always be appropriate, as sustainable design should inherently be responsive to the local context. The SITES criteria, although comprehensive, may not fully account for the nuances of different geographical, cultural, and socio-economic contexts.

Despite these challenges, the SITES certification undoubtedly plays a pivotal role in promoting sustainability within the field of landscape architecture. It pushes the industry towards a future where environmental consideration is not an afterthought, but an intrinsic part of how outdoor spaces are created and managed.

4 METHODS

This thesis is an exploratory examination of the design processes and potential enhancements of three non-SITES certified open space projects in the high mountain desert area of Utah. The study utilizes the SITES certification assessment to analyze these existing projects, with the aim to formulate plans to increase their SITES scores and bring them closer to certification.

The case study method uses a triangulation of data analysis from a variety of sources. The research is qualitative in nature, addressing the general question: how can the application of SITES assessment tools and subsequent plan modifications influence the design process and environmental sustainability of existing projects that haven't pursued certification?

Following the approach of Mishler (1990), who acknowledged that qualitative studies aim to explain and describe relationship patterns, this study documents and evaluates the character of the built works associated with each project. Additionally, it evaluates archival documentation associated with each project and employs interviews with design professionals affiliated with each case, when available.

The focus area of this study is the high mountain desert region of Utah. This area was chosen due to several reasons: 1) the region offers a unique blend of historical and contemporary landscape architectural practices; 2) the selected projects represent a diversity of open spaces suited to the high desert environment; and 3) the application of SITES assessment to these projects will shed light on the potential for enhanced sustainable practices within this distinctive ecological and climatic context.

This research outlines the necessary criteria for employing the comparative case study method to answer questions of 'how' and 'why,' and for assessing the impact of applying SITES assessments across a variety of contexts. The exploration of the differences and similarities in each firm's process will

foster a comprehensive understanding of how landscape architecture firms attain sustainability, irrespective of certification status. Furthermore, contrasting the design processes for SITES certified and noncertified projects will stimulate discussion about the importance of project certification within the professional practice of landscape architecture. This research utilizes Eisenhardt's (1989) approach to data collection triangulation.

The triangulation of data within this study is comprised of project observations and documentation, on-site assessments, semi-structured interviews with professionals involved in the design process for each selected site, and an examination of archival documentation pertinent to each case. The concept of triangulation originates from mapping, military practices, and navigation, wherein the intersection of three sight lines is used for precision. The term has since been widely adapted by researchers as a metaphor for multiple data collection techniques (Berg, 2001). The use of multiple sources of evidence in case study research allows for a wider exploration of issues. This diversified evidence strengthens the findings and increases the accuracy of the conclusions by creating converging lines of inquiry (Yin, 2013).

Selection Criteria

The selection of the three parks for this study was made with careful consideration of their size, purpose, and classification, according to the City of Logan's Comprehensive Parks, Trails, Recreation, and Open Space Plan of 2015. The three selected parks fall under different classifications—community, neighborhood, and natural resource areas. The study covers a broad range of park types, allowing for a comprehensive examination of SITES potential across diverse park typologies in the high mountain desert region of Utah.

The Community Park has been chosen because it serves multiple neighborhoods and presents a mix of active and passive recreational uses. With amenities such as playgrounds, restrooms, picnic shelters, and walking paths, as well as possible natural resource areas, the park provides an opportunity to explore how a broad spectrum of design elements and uses can be assessed and improved for sustainability.

The Neighborhood Park, serving a residential area, has been selected to study smaller scale, but still highly active, urban green spaces. With potential for natural resource areas and amenities that cater to the day-to-day recreational needs of residents, strategies for sustainability in such spaces can differ from larger parks. Exploring the SITES potential for this park type can reveal unique strategies for smaller urban parks.

Finally, the Natural Resource Area has been selected because it features unique natural resources and landscapes. This provides an excellent opportunity to investigate the preservation and enhancement of natural habitats, environmental features, and landscapes within the context of SITES. The passive nature of these areas presents a distinct set of challenges and opportunities in relation to sustainable design practices.

The diversity in size, purpose, and classification of these parks allows this study to address a wide array of SITES criteria, thereby providing a thorough understanding of the applicability and potential of SITES assessments in the high mountain desert region of Utah.

Based on the above criteria, the selected parks are: 1) Hyrum Gibbons Mt. Logan Park; 2) Lundstrom Park; and 3) Denzil Stewart Nature Park. These three parks are owned by the city of Logan, located in the Cache Valley of Utah in the Intermountain West.

Site Inventory

Historical Google maps were collected for comparison. Since the construction of each park, only a few large changes to the sites were visible on Google maps. In 2014, the Logan Hyde Park Smithfield Canal, which runs along the Lundstrom walking trail, was piped, and water was moved underground. The existing vegetation, which provided habitat for various animals, was removed, and as a result, all that remains is a canal full of rocks. Occasionally, when there is too much water for the pipe, water will be diverted above ground into the existing canal structure. It was also observed that between 2014 and 2017, many large trees were no longer near the entrance of the Denzil Stewart Nature area. As of May 2023, this area became a restoration project along the water.

Site visits were conducted to compare information given by maps and the Logan City website. These site visits included behavior observation, amenity inventory gathering, and on one occasion, an interview with a well-versed community member. Mike Timmons lives directly across the street from Lundstrom park and served as a faculty member of USU's LAEP department for 37 years. During that time, he taught many subjects, including Park and Recreation Planning and Design, and participated for six years as a board member on the Parks and Recreation Advisory Board for the city of Logan. He provided information from his own observation regarding popular uses of the park and future plans for open space to the east of the park.

During these site visits, emails were sent to city officials and school historians with questions that could not be answered from site visits alone. Topics such as the previous state of the parks and the underground engineering of the water systems were discussed and used as background and context. Immediately after these visits, the SITES scorecards were completed by the primary investigator.

SITES Scorecard Adaptation

The official SITES scorecard needed modifications for several reasons, primarily due to its timeline. The SITES process is typically implemented before the design, planning, construction, and maintenance of landscapes. In this retrospective study, however, certain requirements like location-based criteria and details about the design and construction processes are not applicable, necessitating their dismissal.

Scoring Process

After several site visits and the completion of data collection, each scorecard was filled out. Some prerequisites that would normally disqualify these parks for SITES certification were dismissed. Those prerequisites were: P1.1 Limit development on farmland, P2.1 Use an integrative design process, P2.2 Conduct a pre-design site assessment, P2.3 Designate and communicate VSPZs, P3.2 Reduce water use for landscape irrigation, P4.1 Create and communicate a soil management plan, P7.1 Communicate and verify sustainable construction practices, P7.2 Control and retain construction pollutants, P7.3 Restore soils disturbed during construction, P8.1 Plan for sustainable site maintenance, and P8.2 Provide for storage and collection of recyclables. These prerequisites were dismissed because they either cannot be verified, or they would disqualify a project that has already violated the requirements.

Points that are not prerequisites are optional, and therefore, such points were not excluded during the scoring of the three sites. There were sections that were not possible to know or consider, however, so they did not receive points. All points given to the existing parks are based on site visits and data collection. After adding the sum of the points given to each park for a total, sections were identified in each park that needed improvement in order to improve the score of the park.

5 RESULTS OF SITE ASSESSMENT

This results section presents the findings from an in-depth examination of three open space projects in the high mountain desert region of Utah. These projects, yet to be SITES certified, were studied using the SITES assessment as the primary tool, with the objective of identifying potential enhancements to increase their sustainability levels.

These results are derived from a comprehensive triangulation of data from diverse sources. This includes project observations, archival documents, and insights gained from interviews with design professionals affiliated with each project. Additionally, it reveals the outcomes from adaptations made to the official SITES scorecards and the subsequent scoring process that was customized to the unique conditions of each park.

In this chapter, each of the selected parks will be examined, beginning with their history and classification. This serves as a foundational understanding of each park's unique identity. Following this examination, a detailed SITES inventory assessment will be presented, mapping out the current state of sustainability measures and identifying areas that could be improved to align the park closer to SITES certification standards.

Finally, the focus will pivot to the spatial organization of each park, providing a comprehensive understanding of how different design elements contribute to overall sustainability objectives.

Hyrum Gibbons Mount Logan Park (HGML)

History and Classification

Hyrum Gibbons Mount Logan Park (HGML) is named after Hyrum Gibbons, the man who farmed the land before the surrounding residential development began, and Mount Logan Peak, which is located east of the site. Directly to the east of the park is Dry Canyon. According to Darren Farar, the city engineer, large storm events can cause Dry Canyon to collect and funnel a large amount of water downhill towards the city of Logan. Because of this, a large storm basin was constructed at the bottom of the canyon. If this basin fills up, water will be directed via a pipe system to the Logan River, which

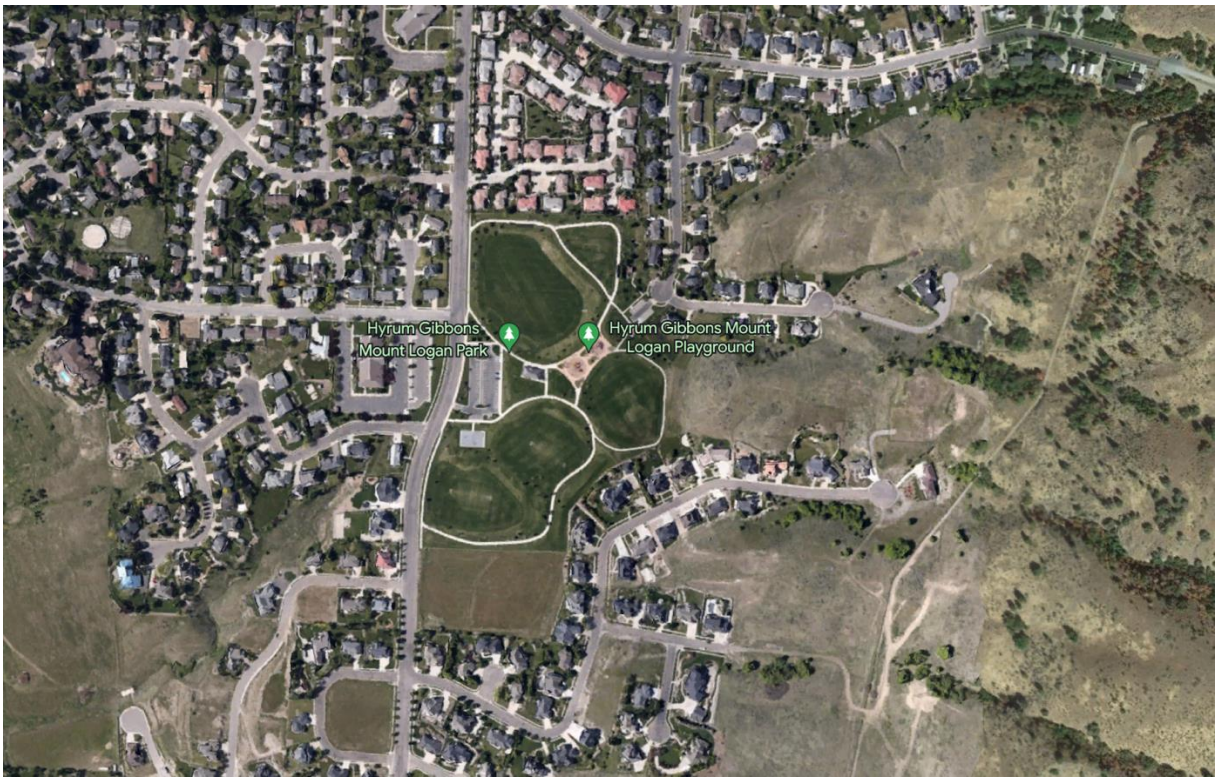


Figure 7 Hyrum Gibbons Mount Logan Park from Google Maps

runs through town. If the water is too much for the river to properly handle, the water will then be directed to one of HGML's most prominent features: a stormwater basin nicknamed "The Bowl." Located at the northwest corner of the park, The Bowl doubles as a stormwater detention basin and a

soccer field. To Farar's knowledge, the basin at the bottom of the canyon has never filled enough for the overflow to be used.

HGML is classified as a Community Park. According to the City of Logan's Comprehensive Parks, Trails, Recreation and Open Space Plan of 2015, community parks are defined as follows:

"a public park property owned by the City and designed to serve multiple neighborhoods, generally smaller in size [than] a regional park, but typically containing recreational amenities such as playgrounds, restrooms, water fountains, sitting benches, picnic shelters, walking paths, and possibly recreation structures for large gatherings or special events. It is not uncommon for community parks to contain natural resource areas, unique landscapes, undeveloped open spaces, environmental features, duplicate amenities, man-made structures like storm water detention basins, and/or athletic field space…. Community parks are intended to have active and passive recreational use (Parks and Recreation)."

Consistent with this description, HGML includes dramatic slopes throughout the park that cater to sledding, exercise, etc. Amenities listed by the City of Logan's Parks and Recreation Department include ADA accessibility, a basketball court, a drinking fountain (May - September), electricity - 10 amp (May - September), loop walkways, a parking lot, a pavilion, picnic areas, a playground, a restroom (May - September), a sports area, and a viewing area of Cache Valley. This park is one of three parks within city limits which allow dogs on-leash. The playground is estimated to be approximately 36,000+ square feet of the 22 acre space.

Site Inventory

HGML is located in the foothills of the mountains. Extreme slopes and beautiful vantage points are major attractions for this park. HGML, though extreme in slope, also has formal recreational elements, such as soccer fields located at the bottom of a water retention area, and a basketball court. Two playgrounds are located near the center of the park. Each playground is designed for specific age ranges. HGML is a popular gathering place for sledders in the winter, and, due to its view of the valley, firework enthusiasts at the beginning of July.

Maturing honey locust, maple, spruce, crabapple, chokecherry, oak, flowering cherry, linden, and pine trees grow throughout the park. These trees generally follow the loops of sidewalk throughout the park.

① Slope / Vantage Point
② Recreation Fields
③ Detention Slope
④ Basketball Court
⑤ Playgrounds
⑥ Parking Lots
⑦ Religious Building and Land
⑧ Large Pavilion

There are two parking lots for park access, as the park is surrounded by residential neighborhoods, with the exception of a church located directly west and an empty lot owned by the same church directly south of the park. A concrete curb edge surrounds the park on all sides, marking

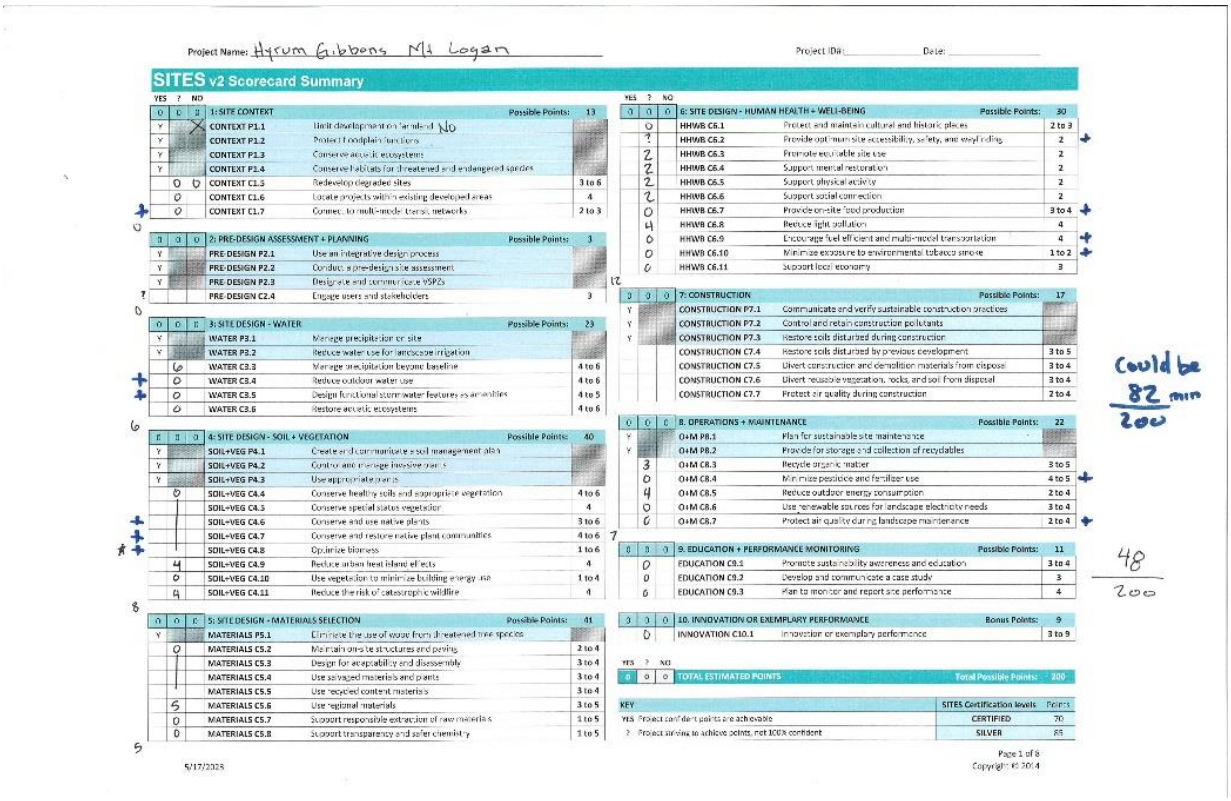
the property boundary. Near the center of the park, between the playground and a parking lot, is a large pavilion with tables, benches, bathrooms, and a water fountain.

Interestingly, this park is located near the edge of town, adjacent to undeveloped land. Because of this, there are signs near the playgrounds warning of potential wildlife in the area. The sign pictures mountain lions, moose, deer, and snakes and teaches safety procedures to follow if wildlife is encountered.

SITES Scorecard

Hyrum Gibbons Mount Logan Park performed well in a number of areas. Firstly, HGML has a 100% water retention rate (P3.1; C3.3). In fact, it is specifically built to take stormwater from surrounding areas as well. Its large, flat-bottomed retention basins serve as recreational fields when no water is present. This is a great example of a stormwater feature that also serves as an enjoyable amenity (C3.5), thereby educating the public about stormwater conservation (C9.1). Secondly, this park scored well in the human health and well-being category. A popular gathering place for events, HGML's unique location in the foothills and natural slope provide opportunity for mental restoration (C6.4), physical activity (C6.5), and social connection (C6.6). The location does have its drawbacks, however. Because of the extreme slope, not all locations in the park are easily accessible (C6.3) and can be considered unsafe (C6.2). As this park is not located within existing developed areas (C1.6), such as a city center, or commercial, business, or retail options, there is little reason for the City of Logan to provide

public transportation to this site. This does not score well in the sections for fuel-efficient and multi-modal transportation (C6.9).


Project Name: Hyrum Gibbons Mt Logan

Project ID#: Date:

SITES v2 Scorecard Summary

YES	?	NO			
0	0	8	1: SITE CONTEXT	Possible Points:	13
Y			CONTEXT P1.1	Limit development on farmland	No
Y			CONTEXT P1.2	Protect ecosystem functions	
Y			CONTEXT P1.3	Conserve aquatic ecosystems	
Y			CONTEXT P1.4	Conserve habitats for threatened and endangered species	
	0	0	CONTEXT C1.5	Redevelop degraded sites	3 to 6
	0		CONTEXT C1.6	Locate projects within existing developed areas	4
	0		CONTEXT C1.7	Connect to multi-modal transit networks	2 to 3
0					
0	0	0	2: PRE-DESIGN ASSESSMENT + PLANNING	Possible Points:	3
Y			PRE-DESIGN P2.1	Use an integrative design process	
Y			PRE-DESIGN P2.2	Conduct a pre-design site assessment	
Y			PRE-DESIGN P2.3	Designate and commission a VSPZs	
?			PRE-DESIGN C2.4	Engage users and stakeholders	3
0					
0	0	0	3: SITE DESIGN - WATER	Possible Points:	23
Y			WATER P3.1	Manage precipitation on site	
Y			WATER P3.2	Reduce water use for landscape irrigation	
	6		WATER C3.3	Manage precipitation beyond baseline	4 to 6
	0		WATER C3.4	Reduce outdoor water use	4 to 6
	0		WATER C3.5	Design functional stormwater features as amenities	4 to 5
	0		WATER C3.6	Restore aquatic ecosystems	4 to 6
6					
0	0	0	4: SITE DESIGN - SOIL + VEGETATION	Possible Points:	40
Y			SOIL+VEG P4.1	Create and communicate a soil management plan	
Y			SOIL+VEG P4.2	Control and manage invasive plants	
Y			SOIL+VEG P4.3	Use appropriate plants	
	0		SOIL+VEG C4.4	Conserve healthy soils and appropriate vegetation	4 to 6
			SOIL+VEG C4.5	Conserve special status vegetation	4
			SOIL+VEG C4.6	Conserve and use native plants	3 to 6
			SOIL+VEG C4.7	Conserve and restore native plant communities	4 to 6
			SOIL+VEG C4.8	Optimize biomass	1 to 6
	4		SOIL+VEG C4.9	Reduce urban heat island effects	4
	0		SOIL+VEG C4.10	Use vegetation to minimize building energy use	1 to 4
	4		SOIL+VEG C4.11	Reduce the risk of catastrophic wildfire	4
8					
0	0	0	5: SITE DESIGN - MATERIALS SELECTION	Possible Points:	41
Y			MATERIALS P5.1	Eliminate the use of wood from threatened tree species	
	0		MATERIALS C5.2	Maintain and re-use structures and paving	2 to 4
			MATERIALS C5.3	Design for acceptability and disassembly	3 to 4
			MATERIALS C5.4	Use salvaged materials and paints	3 to 4
			MATERIALS C5.5	Use recycled content materials	3 to 4
	5		MATERIALS C5.6	Use regional materials	3 to 5
	0		MATERIALS C5.7	Support responsible extraction of raw materials	1 to 5
	0		MATERIALS C5.8	Support transparency and safer chemistry	1 to 5
5					

YES	?	NO			
0	0	0	6: SITE DESIGN - HUMAN HEALTH + WELL-BEING	Possible Points:	30
0			HHWB C6.1	Protect and maintain cultural and historic places	2 to 3
?			HHWB C6.2	Provide optimum site accessibility, safety, and wayfinding	2
2			HHWB C6.3	Promote equitable site use	2
2			HHWB C6.4	Support mental restoration	2
2			HHWB C6.5	Support physical activity	2
2			HHWB C6.6	Support social connection	2
0			HHWB C6.7	Provide on-site food production	3 to 4
4			HHWB C6.8	Reduce light pollution	4
0			HHWB C6.9	Encourage fuel efficient and multi-modal transportation	4
0			HHWB C6.10	Minimize exposure to environmental tobacco smoke	1 to 2
0			HHWB C6.11	Support local economy	3
12					
0	0	0	7: CONSTRUCTION	Possible Points:	17
Y			CONSTRUCTION P7.1	Communicate and verify sustainable construction practices	
Y			CONSTRUCTION P7.2	Control and retain construction pollutants	
Y			CONSTRUCTION P7.3	Restore soils disturbed during construction	
			CONSTRUCTION C7.4	Restore soils disturbed by previous development	3 to 5
			CONSTRUCTION C7.5	Divert construction and demolition materials from disposal	3 to 4
			CONSTRUCTION C7.6	Divert reusable vegetation, rocks, and soil from disposal	3 to 4
			CONSTRUCTION C7.7	Protect air quality during construction	2 to 4
0	0	0	8. OPERATIONS + MAINTENANCE	Possible Points:	22
Y			O+M P8.1	Plan for sustainable site maintenance	
Y			O+M P8.2	Provide for storage and collection of recyclables	
3			O+M C8.3	Recycle organic matter	3 to 5
0			O+M C8.4	Minimize pesticide and fertilizer use	4 to 5
4			O+M C8.5	Reduce outdoor energy consumption	2 to 4
0			O+M C8.6	Use renewable sources for landscape electricity needs	3 to 4
6			O+M C8.7	Protect air quality during landscape maintenance	2 to 4
7					
0	0	0	9. EDUCATION + PERFORMANCE MONITORING	Possible Points:	11
0			EDUCATION C9.1	Promote sustainability awareness and education	3 to 4
0			EDUCATION C9.2	Develop and communicate a case study	3
6			EDUCATION C9.3	Plan to monitor and report site performance	4
48					
200					
0	0	0	10. INNOVATION OR EXEMPLARY PERFORMANCE	Bonus Points:	9
0			INNOVATION C10.1	Innovation or exemplary performance	3 to 9

YES	?	NO		
0	0	0	TOTAL ESTIMATED POINTS	Total Possible Points: 200

KEY	SITES Certification levels	Points
YES Project confident points are achievable	CERTIFIED	70
? Project striving to achieve points, not 100% confident	SILVER	85

Could be 82 min 200

5/17/2023

Page 1 of 8

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Figure 8. Hyrum Gibbons Mount Logan Park SITES Scorecard

Lundstrom Park

History and Classification

Lundstrom Park was acquired by the City of Logan from Utah State University in 1969. Until then, the land was used as a turkey farm by the university. Residential lots surrounding the land reserved for the park were sold to the highest bidder. Despite initial pushback from the community, the park now includes an access road running north and south, splitting the park into two areas. Amenities listed by the City of Logan's Parks and Recreation Department include ADA accessible barbecues, a drinking fountain (May-September), a parking lot, a pavilion, picnic areas, a playground, a restroom

(May-September), a sports area, and trail connections. Lundstrom Park includes 13+ acres of manicured grass, dirt for three baseball diamonds, and a playground encompassing almost 10,000 square feet.

Lundstrom Park is classified as a Neighborhood Park. According to the City of Logan's Comprehensive Parks, Trails, Recreation and Open Space Plan of 2015, neighborhood parks are defined as follows:

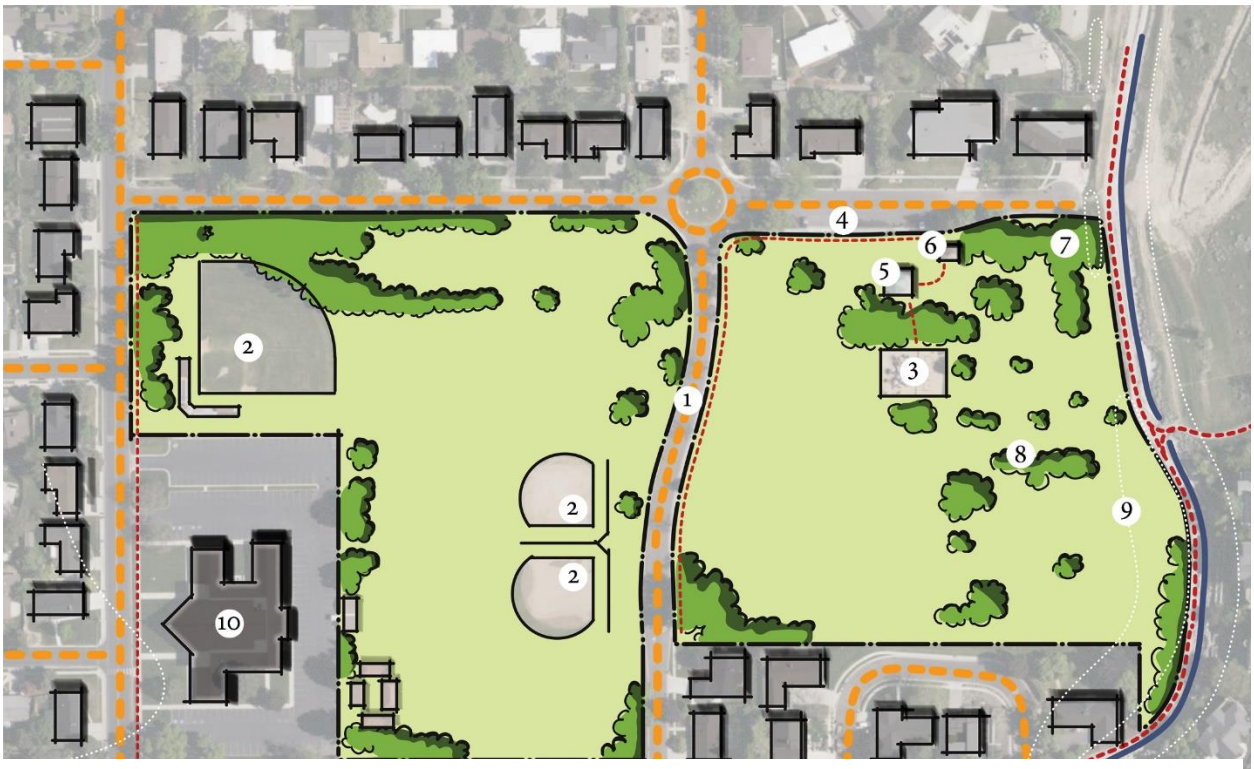
"a public park property owned by the City and typically designed to serve an area that may encompass several residential blocks…. Neighborhood parks gain their designation in two ways: (1) these were properties that were identified through comprehensive planning, or (2) as a result of land being acquired by the City for purposes other than park development… it is possible for a neighborhood park to also possess natural resource areas, unique landscapes, environmental features, man-made structures like storm water detention basins, and/or athletic field space. Typical amenities for a neighborhood park may include, depending on size, a restroom, a playground, water fountain, sitting

Figure 9 Lundstrom Park from Google Maps

benches, a picnic shelter, and walking paths. Neighborhood parks are intended to have active and passive recreational uses (Parks and Recreation).”

Site Inventory

Lundstrom Park is split into two by 1720 East between 1350 North and 1220 North. On the west side of the street are three baseball diamonds and a large cluster of trees. On the east side of the street are a playground, parking area, pavilion, and a bathroom. There is also an unofficial grove of plum trees, rumored to be a remnant of the original turkey farm. After speaking with a community member, I learned that this grove is a popular place for people to hang hammocks, for children to explore, and on one rare occasion, for a wedding to take place. Another remnant of the turkey farm, a row of apple

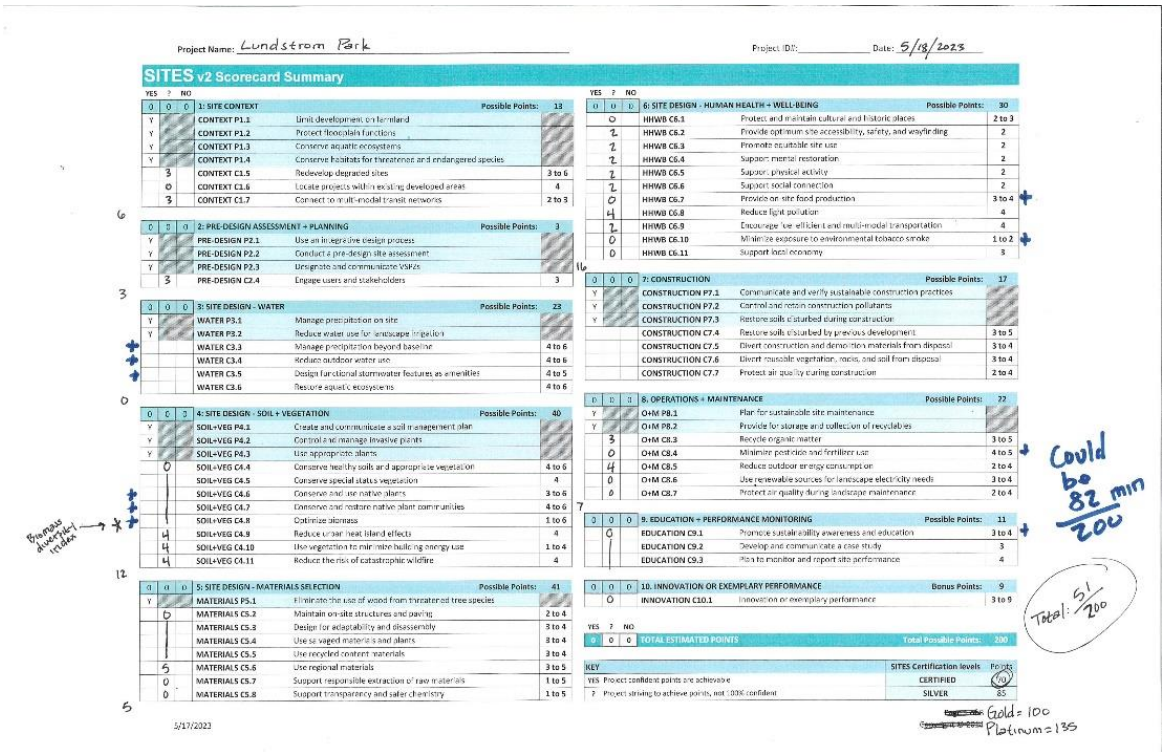


trees, is located near the center of the eastern half of the park. On the far east side of the park is a gentle slope that is often used for winter sledding. There are unsecured picnic tables throughout the park that are used often. Throughout the park, one can also find maple, linden, poplar, spruce, birch, honey locust, and pine.

Lundstrom Park Trail winds along the eastern edge of the park, comprising part of a larger trail system throughout Logan. The trail follows what remains of the Logan-Hyde Park-Smithfield canal. The canal was originally an open canal with vegetation until 2014, when it was piped and all vegetation was removed. Whe there is an overflow of water, water will occasionally be allowed to flow through the open canal. The only circulation within the park are a strip of sidewalk on the far west side of the park along 1600 East and a strip of sidewalk on the east side of 1720 East which turns a corner and ends at the bathroom. The north, west, and south boundaries are surrounded by residential homes. Many houses are currently being built to the east of the park, but immediately on the other side of the canal, an open space will be preserved in a long strip going north to about 1500 North. A church shares the west block on the southwest boundary.

SITES Scorecard

Lundstrom Park incorporates a number of elements that are not officially listed or recognized by the city, but that contribute to the health and well-being of park-goers. Weddings, ski lessons, sledding, and volleyball games all create opportunities for mental restoration (C6.4), physical activity (C6.5), and social connection (C6.6). Such a large, well-maintained park is a space that reduces urban heat island effects (C4.9) and creates a buffer for potential wildfires (C4.11). Yet this large, beautifully maintained park does come at a cost. Large amounts of water are required to maintain large areas of green grass (C3.4). This water-use and maintenance could instead be an investment into the surrounding communities via food production (C6.7). The slight, but consistent slope of the park could be an opportunity to create functional stormwater features to be used as amenities (C3.5).



Project Name: Lundstrom Park — Project ID#: _____ Date: 5/18/2023

SITES v2 Scorecard Summary

YES	?	NO			Possible Points:
0	0	0	1: SITE CONTEXT		13
Y			CONTEXT P1.1	Limit development on farmland	
Y			CONTEXT P1.2	Protect floodplain functions	
Y			CONTEXT P1.3	Conserve aquatic ecosystems	
Y			CONTEXT P1.4	Conserve habitats for threatened and endangered species	
	3		CONTEXT C1.5	Redevelop degraded sites	3 to 6
	0		CONTEXT C1.6	Locate projects within existing developed areas	4
	3		CONTEXT C1.7	Connect to multi-modal transit networks	2 to 3
0	0	0	2: PRE-DESIGN ASSESSMENT + PLANNING		3
Y			PRE-DESIGN P2.1	Use an integrative design process	
Y			PRE-DESIGN P2.2	Conduct a pre-design site assessment	
Y			PRE-DESIGN P2.3	Designate and communicate VSAPs	
	3		PRE-DESIGN C2.4	Engage users and stakeholders	3
0	0	0	3: SITE DESIGN - WATER		23
Y			WATER P3.1	Manage precipitation on site	
Y			WATER P3.2	Reduce water use for landscape irrigation	
			WATER C3.3	Manage precipitation beyond baseline	4 to 6
			WATER C3.4	Reduce outdoor water use	4 to 6
			WATER C3.5	Design functional stormwater features as amenities	4 to 5
			WATER C3.6	Restore aquatic ecosystems	4 to 6
0	0	0	4: SITE DESIGN - SOIL + VEGETATION		40
Y			SOIL+VEG P4.1	Create and communicate a soil management plan	
Y			SOIL+VEG P4.2	Control and manage invasive plants	
Y			SOIL+VEG P4.3	Use appropriate plants	
	0		SOIL+VEG C4.4	Conserve healthy soils and appropriate vegetation	4 to 6
			SOIL+VEG C4.5	Conserve special status vegetation	4
			SOIL+VEG C4.6	Conserve and use native plants	3 to 6
			SOIL+VEG C4.7	Conserve and restore native plant communities	4 to 6
			SOIL+VEG C4.8	Optimize biomass	1 to 6
	4		SOIL+VEG C4.9	Reduce urban heat island effects	4
	4		SOIL+VEG C4.10	Use vegetation to minimize building energy use	1 to 4
	4		SOIL+VEG C4.11	Reduce the risk of catastrophic wildfire	4
0	0	0	5: SITE DESIGN - MATERIALS SELECTION		41
Y			MATERIALS P5.1	Eliminate the use of wood from threatened tree species	
	0		MATERIALS C5.2	Maintain on-site structures and paving	2 to 4
			MATERIALS C5.3	Design for adaptability and disassembly	3 to 4
			MATERIALS C5.4	Use salvaged materials and plants	3 to 4
			MATERIALS C5.5	Use recycled content materials	3 to 4
	5		MATERIALS C5.6	Use regional materials	3 to 5
	0		MATERIALS C5.7	Support responsible extraction of raw materials	1 to 5
	0		MATERIALS C5.8	Support transparency and safer chemistry	1 to 5
YES	?	NO			
0	0	0	TOTAL ESTIMATED POINTS		Total Possible Points: 200

KEY	SITES Certification levels	Points
YES Project confident points are achievable	CERTIFIED	70
? Project striving to achieve points, not 100% confident	SILVER	85

YES	?	NO			Possible Points:
0	0	0	6: SITE DESIGN - HUMAN HEALTH + WELL-BEING		30
	0		HHWB C6.1	Protect and maintain cultural and historic places	2 to 3
	2		HHWB C6.2	Provide optimum site accessibility, safety, and wayfinding	2
	2		HHWB C6.3	Promote equitable site use	2
	2		HHWB C6.4	Support mental restoration	2
	2		HHWB C6.5	Support physical activity	2
	2		HHWB C6.6	Support social connection	2
	0		HHWB C6.7	Provide on-site food production	3 to 4
	4		HHWB C6.8	Reduce light pollution	4
	2		HHWB C6.9	Encourage low-efficient and multi-modal transportation	4
	0		HHWB C6.10	Minimize exposure to environmental tobacco smoke	1 to 2
	0		HHWB C6.11	Support local economy	3
0	0	0	7: CONSTRUCTION		17
Y			CONSTRUCTION P7.1	Communicate and verify sustainable construction practices	
Y			CONSTRUCTION P7.2	Control and retain construction pollutants	
Y			CONSTRUCTION P7.3	Restore soils disturbed during construction	
			CONSTRUCTION C7.4	Restore soils disturbed by previous development	3 to 5
			CONSTRUCTION C7.5	Divert construction and demolition materials from disposal	3 to 4
			CONSTRUCTION C7.6	Divert reusable vegetation, rocks, and soil from disposal	3 to 4
			CONSTRUCTION C7.7	Protect air quality during construction	2 to 4
0	0	0	8: OPERATIONS + MAINTENANCE		22
Y			O+M P8.1	Plan for sustainable site maintenance	
Y			O+M P8.2	Provide for storage and collection of recyclables	
	3		O+M C8.3	Recycle organic matter	3 to 5
	0		O+M C8.4	Minimize pesticide and fertilizer use	4 to 5
	4		O+M C8.5	Reduce outdoor energy consumption	2 to 4
	0		O+M C8.6	Use renewable sources for landscape electricity needs	3 to 4
	0		O+M C8.7	Protect air quality during landscape maintenance	2 to 4
0	0	0	9. EDUCATION + PERFORMANCE MONITORING		11
	0		EDUCATION C9.1	Promote sustainability awareness and education	3 to 4
			EDUCATION C9.2	Develop and communicate a case study	3
			EDUCATION C9.3	Plan to monitor and report site performance	4
0	0	0	10. INNOVATION OR EXEMPLARY PERFORMANCE		Bonus Points: 9
	0		INNOVATION C10.1	Innovation or exemplary performance	3 to 9

Could be 82 min / 200

Total: 51/200

Gold = 100

Platinum = 135

5/17/2023

Figure 10. Lundstrom Park SITES Scorecard

Denzil Stewart Nature Area (DSNA)

History and Classification

The land for the Denzil Stewart Nature Area (DSNA) was donated by its namesake, Denzil Stewart. The Logan River flows northeast to southwest along the north side of this park and includes a bridge from the looped trail to the unmarked street parking area. According to the Logan City website, all but a small area of grass has remained as untouched vegetation (Logan City). Signs can be found throughout the park with information about the park's history and local environments. DSNA is one of three parks within city limits that allow dogs on-leash. Amenities listed by the City of Logan's Parks and Recreation Department include ADA accessibility, a drinking fountain (May - September), fishing, loop walkways, a parking lot, picnic areas, and wildlife. DSNA is comprised of 6+ acres and is linked to several walking trails leading to various neighborhoods. DSNA is classified as a Natural Resource Area. According to the City of Logan, natural resource areas provide wildlife habitat, contain bodies of water, and/or include other unique landscapes.

According to the City of Logan's Comprehensive Parks, Trails, Recreation and Open Space Plan of 2015, natural resource areas are defined as follows:

"public land that is owned by the City and contains unique natural resources, including wetlands, bodies of water such as ponds, streams, or rivers, encompasses floodplain, and provides for wildlife and aquatic habitat, environmental features, and/or other unique landscapes. Public walking paths or trails are generally included in these areas. Size of natural resource areas may vary and may be found linked or adjacent to manicured public park areas. In general, natural resource areas feature passive uses, but they may also be a part of an active use area (Parks and Recreation)."

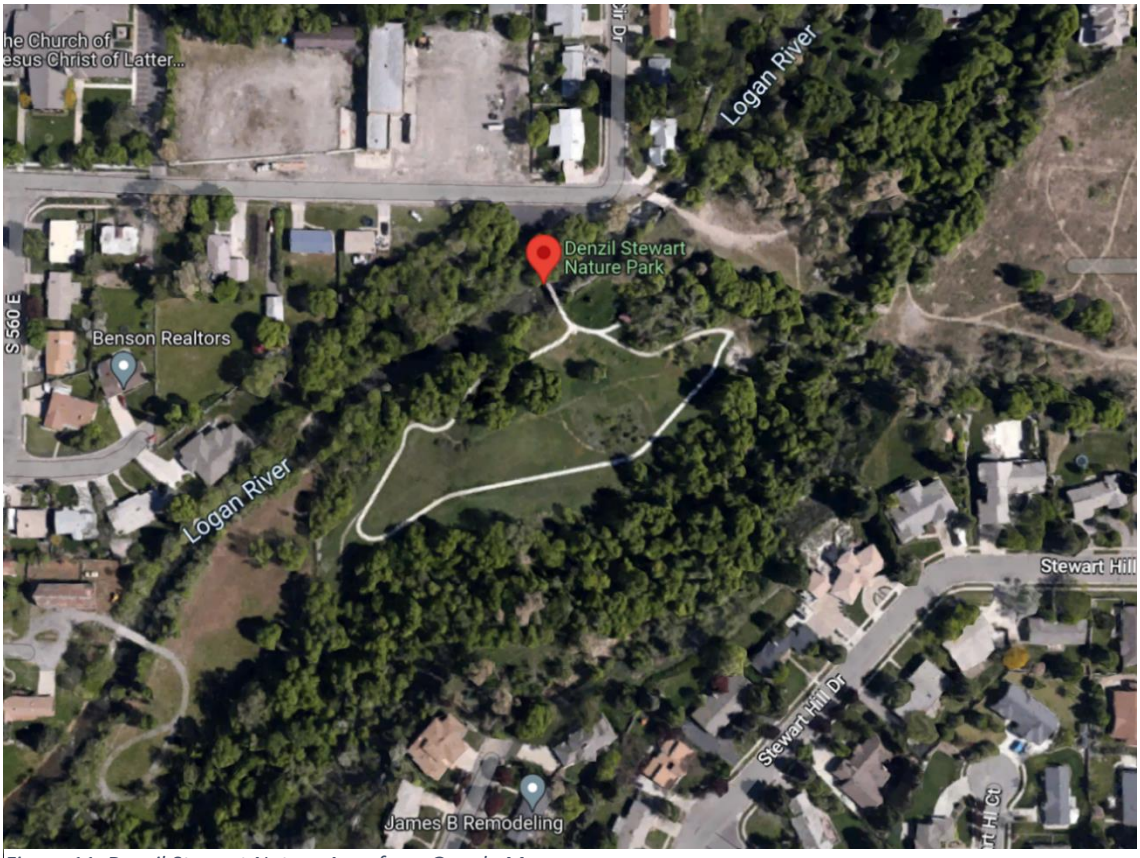


Figure 11. Denzil Stewart Nature Area from Google Maps

Site Inventory

Two large bridges span the length of the Logan River, leading from the road and parking area to the small information pavilion. DSNA's looped sidewalk is completely ADA compatible. The loop is accompanied by eight educational signs. These signs explain of the history of the site as far back as 12,000 years ago and describe the bird life, aquatic life, farm life, and modern settlement patterns of the region.

DSNA is surrounded on almost every side with large, mature trees. These trees consist of poplars, maples, ashes, willows, and many more tree species. The northeast stretch of sidewalk is covered by foliage. Between this tunnel of trees and the river are unofficial trails and exploration opportunities.

The south side of the walkway is open, allowing for long visual corridors and a view of the foliage-covered hillside. In the middle of the sidewalk loop is a large basin with freshly planted trees, including oak, ash, and maple trees.

① Bridges
② Parking
③ Info Pavilion
④ Exploration Zone
⑤ Basin
⑥ River Restoration Project
⑦ Amphitheater
⑧ Denny's Trail

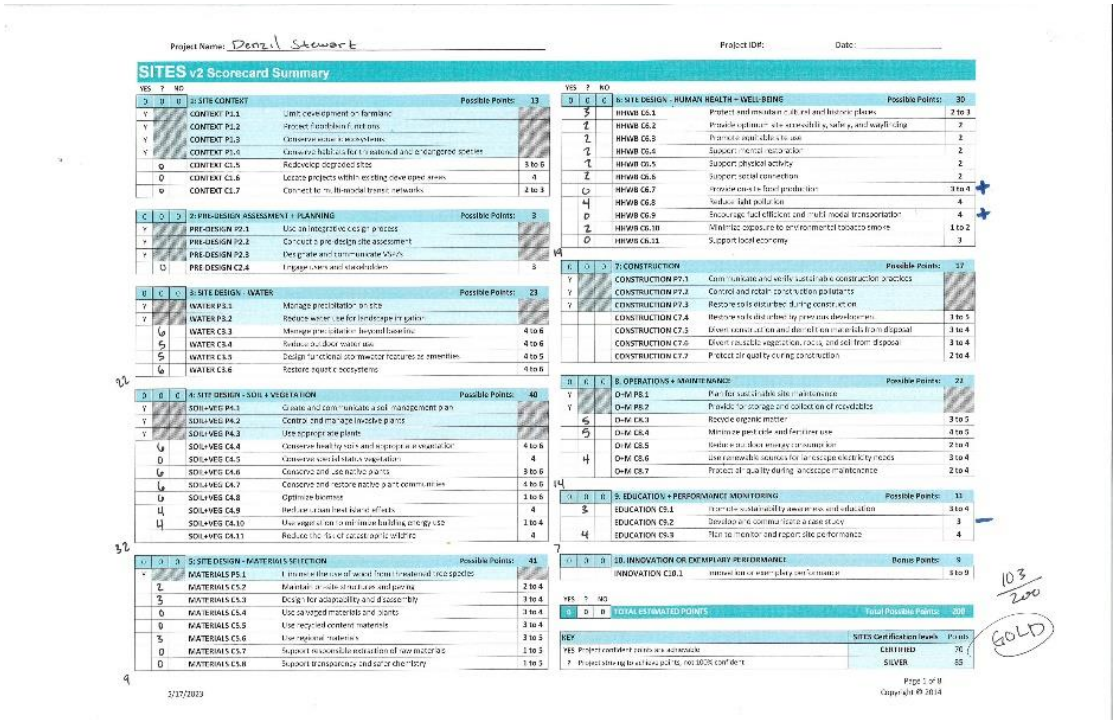
Running along the northeast boundary of the park, where the land interacts with the river, is a restoration project. The goals for this project are, among others, to beautify the river's edge, restore

bird habitat, and reactivate floodplains. A small amphitheater is located on the southeast side of the park, below "Denny's Trail," a trail blazed by Denzil himself.

Though small, the Denzil Stewart Nature Area gives a sense of seclusion. There is clear evidence of maintenance and care, yet the land feels natural.

SITES Scorecard

Denzil Stewart Nature Area easily scored the best out of the three parks, excelling in areas like water conservation (P3.2; C3.4) and aquatic ecosystems restoration (C3.6). Unlike most parks, one can clearly see where organic material is being kept on site for natural decomposition (C8.3), and there is minimal to no herbicide used (C8.4) in the park. Throughout the DSNA, there is signage educating


Project Name: Denzil Stewart

Project ID#:

Date:

SITES v2 Scorecard Summary

Y	?	N/D	1: SITE CONTEXT	Possible Points:	13
Y			CONTEXT P1.1	Limit development on farmland	
Y			CONTEXT P1.2	Protect floodplain functions	
Y			CONTEXT P1.3	Conserve water ecosystems	
Y			CONTEXT P1.4	Conserve habitat for threatened and endangered species	
	0		CONTEXT C1.5	Redevelop degraded sites	5 to 6
	0		CONTEXT C1.6	Locate projects within existing developed areas	4
	0		CONTEXT C1.7	Connect to multimodal transit networks	2 to 3

C	?	D	2: PRE-DESIGN ASSESSMENT + PLANNING	Possible Points:	8
Y			PRE-DESIGN P2.1	Use an integrative design process	
Y			PRE-DESIGN P2.2	Conduct a pre-design site assessment	
Y			PRE-DESIGN P2.3	Designate and communicate SSVEs	
	0		PRE DESIGN C2.4	Engage users and stakeholders	3

D	?	C	3: SITE DESIGN - WATER	Possible Points:	23
Y			WATER P3.1	Manage precipitation on site	
Y			WATER P3.2	Reduce water use for landscape irrigation	
	6		WATER C3.3	Manage precipitation beyond baseline	4 to 6
	5		WATER C3.4	Reduce outdoor water use	4 to 6
	5		WATER C3.5	Design functional site irrigation features as amenities	4 to 5
	6		WATER C3.6	Restore aquatic ecosystems	4 to 6

D	?	C	4: SITE DESIGN - SOIL + VEGETATION	Possible Points:	40
Y			SOIL+VEG P4.1	Create and communicate a soil management plan	
Y			SOIL+VEG P4.2	Control and manage invasive plants	
Y			SOIL+VEG P4.3	Use appropriate plants	
	6		SOIL+VEG C4.4	Conserve healthy soils and appropriate vegetation	4 to 6
	0		SOIL+VEG C4.5	Conserve special native vegetation	4
	6		SOIL+VEG C4.6	Conserve and use native plants	3 to 6
	6		SOIL+VEG C4.7	Conserve and restore native plant communities	4 to 6
	6		SOIL+VEG C4.8	Optimize biomass	1 to 6
	4		SOIL+VEG C4.9	Reduce urban heat island effects	4
	4		SOIL+VEG C4.10	Use vegetation to minimize building energy use	1 to 4
			SOIL+VEG C4.11	Reduce the risk of natural and wildfire	4

D	?	D	5: SITE DESIGN - MATERIALS SELECTION	Possible Points:	41
-			MATERIALS P5.1	Limit use of wood from tropical rainforest species	
	2		MATERIALS C5.2	Maintain durable structure and paving	2 to 4
	3		MATERIALS C5.3	Design for adaptability and disassembly	3 to 4
	0		MATERIALS C5.4	Use salvaged materials and plants	3 to 4
	0		MATERIALS C5.5	Use recycled content materials	3 to 4
	3		MATERIALS C5.6	Use regional materials	3 to 5
	0		MATERIALS C5.7	Support responsible extraction of raw materials	1 to 3
	0		MATERIALS C5.8	Support transparency and corporate citizenship	1 to 3

YES	?	NO	6: SITE DESIGN - HUMAN HEALTH + WELL-BEING	Possible Points:	30
	3		HHWB C6.1	Protect and maintain cultural and historic places	2 to 3
	1		HHWB C6.2	Provide optimum site accessibility, safety, and wayfinding	2
	1		HHWB C6.3	Promote multiple uses	2
	2		HHWB C6.4	Support mental restoration	2
	1		HHWB C6.5	Support physical activity	2
	1		HHWB C6.6	Support social connection	2
	0		HHWB C6.7	Provide on-site food production	3 to 4
	4		HHWB C6.8	Reduce light pollution	4
	0		HHWB C6.9	Encourage fuel efficient and multi-modal transportation	4
	2		HHWB C6.10	Minimize exposure to environmental tobacco smoke	1 to 2
	0		HHWB C6.11	Support local economy	3

C	?	D	7: CONSTRUCTION	Possible Points:	17
Y			CONSTRUCTION P7.1	Communicate and verify sustainable construction practices	
Y			CONSTRUCTION P7.2	Control and retain construction pollutants	
Y			CONSTRUCTION P7.3	Restore soils disturbed during construction	
			CONSTRUCTION C7.4	Restore soils disturbed by previous development	3 to 5
			CONSTRUCTION C7.5	Divert construction and demolition materials from disposal	3 to 4
			CONSTRUCTION C7.6	Divert reusable vegetation, rocks, and soil from disposal	3 to 4
			CONSTRUCTION C7.7	Protect air quality during construction	2 to 4

R	C	C	8: OPERATIONS + MAINTENANCE	Possible Points:	23
Y			O+M P8.1	Purchase sustainable site maintenance	
Y			O+M P8.2	Provide for storage and collection of recyclables	
	5		O+M C8.3	Recycle organic matter	3 to 5
	5		O+M C8.4	Minimize pest, vermin and fertilizer use	4 to 5
			O+M C8.5	Reduce outdoor energy consumption	2 to 4
	4		O+M C8.6	Use renewable sources for landscape electricity needs	3 to 4
			O+M C8.7	Protect air quality during landscape maintenance	2 to 4

C	D	R	9: EDUCATION + PERFORMANCE MONITORING	Possible Points:	11
	3		EDUCATION C9.1	Provide sustainability awareness and education	3 to 4
			EDUCATION C9.2	Develop a communications plan	3
	4		EDUCATION C9.3	Plan to monitor and report site performance	4

C	D	R	10: INNOVATION OR EXEMPLARY PERFORMANCE	Bonus Points:	9
			INNOVATION C10.1	Innovation or exemplary performance	3 to 9

YES	?	NO	TOTAL ESTIMATED POINTS	Total Possible Points:	200

KEY	SITES Certification Levels	Points
YES Project confident points are achievable	CERTIFIED	70
? Project striving to achieve points, not 100% confident	SILVER	85

103/200 GOLD

3/17/2023

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Figure 12. Denzil Stewart Nature Area SITES Scorecard

visitors about the history of the site and illustrating the natural elements that can be found there (C9.1). DSNA is located near the end of a dead-end street, making public transportation difficult (C1.7; C6.9),

though it is unofficially connected to a number of neighborhood walking paths. DSNA scored a nearly perfect score in the Human Health + Well-Being section, as it protects and maintains cultural and historic places (C6.1), provides site accessibility, safety, and wayfinding (C6.2), and promotes equitable site use (C6.3). These benefits could be attributed to its isolated location near the end of a dead-end road and its distance from existing developed locations (C1.6), as specified by the guidelines. Though these points could not be awarded to DSNA, some may argue for the benefits of an isolated site.

6 RECOMMENDATIONS TO IMPROVE SITE SCORES

Hyrum Gibbons Mount Logan Park

Hyrum Gibbons Mount Logan Park offers many positives to the community. HGML provides water management on a large scale. Its large retention basins serve as stormwater retention areas if the river were ever overwhelmed during an event. These basins double as organized recreational fields, which are used regularly. The dramatic slopes of the park provide a large variety of sledding options, exercise opportunities, and a vantage point from which to view the valley below. Despite these positive features, there are many things, big and small, that can still be done to help influence visitors to better care for the surrounding environment.

Many spaces throughout the park are awkwardly shaped, too small, or are merely filled with grass and trees, rather than a more creative option. These spaces are located around the programmed elements, such as the parking lot and recreational areas. Such spaces can be supplemented with native plants that don't need weekly maintenance and can thrive with less water. Incorporating green

infrastructure into these areas, such as the bioswales pictured below, would help capture rainwater and/or snowmelt, and would filter harmful pollutants from the parking lot.

Figure 13. Pete V. Domenici U.S. Courthouse

To resolve a number of categories in the SITES Scorecard, such as incorporating edible plant material, reducing water usage, designing stormwater features as amenities, using native plants, optimizing biomass, creating biodiversity, and reducing harmful maintenance practices, groves should be planted strategically through the park. These groves of native edible and non-edible trees would encourage children to explore in a way that typical built playgrounds cannot provide. Increased shade from trees and low maintenance grass would reduce water usage and attract wildlife. Signage in these areas would help educate visitors who may not be accustomed to seeing features in city parks that are not heavily manicured. In addition to these groves, I recommend planting cleverly placed stream beds.

Though dry for most of the year, during storm water or snow melt events, such stream beds would serve as water features and as additional locations for encouraging water saturation into the soil.

Figure 14. Columbus US Land Port of Entry

The City of Logan's public transport system is extremely impressive and requires no payment. However, the location of the Hyrum Gibbons Mount Logan park lacks accessibility. This park is not centrally located, and an attempt to visit this park without a car would be extremely bothersome. Accessibility issues can be resolved by adding stops to nearby bus routes. Providing bus stations in this park and creating a trail through the land directly east of the park would also create access to Dry Canyon, which is a popular trail system that is easily accessible with a vehicle.

Categories amended: C3.3 Manage precipitation beyond baseline, C3.4 Reduce outdoor water use, C3.5 Design functional stormwater features as amenities, C4.6 Conserve and use native plants, C4.7

Conserve and restore native plant communities, C4.8 Optimize biomass, C6.7 Provide on-site food production, C8.4 Minimize pesticide and fertilizer use, C9.1 Promote sustainability awareness and education.

Figure 15. Hyrum Gibbons Mount Logan Park Recommendation Illustration

Lundstrom Park

With a few key elements and lots of trees, Lundstrom Park can potentially reach a certified level. Firstly, there is plenty of space to add elements, such as an orchard, that would reflect the historical nature of the site. In addition to an orchard, a community garden would be a great way to make sure water use is both productive and giving back to the community. There is currently a slope on the eastern edge of the park that is commonly used for sledding, tumbling, and the occasional ski lesson. Such features should be preserved. “The Grove,” a handful of trees on the northeast side of the park, is a great section that can be mimicked throughout the park. Providing a mixture of low, possibly native, fruit trees, as well as tall shade trees, would provide more places for leisurely activities such as hammocking and insect hunting. Since the grass would be rarely mowed and the trees would provide a tight canopy, water use should be less necessary. Scattered throughout the park, such places would provide spaces for children to explore, adults to relax, and native plants to integrate into the landscape. With the help of signage, these groves could serve as educational tools to teach the community the benefits of less manicured space. Near one of the new groves and the existing playground, a dry stream bed could be used to collect water runoff and serve as a more natural play area for children. Directly to the east of the splitting road, open space should be maintained for organized recreation. This field, with a slight berm on the lower side, is where excess water could gather and then percolate into the ground.

For several reasons, I would advise the land to the west of 1720 East to remain untouched. On that land, one baseball field is owned by the city, while another is privately owned by a neighboring church. This area is covered with very large, mature trees which provide ample shade and a buffer between the baseball fields and the surrounding roads. To disturb this area would mean eliminating access to community sporting activities for players and spectators.

Categories amended: C3.3 Manage precipitation beyond baseline, C3.4 Reduce outdoor water use, C3.5 Design functional stormwater features as amenities, C4.6 Conserve and use native plants, C4.7 Conserve and restore native plant communities, C4.8 Optimize biomass, C6.7 Provide on-site food production, C6.10 Minimize exposure to environmental tobacco smoke, C8.4 Minimize pesticide and fertilizer use, C9.1 Promote sustainability awareness and education.

Figure 16. Lundstrom Park Recommendation Illustration

There are few things that can improve the SITES scorecard of the Denzil Stewart Nature Area. Many elements are already in practice at DSNA, including the omission of pesticides, on-site composting, and minimal water use. In contrast, many of the points that were not given to DSNA were related to construction and park location, neither of which can be changed at this time.

The DSNA is a wonderful example of sustainable practices in appropriate locations, as there is currently no need for large amounts of grass and water dispersion, native plants are protected, the river edge is being restored, and minimal maintenance is necessary. Another park in Logan, Rendezvous Park, has been designed in similar fashion, for example. Behind a large dog park exists an extensive network of trails along the river's edge. In one particular area to the south end of Rendezvous park, the city has taken time to restore a biologically diverse wetland area. The water that runs through this wetland area leads to many surrounding agricultural areas. This small section of the Logan River is rich with diversity and clean water.

7 DISCUSSION

At the time of this research, there are very limited options for aiding smaller operations that seek to attain some sort of SITES certification. All certification requires an extensive timeline and budget, and for public projects, certification also requires support from the community. Even considering the four tiers of certification, "certified, silver, gold, platinum," the lowest tier is still difficult to achieve. As a result, project managers of such small projects are forced to wonder whether or not

achieving certification status is worth the work involved. If projects could be awarded some sort of credit for achieving excellence in certain subcategories (such as water use, accessibility, or education), many more such projects would potentially seek greater sustainability practices. With this in mind, I recommend that the Sustainable SITES Initiative and their partners closely examine how to create more attainable goals for a greater variety of projects.

Similar Parks without SITES Certification

As discussed, the term *sustainability* is a far-reaching ideal. There are many ways to demonstrate sustainability, depending on local environments, conditions, and other characteristics. To claim a site is not SITES certified does not necessarily mean that it is not a sustainable project. It is important that sustainable park designs not get overlooked because of a lack of certification status. While SITES plays an important role in setting the sustainability bar high across many categories, it is important that designers keep an open mind when it comes to what their community wants and needs. The following parks demonstrate important principles of sustainability, such as the preservation of native land, stormwater retention, and biodiversity.

Red Butte Garden, owned by the University of Utah in Salt Lake City, includes over 5 miles of hiking trails within its 21 acres of land. Though there is a minimal amount of manicured grass, the gardens still invite a variety of community engagement opportunities, such as horticultural education, exercise, recreation, family-based activities, and even weddings. Red Butte Gardens is one of the largest botanical gardens in the Intermountain West and demonstrates many important sustainability practices. These achievements are not diminished because the space is not SITES certified.

Heights Park is located in the Daybreak community of South Jordan, Utah. Designed by the LOCI landscape architecture firm, the park touches all three pillars of sustainability: Environmental, Economic,

and Social. From an environmental standpoint, Heights Park was designed to capture 100% of the stormwater of the surrounding development and return it back to the ground and out of the city's sewer system. In order to keep on budget, the earth that was moved in order to capture this water was mounded up to make an attractive play environment. All this was done without compromising the aesthetic beauty of the park, leading to greater social engagement and even a newly constructed neighborhood named Heights Neighborhood.

Kathryn Albertson Park in Boise, Idaho is a riverside park in the "Ribbon of Jewels." Each park in the "Ribbon of Jewels" is named after a prominent woman in the surrounding community and can be accessed via car and/or the trail system of Boise's famous greenbelt. Kathryn Albertson Park is not SITES certified; however, it embraces many elements of sustainability. Rather than expanses of manicured grass, the park boasts plenty of wildlife, due to its preserved natural space. In fact, park caretakers require visitors to stay on paths through certain areas because the spaces are so full of wildlife (City of Boise).

Limitations

If the City of Logan were to implement the design suggestions above, they could, in theory, reach the standards for SITES certification. However, there are many impractical aspects of these design challenges. For a city like Logan, the toughest challenge would be the financial burden: finances are required for planning, for making modifications to existing infrastructure, and for maintenance costs. Such costs would undoubtedly lead to public resistance. While many Logan residents care about environmental sustainability, they may feel that the resources required to make these changes would be better spent elsewhere. Maintaining a healthy balance among the three pillars of sustainability (social,

economic, and environmental) is vital. Overemphasizing the environmental aspect by designating excessive resources to its development could potentially harm the social and economic pillars.

Many of the suggested design changes would require the City to rethink the way maintenance is performed, as such changes disrupt the traditional, popular aesthetic of manicured lawns and clear views. Shifting to more natural areas or groves, as suggested in Lundstrom Park's plan, may also frustrate community members who don't understand the intention behind the design. The introduction of more food-producing plants and/or trees would also require community engagement, which cannot be guaranteed. Managing food production and groves of trees would require expertise within the parks and recreation design department and maintenance teams, as standard practices for lawn and tree care would not apply to these locations. Developing and maintaining such locations would require conscious decisions to be made weekly by team members. This type of expertise is difficult and costly for a city to implement and maintain.

Future Research

There are many things that would optimize the potential changes made by the City of Logan suggested above. If the City is going to pursue the science of sustainability, it is important follow through after any changes have been made. It is inherently short-sighted to claim that these hypothetical changes will help the environment and the surrounding communities without first implementing long-term plans to monitor, evaluate, and possibly revisit the changes. The following suggestions would help Logan City reach and maintain goals for environmental, economic, and social sustainability.

Community Involvement – It is difficult and unethical to make major decisions within a community without feedback and participation from its citizens. This can be accomplished during the planning phase. Through surveys, public meetings, and/or interactive workshops, designers can better

understand what is important to citizens. Such opportunities allow people to set boundaries for the process and feel a greater sense of ownership in the project. This is important when considering the long-term preservation of parks. A sense of ownership within the community will instill a collective sense of responsibility for the overall health of the park.

Partnerships with Local Organizations – Renovating an existing park is a costly job. Partnering with local organizations, such as schools, businesses, environmental groups, and/or neighborhoods, can reduce costs and help generate excitement and awareness about the project. These passionate groups will likely have members that can also serve as experts in various fields.

Evaluation – Throughout the design, build, and maintenance processes, detailed logs should be kept to track progress. Thorough documentation is imperative in order to learn what works well, what did not reach expectations, and what can be implemented in the future. Detailed reports can help to both educate investors and participants and motivate future projects.

Long-term Plans – In its simplest form, *sustainability* means keeping an eye on future resources. Too often, designers and contractors are not on the same page, making goals difficult to reach. Creating a plan that clearly outlines best maintenance practices can ensure longevity, and preparing proper documentation of design methods can establish a tone for the park that can be replicated when future changes need to be made.

8 CONCLUSION

The objective of this research has been to analyze the sustainability of three parks in Logan, Utah through the lens of the Sustainable SITES Initiative. The scorecard provided by the SITES resources was applied to the three parks to demonstrate the disparity between certification and realistic improvements to public spaces.

While studying the process to receive certification through the Sustainable SITES Initiative, it became clear that the current process is not set up to be used as a mainstream tool to promote sustainable practices. Rather, certification is only attainable for a niche group of designers, developers, or city officials. One could make the argument that the lofty goal of certification is what makes the process worth the effort—in short, if it were easy, everyone would do it. However, in the case of environmental, economic, and social sustainability, all action, big or small, should be encouraged and recognized.

When the SITES Scorecard was applied to the parks in Logan, a few key findings were revealed. Firstly, if the location and type of land has already been chosen, there are many prerequisites and points that can be impossible to achieve, disqualifying the project completely. For example, if a portion of land is donated, the location of the project is out of the control of any project designers and/or decision makers. In Section 1: "Context," points are only credited if you redevelop a degraded site, if the project is located within an existing developed area, and/or if the project is connected to a multi-modal transit network. All three of these point opportunities—and many others—exist outside a design committee's control, thus providing no incentive to proceed with the SITES program.

These broad stroke constraints do not take into consideration the spirit of each individual place. For example, the Denzil Stewart Nature Area was once an agricultural site, used for grazing and watering cattle. When the land was donated to the city, the land was no longer suited to its original purpose, as development had begun encroaching on the borders of the property. The restoration of the water's edge and the low maintenance processes provide our only glimpse of what the surrounding land may have looked like before settlement. Still, the DSNA's historical and logistical situation does not comply with the SITES scorecard, even though the three pillars of sustainability would indicate that the DSNA is one of the best possible options for certification.

Another key finding is difficult to analyze for anyone but regular visitors who are intimately familiar with the space. The stiff but generic rules of the SITES scorecard create a lens capable of finding fault in any space. For example, Lundstrom Park's large, grassy fields are one of its defining features. An outside observer could easily jump to the conclusion that such fields are a waste of water, that the space isn't being utilized well, or that there is not enough biodiversity. Yet a conversation with local expert Mike Timmons shifts that perspective. Timmons mentions busy afternoons and evenings in the park, wherein almost every space in the park is full on a daily basis. Lundstrom Park would not be able to accommodate so many people without its sprawling grass fields.

Looking back on the two largest parks in our study, Lundstrom and Hyrum Gibbons Mount Logan Park a common factor seems to make the biggest impact on the feasibility of sustainability revisions, a defining factor that I suspect would apply to many parks in the Intermountain West: manicured turf maintenance. This maintenance includes weekly care from lawnmowers, pesticide applications throughout the year, and most importantly, multiple waterings throughout the week. Extensive fields of manicured lawn seem to be the default landscape throughout the United States, despite the fact that the United States boasts one of the most diverse range of climates of the planet. While there are

appropriate situations for low-cut, manicured lawns, such as sporting activities and large gathering spots, such landscapes should not be used to “fill in the gaps” between usable spaces.

To be clear, within the setting of a public park, the alternative to low-cut manicured lawn is not a perfectly zeroed-out solution. Depending on location, one could even make an argument that a zero-impact solution is not possible. But anything that reduces water usage and regular maintenance while simultaneously preserving the park’s purpose is a better solution than straight turf. Two possible solutions include: 1) Identifying low-use zones of the park to simply stop mowing the grass. After a few weeks, the grass that had been carefully cultivated will become a bit more self-sufficient. In time, a beautiful, flowy grass will start to seed, ultimately bending over to shade itself and the ground and thereby insulate the ground from heat and prevent evaporation. This will not only allow water output to be reduced, but it will create a slight but interesting variety to the grass monoculture. 2) Breaking up the grass monoculture by supplementing with native grasses and flowers. Adding a bit of destruction to turf will provide room to throw native seeds into the area. Over time, water usage will drastically reduce, and there will be an increase in bugs, butterflies, birds, etc.

It should be mentioned that both of these solutions will still require water and maintenance, not only in establishing the landscape, but for long-term care. Any existing shade trees will also require continued maintenance. As far as public appearance is concerned, this specific upkeep shows that the site is being maintained, rather than being left in an unkempt, abandoned state.

One must also take into consideration the ethical obligation to please the public. In most cases, the money to build or maintain a park is largely funded by taxpayer dollars. If a space does not serve the people and instead appeals solely to the aspirations of landscape designers, it is not effectively serving its purpose. Interestingly, the majority of SITES certified projects worldwide are privately funded projects. This makes one wonder whether the lofty expectations of SITES simply aren’t worth the cost to

the average consumer, regardless of whether or not such consumers value sustainability. Considering the three pillars of sustainability, designers should make time to step outside their classrooms and studios to better understand public opinions. In addition to degrees and an overall vision, an ideal designer will also possess knowledge of the community being served. Thus, long-lasting sustainability will inevitably require compromise in the decision-making process.

Some claim that SITES is simply rewarding projects for elements that good landscape architects should consider standard practice. Few would argue against the merits of saving water (even if for economic reasons), reducing carbon emissions, or providing more access to and restoring riparian areas. And if such strategies are indeed standard practice, why seek the reward of SITES certification? There are plenty of projects, including the Denzil Stewart Nature Area, that are currently striving to do all the right things without seeking SITES recognition. This is not to say that The Sustainable SITES Initiative and its scorecard is negatively impacting environmental sustainability—on the contrary, if SITES is capable of reaching a large audience and demonstrating sustainable design that appeals to the masses, it could result in huge strides for sustainable landscape design. That being said, the results of this study call into question the true motives of those seeking certification. In essence, would the time and resources invested in attaining platinum SITES certification be better used to strengthen or further other sustainable actions?

The word *sustainability* elicits a wide range of facts, opinions, and beliefs, many of which have led to political weaponizing of the term and subsequent misrepresentation and/misunderstanding of its inherent value. The actual word has been so greenwashed, sadly, that additional incentives must often be added in order for designers and other decision-makers to prioritize environmental preservation. There are those who seek sustainability in order to wear the word like a badge, while others seek sustainability because it's the right thing to do. Yet no matter what the agenda, the ultimate vision of

sustainability remains the same. Whatever the motivation or bias, steps toward sustainability should always be encouraged.

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