

TEX-ESSIBILITY: AN ANALYSIS OF ACCESSIBILITY IN TEXAS STATE PARKS

by

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HONORS THESIS

Submitted to Texas State University
in partial fulfillment
of the requirements for
graduation in the Honors College
May 2022

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2022

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DEDICATION

To anyone who finds a sense of belonging in nature.

ACKNOWLEDGEMENTS

Thank you to my wonderful advisor, Dr. Jason Julian, who helped this project come to fruition. I also want to thank the honors college, and specifically Dr. Ron Haas, for their guidance from the very beginning to the bitter end, the support they gave was invaluable. Finally, none of this would be possible without the assistance of the Texas Parks and Wildlife Department- the emails, the meetings, the data. Thank you for not only accepting my passion for State Parks but giving me a new appreciation for all that you do. JJ Fleury and Rodney Franklin, thank you.

ABSTRACT

Parklands are a critical resource for a variety of people looking for recreation, entertainment, education, and even spiritual connections. It is thus vital that everyone has access to these resources and amenities. This in-depth analysis aims to identify the various levels of accessibility, in terms of physical mobility, throughout the Texas State Parks system in order to increase the enjoyment of visitors to the parks. To achieve the goal, the levels of mobility accessibility are defined and divided into four specific categories ranging from wheelchair accessible (under the Americans with Disabilities Act) to completely inaccessible to persons with mobility impairments. Then, the defined spaces within parks (trails, campgrounds, outlooks) are classified based on the established four levels. Using a case study of a park that is currently undergoing ADA/Accessibility assessment—Palo Duro Canyon State Park—this thesis will categorize a portion of the defined spaces using the data collected and the categories listed above. This examination and categorization will be the basis for proposed concepts that would increase visitor enjoyment, area access for persons with mobility impairments, and better connect people to nature within Texas State Parks.

Access: This document is to accompany and simplify this project. The main format of the thesis is found at the following URL:

<https://storymaps.arcgis.com/stories/5fac7a253ae94934bc5ba3555d0c4053>

I. INTRODUCTION

I am Isabelle Habegger, a senior Physical Geography honors student at Texas State University in San Marcos, Texas. I have a passion for helping others fully experience nature, and that includes people with physical disabilities that hinder their motor skills. My honors thesis project, *Tex-essibility*, aims to categorize and analyze the various levels of mobility access within the Texas State Parks system to better understand the resources available to differently abled bodies. My hope is that I can assist people with mobility impairments in finding areas where they can get in touch with the outdoors without hinderance.

II. REVIEW OF LITERATURE

When discussing a topic involving a spectrum of physical abilities and the way people move within different spaces, it is vital to define benchmarks within the realm of general “accessibility” in order to ensure that the understanding of the topic is consistent throughout the conversation. The term accessibility differs along with the context that it is used in, so for the purposes of this thesis, the definitions of phrases used are as follows, outlined in the Americans with Disabilities Act (ADA) accessibility standards:

Accessible- A site, building, facility, or portion thereof that complies with this part.

Accessible Means of Egress- A continuous and unobstructed way of egress travel from any point in a building or facility that provides an accessible route to an area of refuge, a horizontal exit, or a public way.

Building- Any structure used or intended for supporting or sheltering any use or occupancy.

Facility- All or any portion of buildings, structures, site improvements, elements, and pedestrian routes or vehicular ways located on a site.

Transient Lodging- A building or facility containing one or more guest room(s) for sleeping that provides accommodations that are primarily short-term in nature. Transient lodging does not include residential dwelling units intended to be used as a residence, inpatient medical care facilities, licensed long-term care facilities, detention or correctional facilities, or private buildings or facilities that contain not more than five rooms for rent or hire and that are actually occupied by the proprietor as the residence of such proprietor.

Vehicular Way- A route provided for vehicular traffic, such as in a street, driveway, or parking facility.

Walk- An exterior prepared surface for pedestrian use, including pedestrian areas such as plazas and courts.

Wheelchair space- Space for a single wheelchair and its occupant.

The Americans with Disabilities Act (ADA) of 1990 is a civil rights law that serves to prohibit discrimination based on disability. It has created a variety of standards from workplace treatment to architectural adjustments in order to ensure equal access for Americans of all physical abilities. Since the year it went into law, many other steps have been taken to further guide agencies and organizations on how to create safe and accessible spaces for people with disabilities. In the Accessibility Standards alone, many

elements of the ADA apply to this paper, including sections on parking spaces (ADA 208), drinking fountains (ADA 211), recreational boating facilities (235), fishing piers and platforms (ADA 237), and general recreation facilities (ADA 1001), encompassing a multitude of other areas.

One emergent area of accessibility that became prominent after the ADA was enacted is the ability for people with disabilities to access wilderness areas for recreation and the like. In a report to the President and Congress of the United States, written in 1992, the National Council on Disability sought to “conduct a study and report on the effect that wilderness designations and wilderness land management practices have on the ability of individuals with disabilities to use and enjoy the National Wilderness Reservation System as established under the Wilderness Act.” The main goal of the report is to satisfy a specific section of the ADA, section 507(a) which states, in summary, that the Attorney General with the aid of others shall develop, publish, and implement a plan to assist Federal agencies “in understanding the responsibility of such entities and agencies under this Act.”

At the time it was written, the report includes specifics on the current use levels of the National Wilderness Reservation System (NWRS, which includes the U.S. Forest Service, the National Park Service, the U.S. Fish and Wildlife Service, and the Bureau of Land Management), as well as the “enjoyment of the NWPS by persons with disabilities,” and goes as far as suggesting alterations for increasing the enjoyment of the NWPS. Another protection, the Wilderness Act of 1964, is an unexpected hurdle that is brought up multiple times, as it prohibits activities involving mechanized or motorized vehicle use, which could apply to electric wheelchairs. The ADA, section 507(c)(1)

addresses the issue, stating that “...consistent with the Wilderness Act no agency is required to provide any form of special treatment or accommodation, or to construct any facilities or modify any conditions of lands within a wilderness area to facilitate such use.” This means that, at least in 1992 when the report was written, 74% of NWPS managers did “not make special provisions for use by persons with disabilities.” The issue of motorized wheelchairs is well laid out, in comparison to the use of NWPS by persons with disabilities, which lack specific guidelines.

For the best example of policies and management practices in wilderness areas for disabled persons, I will compare the current policies of the National Park Service (NPS) outlined in the report from 1992 to the present-day descriptions found on their website under accessibility. At the time it was written, the NPS had already established, in 1980, a Special Programs and Populations Branch to “oversee use of NPS lands and facilities by persons with disabilities,” and “ensure accessibility compliance in historic structures, battlefields, and so on,” as well as “overseeing accessibility compliance within the NPS units of the NWPS.” They have allowed for the use of all wheelchairs, with the important criterion being that it must be suitable for indoor use. If it is unsuitable for indoor use, then it becomes considered a motor vehicle and automatically excluded from use in the NWPS. The treatment of people with disabilities using wheelchairs as pedestrians rather than vehicles is the key factor in the regulations that are implemented within the NPS.

Changes made to the areas within park service territory, in reference to creating accessible spaces, are contingent on the level of man-made modifications that are present, ensuring that undeveloped areas (“wilderness”) stay how they are in the most natural state. This is one of three distinct areas defined by a policy detailed in the Policies on

Accessibility to Specific National Park Functions, which separate park areas into developed areas, undeveloped areas, and threshold areas. It states that the undeveloped areas will not be normally modified to provide access to disabled people, keeping in line with the level of modifications that are currently present in those areas. The belief and reasoning behind this policy is to prevent altering the “fundamental nature of that activity,” by adding unnatural elements to provide special treatment or accommodation.

This is not to say that the National Park Service is completely unaccommodating to people in wheelchairs or with other physical disabilities that may need adjustments. On the National Parks Service website, under the accessibility section, the organization details how they comply with various accessibility acts. These include the Architectural Barriers Act of 1968, which dictates how buildings and facilities are to be built or altered to allow for disabled persons to easily use. Another one detailed on the website is the Americans with Disabilities Act, where removal of barriers is required where “readily achievable- that is, easily accomplishable and able to be carried out without much difficulty or expense.” The final one discussed, relevant to the National Park Service, is the Rehabilitation Act of 1973; the act is more expansive than the Architectural Barriers Act and includes much of the more recent technological and communication advancements used in the parks.

In seeing the standards that parks hold on a national level, there is a baseline of expectations with which to evaluate and analyze the compliance of state parks. The website for Texas State Parks is not as in-depth about the influences on their accessibility accommodations yet boasts many other features that assist visitors with mobility impairments in understanding what the parks have to offer. These website subsets include

information on a list of accessible facilities, wheelchair-friendly events as well as online events, and connections to other sites in Texas that are also accessible. The site visitor is offered contact information for further inquiries into the specifics for each park. In this thesis, the author is hopeful that they can assist in a system to create a database without the need for contacting each park individually.

Many sources are also available on the topic of the benefits of nature and outdoor recreation in terms of mental and physical wellbeing, especially for neurodivergent people and those with physical disabilities. As one reads further on the subject, it becomes apparent why it is so vital to have an easily accessed and navigated, not to mention thorough, way of communicating levels of accessibility within Texas State Parks.

III. STUDY AREA: TEXAS STATE PARKS AND PALO DURO CANYON STATE PARK

The Texas Parks and Wildlife Department (TPWD) was formed when the Texas Legislature combined the State Parks Board and the Game and Fish Commission in 1963. Since then, the department has continued to grow in the scope of what it protects and the amount of land it covers. Currently, TPWD oversees more than 580,000 acres of land which include 89 total state parks.

Palo Duro Canyon State Park has been inhabited by indigenous peoples for about 12,000 years. Over the years, the canyon would see fighting including the Battle of Palo Duro during the Red River War in 1874, a prosperous ranching era, and the creation of

the park which opened in 1934. It boasts 28,000 acres of land, earning the spot as the second largest park in the Texas State Parks system. Much of the foundational work was done by the Civilian Conservation Corps, and their legacy is seen throughout Palo Duro Canyon today.

IV. FACILITIES

Texas Parks and Wildlife Department is undergoing an internal analysis of accessibility in their state parks. This thorough assessment includes various areas within each park, remarking the area description, finding, as built downfall, recommendation, citation, photo, and any figures that clarify the specific notes made. Below is an overview of the main minimum standards that are being assessed for each type of facility.

Campgrounds

There are nine campground/cabin areas within the park. Key elements to ensure accessibility include:

- Smooth, flat, and slip resistant surfaces/materials
- Accessible entrances to buildings
- Water spout and fire building surface heights
- Accessible parking stalls
- Dump station surface and spout reach range
- See restrooms

Restrooms

There are numerous bathrooms across the park, which must take into consideration:

- Sink, mirror, hook, handle, toilet, counter, grab bar, toilet paper, and sign heights
- Toilet width
- Shower access/size
- Various surface levels and slip-resistant materials
- Pounds of pressure needed to push doors
- Accessible routes to entrances
- Proper Signage- font size, braille, placement, symbols

Visitor Center and Headquarters

There is one visitor center and one headquarters, which are assessed according to:

- Accessible parking stalls
- Route to entrance material, stability
- Surface slopes and widths
- Proper signage- font size, braille, placement, symbols
- Bench accessibility
- Obstacles at entrances, exits, and in pathways
- Telescope, desk, handrail, and water fountain height
- Weight required to open doors
- See restrooms

Scenic Overlooks and Historic Markers

While there are very few specified overlooks, the named areas consider:

- Clear ground space
- Stable surfaces
- Slope of surfaces
- Accessible parking stalls and pathways

Amphitheater/Pavilion

The Pioneer Amphitheater, the Tasajillo Pavilion, and Mack Dick Pavilion are some of the largest areas in the park for groups to gather. Here are some specific factors:

- See restrooms
- Doorknobs replaced with levers, even doorways
- Keeping parking spaces clear of debris
- Surface material and slope

Wildlife Viewing Blind/Trading Post

The wildlife viewing blind and trading post assessment include:

- Accessible parking stalls
- Routes to bird blind, picnic area, glamping steep, tables, and rutted path
- Counter and items height
- See restrooms
- Appropriate signage
- Ramps- height, width, material, edge protection

Interpretive Centers/Day Use Areas

Assessment includes:

- Route to areas- width, material, slope
- Access to benches
- Sunscreen dispenser and drinking fountain height
- See restrooms
- Accessible parking stalls

Roads and Parking

The park includes a main road with smaller branching lanes to access areas further out.

Many areas of the park are accessed by car, and therefore include parking spaces. The stalls are assessed based on:

- Slope
- Percent of stalls that are accessible
- Width
- Access aisles
- Proper signage and striping
- Route from stalls to nearby facilities/areas
- Material- firm and stable
- Possible obstructions

V. TRAILS

When discussing accessibility within parks, the most difficult aspects to assess are the trails. The issue is likely rooted in the extreme length and variability of trails, which can include both short and long-term factors such as:

- Geology- the rocks of the region
- Vegetation- the roots that may grow under or onto a trail
- Weather- rain or drought can alter a path
- Elevation- the slope may change drastically
- Waterways- building a path across a river may be impossible

VI. SOLUTION

Trail systems are already developed in state parks, and many are at least partially accessible, even without being fully ADA compliant. In order to ensure that visitors are able to understand what sections of trails are accessible, I propose a system of organizing trail maps into categories based on levels of accessibility. Based on current research, I created four broad categories to define levels of accessibility within this project:

1. Completely (encompassing all the area) wheelchair accessible, as defined by the American Disabilities Act (ADA) guidelines.
2. Partially (encompassing only parts of the area) wheelchair accessible.
3. Assistive devices (such as a prosthesis or mobility aid, e.g., walkers or crutches) accessible.
4. Difficult/Inaccessible for people with mobility difficulties.

Concept: Using a similar organizational method as current difficulty proposals, one could create a method to display the levels of accessibility onto the existing map of trails. Ideally, the data would be entered into the difficulty under another section designed for people with mobility impairments. Perhaps it could be added into the Texas State Parks Official Guide app, allowing for visitors to search for areas that they could access depending on their personal mobility level. This can also apply to more than just the trails, expanding the currently available data on facilities and other areas.

VII. ISSUES

Throughout this project, multiple issues arose in the concepts that were discussed. These are just a few of the hurdles that would need to be overcome if the parks system attempted to make every area fully ADA accessible. There is a fine balance between needing to create spaces for everyone to enjoy nature and the experiences that come with it, and the ability to fulfill that need within reasonable bounds.

Ecosystem functions:

Creating miles of gravel or paved trail would create corridors that assist humans but disturb the flora and fauna. In order to cross streams, bridges or partial dams may need to be built that would impact the local aquatic wildlife as well.

Aesthetic value:

While ensuring people with mobility impairments can access further reaches of the park is a necessary goal, it would mar the landscape with unnatural structures. Many

popular areas are difficult to access, even for people with extreme mobility, and would be broken up by a new route.

Cost, time, and labor:

Within the park system, many projects are currently underway to create new accessible areas. Attempting to pave or cover trails with better material would be extremely costly and time consuming- which could put other necessary developments on the backburner. The number of employees that would be required could also increase the costs of creating accessible areas.

Maintenance:

Even areas that currently are completely ADA accessible wear down over time. Many of the facilities within Palo Duro Canyon State Park were noted as beginning to deteriorate. If it was a larger scale, the amount of deterioration would be exponential, creating areas that would be once again inaccessible.

VIII. FUTURE

Looking forward, the Texas Parks and Wildlife Department is constantly working to improve their facilities and parks in order to include people of all abilities. Ensuring areas are both accessible and natural is a difficult balance to maintain, and one they strive to keep. As technology grows, I hope to see new ways for visitors to be able to easily identify and search for areas of varying levels of accessibility so that they can better plan their trips to enjoy these wonderful parks.

REFERENCES

Meta-data

Keywords: Physical Disability, Motor Impairment, Park Accessibility

Time Period: 1990 (ADA in law)-present, with references to earlier Acts that are relevant to current regulations.

Areas of study: United States

Americans With Disabilities Act of 1990. Public Law 101-336. 108th Congress, 2nd session (July 26, 1990).

Dehler, G.. "Wilderness Act." *Encyclopedia Britannica*, May 12, 2016.
<https://www.britannica.com/topic/Wilderness-Act>.

de Hollander, Ellen L., and Karin I. Proper. 2018. "Physical Activity Levels of Adults with Various Physical Disabilities." *Preventive Medicine Reports* 10 (June): 370–76.
doi:10.1016/j.pmedr.2018.04.017.

Koppen, G, M.S Tviet, A. O Sang, and W. Dramstad. 2014. "The Challenge of Enhancing Accessibility to Recreational Landscapes." *Norsk Geografisk Tidsskrift* 68 (3): 145–54.
<https://search-ebshost-com.libproxy.txstate.edu/login.aspx?direct=true&db=edsfra&AN=edsfra.28424327&site=eds-live&scope=site>.

National Park Service. "Accessibility (U.S. National Park Service)." 2018. Nps.gov. 2018.
<https://www.nps.gov/aboutus/accessibility.htm>.

Salbach, Nancy M., Howe Jo-Anne, Baldry Diem, Merali Saira, and Munce, Sarah E. "Considerations for Expanding Community Exercise Programs Incorporating a Healthcare-Recreation Partnership for People with Balance and Mobility Limitations: A Mixed Methods Evaluation." *BMC Research Notes* 11, no. 1 (April 1, 2018): 1–9.
doi:10.1186/s13104-018-3313-x.

Texas Parks and Wildlife Department. "Accessibility at Texas State Parks — Texas Parks & Wildlife Department." n.d. Tpwd.texas.gov. Accessed April 30, 2022.
<https://tpwd.texas.gov/state-parks/park->

information/accessibility#:~:text=To%20request%20an%20accommodation%20or.

Wilderness Accessibility for People with Disabilities : A Report to the President and the Congress of the United States on Section 507(a) of the Americans with Disabilities Act. 1992. The Council. <https://search-ebscohost-com.libproxy.txstate.edu/login.aspx?direct=true&db=cat00022a&AN=txi.b4970935&site=eds-live&scope=site>.