

GLOSSARY OF TERMS AND ACRONYMS

BRACKENRIDGE PARK TERMS

acequia: An irrigation ditch or canal with Middle Eastern origins. “One of the most significant accomplishments of the Spanish Colonial residents of San Antonio was their construction of a complex and expansive system comprising dams, gates, and irrigation canals. Together these systems, known as acequias, enabled the missions to thrive and determined settlement patterns.”¹ The original acequia network in San Antonio provided water to five Spanish missions spread along the San Antonio River. Later additions to the network provided water to settlers who were not associated with the

Acequia Madre de Valero: Construction of this canal began in 1718 or 1719. When the mission it sourced moved, the Mission San Antonio Valero (the Alamo), new construction was carried out beginning around 1723 or 1724 to supply water to the Mission San Antonio Valero.² The acequia originated from a diversion dam in the San Antonio River at a location in Brackenridge park and “ran southeasterly toward Broadway and south to [the] mission before returning to the San Antonio River below today’s downtown area.”³ Remnants have been located near the Witte Museum. It is the first acequia in the city’s original acequia system, and it is likely remnant along many portions of the eastern edge of Brackenridge Park.

Upper Labor Acequia: Between 1776 to 1778, the Upper Labor acequia was constructed and “twenty-six long, narrow parcels (suertas) running from the acequia to the river were awarded to those who financed the ditch.”⁴ The Upper Labor Acequia was constructed to provide irrigation to settlers; it was not part of the original system of acequias constructed to serve the missions. Remnants have been located in the northwestern area of Brackenridge Park, in the San Antonio Zoo, and in the southwestern area, in Davis Park.

1 “Mission Trails Historic Sites, Acequias,” Sanantonio.gov, accessed January 8, 2020, sanantonio.gov/Mission-Trails/Mission-Trails-Historic-Sites/Detail-Page/ArtMID/16185/ArticleID/4230/Acequias.

2 “Mission Trails Historic Sites, Acequias.”

3 Maria Watson Pfeiffer and Steven A. Tomka, “Brackenridge Park,” National Register of Historic Places, Texas Historical Commission, San Antonio, TX, June 15, 2011, 8.

4 Pfeiffer and Tomka, “Brackenridge Park,” 36.

Balcones Escarpment: A rugged limestone terrain that forms a fault line which delimits the boundary between sub-arid conditions of the Great Plains to the west and subtropical conditions of the Coastal Plains in the east. This line separates Texas Hill Country from the flat and fertile Blackland Prairie. Fissures along the escarpment allow water to trickle down to the Edwards Aquifer below, creating the rechargeable source of water from which numerous springs, and the San Antonio River, flow.⁵

diversion Dam: A structure “designed to divert water from a watercourse such as a waterway or stream into another watercourse, irrigation canal, stream, water-spreading system, or another waterway.”⁶ In Brackenridge Park, diversion dams were constructed to divert water from the San Antonio River into acequias.

Alamo Dam: The Alamo Dam dates to c. 1719-1724, and was constructed “on the east bank of the river to divert water into the ditch [acequia] that served Mission San Antonio de Valero (the Alamo).”⁷

Upper Labor Dam: “The Upper Labor dam diverted water from the river’s west bank into an acequia that ran southwesterly through today’s San Antonio Zoo and near the alignment of Rock Quarry Road (now North St. Mary Street). It worked in conjunction with the Upper Labor Acequia and dates to c. 1776-1778. During park renovation in the 1990s, the dam was partially excavated and documented and then covered for protection. The stone-lined channel remains intact and is visible in both the park and within the boundary of the San Antonio Zoo.”⁸

Edwards Aquifer: “an underground layer of porous, honeycombed, water-bearing rock that is between 300-700 feet thick...The San Antonio segment of the Aquifer extends in a 160 mile arch-shaped curve from Brackettville in the west to near Kyle in the northeast, and is between five and 40 miles wide at the surface... The San Antonio segment is where most of the major natural springs occur, where much of the use by humans takes place, and where the issues are most hotly debated.”⁹

faux bois: French term meaning false wood, “refers to the artistic imitation of wood or wood grains in various media, but typically cement. The craft has roots in the Renaissance... In Mexico and Texas, this style is sometimes known as ‘el trabajo rústico’ (the rustic work). It is often characterized by a realistic look in both composition and coloring, as well as a more finely detailed finish than comparable European work.

Dionicio Rodríguez: Mexican artist Dionicio Rodríguez was an internationally known sculptor and “a skilled practitioner of the technique;” his faux bois exists throughout Brackenridge park, including in Miraflores Gardens and in the San Antonio Zoo. The work includes footbridges, benches, tables, entry gates; this work dates between the 1920s – 1940s.

5 David Malda, “Landscape Narratives and the San Antonio River,” in *River Cities: City Rivers*, ed. Thaïsa Way (Washington, DC: Dumbarton Oaks, Trustees for Harvard University, 2018), 252.

6 “Dam, Diversion,” USDA, Natural Resources Conservation Service, accessed January 8, 2020, nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_026012.pdf

7 Pfeiffer and Tomka, “Brackenridge Park,” 8.

8 Pfeiffer and Tomka, “Brackenridge Park,” 10.

9 Gregg Eckhardt, “Hydrology of the Edwards Aquifer,” The Edwards Aquifer Website, accessed June 3, 2019, edwardsaquifer.net/geology.html.

low-water Crossing: A structure designed provide a bridge across a water body. It is designed to be submerged during high water flows, and to provide a safe vehicular passage during low water flows.¹⁰ There are two historic low-water crossings in Brackenridge Park.

Avenue A Low-Water Crossing: Constructed as a WPA project in 1939 and located in the southern portion of the park. This crossing is no longer functional as a connection, because the road it would have connected people to (on the eastern side of the San Antonio River), is no longer operational.

Tuleta Drive Low-Water Crossing: Constructed in 1917 and located near the San Antonio Zoo entry area, provides access across the San Antonio River, uniting the eastern and western sides of the park.

San Antonio Missions: “a group of five frontier mission complexes situated along a 12.4-kilometer (7.7-mile) stretch of the San Antonio River basin... The complexes were built in the early eighteenth century and as a group they illustrate the Spanish Crown’s efforts to colonize, evangelize and defend the northern frontier of New Spain. In addition to evangelizing the areas [I]ndigenous population into converts loyal to the Catholic Church, the missions also included all the components required to establish self-sustaining, socio-economic communities loyal to the Spanish Crown.”¹¹

Critical to the missions were the system of acequias, with the earliest acequia, the Acequia Madre Valero, beginning in present-day Brackenridge Park.

Water Works Raceway: “a straight, earthen ditch with sloping sides constructed to deliver water from the west bank of the river to the Water Works pump house. As originally constructed, the ditch measured approximately 40 feet wide and 650 feet long. The raceway was designed with a nine-foot fall that provided power to drive turbines and pumps. Water re-entered the river at the pump house. Today the raceway is abandoned and dry.”¹²

PARK PLANNING/PARK HISTORY TERMS

City Beautiful: Movement that grew from the 1893 World’s Columbian Exposition in Chicago. The City Beautiful Movement shifted the role of the city as a symbol of economic development and industrialization to one of beauty and aesthetics.¹³

Chicago World Fair 1893: Also known as the World’s Columbian Exposition, the exposition was intended to introduce Americans “to the products of men’s handiwork and mechanical skill” from around the world.¹⁴

municipal park (large municipal park): “Land usually encompassing 500 or more acres owned and managed by municipalities and designed to relieve the stress of urban living by bringing the perceived benefits of the countryside into the city. Often picturesque in character, many of these parks include orchestrated experiences of spatial sequences characterized by

10 “Low-Water Crossings,” US Forest Service, accessed November 1, 2019, www.fs.fed.us/td/pubs/pdf/LowWaterCrossings/Hi_pdf/2_Chapter1.pdf

11 “San Antonio Missions: Nomination for Inscription on the World Heritage List PDF,” 159-61, San Antonio, TX, January 2014, whc.unesco.org/uploads/nominations/1466.pdf.

12 Pfeiffer and Tomka, “Brackenridge Park,” 10.

13 “City Beautiful Movement,” The New York Preservation Archive Project, New York Preservation Archive Project, accessed June 3, 2019, nypap.org/preservation-history/city-beautiful-movement/.

14 Norman T. Newton, *Design on the Land: The Development of Landscape Architecture* (Cambridge, MA: Belknap Press of Harvard University, 1978), 365.

winding roads and paths, woodlands, artificial lakes, large expanses of lawn, and groves of trees planted to guide movement and control sight lines, as well as architecture planned to harmonize with the landscape. These parks often promoted passive recreation and many included such diverse amenities as zoos, outdoor theatres, golf courses, and public gardens. They were created as democratic manifestations of the benefits of a free society, with the goal of reforming public health crises and contributing to economic vitality and the growth of modern cities.”¹⁵

sustainable park: Sustainable park development arose in the mid-1990s. The model of sustainable park development generally includes three attributes: “(1) self-sufficiency in regard to material resources and maintenance, (2) solving larger urban problems outside of park boundaries, and (3) creating new standards for aesthetics and landscape management in parks and other urban landscapes.”¹⁶ Sustainable park development usually involves citizen participation, ecological education, and related policies to support the effectiveness and stewardship of these parks. Brackenridge Park is not currently a sustainable park, but it is engaging in work towards sustainability, and its preservation should include embracing a new chapter as a sustainable park.

Works Progress Administration (WPA): A New Deal agency established in 1935 under Franklin D. Roosevelt to employ people during the Great Depression. Headed first by the Reconstruction Finance Administration and by the Works Progress Administration (WPA), depression-era projects updated the infrastructure, installed new recreational areas and buildings, and virtually remade the landscape of some parks. The agency was renamed “Works Projects Administration” in 1939.

During this period, approximately \$90,000.00 was earmarked for projects to improve the infrastructure of Brackenridge Park and its zoo, and Koehler Park. Investments included the construction of rock retaining walls along the San Antonio River to control erosion. The city forester, Stewart King, who became a noted landscape architect, supervised a project to build a drive—Tuleta Drive—from Broadway to the recreation area at Brackenridge.¹⁷

World’s Columbian Exposition 1893: Also known as the Chicago World’s Fair, the exposition was intended to introduce American “to the products of men’s handiwork and mechanical skill” from around the world.¹⁸

15 “Large Municipal Park,” The Cultural Landscape Foundation, TCLF, accessed November 1, 2019. tclf.org/category/landscapes-designed-landscape-types/public-park/large-municipal-park.

16 Galen Cranz, *The Politics of Park Design: A History of Urban Parks in America* (Cambridge, MA: MIT Press, 1982).

17 Pfeiffer and Tomka, “Brackenridge Park,” 65.

18 Newton, *Design on the Land*, 365.

CULTURAL LANDSCAPE TERMS

Cultural Landscape: In 1984, the National Park Service (NPS) defined cultural landscape as “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values.”¹⁹ There are four NPS-designated types of cultural landscapes.

Designed Landscape: A landscape “consciously designed or laid out by a landscape architect, master gardener, architect, or horticulturist according to design principles, or an amateur gardener working in a recognized style or tradition. The landscape may be associated with a significant person(s), trend, or event in landscape architecture; or illustrate an important development in the theory and practice of landscape architecture.”²⁰

Ethnographic Landscape: A landscape that contains “a variety of natural and cultural resources that associated people define as heritage resources. Examples are contemporary settlements, religious sacred sites and massive geological structures. Small plant communities, animals, subsistence and ceremonial grounds are often components.”²¹

Historic Site: A landscape that is “significant for its association with a historic event, activity, or person. Examples include battlefields and president’s house properties.”²²

Vernacular Landscape: A landscape “that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes.”²³

integrity: “The historic integrity of a cultural landscape relates to the ability of the landscape to convey its significance...”²⁴ Aspects included in determining a cultural landscape’s level on integrity include assessing “cohesiveness, setting, and character of a landscape, as well as the material, composition, and workmanship of associated features... Historic integrity is determined by the extent to which the general character of the historic period is evident.”²⁵

National Heritage Area (NHA): A Congressional designation for a ‘lived-in’ landscape that may occur in urban, rural, or wilderness areas. NHAs are “places where natural, cultural, and historic resources combine to form cohesive, nationally important landscapes. Through their resources, NHAs tell nationally important stories that celebrate our nations diverse heritage. NHAs are lived-in landscapes. Consequently, NHA entities collaborate with

19 “Understand Cultural Landscapes,” National Park Service, [nps.gov/subjects/culturallandscapes/understand-cl.htm](https://www.nps.gov/subjects/culturallandscapes/understand-cl.htm).

20 Charles Birnbaum, “Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes,” Technical Preservation Services, National Park Service, accessed November 2, 2019, [nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm](https://www.nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm).

21 Birnbaum, “Protecting Cultural Landscapes.”

22 Birnbaum, “Protecting Cultural Landscapes.”

23 Birnbaum, “Protecting Cultural Landscapes.”

24 Robert Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports* (US Department of the Interior, National Park Service, Cultural Resource Stewardship and Partnerships, Washington, DC, 1998), 71.

25 Page, Gilbert, and Dolan. *Guide to Cultural Landscape Reports*, 71.

communities to determine how to make heritage relevant to local interests and needs.”²⁶ There are currently 55 NHAs in the United States.

National Park Service (NPS): “A bureau within the United States Department of Interior. The NPS preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.”²⁷

In 1981, the National Park Service “first recognized cultural landscapes as a specific resource type,” and “more than any other organization or agency...[the NPS] provided the most significant direction to the nascent cultural landscape preservation movement.”²⁸ In 1984, the NPS published *Cultural Landscapes: Rural Historic Districts in the National Park System*, a document that “spelled out criteria for identifying and defining cultural landscapes.”²⁹

National Register of Historic Places (NR or NRHP): The comprehensive list of districts, sites, buildings, structures, and objects of national, regional, state, and local significance in American history, architecture, archeology, engineering, and culture kept by the NPS under authority of the National Historic Preservation Act of 1966.

National Register Nomination: The technical document used by any individual or agency completing the process to nominate a property for inclusion on the National Register of Historic Places list.

Landscape Preservation Treatment (Treatment Plan): The National Park Service (NPS) uses the term “Treatment” to describe the management plan that results from CLR analysis of a landscape’s historical context, site history, existing conditions, significance, and integrity. *The Secretary of Interior’s Standards for Treatment of Historic Properties and the Guidelines for the Treatment of Cultural Landscapes* prescribes four treatment approaches:

Preservation: requires “retention of the greatest amount of historic fabric, including historic form, features, and details as they have evolved over time.”

Reconstruction: establishes a framework for “recreating a vanished or non-surviving landscape with new materials, primarily for interpretive purposes.”³⁰

Rehabilitation: “acknowledges the need to alter or add to a cultural landscape to meet continuing or new uses while retaining the landscape’s historic character.”

Restoration: allows for “the depiction of a landscape at a particular time in its history by preserving materials from the period of significance and removing materials from other periods.”

regional vernacular landscape: A vernacular landscape that is composed of regional or local materials and/or a character or quality that is distinctive to the place in which the landscape occurs.

26 “What Is a National Heritage Area?,” National Park Service, nps.gov/articles/what-is-a-national-heritage-area.htm.

27 National Park Service Definitions, nps.gov/dscw/definitionsdc_n.htm.

28 Arnold R. Alanen and Robert Z. Melnick, “Why Cultural Landscape Preservation?,” *Preserving Cultural Landscapes in America*.

29 Alanen and Melnick. “Why Cultural Landscape Preservation?”

30 *The Secretary of Interior’s Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes*, US Department of the Interior, National Park Service, Washington, DC, 1993.

significance: the historic “meaning or value ascribed to a structure, landscape, object, or site” that is a cultural landscape.³¹

statement of significance: “Every CLR has a written statement of significance that explains the relationship between the cultural landscape and specific historic contexts, National Register criteria, and period(s) of significance.”³²

urban cultural park system: A “designated historical area in a community which has been revitalized to interpret the community’s role in the cultural development of the region and state.”³³ An urban cultural park system may achieve Congressional designation as an NHA.

World Heritage Site: The formal and international “designation for places on Earth that are of outstanding universal value to humanity.”³⁴ This designation is made by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). The San Antonio Missions Park is included on the list of World Heritage Sites.

LANDSCAPE ECOLOGY TERMS

ecological restoration (eco-restoration): The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (Society for Ecological Restoration). Ecological Restoration seeks to restore function, not necessarily a historic community.

restoration ecology is the scientific study supporting the practice of ecological restoration.

ecosystem function: The foundational processes of natural systems which are nutrient cycling, energy capture and hydrologic processes.³⁵

ecological health measures ecosystem function by evaluating the integrity of primary processes. Healthy ecosystems can self-repair, retain resources (soil, water, nutrients), and the living part of the system exerts control over primary processes (nutrient cycling, energy capture, hydrologic processes). Unhealthy ecosystems cannot self-repair, tend to hemorrhage resources and primary processes are inoperable or mediated only by abiotic factors like topography.³⁶

31 Page, Gilbert, and Dolan. *Guide to Cultural Landscape Reports*, 68.

32 Page, Gilbert, and Dolan. *Guide to Cultural Landscape Reports*, 71.

33 Jeanne S. Fagan, “New York State Urban Cultural Park System” (master’s thesis, Rochester Institute of Technology, 1992), accessed October 7, 2019, scholarworks.rit.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=5977&context=theses.

34 “What Is World Heritage?,” unesco.org, accessed November 1, 2019, whc.unesco.org/en/faq/19.

35 Michelle Bertelsen, *Brackenridge Park Ecological Site Assessment* (San Antonio: Lady Bird Johnson Wildflower Center at the University of Texas at Austin, 2019).

36 Bertelsen, *Brackenridge Park Ecological Site Assessment*.

low impact development (LID): “a set of interventions designed to repair hydrologic processes. The goal of LID is to reduce runoff and improve water quality by capturing and treating it in a series of dispersed, but interconnected, systems such as rain gardens, bioswales and filters strips.”³⁷

bioswales: “linear bioretention features that convey water and are constructed and vegetated to provide filtration and infiltration.”³⁸

filter strips: “function as pass-through devices that do not hold water for a significant amount of time, rather cleansing the water as it moves through the element... Frequently installed along roadways, parking lots and trails, filter strips provide the first level of filtration.”³⁹

rain gardens: “soil and plant-based filtration devices that remove pollutants through a variety of physical, biological and chemical treatment processes. Rain gardens allow water to be retained in a basin shaped landscape area with plants and soil where the water is allowed to pass through the plant roots and soil column.”⁴⁰ These spaces are designed spaces that include many components; they can appear highly naturalized, or highly structured and designed, but their design is intentional to support their function.

invasive species: “non-native (or alien) species to a local ecosystem whose introduction causes economic loss, environmental damage or harm to human health. Invasive species grow and reproduce rapidly and establish over large areas, largely because they lack natural predators, competition and exposure to disease-causing agents from their home range.” Their spread takes over ecosystems, decreases biodiversity, and threatens survival of native plants and animals.⁴¹

riparian corridor: “protective bands of vegetation lining a river. The width of the buffer partially determines the ecosystem services it can provide.”⁴² A wider buffer (100-300’) provides full ecosystem services, and a narrower buffer provides fewer ecosystem services. The riparian corridor in Brackenridge Park is in poor ecological health.

37 Bertelsen, *Brackenridge Park Ecological Site Assessment*.

38 Bertelsen, *Brackenridge Park Ecological Site Assessment*.

39 Bertelsen, *Brackenridge Park Ecological Site Assessment*.

40 Bertelsen, *Brackenridge Park Ecological Site Assessment*.

41 “Combating Invasive Species,” accessed January 8, 2020, wildflower.org/project/combating-invasive-species.

42 Bertelsen, *Brackenridge Park Ecological Site Assessment*.

ACRONYMS USED IN REPORT

BPC	Brackenridge Park Conservancy
CLR	Cultural Landscape Report
LID	Low Impact Design
NHA	National Heritage Area
NPS	National Park Service
SARA	San Antonio River Authority
STA	Suzanne Turner Associates
UNESCO	United Nations Educational, Scientific, and Cultural Organization
WFC	Lady Bird Johnson Wildflower Center
WPA	Works Progress Administration