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Understanding City Parks as New Common Pool Resources: A Case Study of the Dakota Nature Park

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UNDERSTANDING CITY PARKS AS NEW COMMON POOL RESOURCES:

A CASE STUDY OF THE DAKOTA NATURE PARK

BY

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This thesis is approved as a credible and independent investigation by a candidate for the Masters of Science in Sociology degree and is acceptable for meeting the thesis requirements for this degree. Acceptance does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

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ABSTRACT

UNDERSTANDING CITY PARKS AS NEW COMMON POOL RESOURCES:

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This thesis examines public parks as New Common Pool Resources through a case study of the Dakota Nature Park in Brookings, South Dakota. I identify the formalization and bureaucratization processes experienced by the governing body of the park. These processes occurred as a capped landfill was repurposed and collaboratively managed to serve the community by providing native, natural space and affordable recreational opportunities. The governing structure is assessed using Elinor Ostrom's (1990) Eight Principles of Common Pool Resource Management, Weber's (1964) ideas of status and authority and Berger and Luckman's (1966) phenomenological theory. I use three major research strategies: (1) interviews with a variety of stakeholders, (2) observation at the physical park space, and (3) a review of documents regarding the park space. This thesis expands on the existing literature regarding classification and management of the Commons while introducing a phenomenological approach to a traditionally realist rational choice theory. This thesis also increases understanding of the development of park governance over time, emphasizing the significance of stakeholders' construction in and by their environments.

Introduction

As a result of growing concerns regarding funding for and management of public lands, land users and administrators have developed creative land management and maintenance practices. One increasingly relied upon management practice, especially in the case of park systems, is collaborative partnership (Margerum, 2008). A collaborative structure places decision making power in the hands of more than one group of stakeholders, leading to a shared sense of responsibility and investment in the shared resource. The literature increasingly analyzes collaborative management systems at a national level, but there are similar collaborative structures functioning at local levels that have the potential to provide communities with access to resources otherwise unavailable or inaccessible due to a variety of factors, including proximity and expense. One such collaborative management structure is used at the Dakota Nature Park (DNP) in the city of Brookings, South Dakota. The DNP is a 135 acre park designed to provide a multi-purpose natural area with trails, rentals, renovated space for recreation, and native flora and fauna (Brookings Parks, Recreation and Forestry, 2017).

The land the park was built on is owned by the City of Brookings but is managed in collaboration with the community. The city allots a certain amount of money for operation of the park's Nature Center and all expenses outside of that budget are paid for by grants and community member contributions in the form of donations of money or resources, program fees and rentals (DNP, 2017). The basic needs for park maintenance (cleaning, teaching, etc.) are met by the part-time paid employees, while much of the care and improvements to the park are done by volunteers and community members. The contributions made by volunteers largely support nature based education, and include

bird seed for all bird feeders in the park, educational display case exhibits and teaching materials. Decision making power as well as budget allotment is nested in layers of authority. These layers of authority peregrinate between formal and informal accountability within elected and appointed roles, resulting in an ambiguous governing arrangement where formal and informal control over varying levels of rule-making have created tension amongst park appropriators and monitors. The collaborative management is unique in its structure and presents an opportunity to understand the effectiveness of local governance over public land.

The Dakota Nature Park is evaluated utilizing a common pool resource framework, specifically, Elinor Ostrom's (1990) Eight Principles of Common Pool Resource Management. Data collection occurred from January 2018 to August 2018 and consisted of observations, interviews, and document review. Ostrom's (1990) framework will be used to understand existing resource governance and uses of the park while considering historical context and plans for future development. Ostrom suggests that there are eight attributes of common pool resource (CPR) governance that indicate if a governing body is capable of sustaining itself and gaining the compliance of future generations of users.

Traditionally CPR Theory has been used to evaluate shared natural resources such as shorelines, fishing spots and grazing land. To be defined as a CPR, a resource must share two essential characteristics: the problems of excludability and subtractability. The problem of excludability refers to the inability to monitor and control the physical boundaries of a resource and to control who uses the resource. The two and a half miles of paved trails, three ponds and open bike trails at the DNP are examples of physical

characteristics of the park that are too expensive to fence in or monitor, making them practically impossible to restrict access to. Subtractability on the other hand refers to the capability of each user of the resource to subtract from the welfare of the resource and diminish its benefits for other users. At the Nature Park, the more users who fish young bluegills out of the ponds and are careless in their hook removal, causing the fish to die, the lower the adult fish population is for future users. Because these two characteristics are the only attributes necessary to define a resource as "common", there is a large variety of resources which fit this description. Due to the variability of types of CPR's it is difficult for Common Pool Regimes to use existing information from other CPR's to create their own policies. Common Pool Regimes are the property rights systems that govern access and use of the resource itself. In this case, the Common Pool Regime is the City of Brookings, and more specifically, the City of Brookings Parks, Recreation and Forestry Department. Along with the Common Pool Regime, board members, donors, and patrons who make up the stakeholders for each CPR and govern over each individual resource must determine the needs within their community. They must then emphasize those who will potentially use the resource and create their own mission and purpose for that resource.

Currently the Dakota Nature Park strives to meet the needs of the Brookings community through its accessibility and amenities by providing recreational opportunities at an affordable cost, creating a natural environment where there was previously just a landfill, and introducing native flora and fauna through nature-scapes that mimic native settings. It functions as one of two community level parks, and is designed to serve all Brookings community members. It is an unlisted public catch and release fishing site,

meaning that it is not listed on the state's fishing websites, but catch and release fishing is allowed. The ponds are stocked every year with rainbow trout, and the equipment available for rent is updated as the budget allows. There are also a wide range of educational courses available throughout the year for all ages. In addition to the standard approved uses listed above there is a subset of discouraged but seemingly unregulated utilizations of the park. All four of the ponds have become a swimming hub for local youths, especially those who appear to be 12-16 years old. There is a group of men and women that fish out of the ponds every day and take the fish they catch home with them, often keeping whole pails full of young fish. Some hunters walk the trails to chase deer into the privately owned fields where they can be hunted, while others let their dogs loose in the tall grass for training purposes. Photographers and families walk through the wildflowers and native grasses to take their family pictures, while whole families set up picnics on the patios that are intended exclusively for use by renters.

The park has become a site for a variety of users who participate in a wide range of activities. The following analyzes the current governing body (Common Pool Regime) over the park, focusing specifically on their interactions with the community and formalization as a governing body over time. This is done by first discussing the guiding institution over the park, its' mission statement. The mission statement is analyzed by detailing the norms, values, and rules that led to its institutionalization. It is then discussed in relationship to the park users and governing body that created it. Finally, the impact of the mission on existing governance and decision making is analyzed, including the process of adopting new meanings to fit the processes inherent in the mission statement. Next, the organization of the park is discussed by analyzing the stages of its

development. Each stage is distinct yet interconnected. The stages have been identified by the degree of formalization of their governance and appropriators' perceptions and responses to the governing body. Therefore, the length of time of each period differs somewhat drastically. Ostrom's (1990) Eight Principles have been applied as a framework for the discussion of each stage of development.

Stage 1 in the park's development takes place from 1965-2010, a 45 year time period. At the beginning of this stage, the Brookings landfill was still open and operating, and the very first Parks and Recreation Department had been formed. During this period of time the first Director of Parks and Recreation began planning the future of green space and park lands in Brookings. Most of the trash at the landfill where the Nature Park would be built was burned, but giant pits were dug to bury that which was not, and the soil that was removed formed mounds around the holes. Gravel was removed for burying trash, and after some time those pits became deep enough that they reached a natural aquifer and turned into ponds. It is uncertain when community members began fishing out of the ponds, but after several years people had dumped enough fish that they were breeding and began to populate the ponds. After the landfill's closure in 1993, and its capping in 1994, plans for a future park on the repurposed space got much more serious. The capped landfill had a settlement period during which no development could occur that would potentially damage the clay cap that was sealed over the landfill refuse. While this settlement period occurred, wild flora and fauna began to take over the empty lot and the space became much more natural. Members of the surrounding community used the land for whatever recreational and environmental activities they preferred. Activities ranged from dog walking to riding ATV's to fishing. This stage is called "Open Access"

because to the community members appropriating the space, that's exactly what it was. There were no posted rules, and people organized themselves such that they could participate in their activities without disrupting the activities of others and without requiring regulation from the city.

Stage 2 occurred from 2008, two years before the formal Nature Park Vision document was released outlining definite plans to transform the land into a city park, until 2011 when the developments that were discussed in this document were completed. During this three year period, city governance took the plans they had created during Stage 1, with collaboration from community groups and outside professionals, and began to present them to the public. During this stage the entire Brookings community was invited to share their opinions and perceptions of how the land should be developed. While some elements of development were non-negotiable, there were spaces and trails that were not allotted for any specific activity. Stage 2 is where conflicts began to arise as appropriators were forced to speak up for their uses of the park to avoid elimination of those spaces. As previously informal ideas became formalized and implemented by the city, the city employees that had once been viewed as fellow appropriators of the land began to be perceived as external monitors and regulators by appropriators.

Stage 3 is a discussion of the present state of park governance. There is some overlap for Stage 2 and 3, as Stage 3 occurs from 2011-2018 (present). The final building structure was completed in 2013, and the focus of city governance turned to the less tangible priorities for the park. The development of the park happened 5-7 years faster than had been expected due to generous donations from external stakeholders. This has led to massive physical changes without the time required for cultural and organizational

shifts to occur. The result has been a fully functional park with a lot of frustrated volunteers and community members who feel that it is not living up to its fullest potential.

Following the analysis of each stage of governance organizationally, there is an inclusive examination of the groups of people that are stakeholders of the park. Each of these groups is made up of individuals and entities who have in some way contributed, or continue to contribute to the development of the park. Groups have been separated into: Governance, Appropriators, and Contributors. Those involved with Governance have formal decision making power over the park. Appropriators are users of the park land, and are further identified as either Responsive or Committed. Responsive Appropriators are park users who would like to learn more about park governance so they can contribute. Committed Appropriators are park users who are already invested in resource function, and in addition to using the resource, they invest time, money or other resources into its operation. Members of Governance can also be appropriators of the park and committed or responsive appropriators as long as their investment must go beyond what is required for their jobs as members of governance. Contributors are stakeholders who have committed resources to the park, but are not park users. Discussion will focus on each of these groups and their influence over park governance. Finally, there is a discussion of the overall sustainability of the Common Pool Regime over the Dakota Nature Park.

The interconnection of Institution, Organization, and People throughout all three stages of CPR development for the Dakota Nature Park will be explained through Ostrom's (1990) Eight Principles. Recommendations for the city of Brookings to ensure

the sustainability of the park and the contributions of this study for scholarship on commons will be discussed. A review of the literature is followed by an explanation of the limitations of this study, specifically regarding its case specific applications. Finally, there is a brief discussion of ideas for future research to continue expanding our understanding of governance over the commons and the dynamics of institutions and stakeholder relations.

Literature Review

Across the world there are protected lands that can be classified as commons, and within this domain of common land are the open spaces provided for public use and enjoyment that we know as parks. Resources fitting within the classification of CPR's share two important characteristics: excludability and subtractability (Feeney et. al, 1990). Resources that have low excludability share physical characteristics that are difficult for one user or group of users to control access to, such as bodies of water or miles of trails. Common Pool Resources also have high subtractability, meaning that each user can subtract from the ability of other users to use the resource to its fullest extent. Runners who pack down the sides of the mountain biking track, making the track less enjoyable for the bikers themselves, are examples of individuals who diminish the experience of other park users. Traditionally commons research has centered on, "…agriculture, fisheries, forests, grazing lands, wildlife, land tenure and use, water and irrigation systems, and village organization," (Hess, 2008). Thus, literature revolving around resources which are or should be shared in the world have come to be known as non-traditional, or new, commons research (Ruiz-Ballesteros and Gual, 2012). The terms new and non-traditional commons are used interchangeably throughout existing literature and have the same definition. A new commons consists of a common pool resource that has low excludability and can be depleted by those who use it, but does not specifically fit into the traditionally studied commons (which are often inaccessible to the public for recreational uses) (Hess, 2008). A variety of new commons have emerged by studying social dilemmas with resources other than traditional commons, such as sports, snowmobiles and roads (Bird and Wagner, 1977; Antilla and Stern, 2005; Waller, 1986).

These applications of commons theories to new resources continue to expand the definition of commons. They also have the potential to advance our understanding of what commons can be and how they can serve the people who use them. An emerging subset of new commons literature focuses on urban environmental amenities, including dog parks (Matisoff and Noonan, 2012). They, like the DNP, represent an uncommonly discussed nontraditional commons. The emphasis of such a study focuses primarily on these new CPR's as neighborhood commons. Neighborhood commons, "…incorporate both urban and rural commons where people living in close proximity come together to strengthen, manage, preserve, or protect a local resource," (Hess 2008: 16). It is collective community perceptions which initiate the movements to strengthen, manage, preserve or protect the resources within the commons (Hess, 2008; Matisoff and Noonan, 2012, Rogers, 1995; Linn, 2007). Thus, it appears that the successful common pool resources have committed stakeholders who are willing to put forth the efforts required to maintain the resource they care about. New commons can evolve in several ways, and after their emergence require New Commons Regimes, defined below using Ostrom's (1999) four types of property rights. These property rights systems expand to include open access, community, private and government property (see Table 1).

Table 1: Types of property-rights systems used to regulate common-pool resources

Property Rights	Characteristics
Open Access	Absence of enforced property rights
Group Property	Resource rights held by a group of users who can exclude other users
Individual Property	Resource rights held by individuals (or firms) who can exclude others
Government Property	Resource rights held by a government that can regulate or subsidize use

Open access involves the negation of any property rights. Open access properties are unregulated and accessible to everyone. Community property is controlled and managed by a discernable group of interdependent users who can collectively work to exclude individuals outside of the group from accessing resources on that property. Private property is the most exclusive and easy to regulate, with transferable rights that are typically formal, in that they are recognized by the state. Government property is controlled and managed exclusively in government. Access may or may not be restricted to the public. The Dakota Nature Park has a collaborative structure that incorporates elements of all the property rights systems. It is owned by the city of Brookings and classified as a government property but has group property characteristics. While the city has control and ownership of the land, there is a Parks Board that is appointed by members of city governance and made up of community members that have some control and decision making authority (Parks and Recreation, 2017). It is within these small groups that are underneath decision making powers that collective action begins to take place.

Small groups have been shown to work together effectively without legal supervision because of the relationships formed between members (Saunders, 2011). This emphasis on small group functionality is not intended to subtract from the importance of structure within the system. Ostrom's (1990) principles depict healthy stakeholder involvement as essential, without overlooking that structure and the ability to follow through with consequences for misuse of resources are also crucial. A widely recognized and studied commons is the National Park land which is overseen by the National Parks System. As the attractiveness of these natural resources has risen, visitors' commitment

to preservation has become less valued than the recreational opportunities the resource provides. Robert G. Healy (2006) found that the lack of monitoring of visitation to Niagara Falls led to severe resource depletion of the common land. He also found that because those who could invest in the Falls could not experience the full economic benefit, they did not invest as much as needed to ensure sustainability. Similarly, recreational trails in Gorce National Park in Poland have been documented as experiencing severe degradation due to use, putting the protected wildlife areas at risk (Tomcyzk and Eweertowski, 2011). There are strong arguments for and against the ability of the public to respect common pool resources so that they will exist for future generations. Wozniak and Buchs (2013) argue that to avoid misinterpretation or overgeneralization due to lack of distinction between the nature of a resource and the property rights regime supervising its use, various categories of goods and the current property regime should be identified and evaluated. This study seeks to point out that distinction by focusing on the common pool regime to determine its impact on the resource and its users, rather than the state of the physical resource itself. By analyzing the impact of governance organization on a resource and its users, there is increased likelihood that the role and influence of the public can be more clearly identified and discussed.

Focusing on the impact of Common Pool Regimes on the community members they serve will increase our understanding of the accessibility of resources for communities. In the United States, the National Park System is the result of increasingly progressive natural resource policies, and is funded and maintained by the federal government, but accessible to the public (nps.gov, 2018). National parkland provides

individuals with access to natural resources that have been preserved and maintained while simultaneously creating opportunities to enjoy recreational activities; all of which are wonderful attributes of the parks, but require potential visitors to pay for their travel to the parks, park entry, lodging, supplies, etc. County and metropolitan parks systems were created in light of the inaccessibility of a large majority of federally protected lands (Cranz, 2000). Local parks provide opportunities for individuals and families to experience the natural environment without requiring the gear, compensation for fees, transportation, etc. to access national park lands (Walls, 2009). While the Nature Park is not advertised as a tourist attraction, it does attract a large number of people who couldn't get the same experience anywhere as geographically close, making certain amenities at the park in high demand.

Stakeholders' interpretations of key issues or topics involving high-deman amenities in a resource are one way of revealing the resource's role and perceived purpose; information that can then be used to help understand the resource as a whole (Adams et. al, 2003). There is a rapidly increasing desire for access to hiking/walking trails and dog parks according to the "Recourses of the Future" survey of 46 parks directors (Walls et. al, 2009). Despite hiking/walking and dog parks being the two most highly desired resources by individuals in urban areas, there are surprisingly very few of these amenities in the cities studied. With the exception of lack of funding, there is little to no data regarding spatial or any other details on local parks and spaces. This prevents current park directors and managers from understanding the uses of existing parks to assist in the development of future parks (Walls, 2009). We are in a cultural climate where there is uncertainty about who has the power to create and diminish public land

(Eilperin, 2017, Patagonia, 2017, Siegler, 2017), parks funding is being decreased,

National Park entry fees are being raised (Resources for the Future, 2017, Phippen, 2017)

and the current regimes managing the parks have few resources to assist in understanding

the future of parks. Grasping a local-level understanding of the sustainability of parks as

CPR's has become more critical than ever.

Theoretical Framework

This study is grounded in Common Pool Resource Theory, and the application of Ostrom's (1990) Eight Principles of Common Pool Resource Management to the Dakota Nature Park. Prior to Ostrom's influence on the field, there were a variety of progressions of thought about common pool resources, led by Gordon, Scott, Olson and Hardin. Gordon (1954) and Scott (1955) analyzed open access-fisheries under the assumption that the resources being studied produced a highly predictable amount of resources and that the actors involved were exclusively self-motivated resulting in over-fishing. Theorists of the 1950's-60's focused on the tragedy of the commons, concluding that individuals will always overuse natural resources to the point that they will be depleted and inaccessible to future generations (Hardin, 1968). In 1965 Mancur Olson elaborated on prior theoretical work with his theory on collective action. He concluded that even those individuals with a common goal are unlikely to willingly unite to reach that goal. He determined that motivations for free-riding behavior are stronger than collective efforts for the general good (Olson, 1965). In response to existing ideologies like those expressed in Hardin's (1968) "The Tragedy of the Commons" and Olson's (1965) theory of collective action, Elinor Ostrom (1990) argued that individuals would collaborate to ensure sustainable CPRs given certain circumstances and specific characteristics. Ostrom (1990) defined the following principles that contribute to the long-term sustainability of common pool resources:

1. Individuals with the right to utilize the resource must be clearly defined, along with the conditions of the resource itself
2. Rules restricting time, place, technology, and the quantity of resource units must be related to the specific resource and its costs (labor, material, money, skills)
3. Most of the individuals who are affected by the rules should have a say in creating them

4. Monitors (of resource conditions and patron behavior) are accountable to the appropriators (those who take possession of or legislate the park for specific uses), or are patrons themselves
5. Appropriators who violate clearly defined rules are likely to receive repercussions for their actions by officials or other appropriators
6. Conflicts between appropriators and officials can be resolved in a low-cost, easily accessible manner
7. External authorities do not challenge or restrict the rights of the appropriators to develop their own institutions through collective mobilization and democratic participation
8. Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized into multiple layers of nested enterprises (note: this Principle is analyzed only at a local level)

These principles do not necessarily describe the attributes necessary to create a functioning CPR; rather they outline the principles that help to predict if a common pool regime is functioning in such a way that the long-term cooperation of appropriators of the park is achievable and sustainable. Ideally, understanding this will assist in understanding holistically the institutional arrangements governing access to the resource (Feeny et. al, 1990). In this case, those arrangements include the formal and non-formal structures within the decision making system. It is important to note that Ostrom pointed out that these principles need further development when being applied to smaller-scale community based organizations like the DNP. This study will help to develop the existing principles by determining stakeholders' perceptions of each principle and measuring the sustainability of the existing regime. These efforts combined with cross examination of data, observations and document review will determine if the Nature Park is sustainable based on Ostrom's principles.

To address the issues of influence and authority work from Max Weber (1964) is used. The "City Organizational Chart" below is provided by the City of Brookings and identifies each role in descending order based on the authority they possess. The chart

indicates that the voters have the greatest influence in decision-making, followed by the

City Council and City Manager who manage the Parks, Recreation and Forestry

Department. These delineations of power are important, but are not specific enough to

explain the complexity of authority and influence involved in park decision-making. In

his discussion of legitimate authority, Max Weber (1968) established that governing

bodies will differ "…according to the type of legitimacy which is claimed, the type of

obedience, the kind of administrative staff developed to guarantee it, and the mode of

exercising authority…." This differentiation is crucial because at each stage of park

development, and at each level of city governance, there have been influential

stakeholders with different types of formal and informal authority that have affected the

overall direction of park development.

Figure 1: City of Brookings, South Dakota, cityofbrookings.org

Formal authority refers to the power to determine, mediate, or otherwise settle disputes which is given based on an individual or group's position and role pertaining to the resource. Similarly to Weber's notion of rational/legal authority, formal authority resides in the office or position held by an individual, not the person themselves (Weber, 1968). Each professional position listed in the chart above has formal authority over their assigned areas. For example, the Director of Parks, Recreation and Forestry has the ability to allocate land for future parks, but if he retires he no longer has the power to do so. This differs from informal authority, which is the power to determine, mediate or otherwise settle disputes, earned through influence external to occupational position. Informal authority relates to Weber's (1968: 305) ideas about status, which is an, "…effective claim to social esteem in terms of positive or negative privileges…" Like status, informal authority may depend on position, but is not solely determined by it (Weber, 1968: 306).

Any stakeholder of the park maintains varying levels of influence regardless of their position and authority. Influence is the capacity of individuals to be a compelling force on or produce effects on the actions/behavior/opinions of others. A larger scale example is evidenced by the flow chart above. The chart indicates that voters have the highest degree of authority over decision making because of their ability to collectively elect the members of the City Council. However, it is the City Council and Mayor that appoint a City Manager, with no input from the voters. The appointed City Manager can then lobby for policy change to alter legislation without any input from voters. Therefore, voters have formal authority because they are recognized by the city as a contributing

entity, but do not have high levels of influence because they cannot make decisions for/within the governing body.

   While the chart above is helpful for disseminating the official structure of governance, it lacks the details necessary to understand each breakdown of authority, and where the community is recognized as having influence over decision making. Table 2 located below, indicates which positions with formal authority are elected or appointed. For those positions that require election, community members have formal authority to influence the person selected for that position. After the election, however, the elected official has formal authority and influence over all decisions within their department, negating the need and solicitation for community input. This is concerning because for authority to be legitimate, the powers in use must be considered just by the appropriators of the park (Weber, 1968). If the appropriators of the park are not given opportunities to influence those decisions as they transpire, they may be unaware of the way formal authorities are influencing decisions, and therefore unable to accurately judge the decisions being made. Table 2 is discussed specifically in "*Chapter 3: People"* to assist with understanding the ways that stakeholders of the park utilize their power and position to influence park development.

Table 2: Governance Organization

Mayor (elected)
City Council (Mayor+ 6 elected)
City Manager (appointed by city council)
Parks and Recreation Director (appointed by City Planner with advising by City Council)
Recreation Manager (appointed by Parks and Recreation Director)
Parks and Recreation Board (appointed by Mayor)

METHODS

Background

Culture and Climate for Parks and Recreation

The Dakota Nature Park was created in a social/cultural environment where the importance of recreational opportunities and green space was undeveloped and only minimally understood. Its founders were working in Parks and Recreation at a time when there were few formal institutions from which to learn and model new natural resource institutions. The first conference to discuss establishing a Parks and Recreation Association was held at the University of South Dakota in April of 1957 (Williamson, 1983). The conference theme was, "Better Recreation and Parks for South Dakota," and covered a variety of topics from the implementation of purpose in the society to the philosophy of recreation (Williamson, 1983). The association generated so little interest and investment that it failed almost instantly. After several years of failed attempts to create a league for those involved in Parks and Recreation in South Dakota, the first ever state-wide association, the South Dakota Parks and Recreation Association (SDPRA), was created in 1965 (SDPRA, 2018). To obtain formal recognition by the state, letters from powerful local governance were collected. While many governing officials supported the association, Williamson documents one anonymous county commissioner worried the association would too quickly become autonomous and attempt to operate independently of the governance systems themselves (Williamson, 1983). Despite this opposition, the association was accepted by the state and supported with heavy enthusiasm and ambitious initiative implementation by many Parks and Recreation directors statewide. One such supporter was the Secretary-Treasurer and also a key

founder of the Nature Park in Brookings (Williamson, 1983). The association was made up of, "parks and recreation officials, students, lay people, and industry related persons," giving the group broad perspectives and experience dealing with natural resource and recreational issues (Williamson, 1983). The mission of this fundamental organization introduced a novel and complex vision that went beyond green spaces and managing vegetation in rural communities.

The SDPRA was the first organization composed of local stakeholders in the Parks and Recreation field to formally emphasize the following objectives in their mission statement:

"Communication of ideas in the parks and recreation field, collection and dissemination of information related to the field, education of students and citizens, promotion and encouragement of studies in the field, involving membership and the public with legislation affecting parks and recreation, promoting high standards, establishing relationships with existing relationships and promoting awareness of the interests of the association," (SDPRA, 2018).

These directives are directly reflected in the ideas and priorities outlined by Brookings city governance. They represent the influence that the organization had on the Brookings City Director of Parks and Recreation as well as the Common Pool Regime responsible for creating the park's mission. Communication and public involvement between the governing body and community members were highly prioritized and are discussed in greater detail in the "Formal Collaboration" section below. Prioritization and accessibility of nature education through interactive programming and hands on activities were priorities mentioned by every single city employee, volunteer and parent interviewed.

According to current city governance, "education" is an objective that continues to be fundamental to their planning processes, as well as an openly expressed expectation of the community utilizing the park space. The residual prominence of each objective, evidenced by their current prioritization, conveys the significant impact of the initial informal mission conceived by the very first Parks and Recreation Department, with heavy influence by the SDPRA.

Setting

The Dakota Nature Park is located in Brookings, South Dakota, a 23,895 person city located near the Minnesota border (Census Bureau, 2016). While there are a plethora of state parks and wilderness areas throughout the eastern half of the state, the Nature Park is unique in that it is city owned but operates with a recreationally and sustainably minded mission. There are three nationally managed public attractions within the state sharing similar missions—all of which are located in Western South Dakota. This makes them inaccessible to individuals and families who want to experience a South Dakota park without a six hour drive and the need to arrange lodging and accommodations. "There's no getting around the fact that fuel prices and national park access fees have risen faster than consumer incomes. That's a major contributing factor to the decline of per capita national park visitation rates, which are down from their 1997 peak" (Josephson, 2016). To combat the effects of less accessibility to national park land and natural resources, smaller parks like the DNP have the potential to provide geographically proximate, affordable access to nature.

Currently, 640 acres of the 8,563 acre county are parks, meaning that 7.5% of the land is parks (DNP, 2017). Of the existing parkland, the Dakota Nature Park is the

biggest park of its kind in eastern South Dakota. The DNP was designed to use the ponds and wetlands created by a gravel mining pit that had been turned into a landfill (City of Brookings, 2010). The park is managed by the Brookings Parks, Recreation and Forestry Department and according to its mission statement, its goals are to promote sustainability and recreation for all patrons who attend. The range of *intended* use for attendees is diverse, ranging from bird watching to mountain biking to learning in a variety of nature classes. Throughout its development, the park has been modified to accommodate more recreational users by introducing grassy beaches, a boat landing and launch and paved paths. For a city owned park in a small rural city, the DNP (2017) is unique in its outreach and structure, stating in its mission statement that:

> "Dakota Nature Park is a special place that is set apart from the City and its other
> fine parks. Nature prevails and all humans are guests at the Larson Nature Park.
> As good guests, humans should tread lightly on the land, undertaking only
> activities that have a minimal impact on the park's land, waters and wildlife.
> Minimal impact will allow others to experience a sense of solitude and uniqueness
> of this special place."

The mission statement at the Dakota Nature Park promotes an organizational culture of preservation and recreation, two seemingly contentious objectives. When new trails are built, trees have to be cut down and animal habitats are split. As more rental equipment is purchased and the new boating dock was put in, water traffic increased and the turtles, cranes and fishers (the small carnivorous mammal, not fishermen) were forced to relocate. Additionally, there are patrons who use the park for purposes outside of any of the existing functions, including swimming and self-subsistence. This creates tension

for stakeholders and decision makers as development continues and intentions for development are discussed and determined. Stakeholders in the Nature Park include investors, contractors, employees and patrons (including community members and all guests who visit the park), all of whom perceive the park and its future in their own ways based on their perceptions of what the park is and should be. Hunters and dog trainers want more open grassland space reserved for training—meaning that hikers, bikers and swimmers would not be permitted. Bird-watchers want more ungroomed trails with increased native plant species to attract different types of birds. The mountain bikers want more trails in the grassland space, and the conservationists want less trails and a more authentic environment. With so many different intentions for this space that is still being formed, decision makers have a lot of options to consider.

Brief History of Significant Events

The original documentation of the objectives and formal organization of a Parks and Recreation association were found in the personal records of the first Director of Parks Recreation and Forestry in Brookings (Williamson, 1983). This gave the director and the city employees who worked under him immense influence over the direction of park development as well as access to other professionals and resources around the state. Throughout all three stages of development, the City of Brookings retained ownership of the land that the Dakota Nature Park was constructed on. The site was originally the city's first landfill, which went into service between 1959 and 1960 and was closed in 1993. When the landfill was capped in 1994, it was with the intention of revitalizing the land for use by the community.

The plans for revitalization were extensive and required large amounts of financial capital and time. Already during landfill operation, efforts were being made to strategically dig gravel pits that could be transformed into ponds for fishing. While there was intentional planning being done by those within the governing body over the park, there was very little development or monitoring occurring within the physical space. This allowed community members to claim the space as their own and organize themselves based on intended use. While to the average user today the park appears to be no different than any other natural community space, its origin is actually very complex. The following sections will discuss in depth the organization of appropriators of the resource, the formal governing Common Pool Regime, and the groups that collaborated in the development process. Additionally these sections will identify and discuss the different combinations of the principles as they emerge throughout the stages of development.

Research Design

Data collection occurred from January 2018 through August 2018. The primary methods of data collection were interviews (30), observations and review of documents. Interviews were conducted with current and former staff members (7), volunteers (2), board members (3), the organizations who collaborated on park plans (1), and patrons of the park (17). Volunteers include anyone who voluntarily provides time and/or services at the park, and patrons of the park consist of anybody who attends the park to utilize the resources. Staff members include directors, recreation managers, superintendents, office managers and Parks and Recreation maintenance workers. The time frame for data collection spanned from January 2018-August 2018. Most interviews were completed

from January-April, with follow-up interviews being completed in June. Document review and observation continued through August.

Interviews from *Question Set 1: Parks Department Employees and Volunteers* (see Appendix C) were conducted in a semi-structured format, with plenty of room for expansion on questions and ideas. A semi-structured format was the best fit for this set of questions because there are unlimited unknown factors affecting those involved with the Park and its future. Utilizing semi-structured interviews provided respondents the time and scope to talk about their opinions of the issues and topics addressed. Each interview took from 30-120 minutes. Interviews took place in public locations, such as interviewee's' offices or local coffee shops. Phone interviews were completed with stakeholders that did not live within a geographical proximity of 30 miles or specified they preferred to answer the interview questions over the phone. Semi-structured interviews have the advantage of having high validity and allowing for interviewer/interviewee rapport, but are limited by their lengthy time consumption, lack of reliability due to differentiating questions asked and difficult generalizability.

To balance the limitations discussed above, interviews from *Question Set 2: Other Park Stakeholders* were more structured. This ensured that each patron was asked the same questions and given the same opportunities to express their opinions. The in-person interviews were intended to be purposive in their focus on people who were physically at the Nature Park at the time of the interviews. Patrons were approached and informed of the purpose of the interview and asked if they would be willing to spend 5-10 minutes answering questions. The questions for all interviews were recorded on a hand held recording device or by hand by the interviewer for post-interview analysis. Participants

were made aware of the recording device and had the option to opt out of the recording in favor of hand-written notes. All recordings were kept confidential and names were not documented for any participants. In the hopes of gathering the opinions of park patrons who had stronger opinions about the park, additional interviews were collected from individuals using the Dakota Nature Park Facebook page. Anyone who had reviewed the Dakota Nature Park, either positively or negatively, was sent a Facebook message asking if they would be interested in participating in an interview about their perceptions and uses of the park. Those who were interested either engaged in a virtual chatting interview, or were given the opportunity to call and have a phone interview. Broadening the scope of interviewees provided insights from a more diverse range of individuals, such as mothers who self-identified as too busy to be interviewed at the actual park, and seasonal users, who were not using the park during the observation/interview timeframe. Participants from both sets of interviews were referred to by a generalized group name determined by their self-identified uses of the park rather than any other identifying information. Table 3, located below, outlines appropriators of the park based on their determined usership preferences:

Table 3: Appropriators of Dakota Nature Park Amenities

Recreational	Naturalist	Subsistence
Bikers- Mountain/Street	Bird Watchers	Fisherman
Water Equipment	Astronomy Club	Foragers
Fisherman	Biologists	
Runners/Walkers	Boy Scout Projects	
Families		

All park users are appropriators, as they are all using the park for their own particular purposes. However, throughout the interview process three distinctly different

types of appropriators became apparent. The first appropriator classification is a "Recreationalist." Recreationalists are individuals who simply utilize the amenities the park offers for relaxation and enjoyment. Recreationalists are not mutually exclusive from Naturalists or Subsistence users, but the primary distinction is their intention to refresh or restore themselves physically or mentally. For this study, Recreationalists were either participating in, or expressed their intent to participate in activities that did not require a specifically natural environment. For example, one interviewee enjoyed walking and sitting next to the trees and ponds at the park because it was peaceful. He indicated that the peace he sought from the park was not inhibited by non-native plant species or other park users crowding into his space and starting up conversations.

These uses differ from the second appropriator classification, the "Naturalists." Like recreationalists, naturalists may utilize the park for activities that bring them relaxation or enjoyment, but their activities specifically require the physical environment be in its most natural form. They most explicitly require the "nature" aspect of the nature park, as their intended activities depend on the elements of the natural world as they exist independently of people/development. An example of one of a more prominent Naturalist group at the park is the birding association. Individuals who participate in the association find enjoyment in identifying very specific types of birds who are drawn in by native flora. Thus, the exact types of trees, grasses and other species at the park influence their appropriation very heavily. The final classification of appropriators are "Subsistence" park users. These individuals utilize park resources specifically with the intent of providing sustenance or support for themselves and/or their families. This appropriator group is the most specific, and the smallest. Appropriators who have been observed using

the park for subsistence are primarily fishermen/women and boy scouts learning how to forage. Throughout the rest of this paper, interviewees and appropriators are identified using these classifications. More specifically, especially in the final chapter of the analysis, appropriators are grouped based on their investment in and influence over decision making at the park.

Documents were reviewed to gain deeper understanding of the history of the park, as well as its existing policies and formal records. All historical data was meant to be obtained from the Brookings County Government Office, including development plans pre and post construction of the park, news articles about the park and documents obtained from the park's initial builders. The documents that were actually collected for analysis from the city include: The 2030 Master Park Plan, The Nature Park Vision Statement, architectural layouts for park development, Dakota Nature Park Brochure, Rules and Regulations for City Parks, the Nature Center Rental Agreement, correspondence regarding the financial information for the development of the park, and development designs regarding the pump and single bike tracks. Documents that were provided by other stakeholders include email correspondence regarding the interests of different groups and associations, including the Mountain Biking Association, Friends of the Dakota Nature Park volunteer information, social media posts, a written history from the South Dakota Association of Parks and Recreation and several timelines of events from stakeholders involved in the development process. A member of DNP governance indicated that many documents potentially related to the development of the park were lost in a move several years ago, so the written documentation available from the city was limited. It should be noted that throughout the course of this case study, following

interviews with several members of city governance, more detailed documentation of park rules and regulations were posted for public access. These regulations were listed online on several links to the Nature Park's website as well as on signs throughout the park. It is noted in the "Organization" section of the analysis that these regulations were added throughout the course of the study and may have been present for some interviews but not others. The regulations were analyzed as official park documentation.

Observation was the final key data collection tool. Prolonged engagement in the park setting allowed for a wider range of data collection. Observation also served to increase the validity of the data provided by participants through extensive determination of the actual activities occurring in the park versus the reported activities. Observation took place from January-early August 2018 and occurred at different times throughout the day. Each observation occurred at a specified section of the park or walking on the trails. Hours were divided out such that each observation area is observed from for a period of time in the morning, afternoon and evening. Walking observations were documented throughout the course of the study as well. Some observations were predetermined and others were determined as necessary. *Observation Area 1: The Larson Nature Center* was frequented more heavily due to the colder weather, and was therefore used for observation more frequently than other areas. Part time workers were located in the building at all times of observation, which provided opportunities to observe the way they interacted with patrons.

Observation also allowed for greater depth of understanding the ways that appropriators adjust to make the resource meet their needs. Many appropriators identified only the ways they used the park which were in line with the posted rules and regulations.

Observations indicated that while the majority of park users are participating in activities that are in line with the guidelines provided by the city, many are *also* utilizing the park in ways that deviate from the posted rules and regulations. Examples of these uses include running on the cross-country ski trails, off leash dog walking, trail blazing through tree groves and across frozen ponds, and riding fat tire bikes on snow-covered trails. None of these activities are particularly harmful, but they were also not mentioned by any interviewees. One reason these activities may have been overlooked in interviews is because many of the individuals participating in them appeared to be younger than 18, making them ineligible for interviews. To mitigate this limitation of the study, several interviewees who identified themselves as parents were asked how their kids prefer to utilize park amenities. There was still no mention of any of the activities listed above.

Together, the interviews, observation and historical data helped to gain a more holistic understanding of the day-to-day and long term operation of park governance. These data collection methods also provided insight into the perceptions of park users and their influence over the organization. All of these data collection techniques were used in the hopes of providing the most conclusive, accurate details about the norms, values and rules at the park and how they came to be. This information was then used to understand the mission of the park as an institution. Ultimately, all of this was done to understand if the social institution governing the Nature Park meets the Eight Principles, as defined by Ostrom (1990).

Sampling

This research explored the Dakota Nature Park as a unique type of CPR, with the intention of determining untapped potential and the balance of recreation and

sustainability. Elements (people, documents, specific contexts for observation) were selected into this study through a purposive sampling method to maximize information relevant to answering the broader research question, which is: Does the Nature Park have the requisite characteristics to successfully sustain itself as a CPR and gain the compliance of future generations? The people interviewed were those considered stakeholders based on their involvement with or use of the park. Forty-five people were contacted for interviews and thirty participated. Interview participants include park users, park board members, volunteers, city employees, retired city employees, and contracted entities who participated in park development. With the intention of encompassing the most inclusive information from a variety of park stakeholders, participants were selected and assessed using a variety of non-probability sampling methods.

Staff members were selected based on their position in the Parks and Recreation Department and their role in the Brookings city government. There are databases on the city website (2017) which list staff members and their contact information. All core staff members were emailed with a request to participate in an interview. A follow up email was sent to those who did not initially respond. During interviews, stakeholders were invited to recommend other potential participants and given the interviewers name and contact information to pass on. Several interviews took place because of these recommendations. Chain sampling was used for volunteer, investor and board member interviews. Participants were also given the researcher's information by the staff members and were able to decide if they were interested in participating in interviews by emailing/calling the researcher. Patrons were selected using a quota sampling method. Subgroups were identified and selected for observation and interviewing based on the

activities offered by the Nature Park and the locations patrons can participate in each activity. While the intention of the interviewer was to gain a diverse array of information from varying participants, the most willing participants proved to be families and college students. To understand the characteristics of the population at the park, the interviews were given over the course of three months. Semi-structured interviews were conducted at a predetermined time, while structured interviews were conducted within a predetermined window of time. No willing participant was turned away, with the exception of minors or individuals whose participation could compromise the reliability of the study (non-English speakers without a translator, individuals with handicaps requiring accompaniment by aids or caretakers).

Stakeholders were put into groups to increase understanding about the way that appropriation of the park impacts investment in its sustainability. Any stakeholder of the park who is also a park user is considered an appropriator. The key characteristics of appropriators for this study are that they are physically utilizing the Nature Park. If appropriators are invested in park activities outside of solely being park users, they are classifies as Committed Appropriators. Often committed appropriators invest in the park through volunteering time or resources. Appropriators who expressed interest in further commitment outside of solely being a user of the park, but are not currently doing so, are classified as Responsive Appropriators. Contributors are individuals who provide or have provided resources for the park, but are not appropriating the land themselves. Contributors may commit to investing monetarily or volunteering their skills, but that does not make them appropriators. Examples of contributors are business owners in the city who donated money for different aspects of park development, but do not personally

utilize the park's resources and amenities. The final categorization, governance, consists

of individuals who may appropriate the park, but also hold positions of authority,

specifically of monitoring. Governance determines rules and regulations, ensures they are

being upheld, and is responsible for enforcing consequences for those who do not abide

by the rules. Members of governance are considered appropriators of the park if they

identified themselves or were observed using the park outside of the time required by

their formal position as a city employee.

   Table 4 and Table 5 depict the variations of appropriator user groups and their

commitment or responsiveness to involvement in the park. Table 4 is presented first to

give an overview of the top activities identified by interviewed appropriators. Table 5 is

presented next to express the variety of overlapping activities appropriators participate in

throughout the year. Appropriators (App.) are listed in the first column to the right of the

activity. Since appropriator activities are not necessarily mutually exclusive, i.e. a

Recreational Biker could also be a Subsistence Fisherman, the first table includes only

each appropriator's self-prescribed most participated in activity. The second table depicts

how many park users participate in each activity, meaning that there may be overlap

because a single appropriator can participate in several activities. Each category of

appropriator is associated with the number of interviewees who were identified as

committed (C) or responsive (R). This table depicts only appropriators, not members of

governance who are also appropriators. If no interviews or data were available regarding

the committed/responsiveness of individuals partaking in each activity, their quadrant is

left blank:

Table 4: Appropriator's Top Activity Participation

Recreational	App.	C/R	Environmental	App.	C/R	Subsistence	A	C/R
Bikers	3	2	Bird Watchers	2	2	Fishermen		
Rental Equipment	2	1	Boy/Girl Scouts	1	1	Foragers		
Fishermen/women	6		College Classes					
Runners/Walkers	6	3	Astronomy					
Bring kids to play	2	2						

Table 5: Total Appropriator Participation per Activity

Recreational	App.	Environmental	App.	Subsistence	App.
Bikers	10	Bird Watchers	1	Fishermen	
Rental Equipment	7	Boy/Girl Scout Projects	1	Foragers	1
Fishermen/women	3	College Classes			
Runners/Walkers	11	Astronomy	2		
Bring kids/grandkids to play	3				
Photographers	1				
Cross Country Ski	3				

Table 6 outlines the different roles of "Contributors" in the park. Contributors may be individuals or entities. The numbers below depict the number of Contributors that were a part of the development process for the park. The specific number of interview participants for each individual/entity will not be given for the sake of anonymity.

Table 6: Contributors

Donors	3
State Engineers/Monitors	1
Landscape Architecture Firm	1
City Engineering	1
Local Building Company	1

The final table outlines the specific roles of the governing body. Numbers were

not given due to the identifiable nature of the participants. Table 7 simply identifies the

positions that were *contacted* for interviews, rather than the number individuals from

each category who participated. To respect the confidentiality entitled to each participant,

a graph has been used to depict the number of interviewed stakeholders in governance

roles that are also either committed or responsive appropriators of the park. As evidenced

by the Figure 2, there were ten total participants who were members of the governing

body, or Common Pool Regime. Out of these ten participants, four were identified as

appropriators of the park, meaning that 60% of the participants with formal and informal

authority over park decisions are not appropriators of the park themselves. It must be

noted here that the columns in Figure 2 are not mutually exclusive. The first column

depicts the total members of governance who participated in interviews, while the next

three columns depict the percentage of governance members from column one who are

also appropriators of the park or committed appropriators of the park. The layout is

intentional to provide a visual representation of how few members of the governing body

are actually appropriating the park space. This is discussed in greater detail in the

"*Chapter 3: People*". Of the four members of governance who appropriate the resource, two are committed appropriators, and none expressed interest in further investment of their own capital (in addition to and outside of their formal role in the governing body) to expansion and enhancement of the Nature Park.

Table 7: Members of Governance

Parks and Recreation Director
Recreation Manager
Parks Manager
Forestry Manager
Parks and Recreation Board (7 members)
Volunteers
Seasonal Parks and Rec Employees
Former Parks and Recreation Employees
Police Chief
Parks and Recreation Maintenance Department
Clerk of Courts
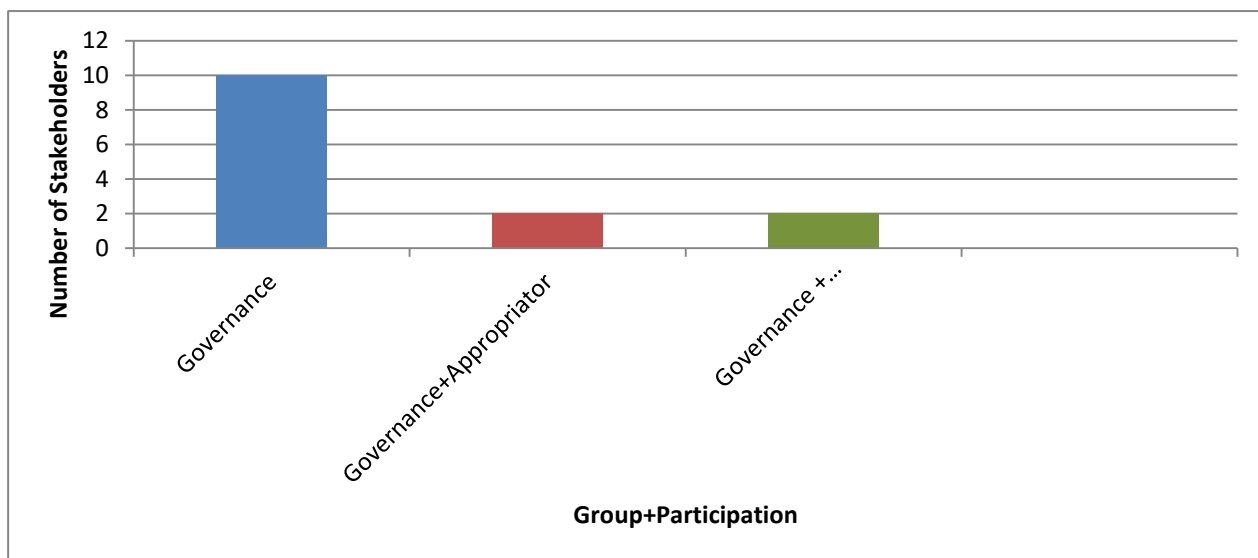
Figure 2: Members of Governance who Appropriate the Park

Analysis

The Dakota Nature Park is a Common Pool Resource regulated by a government property regime operated cooperatively with the Brookings community. The question this study sought to answer is: Is the park successful (as an institutional arrangement) in sustaining itself as a CPR and in gaining the compliance of future generations of appropriators based on Ostrom's Eight Principles? Ostrom's attributes of common pool resources that identify elements supportive of the emergence of cooperation and appropriator attributes were used to code the data collected. Many of the attributes listed complimented at least one of the Eight Principles and were linked specifically for coding. See Table 8 for a full list of all attributes and their definitions according to Ostrom (2000). Using these appropriator attributes within the framework of the Eight Principles assisted in assessing if the DNP is sustainable based on existing information, stakeholder perceptions and observable uses of the park. Evidence of the attributes is in the analysis of each Principle listed below.

Table 8: Appropriator Attributes that Support the Emergence of Cooperation

Salience	Dependent for major portion of activity
Common Understanding	Shared image of how resource system operates
Low Discount Rate	Use low discount rate in relation to future benefits to be achieved from resource
Trust and Reciprocity	Trust one another to keep promises and relate with reciprocity
Autonomy	Appropriators are able to determine access and harvesting rules without external authorities countermanding them
Prior Organizational Experience in Local Leadership	Have at least minimal skills in organizational leadership through participation in outside groups

The following will briefly outline the way each Principle was assessed. Deeper analysis is included in *Chapter 2: Organization* and the *Discussion* at the conclusion of this paper. To reiterate, the principles used as a framework for the study are characteristics of sustainable governance in CPR's whose appropriators are willing to commit themselves and monitor institutional arrangements across generations. *Principle one* states that individuals or groups with the right to use the resource must be clearly defined. Rules/regulations, reports from past Parks and Recreation employees, and staff/volunteer interviews determined the extent to which this Principle was being met. Clear and concise descriptions of who is permitted to use the park and at a minimum, non-descriptive outlines of park conditions indicated the extent to which individuals with the right to use the resources at the park were defined. References to overlooked populations, teens, the elderly, community members, and different interest groups were all used to help determine stakeholder perceptions of who has access to the resources at the park. This information was accounted for to not only determine who is perceived as having the right to utilize the park, but also who is not. *Principle two* indicates that rules restricting appropriation must be specific to the resource; in this case, the rules must be specific to the Dakota Nature Park as a *nature* park rather than a park that solely provides recreational opportunities. Staff, volunteers, and patron interviews were used to measure Principle Two along with rules and regulations posted on the City of Brookings's website and around the park. Posted rules and regulations were cross referenced with interview responses to gain a holistic understanding of the published rules and the perceptions of regulations specific to the park. Interviewee responses included references to the characteristics of the park as a wetland and prairie, neighboring communities'

comparative parks and their regulations, and the societal norms and expectations derived from the Nature Park's location in the city of Brookings. Understanding the unique attributes of the park and requiring specific rules to enhance the park and its patrons' experiences were necessary to meet Principle Two.

Principles three and five were measured using similar techniques. Principle Three states that most appropriators affected by rules should participate in their creation and Principle Five states that appropriators who violate rules and regulations should face sanctions that are enforced by fellow appropriators. Measuring Principles Three and Five required secondary data, staff/volunteer interviews, patron interviews and observations. Each perspective differed based on who was sharing it and their understanding of the park and its rules. The interview questions for both sets of interviews included questions regarding the regulations of the park and the interviewees' perceptions of those regulations/willingness to enforce them. Observations supported or invalidated subjects' stated park uses. As each person being interviewed was considered a stakeholder at the park, their ability to affect the rules that govern them was accounted for. *Principle four* coincides with Principles Three and Five, and states that monitors of the park should be accountable to appropriators or be users of the park themselves. This was analyzed with a specific emphasis on accountability for those considered monitors of the park. Written and verbal accounts of the history of the park were taken into account and the accountability of monitors to park users was tracked over time. Additionally, stakeholders were asked about their perceptions of accountability of those in governing positions. *Principle six,* which states that appropriators and officials should have access to low-cost conflict mediation arenas, was measured using staff/volunteer interviews and

document review. Question six in "Question Set 1: Staff and Volunteer Interviews" was used to help determine if conflicts could be resolved in a low-cost and accessible manner. Document review provided documentation of the official park status for conflict resolution. Because the park is owned by the city, all city owned public buildings were found to be accessible for conflict resolution. *Principle seven* refers to the rights of appropriators to develop their own institutions without external oppression. Analyzing this Principle relied heavily on inference from all of the methods of investigation. Oppressed expressions, frustration, confusion and perceptions of authority within the park were examined to determine if appropriators' rights were challenged by external authorities. Those who held positions of formal authority, or expressed the use of informal authority in relation to decisions affecting the park, were also asked about their experiences with appropriators' development of institutions. Finally, *Principle eight* was measured only at a local level and based on documentation it was assumed that appropriation, provision, monitoring, conflict resolution and governance activities were organized into multiple layers of nested enterprises. Throughout coding, trust and reciprocity between patrons, staff members, board members and volunteers as well as prior experience in local leadership were accounted for as attributes that code for emergence of cooperation by appropriators.

Risk to Participants

This study created minimal risks for the psychological, political, economic, and social well-being of participants. Risks of inconvenience, interview time, and sharing of private information were low. Participants were informed about the estimated interview time and the low risk of lack of confidentiality caused by the public locations where

interviews took place. Additionally, they were informed of their right to halt the interview at any time, and retract any information they shared up until the final submission of this study. Participation was completely voluntary and no coercion was used to recruit interviewees. The estimated time of the interview was 30 minutes to 60 minutes for interviewees participating in *Question Set 1: Governance*. The estimated time of interview was 5 minutes to 15 minutes for interviewees participating in *Question Set 2: Other Park Stakeholders*. Interviews were scheduled at the interviewee's discretion and those who participated in interviews using *Question Set 1: Governance* were given physical copies of written consent which they signed. Interviewees were given a copy of the consent form, and the interviewer kept a signed copy. The consent forms have been kept in a locked desk drawer to maintain the highest levels of confidentiality and will be shredded following the submission of this study. Interview participants were offered copies of the transcripts of their interviews, as well as a written summary of the findings of the study following its completion. Interviewees who participated in *Question Set 2: Other Park Stakeholders* were not given written consent forms, as many preferred to communicate via social media and were contacted because of their public reviews of the park. All interview participants were still informed of the scope of the study and offered a summary of the results following its completion. Loss of anonymity and confidentiality are the only known serious risks to potentially affect participants in this study. Breaches in confidentiality are potentially serious as they could conceivably result in loss of reputation or embarrassment.

Confidentiality

Data was collected in the City of Brookings. The analysis and write up were conducted in the home office of the researcher or on the campus of South Dakota State

University. All data was stored electronically on a password protected computer and on

hand written notes locked in the office of the interviewer. A coded list of names exists in

a password protected file on the interviewer's computer. Transcribed interviews are

identified only by their stakeholder group within the study. The linked list will be stored

on the passcode protected computer, in a separate file from the research data, for 6

months following the submission of this study, at which time it will be deleted and erased

from the computer memory. Only the interviewer and their Advisor will have access to

the data. Following the completion of the final written report, a copy of the final report

will be provided to any participants from this study that may wish to have a copy. The

confidentially of all participants will be maintained in all presentations and publications.

Additionally, pseudonyms will be used for all locations discussed in the study in

presentations, to maintain the confidentiality of the city and the participants.

CHAPTER 1

Institution

Mission as Institution

In its simplest form, Ostrom's (1990) definition of institution consists of sets of rules which are used to organize active, procedural and informative decision making. In addition to setting enforceable expectations, institutions determine who is and is not eligible to participate in decision making and what the consequences are for those involved. Within the governance of the Dakota Nature Park the mission statement is the foundation for the institution, with layers of formal and informal rules, regulations, and policies continually being constructed and revised around it. The mission statement for an organization states what the organization is doing, how they are doing it, who they are doing it for and the value of the service provided (Hull, 2013). The Dakota Nature Park's (2017) mission statement identifies: what they are doing, providing a *special place that is set apart from the City and its other parks*; how they are doing it, creating an environment where *nature prevails and all humans are guests*; who they are doing it for, *people* who use the park; and, the value brought by the park, an environment where people can *experience a sense of solitude and uniqueness in a special place*. Formally, it is around these general but intentional statements that park policies are created and enforced, with informal influence from the experience and priorities of the current city employees and stakeholders of the park, including investors, volunteers, local community groups, and seasonal employees. These informal influences are discussed in greater detail in later chapters.

While a mission is effective for giving direction to an organization, it is also vague and lofty, painting a picture of organizational aspirations rather than reality. To play off of Weber's (1965) "ideal type," the mission is the ideal function, as determined by the governing institution. In its proper context, the mission provides direction and clarity to diverse groups of appropriators and members of governance. Nonetheless, when the mission becomes the primary guiding institution for the entire organization, generalized aspirations may not provide the structure necessary for the organization to function at its highest potential. Some of the Ostrom's (1990) Eight Principles are inherent in the mission statement of the park, and others are lacking. Those that are present provide a hazy answer to any questions raised by stakeholders, while those that are lacking leave gaps that can lead to confusion and misalignment of different stakeholders' projections for park development. The two principles that are addressed by the Dakota Nature Park Mission Statement (2010) are listed below:

1. *Users are clearly defined*- "all humans are guests"

2. *Restricting rules are resource specific*- "humans should tread lightly on the land…[and] have a minimal impact on the park's land, waters and wildlife, and allow others to experience solitude"

While the two principles listed above are addressed by the mission statement, they are addressed broadly. The other principles (those affected participate in rule creation, monitors are accountable to users, repercussions are enforced by users, low-cost conflict resolution is available, and appropriators can develop institutions) are entirely absent. For the initial governing body who created them, this may not have been an issue because the norms, values, and rules that they were built on were woven into the organizational fabric at the time.

Over time, as new park governance and groups of appropriators became involved, the habitualized actions that resulted from shared norms began to take on new meanings (Berger and Luckman, 1966). As the creators of the mission are no longer involved in governance decisions, the new governing body has lost some of the implicit context of the words that make up the mission. In order to integrate the old mission with the new governing body, the institutional order has to not only make sense, but be meaningful (Berger and Luckman, 1966). This means taking what was written and applying it to the park. It also means creating new rules and regulations based on current norms and values that fit their own contexts and experiences.

While these rules and norms have evolved over the course of park formalization, the mission statement remains unchanged. This provides stability to the park as an institution through its consistency, association with past and future development, ties to the extensive research and experts that created it, and its inclusivity of recreational and environmental usership. The teams of professors and environmental experts that helped to determine sustainable ecological and recreational uses for the land remain users of the park and, up until the last two years, remained involved in establishing park procedures in response to evolving community culture. Shared patterns of belief expressed through the mission statement and the ways it is implemented serve to mitigate uncertainty and emphasize the roles of ideas and beliefs in supporting the organization itself (Jepperson, 1991). Confirmation of this in the early stages of development is evidenced by the willingness of local hunting and mountain biking associations to come together and establish geographical boundaries for each activity, agreeing that access for the whole

public to the land was more important than lobbying for one group and risking total loss of access.

Along with the positive effects of a concrete mission, there has been resulting division and confusion between and among appropriators and monitors. The institutional arrangements created by appropriators of the park are, for some user groups, proving to be an ineffective solution for competition over use of space and development. This dissent is partly the result of an institution built on principles that are frequently in contention. By attempting to balance both recreation and sustainability/environmentalism, the mission statement of the park has opened up the governing body to conflict. Examples of these conflicts occur between appropriators seeking to participate in either recreational *or* environmental activities, community members who desire development that supports only one of the two principles, board members who have vested interests in one principle more than the other, workers who are skilled in only one type of activity, and appropriators who are uncertain of the actual uses and purposes of the park. These conflicts may also be the result of an organization that is dependent on an institution lacking many of the Eight Principles, including clear usership rules, the participation of those who are affected by decisions in decision making, and accountability and transparency on behalf of monitors. Other potential contributions to conflict discussed in the following chapters are: lack of transparency, high turnover in powerful governance positions, informal accountability, passive community engagement, shifting inner-governmental priorities and evolving appropriator culture.

Development of Institution

In the case of the Common Pool Regime at the Nature Park, different stages of organization have had varying levels of influence on the institutions and resulting mission guiding DNP governance. The land the Nature Park was developed on has remained in the control of the city of Brookings, but the application of the mission and management of the land have shifted drastically over a 15 year period, resulting in three distinct organizational management structures. The first, the *open stage*, occurred between the time the landfill was capped and left to settle and the initial stages of park formalization. This stage consists of stakeholders' perceptions of governance over the resource as minimal due to a lack of intervention and regulation by the governing body (the City of Brookings). As appropriators of the park began to utilize the land to meet their needs and desires, they self-organized. The organization was largely informal, consisting of appropriators using the land for unrelated activities and respecting each other's space. At the beginning of this open access stage, the Common Pool Regime had complete authority over decisions made regarding the park. The Director of Parks and Recreation answered only to the mayor, and the mayor was uninvolved with most decisions regarding the Dakota Nature Park. Therefore, when the Vision Statement was approved by the City, and the Director of Parks and Recreation was able to begin development of the park, it was the Director and Parks staff who held formal decision-making powers.

The second stage, the *formalization stage*, occurred under the management of two different park directors. This stage took place during the initial phases of park formalization and the establishment of the land as an official city park and education center. There is a distinct shift during this stage from the initial organization of

appropriators within the park to external regulation by the city. While the city itself is not an external authority (as it owns the land), it is considered external for this stage because it imposed regulations on appropriators who had previously been governing themselves. The final *institutional stage* consists of new leadership over the park and is characterized by concentrated efforts to find the necessary institutional balance for consistent park development and regulation. New efforts are being made by appropriators to build internal organization under the city's external regulation. At the same time, city employees are trying to redefine internal organization through regulation of park amenities and staffing to balance recreation and environmental sustainability. The three stages are discussed in greater detail in *Chapter 2: Organization*.

Characterizing the social relations, categories of meaning and implicit values at the park will assist in understanding the institution as a whole (Mosse, 1997). Ostrom's framework has been used to analyze how each of these characteristics has been impacted by the progression from informal mission as instituted by appropriators of the park to formalized mission as delegated by city governance. It has also been used to understand how internal changes in governance have affected the norms and values that were used to create the mission, and the ways those norms and values have evolved to their present state. Understanding this facilitates cognizance of the difficulties associated with the most pressing challenge faced by the current governing body: balancing recreation and sustainability. The following section will discuss the present state of the institution as well as associated complexities.

Present State of Institution

The park's mission statement, which is the culmination of years of concretizing values and ideas from appropriators and monitors of the park, has become the guiding model for decision making. It is woven into the complex networks of formal rules and informal constraints which make up the institutional structure of the Dakota Nature Park. These rules and networks can be categorized as operational, collective-choice and constitutional-choice rules (Ostrom, 1990). Ostrom (1990) explains that at an operational level, the decisions made by individuals directly affect the physical world. Operational rules are the obvious working rules which affect the daily decisions of appropriators and include monitoring and enforcement. The operational rules that are employed by stakeholders of the park have shifted and evolved over time and vary in legitimacy from inferred rules upheld by seasonal workers to formal working rules, written and upheld by the Common Pool Regime. To understand institutional change, understanding these operational decisions within a fixed set of rules is not enough because operational rules happen within collective-choice rules (Ostrom, 1990). Collective-choice rules have an indirect effect on day-to-day operation and are used by appropriators, monitors and external authorities for making policies affecting operation of the CPR. Collective choice rules involve the decisions made by the governing body that will affect the way operational rules are created and enforced. Formally, the mission is the keystone for these decisions, and informally the implicit rules, values and norms that shape the mission also guide the decisions made by park monitors. These collective-choice rules are nested inside of the final layer of rules, constitutional-choice rules. Constitutional-choice rules determine eligibility and set regulations that are utilized in operational and collective-

choice rule formation. These rules occur at the highest level of governance and are used to create collective-choice rules, which in turn affect operational rules.

The values and norms represented by mission of the Dakota Nature Park are woven throughout all three sets of rules, solidifying the mission as the guiding institution for park governance. Stakeholders of the park operate under one set of formal rules— the official Park Regulations for the Dakota Nature Park. Many of these rules were the product of the same collaboration that led to the conceptualization of the mission for the park. They, along with the mission, have been upheld throughout the development of the empty land into the Nature Park. All operational rules outside of those that are formally published are made and discarded as deemed necessary by the Common Pool Regime, using the mission as a guide for decision making. Some operational rules are created as needs arise at the park, while others have been normalized over time and have only become formalized in recent years. These operational rules are nested in collective-choice rules defining how the operational rules are chosen.

Rules are determined at the collective-choice level by several different entities and individuals operating implicitly and explicitly under the guidelines of the mission statement. The "Rules and Regulations for Use of the Brookings Park System" are an explicit set of rules established by the city and enforced in all city parks, including the DNP. These rules were created throughout the stages of Common Pool Regime organization and published in 2017. According to park policies, the rules are formally enforced by monitors appointed by the city, including the Parks and Recreation Department staff, Brookings Police Department, Brookings County Animal Control, and South Dakota Game Fish and Parks. The specific enforcement practices of each entity are

discussed more extensively in the proceeding chapters. The park rules and regulations lay the foundation for the more operational rules that are specific to the Nature Park, as each of the Nature Park rules and regulations is consistent with the generalized city park rules.

Additional rule making at the collective-choice level is done by members of the governance system (see Table 2). Specifically, the Director, Superintendents of Recreation, and Parks and Recreation Board directly affect policy making and determine who is eligible to participate in operational rule making. These decisions are not made by exclusively using the formal rules and regulations. Rather, members of the governing body expressed that their decisions are based on their perceptions of whose contributions are both reliable and relevant. Past members of the governing body relied on local community members who were experts in environmental fields to create regulations for the park. Former consultants to the Parks Department explained that the new members of the governing body have implied that their input is no longer necessary, and have instead contacted more established nature-based organizations in an effort to mimic their organizational structure. The result has been action within institutional constraints, as the mission has not changed as an institution.

While the mission is applied at all three levels of rule-making, it is a constitutional rule. The most deeply rooted and difficult rules to change are constitutional rules, within which are formal rules and rule makers. The current Common Pool Regime consists of several city employees and an appointed-Parks Board who collaboratively make decisions. Formally, these positions have the highest levels of influence over decision making directly affecting the park. As each of these decision makers weighs the costs and benefits of decisions regarding the Dakota Nature Park, the mission is the only

formally recognized guide. Ostrom (1990) argues that changes in deeper sets of rules are more difficult to accomplish and therefore increase the stability of mutual expectations among those who are interacting with the rules. This is evidenced by the complexity of the rule-changing process at the constitutional-choice level, the ability to modify collective-choice rules through collaborative processes between stakeholders, and the ease of modifying operational rules to the point that seasonal park employees create their own regulations, often without any approval by decision making authorities. Each layer of formal constraint influences each position within the governing body differently because they provide a wide range of restrictions and regulations for park use. Appropriators of the park, seasonal employees working behind the rental desk and teaching programs, and park maintenance employees function at an operational level as they work to create operational rules that keep the park functioning on a day-to-day basis. Full-time Parks and Recreation employees, the Park and Recreation Board, and groups lobbying for policy change at the local level all interact with collective-choice rules as they are working to determine who can impact the rules that affect the overall operation of the park.

In addition to the institutional decision-making processes discussed above, constraints outside of the three levels of rules influence the majority of appropriators. Appropriators' actions are reflections of the levels of rules as well as their own interpretations and understandings of values, norms and informal rules, their influence on and responses to the mission as an institution are different than individuals and entities with formal authority over decision making. Some appropriators use the park for undocumented activities such as subsistence fishing, recreational swimming, and

professional photography, none of which are addressed by the formal rules and regulations, but arguably fit within the wide constraints outlined by the mission statement. Appropriators have responded to the mission by changing their behaviors to reflect their interpretation of the mission regarding long standing rules, customs of park users, individual traditions and emerging codes of conduct. These are evident in the appropriator groups that organize, or attempt to organize, their own institutions at the park, such as the Mountain Biking Association.

While other groups of appropriators with shared interests have taken collective action, the mountain biking association is the most established group to use their voice in the community, rather than formal authority, to influence formal policies governing the park. They did this through a combination of tactics, including forming a relationship with a national organization that assisted with planning and funding, persistent attendance at city-led forums and rallying the community to put pressure on governing officials who were not initially inclined to adopt bike-friendly policies. Their efforts resulted in adjusted formal regulations at a collective-choice level to allow bike use on the paved trails within the park and the interconnection of the park's trails with the entire Brookings Trail System. Additional outcomes were the installation of a pump track funded and maintained by the city, a single track installed by the city and maintained by the Mountain Biking Association, the purchase of mountain bikes and protective gear by the city to provide individuals without a bike access to the trails and educational courses, and a long standing relationship between the city and bike association. To date, the data indicates that the mountain biking association was the only group successful in formalizing themselves within the greater park institution. The broadness of the mission

provided grounds for individuals within and outside of formal governing roles to make

operational and collective-choice decisions. This is a significant example of appropriators

acting outside of organizational constraints but within institutional constraints to achieve

collective action.

Conclusion

As a whole, the mission as the primary guiding institution of the Nature Park is

riddled with complexity. Because it is the culmination of years of assessing values, norms

and rules within the park, there are implicit and explicit associations between the mission

and all three levels of rule-making. At an operational level, the mission is used as a

primary guide for the creation and dissemination of rules and regulations over the park.

Its broadness leads to a wide range of interpretations by appropriators and monitors,

lending it to situation-specific applications as well as general applications. At a

collective-choice level the mission serves as an informal guide for determining who is

eligible to make operational rules. There is necessary conformity to the mission and its

valuation of recreation and the environment to make decisions, especially those regarding

park regulations. At a constitutional-level, the mission is the only formal guide for

decision making, and therefore has the potential to directly influence those with

constitutional-level authority. It is both implicit in the yearly report submitted by the

Director, and explicit as the only published guide for decision making.

As an institution, the mission also affects the appropriators of the park outside of

the confines of formal rules and regulations. Different stakeholders have interpreted the

norms and values that evolved over the course of park development, and apply those

interpretations to the current mission, influencing their appropriation of the park as a

resource. The following sections will address the mission in relation to the organization and stakeholders of the park. As the development from open land into a park progressed, the mission began to take shape and develop into the institution discussed above. The norms and values that led to its creation also impacted the development of the governing body, and continue to influence the development of the park as an institution today. Understanding the impacts of this development contributes to our understanding of the influence of the mission on the Common Pool Regime by addressing each part of the institution and then assessing its sustainability over time.

CHAPTER 2

ORGANIZATION

Stage 1: Perceptions of Open Access Lead to Internal Organization

Introduction

The first stage of development is characterized by the three distinct stakeholder groups appropriating and governing the undeveloped land that would one day become the Dakota Nature Park. The first group is labeled "Appropriators", and is comprised of different assemblages of community members who began utilizing the land for outdoor recreational activities. Most of these individuals did not have formal permission from the city to use the land, but there was little monitoring or clear restrictions regarding the empty land to prevent them from using it. The group responsible for monitoring and restrictions is the second stakeholder group. This group is labeled "Monitors," and was comprised of the City of Brookings Parks and Recreation Department (CBPRD). The CBPRD began collecting data based on past monitoring of water quality, as well as assessing the land itself in the hopes of developing a park. The City requested the help of several organizations and entities who together make up the third stakeholder group—the "Collaborators." The organizations and entities who collaborated with the CBPRD worked together to conceptualize a feasible proposal for the development of a park. Even though these groups were each working in different ways, they all had a distinct and vital role in the institutionalization of the mission of the Dakota Nature Park.

The following will discuss Ostrom's (1990) Eight Principles as they relate to the different stakeholder groups. While the principles are typically applied to an institution as a whole, perceptions of governance on behalf of each stakeholder group led them to

operate as if theirs was the only institution at the time. Appropriators organized as if the land was open access, leading to the evolution of normalized behaviors, allocations of land for different activities, and management of space to avoid conflict. They began to form their own institutions, which makes Ostrom's (1990) Eight Principles applicable to their organization. The norms and values they developed independently from the Parks Department later contributed to the creation of the formal mission statement. Similarly, the monitors who were the formal governing body over the land began creating plans for park development. They minimally monitored the land while using their own norms, values, and rules to create the beginning stages of a proposal for park creation. They too operated as an institution separately from the appropriators and within their organization exhibited several of the Eight Principles. The discussion of collaborators will not be organized around the principles, because their group was composed of both appropriators and monitors and they did not organize themselves outside of the constraints of their collaborative roles. They will however be discussed in relation to the Eight Principles and their impact on the mission as an institution.

This section will include discussion about the ways that each stakeholder group aided in the establishment of different elements of the present day mission. Because no one group exhibited all eight of the principles during this stage of development, the focus of this section is on the attributes each displayed. Discussion will also emphasize the ways each attribute positively or negatively affected the success of the groups' sustainability and influence over park development. Ostrom's (1990) definition of sustainability as a group's, "…ability to gain the compliance of future generations of appropriators…" was incorporated into the framework of this study, and is applied here,

along with the attributes that support the emergence of cooperation in appropriators
(Ostrom, 2000). This is done to specifically identify and examine the attributes of the
groups that had longstanding impacts on the Common Pool Regime and mission of the
park. Through different combinations of salience (resource dependency), prior leadership
experience, and common understanding all three groups achieved varying success
establishing some of the Eight Principles.

Organization of Appropriators

 The Brookings landfill was capped in 1994, but the development of the DNP did
not begin until 2013, leaving a 19 year gap where the land sat largely undeveloped by the
City of Brookings. This period of "settlement" was required by the South Dakota
Department of Environmental and Natural Resources while the clay cap over the refuse
from the landfill decomposed. The result of this required settlement was minimal external
regulations over the land and the appropriation of the space by community members.
There is very little information available from city employees and historical document
about the uses of the land by appropriators during this time. By interviewing people who
either used the land themselves or observed the behaviors that took place, it became
apparent that many community members were appropriating the land for varying
activities with minimal or no monitoring by the city. Their capitalization on the freedom
allotted by this open access governance structure allowed them to begin organizing
themselves based on their recreational activities and intentions for land use.

 Based on the nature of their land utilization, those fitting within the category of
Appropriators are categorized as a Recreationalists, Naturalists or Subsistence Users.
Each user group had different intentions for their use of the land, but shared a sense of

salience, or dependency on the space. Each group was dependent on the land, and was affected by rules. Therefore, they were the focus of and most involved in rule creation. This dependency on the land for activities combined with the implied past leadership experiences of different users allowed the appropriators to establish common understanding regarding resource consumption. Through this process, several of the Eight Principles were present, potentially aiding in appropriator's success. Attributes that were distinctly present include: Principle Three- those affected by rules participate in their creation, Principle Four- monitors are accountable to users, and Principle Seven- appropriators can develop institutions (Ostrom 1990). Principles that were absent or unidentifiable include: Principle One- clear definition of users, Principle Two- rules to resource consumption are specific to the resource, and Principle Six- there are low cost resolutions for conflict. This may have allowed the appropriators to self-govern despite their differing uses of the land, which are outlined below.

Recreation is an activity of leisure and typically involves enjoyment and pleasure. Recreational activities can incorporate physical activity but their primary intention is fun. Recreationalists of the park land included mountain bikers, fishermen and women, photographers, four-wheelers and other all-terrain motorists, dog walkers and dog trainers. Examples of ways people utilized the land included: trail creation by bikers that went through the mounds created by large machines that dug holes to bury garbage prior to the capping of the landfill, dog training using decoy ducks and firing blanks, and horseback riders who took their horses through the shelter belts (sections of trees planted to shelter the land from the wind) and created their own riding trails. Naturalists differ from recreationalists in that they participated in activities that were reliant on nature, the

environment or physical natural spaces. At the park this included those involved with educational establishments, such as schools, college classes and boy scouts who took students to monitor water quality and study wildlife species and habitats. It also included the astronomy club from SDSU, which brought students out with telescopes to map the stars and observe planets. Boy scouts used the land to build shelters and learn how to live off of the land, a unique opportunity within city limits. Subsistence users were the final group of appropriators and they utilized the physical resources to provide sustenance and support. This group of individuals consisted primarily of lower income community members who would bike out to the docks around sunrise and sunset to catch fish. While subsistence appropriators were fishing to support themselves and their families, recreational fishermen began fishing and dumping fish into the ponds as well, enhancing both the recreational and subsistence fishing cultures.

Principle 3: Those affected by the rules participate in their creation

While there is no official documentation of the rules and restrictions upheld by those appropriating the park land, there are several accounts of the implicit regulatory guidelines they adhered to. Stakeholder who participated in interviews referred specifically to a dependency on the land for outdoor activities that many land users shared. For the individuals utilizing the undeveloped park land, there were very few similar resources nearby, making the park especially valuable to them. Ostrom (2000) refers to this type of reliance on a CPR as "salience" or dependency on a resource for a major portion of activity. Dependency on the land was the unifying commonality among the different groups of appropriators, despite the way that their activities sometimes contradicted each other. Their dependency on the land provided grounds for common

understanding about how the resource system operated to meet each their appropriation needs.

Without formal authority, appropriators relied upon the normalcy of their informally established operation to create rules for land use. All rules are made up of prescriptions that forbid, permit or require action to occur, and while the appropriators did not create formal rules, they did establish order amongst themselves (Ostrom, 1990). They were autonomous and either organized themselves by activity, or did not organize themselves at all. Groups who participated in similar activities learned which parts of the land were the most practical and for the most part, respected the equity of other resource users or learned to appropriate around each other. For example, at any one of the ponds located on the land hunting dog trainers shot blanks over the water and trained their dogs, recreational kayakers fished in the middle of the ponds, families brought their children out to play in the shallow water, and community members brought their dogs out to run off leash and swim. Despite there being no documentation of any formal contracts created regarding the allocation of the physical space, none of these groups were reported formally as engaging in any kind of disputes. It appears that land users shared the common understanding that they needed the land to participate in their intended activities. Because there were many different appropriations of the space, they therefore needed to share the land in order to avoid external infringement. According to the data collected for this study, the result was the avoidance of outside regulation, and in the perception of most interviewed appropriators, harmonious cohabitation of the land.

In addition to dependency on the land, prior experience with organizations and rules for resource appropriation may have also supported the emergence of cooperation

amongst appropriators such that they were able to co-appropriate without external rule enforcement (Ostrom, 1990). Many of the people using the undeveloped land likely had prior experience with common pool resource use, and the rules and regulations enforced in those spaces, which would have contributed to their successful co-appropriation. The user groups described as participating in activities that would have normally required external regulation and monitoring were: recreational motorists, sport and recreational fishermen and women, equestrians, and mountain bikers. Because these activities involve varying levels of risk and had a greater impact on the physical resource than other appropriator activities such as walking or bird watching, they were most likely to attract outside attention and warrant regulation. There is, however, no documentation or recollection by interviewees of any such measures being taken. It is difficult to determine if the recreational motorists and horseback riders were associated with entities and associations outside of their activities at the park, because there was little known organization amongst appropriators participating in these recreational activities. Many of the horseback riders were youths and rode over from a neighboring barn, while many of the motorists drove in from outside of the city and used the bike paths to ride. However, according to interviewed appropriators, the fishermen/women and mountain bikers were associated with entities external to the city or their group of appropriators on the land.

The individuals using the park and participating in these activities likely had prior experience with similar resources used for recreation which allowed them to develop the skills and competencies needed to successfully utilize the DNP land. There are numerous public access lakes and ponds throughout the state that are accessible to fishermen/women in South Dakota, many of which have been made accessible through

negotiations by South Dakota Game, Fish and Parks (SDGFP) and private landowners

(gfp.sd.gov, 2018). Water accessibility is accompanied by strict rules and regulations that

all fishermen/women must abide by, including fishing limits, gear restrictions and

accessibility guidelines (South Dakota State Legislature, 2018). This indicates that any

fisherman/woman who had experience fishing in the state also had experience with the

rules and regulations, and may have abided by a similar informal code of conduct at the

DNP. Similarly, those now involved with the Brookings Mountain Biking Association

would have been a part of the International Mountain Biking Association (IMBA) prior

to the creation of an association in Brookings. The IMBA promotes responsible riding

through their guidelines for biking etiquette in their "Rules of the Trail" publication,

which are available online or in a printed format (imba.com, 2018). The mountain bikers

who pioneered biking in Brookings were members of the IMBA and worked in

incorporate their guidelines and structure in a Brookings biking association. Bikers

utilizing the mounds on the DNP land may have been members of the IMBA or

associated with individuals who were, encouraging them to abide by the standards upheld

by their fellow bikers.

Principle 4: Monitors are accountable to Appropriators or are Appropriators themselves

　　　　While the city had formal monitoring authority, it was the appropriators of the

park themselves who served as monitors during this time period. In interviews,

appropriators recalled that the city Parks and Recreation Department governance

enforced few rules and regulations during this open access stage of development. This

created space for appropriators to self-organize and self-monitor. For activities that did

not violate formal laws at the time, appropriators were responsible for monitoring

themselves and holding each other accountable for activities that could lead to their

expulsion from the land. There were few direct references to the accountability of users

to each other, but in several instances monitoring was implied. Individuals who deviated

from what was commonly assumed to be non-invasive, non-disruptive uses of the land

were reproached by their fellow appropriators. While not all appropriators who

participated in interviews were able to discuss monitoring, two had specific examples of

monitoring techniques and graduated sanctions.

The first interview participant who was an appropriator of the park land at this

time mentioned needing to monitor individuals who would participate in disruptive

behaviors. They held themselves and their fellow appropriators responsible for ensuring

those behaviors were stopped so they did not damage the land or attract formal

repercussions from the Brookings police department. One interviewee shared that to

decrease these deviant behaviors he/she verbally reprimanded appropriators caught

participating in disruptive activities. If verbal reprimands were ineffective, this individual

escalated to threats of external consequences from parents or external monitors,

specifically the Parks and Recreation Department or the police. This particular

interviewee shared that many alternatives were given, but some appropriators perpetually

participated in disruptive behaviors. Therefore graduated sanctions were necessary.

Because continued rule infractions led to increasingly severe sanctions, appropriators felt

that they were able to minimize, although not completely eradicate, troublesome behavior

from the land before external authorities had to be brought in. Another reference was

made by a different interview participant and appropriators of the land that there were

rowdy community members who would tear through the gravel path and grassy areas on

their four-wheelers, scaring off the wildlife and destroying the young plants. They, along with fellow appropriators of the park, would chase down the four wheeling individuals and reprimand them for their inconsiderate behavior. They would also try to ensure other appropriators of the park knew to do the same thing. Their commitment to the preservation of the resource for their use and use by other non-damaging resource users led to an ingrained commitment to follow sets of unwritten rules. They not only adhered to this commitment themselves, but sought to ensure other appropriators did too. Hence, despite their formal status as users of the park, appropriators did exhibit monitoring behaviors as well as hold other appropriators accountable for what they perceived to be misuse of the resource.

Principle 7: Appropriators can develop institutions without being challenged by external authority

As discussed in previous sections, institutions are sets of working rules that are used to determine who is able to make decisions (in this case regarding the Dakota Nature Park), what actions are allowed, what rules and procedures are used, and what information and payoffs are available to stakeholders (Ostrom, 1986). Norms, values and rules require time to become institutionalized (Weber, 1968; Berger and Luckman, 1966). Therefore it is only by assessing the motives and actions of original appropriators and comparing them to the institutions still in existence that the original institutions can be identified. Many of the rules that contributed to the institutions created by the appropriators of the park at the time were operational rules, as they were only affecting the day to day operations of activities (Ostrom, 1990). In addition to the lack of formal publication by appropriators of rules and regulations at the time, there was no formal legislation or policies created either. Some of the monitors of the park were also

appropriators, and their contributions to collective choice and constitutional choice rules are discussed in the following section: *Organization of Monitors.* For the appropriators without formal resource control, the most significant and empirically verifiable institutionalized value is the prioritization of accessibility and inclusivity.

Accessibility and inclusivity here refer to the inclusion of all appropriators in the use of the land. Many appropriators of the park prioritized accessibility of the land for everyone over selfish pursuits of their own activities. This value of accessibility led to habitualization of actions based on typifications supportive of accessibility (Berger and Luckmann, 1966). The previous section's discussion of monitoring is the best example of the support of accessibility by appropriators. By adopting informal regulations about non-invasive uses of the park, appropriators sought to ensure the space could be shared by a wider variety of individuals. They were also creating an accepting appropriator culture by moving from support of accessibility to action to ensure it. In interviews, several appropriators went so far as to accuse people who used the park in ways that prevented use by others as being "selfish," "inconsiderate," and privatizers of the shared resource. Their negative reactions towards appropriators they deemed deviant not only affected their own behavior at the park, but the behavior of other appropriators as well. They impacted other's behavior by assigning consequences to appropriators participating in activities that exclude others, like those who were disruptive on their four-wheelers, therefore influencing the willingness of other appropriators to make similar decisions. The influence of the value of accessibility only grew as time went on.

As a result of the significance of providing accessible space to all people, this value of accessibility has outlived the initial appropriators that valued it and retained its

meaningful characteristics today. This is most evident in the existing mission statement, which specifically states that, "…*all* humans are guests…" (Dakota Nature Park, 2018). The inclusivity implied through this statement epitomizes the values that were generated by the first appropriators of the park. Support for the longstanding value of accessibility is also apparent in its emphasis by current stakeholders of the park. Over half of all interview participants either acknowledged or commended the accessibility of amenities at the park. Current appropriators and monitors reinforce the institutionalization of accessibility by giving themselves titles like "protector" and claiming the weight of responsibility to take care of the park.

Discussion of Organization of Appropriators

Analyzing the organization through Ostrom's (1990) eight principle framework allowed for institution-specific data collection despite having little access to documentation about this time period. Through stakeholder interviews it became clear that some of the Eight Principles were prominent, while others were entirely lacking. The principles that were present may have contributed to the sustainability of self-management by appropriators over the resource throughout this 15 year time period. The Appropriators were not recognized by the city as monitors with formal governing authority regarding land use. However, they were able to self-organize with little external regulation, which allowed them to create an informal monitoring system. This, along with their persistent cooperation, was maintained through the creation of information, rules and norms. All norms and rules were built upon those already in existence in outside organizations and the appropriators' reciprocity with one another as they acknowledged their own and each other's' dependency on the land for their activities. While there were

deviations from the established rules requiring monitoring, the appropriators were able to organize themselves to successfully use the land with minimal external regulation until park development was underway.

Organization of Monitors

      While the appropriators of the undeveloped park land were informally organizing themselves, the City of Brookings Parks and Recreation Department was in the beginning stages of developing formal rules and regulations for the future park. There is little information available about the governing body at the time, but it is apparent through interviews with long standing community members that the Parks and Recreation Department was perceived as having autonomy over the revitalization plans for the Dakota Nature Park. The Brookings City Council and City Manager positions were not created until 1999, meaning that the Parks and Recreation Department and the Parks Board had decision making sovereignty for 38 years (as the position was created in 1961). For the department, having freedom over their own actions allowed them to influence the culture of the Parks and Recreation Department, as well as the initiatives it took on, such as the revitalization of the landfill into the Dakota Nature Park.

Principle 2: Rules are resource specific

      Ostrom's (1990) second principle specifies that rules affecting appropriation should be related to local resource conditions. As this was the emergence of formal regulatory action, the regulations were being created rather than enforced. To ensure the rules and regulations they proposed were appropriate for the space and the people appropriating it, the Parks Department completed detailed assessments of the land. The land that the Dakota Nature Park was built on was chosen largely because of its

development potential. It was determined by city governance that the land had many of the necessary characteristics that lead to the emergence of cooperation in governing bodies (Ostrom, 1990). Ostrom's (1990) characteristics that were present in the case of the DNP included land that was feasibly improvable, affordable to study for development purposes, and had a predictable flow of resource units. Due to the existing development on the land, the parks and recreation department believed that making other improvements to the land was highly feasible.

Some of these developments were appropriator-specific based on the ways people were already utilizing the space. As a result of the presence of the ponds, there was discussion of allowing regulated fishing, especially for youths. The ponds were already funded and dug by the sanitation department, making the installment of a park even more economically viable for the parks department. The most significant indicator of the condition of the land came from the South Dakota Department of Water and Natural Resources and the South Dakota Department of Environmental Protection. These state level departments were tasked with and responsible for ensuring the quality of the water through ground water monitoring while the landfill was in operation. This saved the parks department the time and resources required to monitor the water themselves prior to stocking it with fish and officially allowing families and children to use the land.

The location was within city limits, making it a safe walk or bike ride for kids and teenager. Members of the initial governing body indicated that the connection to the bike trail provided opportunities new trail creation, which would further increase accessibility. With the prior utilization of the space as a landfill, there were existing gravel and grass roadways that could affordably be converted into trails around the ponds. There were also

shelter belts of large cottonwood trees around the outside of the park that would protect

the conceptualized appropriators of the park from wind and airborne debris from the

nearby quarry. This diversity of developable spaces made the land especially appealing to

the Parks Department.

The diversity of spaced is evidenced through the DNP's 135 acres of wetland,

ponds, prairie and trees. The land was being reclaimed with the intention of including a

variety of recreational and natural spaces, and the Parks Department was able to

accurately develop knowledge of the predetermined external boundaries and study the

internal micro environments. By utilizing the resources they had at their disposal, the

department developed common understanding that catalyzed their crusade to revitalize

the landfill. The governing body was in the process of creating rules and regulations,

rather than enforcing them, and their attention was largely focused on the regulations

necessary to begin development of the land, rather than the enforcement of the new

regulations. To create rules that were the best fit for the park, monitors made efforts to

take into account the wide variety of appropriations of the land prior to development.

This was the beginning of the institutionalization of accessibility.

Principle 3: Those affected by rules participate in their creation

The initial governing body's commitment to accessibility originated partially

from their experiences as appropriators of the land themselves. The individuals who held

positions of formal authority working for the city of Brookings were mentioned by

several interviewees as active members of the community and active outdoor

recreationalists. They utilized the undeveloped park land and participated in the same

activities they were considering developing at the park. Members of committees that

worked alongside the governing body to develop plans for the park mentioned the novelty of the land in its geographical setting as well as in Brookings as a community. The first Director of Parks and Recreation is remembered as understanding that the opportunity to bring back natural elements to a city setting, and to provide outdoor recreational opportunities to appropriators, was the best way to serve the community. The governing body is also remembered by interviewees as recognizing and openly discussing their own inability to develop plans for a nature park without the input of fellow community members. So not only were the appropriators themselves, making them part of those "affected by the rules," but they planned to seek out the input of other appropriators as well, rather than solely relying on their formal decision making authority. Their acknowledgement that intensive communal partnership would be necessary to acquire the funding and support necessary to develop the park may have aided in their successful campaign to do so, a campaign that was also aided by plans for collaboration with community groups and experts (as are discussed in the *Collaborators* section, as well as *Stage 2*).

Principle 7: Appropriators can develop institutions without being challenged by external authority

As discussed above, members of the governing body were also appropriators of the park, qualifying them to develop their own institutions, as Ostrom (1990) discusses in principle seven. Many of the norms, values and rules that define the current Common Pool Regime originated during this stage of governance. Interviews with several heavily involved stakeholders indicate that the institutionalization of "accessibility" began with this initial governing body, so that every aspect of the park is accessible to underserved community members. Two different interview participants discussed the department's

emphasis of their intentions to specifically serve lower income families, residents of the city without access to the natural resources provided at the park, and the elderly. During the planning stages, their most consequential priorities involved providing fishing areas and stocking fish for youth fishing and creating parking lots and low cost rentals for families who could not afford to purchase equipment. This concept of accessibility was passed down throughout the years of the parks development, and while the definition has evolved over time, the value of "accessibility" has remained a top priority.

Discussion of organization of Monitors

Ultimately the monitors were organizing separately from the appropriators during this stage, despite their role as appropriators themselves. While the governing body was planning on collaborating with other community members, the collaboration with the public was only proposed at this point. Because the rules and regulations for the park were just beginning to be created, they were intentionally resource specific, meeting principle two. The monitors' role as appropriators of the park themselves gave them an inside position for rule creation, meeting principle three. They also made plans to collaborate with other appropriators, providing them future-input into the rules and regulations prior to their formalization. Because of their roles as appropriators themselves, the value of accessibility became a top priority for them. This value was only deepened after realizing the significance of accessible land to the people, meeting principle seven.

While the governing structure of the monitors did not meet all of Ostrom's (1990) principles, there were several present. The absence of each of the other principles can be attributed, at least in part, to the still developing structure of the park and its governance.

Principle one requires that appropriators who have the right to use the resource are clearly defined, but since the park that the monitors were proposing did not exist yet, there were no appropriators to define. Their efforts to specify the park to fit the existing amenities and appropriator uses indicates that appropriator definition would be a part of the development process. Principles four, five, and six are missing for similar reasons. Principle four states that those who monitor a resource should be accountable to the appropriators of that resource. However, without a park to actually monitor, there were no *park* appropriators to hold the monitors accountable. Principle five indicates that rules should be enforced with gradual sanctions, but without formal regulations, there were not many rule violations. Finally, Principle six states that appropriators and monitors should have access to low cost means of conflict resolution. Because the ideas the monitors were brainstorming were not being implemented yet, no conflict arose between them and resource appropriators at this time. To take the Parks Department's ideas and conceptualize applicable rules and regulations, the Parks Department drew upon the assistance of two outside entities. These organizations were external to the appropriators or monitors, but came alongside the monitors during this stage as collaborators in the proposal process. They are discussed below in terms of their relations with the monitors and current appropriators of the land.

Organization of Collaborating Entities

There were only two external organizations that are documented collaborating with the city Parks and Recreation Department: an Ad Hoc Committee consisting of community members with specialized knowledge pertaining to the park and a landscape architecture firm with professional landscape architects and engineers. Both organizations

came from very different places, but both heavily influenced the development of the

DNP. Ostrom's (1990) principles will be applied to the collaborating entities, but it is

important to note that they were not developing their own separate institutions regarding

the empty park land. The principles are, however, still relevant for understanding the

collaborator's influence. As a result of the influence of these two entities, all seven of the

principles being assessed were actualized. Again, all of the work these entities were

doing was theoretical, as their impact on this stage is related to the *proposal* for park

development, not the actualization of the park plans.

Influence of the Ad Hoc Committee

    The Ad Hoc Committee was essential for gathering knowledge and opinions from

actual Brookings residents with experience working with wildlife, human resources, and

native landscapes. The Committee was initially assembled by the Director of Parks and

Recreation in the late 1990's. Each member contributed to the group by bringing their

expertise about certain subject matters as well as their experiences as residents in the city

of Brookings; and for some members, their experiences as appropriators of the park

space. They helped to meet design Principle Three, because most of the members of the

committee were also appropriators of the park, meaning that they were affected by the

rules they were helping to create. Their broad knowledge about the Nature Park land

specifically led to contributions that helped to define existing and future users (Principle

One) and create rules that are resource specific (Principle Two). One interviewee felt like

she brought an environmental education perspective to the planning process, while other

professors and community leaders brought their own unique experiences. A member of

the committee and appropriator of the park described the group saying, "There were a

number of [committee members] and [they] worked a number of years [on] vision [and] different ideas…" Every person was specialized in a field, such as ornithology, botany, or geology, or had influence over select groups within the community, such as retired biology and physical science professors. According to one interview with a committee member, the members' diverse backgrounds allowed them to share unique insights regarding topics like reintroducing native South Dakotan flora and fauna, creating an educational center that ran on environmentally clean energy with recycled and reused materials, and creating a space that was both natural and accessible to the entire community. Their capabilities as leaders in their fields of experience and expertise provided the committee members with a platform to share their ideas and collaboratively work towards developing realistic goals.

The goals the committee set were agreed upon because of their common understanding that the park was intended to go beyond providing green space for the community. This belief contributed to the institutionalization of accessibility, a value that the monitors already expressed as necessary for the future park. In addition to emphasizing accessibility, the Ad Hoc Committee advocated heavily in support of environmental-friendly initiatives. Their intention for the space was to provide new recreational and educational opportunities while revitalizing the land to the most natural form possible. In reference to the possibilities that the park possessed, one member of the Ad Hoc committee emphasized that,"…from the very beginning [the land] was to become a nature park, to have environmental aspects, to be kind of a retreat… it wasn't ever supposed to become like any other park." In a follow up interview, this same individual specified that the goals of the committee were to provide a sanctuary for

children and adults built on, "…consistency, continuity and a positive environment." The institutionalization of these values is evidenced over each stage of development, and support Ostrom's seventh principle, which states that appropriators should have the right to devise their own institutions. Their common belief in these values is the essential factor of their success at suggesting and implementing plans for park development along with their common understanding about the unique mission of the space.

Influence of the Landscape Architecture Firm

The landscape architecture firm completed documented observations, mapped out the land and its potential uses, and intentionally talked to appropriators and city employees to compose and publish the formal vision for the Dakota Nature Park. The firm also had a unique mission for the DNP, and through collaboration with the parks department and the Ad Hoc Committee, they were able to create the vision statement that the park continues to use today. The firm was brought into the project approximately 10 years after the Ad Hoc Committee had begun conceptualizing the future park. They largely relied upon their prior experience developing open spaces into natural park settings for any suggestions and modifications they made to the plans already set by the Ad Hoc Committee. Their role was largely one of refinement and determining the feasibility of the ideas the Ad Hoc Committee and Parks and Recreation Department had generated over the years. The architects offered a distinct perspective compared to that of the Ad Hoc Committee and Parks and Recreation Department because while they were not regularly appropriators of the land, they spent the majority of their time in Brookings at the Nature Park land. They were able to create an inclusive mission and vision for the

future park by utilizing their prior experience and emphasis of natural elements to enhance the already existing features of the land.

A combination of the extensive prior experience the leaders of the firm had and their mission alignment with the Parks and Recreation Department and Ad Committee provided numerous opportunities for successful collaboration. At the center of the firm's design process was the intention to build strong relationships with their clients and understand their goals so that they could build the trust required to accomplish their clients' vision. Their website specifies their belief that every good project should, "[meld] client goals and expectations, contractors' skills and expertise, and the designers' vision and creativity…" (bigmuddyworkshop.com, 2018). As previously mentioned, this is in line with the expressed priorities of the Parks and Recreation Director. Their agreement on this fundamental prerogative allowed the firm to invest resources into interviewing community members, hosting community input meetings, and begin physically spending time at the land getting to know appropriators and observing their activities during the second stage of development. This met Principle Four because it gave opportunities for monitors to be accountable to appropriators. In addition to spending large amounts of time at the Nature Park site, the founder of the firm got an undergraduate degree in parks and recreation and spent his first years in the workforce with state and federal natural resource agencies. This provided the firm with a platform for understanding how parks are used and how they can serve the communities they exist in.

Prior to any other community member collaboration, the landscape architecture firm, parks department and ad hoc committee dictated several directives for the Dakota Nature Park. Some proved insignificant to appropriators in the long run, but some had

lasting impacts that created positive and negative impacts in future years of park development. These directives addressed Principles 1 and 2, by defining clear users and ensuring rules are resource specific. The first directive was that the park should be a walking park, with very little accessibility by vehicles outside of those required by handicapped individuals, such as motorized wheelchairs and scooters. Prior to development there was a gravel trail that ran straight across the park land from one street to the next. One of the architects timed the drive across the park and found that it took three minutes, as opposed to the walk which took 20. Therefore, not letting people drive in the park gave the impression to park users that the park was six times bigger than if they were able to drive through it. Thus, several years later during physical park development, the road was very intentionally removed. This is significant because Section 2 discusses the formalization process of the decisions made during this time period, and the decision to remove the road created months of conflict for parks employees and recreational motorist appropriators of the park who wanted to use the new walking trails for their ATV's in place of the gravel road that was removed.

Another decision made prior to the request for public input was to provide resources to families and individuals who cannot afford them elsewhere. This supports accessibility, which as previously discussed, was also valued by the other Collaborators, Monitors and Appropriators (supporting Principle Seven, appropriators can create institutions). Providing access to the entire community involved the recreational rental equipment available at the park and the depth and accessibility of fish in the ponds that are located throughout the park (See a map of the park's ponds in Appendix A). The decision to provide rental equipment came from the Director of Parks and Recreation and

based on interviews with different collaborators was supported by the Ad Hoc Committee and landscape architecture firm. One stakeholder indicated that, "…it was never really designed to be a big rental place…" but rather a small program that provided rental opportunities to community members who could not afford to purchase their own equipment or travel out of the city for similar rental opportunities. At this point in development there was little expansion upon the specifics of the rental program, but even the decision to establish such a program was fundamental for the existing nature of the park's programs and monetary investments. In a community where most lakes were at least 15 miles away and the closest water equipment rental site was 20 miles away, the equipment rental program proved to be exceptionally successful, supporting Principle Two (that rules should be site specific).

To members of the landscape architecture firm, the accessibility of fishing spots for the community was perceived to be the most important initiative they developed. One of the key architects involved with the planning process discussed these decisions in their interview. They focused on their interactions with subsistence fishermen during their time studying the park. More specifically, they mentioned the conversations they had with a wildlife major at SDSU who fished out of the ponds to supplement his diet when he couldn't afford groceries. In reference to the importance of making the ponds available to people, a member of the firm said, "I'm a sports fisherman but I don't need the fish to feed my family," indicating his realization that there are people who do need the fish. The architecture firm is based in another larger Midwestern city, and members indicated during interviews that they have noticed during past projects that accessibility to fish can positively impact elderly populations in their city. An interviewee had been involved in

discussions with community leaders who had the ability to plan and develop public fishing spaces. This person indicated that there were elderly populations that fished out of stocked urban ponds when their paychecks or government assistance was not enough to sustain them through the month. This individual's passion for providing similar ponds in other urban areas stemmed from their observations of the improved physical well-being of individuals who were able to provide for themselves and their families because of access to these ponds. Additional evidence of the intentionality behind the accessibility of fish to community members who may need them is outlined in descriptions of the stocking selection. The Parks and Recreation Director, under the advisement of the architecture firm, determined that one of the ponds at the park be stocked with rainbow trout every year, even though it is too shallow for the breed. The trout cannot survive the heat of a South Dakota summer and therefore must be fished out of the ponds without being released back in. The Director at the architecture firm indicated that this design was deliberate, though unidentified in the formal Brookings Nature Park Vision released in 2010. The intentionality of this decision provides one of the most unique opportunities in the park, giving access to a resource that is otherwise unavailable in city limits.

Overall the landscape architecture firm was instrumental in the creation of innovative resource uses. Their suggestions became well thought out ideas, which were eventually the foundation for the formal documentation of the park's mission and vision. By recognizing the existing values and norms of appropriators of the land, as well as appropriating the land themselves, both groups were able to give unique insight and direction for development. Additionally, they were able to address Ostrom's (1990) principles by expanding on the ideas of the current monitoring group, the Parks and

Recreation Department. This created a cohesive plan for development, which would set them up to more successfully propose development ideas to appropriators as formalization of these plans begins in Stage 2: *Formalization Leads to External Regulation*.

Conclusion

The first stage of park development involved Parks and Recreation pioneers partnering with experts in a range of fields, and appropriators simultaneously seeing open land and claiming it as an opportunity to participate in their desired activities. While the Appropriators were organizing themselves, the Monitors were also organizing for the future of the land as a park with the help of a group of Collaborators. These collaborative groups were composed of professionals and community members with a wide array of knowledge regarding different environmental and educational fields. Within each stakeholder group, the Appropriators and Monitors both exemplified different combinations of the Eight Principles and the six appropriator attributes that lead to collaboration. These combinations of principles were impacted by the influence of each stakeholder group over the park, as well as setting the trajectory for sustainable governance going forward. The following will discuss the principles that were present or absent for each stakeholder group as they relate to each other, while considering the impact each will have on the formalization of regulations in the following sections.

Due to the hands off governance approach taken during this open access stage of development, Principle One was not formally addressed by any of the groups. However, the appropriator groups utilizing the land exhibited many of the appropriator attributes that support the emergence of cooperation, and by doing so were able to accommodate a

wide range of users. The appropriators were very dependent on the resource for their activities, whether recreational, environmental or subsistence; while the Common Pool Regime was dependent on the resource as the only city owned space where a nature park was feasible. Both groups' expressed salience that led to investment in the resource and to cooperation and the common understanding that they all desired to use the land. For appropriators this meant understanding that they needed to co-appropriate to avoid external regulation or restriction. Their cooperation allowed them to create informal regulations for land use, meeting Principles Two and Three. For governance this meant collaborating with community members and experts in the field to determine the most environmentally friendly, accessible approach to creating a community park, also meeting Principles Two and Three.

Principle Four was addressed by the landscape architecture firm, as they expounded on the monitor's desire for community input by proposing formal avenues for community-governance conversations. This proposal also met Principle Six by proposing avenues for low-cost conflict resolution. Their contributions differed from those of the Ad Hoc Committee, which provided expansion on Principles One, Two and Three. Because many of the Committee members were appropriators themselves, they were able to propose the inclusion of specific groups of users, compose rules that were specific to the resource and its users, and participate in rules they were going to be affected by.

Analysis of all of these groups differs from the following sections because of their distinct organization apart from each other. Although some stakeholders had overlapping roles, for example some of the Ad Hoc Committee Members were also appropriators of the park, their organization and developments for future land use were entirely separate.

The monitors (Parks Department) had formal authority over the resource, but appropriators developed their own institutions while the land sat undeveloped. This led to a unique institutional setting where most of the ideas and regulations being discussed were proposed or informal. Because this stage of organization is defined by the emergence of norms, values and rules, much of the organization is occurring within groups, rather than through enforcement. The following section will discuss the formalization of these proposed norms and values, and the perceptions of external regulation that ensued.

Stage 2: Formalization Leads to External Regulation

Introduction

The previous section detailed the state of governance and appropriation of the land before there were formal plans for its development as a park. This section will analyze the time period that followed, where the discussions and ideas proposed by the Ad Hoc Committee and landscape architecture firm were presented to the Brookings community. Community members, including the appropriators of the park, where asked to give their input in the hopes of coming to an agreement about future land use. While there were no definite arrangements for the land reclamation, there were several initiatives that each stakeholder group lobbied for. During the first stage of development there were three distinct stakeholder groups actively using or planning development for the park land: the community members appropriating the land, the Parks, Recreation and Forestry Department, and the Ad Hoc Committee and landscape architecture firm that the parks department collaborated with to form ideas for the proposed future park. During this second stage of development all three of these stakeholder groups (Appropriators, Monitors, and Collaborators) came together to compile their ideas for resource use and develop a formal written proposal of their intentions for park development.

Ostrom's (1990) Eight Principles became discernible because of the merging of the Appropriators, Monitors, and Collaborators, and the subsequent establishment of one governing body over the resource. The ebb and flow of formalizing the authority of the Parks Department led to a shift in appropriator perceptions. The governing body was no longer perceived as being hands off, but rather as an external entity imposing regulations on the existing body of appropriators. The first formal park proposal was released at this

time, along with an in depth plan for development. As the ideas for the park are formalized and resulting regulations begin to emerge, the following will examine the interplay of each of the principles with the existing governance institution.

Principle 1: Clear Usership Definition

As development of the largely untouched 135 acres got underway, the Parks and Recreation Department defined which appropriator groups would be able to continue utilizing the land. They, along with the groups selected for collaboration, established themselves to the appropriators as the formal governing body over the resource, despite the lack of structure or development of actual park land. The intent of the parks department was to constitute uses of the park which would ensure the land was preserved and restored with its most natural characteristics. They intended to do so while providing unique opportunities for the community to participate in otherwise unavailable recreational activities. To institute patterns of conduct that met these standards, the Parks Department determined which uses of the land were sustainable and therefore necessitated further exploration. Additionally they determined which uses were harmful either to appropriators or the environment and required restriction or expulsion.

Conclusions made by the governing body resulted in the promotion and exclusion of several types of land use, as evidenced in their first formal park proposal: *Brookings Nature Park—Vision Statement & Program* (2010). Fishermen/women were asserted as the first formally recognized and clearly defined users of the park. Other groups included in future park plans were water craftsmen, walkers and bikers, winter sportsmen, mountain bikers, and families. At the same time, motorized vehicle activities were the first user group to be expelled from the future park land. These activities were selected

based on the deeply institutionalized value of accessibility in the community and the degree of alignment with the ideas for a proposed mission statement.

<u>Fishing</u>

One of the most institutionalized values at this point in development was access to resources, and more specifically access to water. Fishermen and women appropriated the land from the onset of park creation and maintained their standing as park users throughout each stage of development. This catalyzed the endorsement of fishing as a *clearly defined use of the park* (Principle One) by the Common Pool Regime. Most interview participants who were involved with development or were residents of Brookings at the time mentioned the significance of providing accessible fishing and recreational water use, especially to youths. The self-expressed value of accessible fishing access by the governing body and the reminiscence and sentimentality attached to years of fishing in the community resulted in the formal recognition of fishermen/women and water sport recreationalists as park users.

Creating and maintaining fishing holes at the old landfill site was the first initiative undertaken by the City Parks and Recreation Department in 1970's. Some community members claim there were fish dumped in the ponds as soon as they were created. Following a donation in 2009 by a well-known local business family, the ponds were officially stocked with fish and the embankments were leveled out for safer access by youths and families. The willingness on the part of the Common Pool Regime to come alongside the donating family and enhance fishing at the ponds indicates their support of fishermen/women continuing to appropriate the land. Past and current city employees referenced the anonymous donation and its influence on the trajectory of fishing at the

future park. The 2010 Vision Statement outlining park regulations and intentions specifies that, "fishing will be open to people of all ages…" with an emphasis on youth fishing events. The vision statement continues by emphasizing the provision of "accessible" fishing locations to the surrounding community. Although there were other fishing holes around the city, interviewees emphasized that this was the closest and most accessible for those without vehicles like small children and the elderly. Former fishermen made similar statements, adding that they frequented the resource because of the accessibility to shorelines and different types of fish without needing a boat or trailer. Because of the cold temperatures during the South Dakota winter, parents frequented the space. The common understanding expressed by both appropriators and monitors that water access was meaningful to the community also led to the clear definition of fishermen/women as permitted users of the park.

In addition to their dependence on the water for activities, appropriators recounted their time using the land with fondness and nostalgia. Interviewees expressed non-verbal cues when reminiscing on using the land prior to development. Cues included sighing, closing of the eyes, and smiling as stories were told of nights spent on the water. One interviewee recounted taking their grandchildren out to the ponds and teaching them to fish for the first time. The memories were special and led to positive feelings towards the space. Another elderly appropriator who frequently fished out of the ponds made several references to experiences fishing with their children and then grandchildren. Again, it was the individual's personal experiences which attached him/her to the value of accessible fishing. In the framework applied to this study, Ostrom does not directly address sentimentality or attachment as attributes contributing to cooperation amongst

appropriators, but they are the foundation for the term salience and understanding of dependence on a resource. In this case, positive experiences and a satisfactory relationship with the resource and activities appear to have contributed to the institutionalization of maintaining appropriator access to the water. Other users of the water were clearly outlined as acceptable appropriators, but their activities were proposed for *future* use rather than present use. The activities clearly outlined for future use are discussed below.

<u>Water and Winter Sport Recreationalists</u>

Few appropriators who participated in interviews were able to recount winter activities that they or their fellow appropriators participated in. However, both forms of recreation are listed in the proposed Mission and Vision for the park, making people who participate in them "clearly outlined park users," as discussed in Principle One. There were also several physical developments that supplied water and winter recreationalists with amenities specifically aimed at their activities of choice. This supports their acceptance and encouragement as users of the park. Certain water recreationalists were defined as park users. They are clearly addressed in the Visions Statement, which says, "use of kayaks, canoes and row boats will be permitted on the park's ponds," (DNP Vision Statement, 2010). Former appropriators of the park remembered people bringing kayaks out to the water, but because of the site's history as a landfill, very few people participated in activities that involved entering the water. Several appropriators believed this was due to fear of contamination from the garbage under the landfill. The introduction of water recreation expanded upon the existing uses of the park and encouraged open mindedness, while reassuring appropriators of the safety of the water.

Water craft were not only accepted, but "…encouraged on the park's ponds," (DNP

Vision, 2010). Similarly, the new vision and mission statement encouraged winter

recreationalists to begin using the space. The park's department's intention to leave the

trails unplowed to allow for cross-country skiing and snowshoeing is outlined in the

Vision Statement and Program (2010). Patches of ice were declared safe for broom ball

and ice skating, and outdoor recreationalists were invited to use the future Nature Park

Center as a warming hut. All of this allowed appropriators who could not handle long

periods of time in the cold to participate in activities.

Mountain Biking

Mountain bikers were also accepted into the formal Vision Statement document.

There were few existing structures for mountain bikes, so appropriators had been creating

their own trails on the large dirt piles left from excavation. The Vision Statement

document indicated that, "a mountain bike skill area and trail will be developed on the

periphery of the park [to] allow mountain bikers to develop a skills training area..."

(2010). Developing such extensive infrastructure implies that mountain bikers themselves

were going to be allotted space to use the park. The proposed Vision statement also

indicated that there would be a separate trail created to allow bikers to use their skills on

a real track. The statement was inclusive of children and adults of all ages, in the hopes of

providing a space for a diverse array of mountain bikers.

Motorized Vehicles

Unlike the clear acceptance and encouragement of fishermen and non-invasive

recreationalists as users of the park, there was a definitive stigma around using motorized

vehicles that manifested during this stage of development. Members of the Ad Hoc

committee recounted discussions about the disturbance caused by motorized vehicles, both in the water and on the land. The drivers of the vehicles were perceived as not adhering to the commitment to environmentalism made by appropriators and monitors, and the long term consequences of their presence at the park outweighed the Common Pool Regime's desire for inclusivity of existing appropriators. There is little data available regarding those who participated in motorized vehicle activities, but from what was gathered it appears that lack of mutual trust and low discount rates contributed to the consensus that the vehicles should be banned from the land in preparation for its future as a park.

Recreational motorists were not the most prevalent at the park, but because of the disruptive nature of their activities, they did not fly under the radar. The Common Pool Regime proposed regulations for all motorized vehicles, with the exception of wheelchairs, scooters, and other necessary motorized medical equipment. The Vision Statement and Program specifically states that, "…movement within the park will be restricted to muscle-powered activities…" (2010). Later they reinforce the restriction by saying that only, "muscle-powered craft are allowed and encouraged on the park's ponds," and that, "Gas or electric motors will not be allowed," (DNP Vision, 2010). Through reiterated regulation and repudiation of motorized vehicles in the park, the Common Pool Regime made it very clear that these activities were not in line with their trajectory for the park.

Discussion of principle one

The groups of appropriators who were formally accepted by the Common Pool Regime were more diverse than in many other CPR's. The land was already adapted to

meet the needs of some appropriators, such as fishermen and water sport recreationalists.

For others, the land would have to be adapted to meet their needs, such as the trail

systems for mountain bikers and walkers. Many of the "clearly defined users" of the park

were proposed users, as the document verifying their right to use the park was also

proposing the first official plans for park development (Ostrom, 1990). As we'll see in

later discussion, this allowed for the transition time necessary to eliminate disruptive

activities from the park while encouraging other new appropriators to utilize the park's

amenities. During this transition period, restricting rules were proposed that aligned with

the activities appropriators were participating in. These rules and regulations allowed for

larger numbers of people to utilize the resource with the intention of making the most

minimal impact on the wildlife possible. The following section outlines the rules and

regulations that were specific to the Dakota Nature Park.

Principle 2: Restricting rules are resource specific

Because the City of Brookings is the Common Pool Regime governing the Dakota

Nature Park, there are general park rules that have been applied to all parks, including the

DNP. The City manages many parks throughout the city, and has an umbrella rule-set for

all of them (See Appendix for copy of general Park Rules and Regulations). In addition to

these rules, at the Dakota Nature Park there were proposed resource-specific rules that

encouraged sustainable use of the land while providing opportunities for recreation.

These rules were not legitimized in writing or formal documentation by the city during

this time period, but they were inherent in the Vision Statement for the park. The Vision

Statement document served as the most formal guideline for installation, adaptation and

consistency in rules and regulations. The general vision for the park use was that:

"Allowed uses at Brookings Nature Park should be tied to the unique natural

resources that exist in the park. Motorized vehicles should be restricted to the

three parking areas located on the periphery of the park. Movement within the

park will be restricted to muscle-powered activities – walking, running and riding

bicycles, while accommodating any motorized mobility aids required by some

visitors. Canoeing, kayaking and float tubes, all muscle-powered activities, will

be allowed on the park's ponds. Dogs will be allowed in the park according to the

rules that apply to all city parks" (DNP Vision Statement and Program, 2010).

The rules discussed below support the vision statement above and are outlined in the

Vision Statement document. They were also discussed by stakeholders who participated

in interviews. These rules include those pertaining to general accessibility and regulations

regarding the formalization of specific spaces for different appropriator activities.

General Accessibility

The paramount rule over the park was accessibility. Accessibility has already

been discussed at length throughout this paper, and requires little additional proof of

significance. However, an element of accessibility that has not been discussed is its

resource-specific dependency. Value of accessibility was born out of the salience of park

users who needed a geographically proximate resource to participate in their assorted

activities. For some appropriators this meant ponds that were safe and close to town for

fishing, and for others it meant natural green space they could ride their bikes or walk to

with their children and pets. Regardless of their various appropriations of the resource, all

of them were dependent upon its convenient location and safe access. One of the results

of their salience was their own restriction of other appropriators participating in disruptive activities.

As the park space became more heavily frequented, appropriators increasingly monitored each other's activities. One appropriator recounted the transition from appropriator independence to organization saying, "I mean, [in the beginning] you had four-wheelers and the little motorcycles and people just went out and nobody really cared [since] they weren't really hurting anything. And they did more horseback riding and things out there like that, where now we've restricted some of that." This appropriator continued to explain that the reason for increased restriction was to increase accessibility to *all* amenities for *all* community members. He/she felt, along with several other appropriators, that motorists were disrupting a wide variety of other appropriator activities. Ultimately, they felt that motorists' presence at the park had more harmful consequences than benefits. Ostrom explains this reasoning, positing that, "…how an individual evaluates expected benefits in an institutional-choice situation depends on the information available…concerning the benefits (or harm) likely to flow from the continued use of status quo rules," (Ostrom, 1990, 194). Many interviewed stakeholders perceived the same consequences would result from allowing the motorists to continue park use. Some of these consequences include harming or scaring away wildlife, destruction of greenspace and foliage, danger for children and youths who were in the path of oncoming vehicles, and a disruption of the peaceful nature the wild landscape brought. This is why they began regulating motorists at the same time that the Common Pool Regime began formalizing motorist regulations.

The rules and procedures developed by appropriators who supported increased accessibility became operational over time, and were supported by the Common Pool Regime in the Vision Statement. The Vision Statement was a document created specifically for the future nature park, making it inherently resource specific. The words "access", "accessible" and "accessibility" are mentioned 42 times in the 12 page document. There are references to accessibility of specific amenities for all members of the community. "Accessible launch points," "accessible piers," "accessible fishing," and "accessible trails," were all proposed in the Vision Statement. Additionally, the word "all" is used to reference who will be permitted and encouraged to use different resource amenities ten separate times. Some examples of these references from the 2010 Vision Statement and Program are listed below:

- o "Brookings Nature Park is a place where nature prevails and *all* humans are guests."

- o "Fishing will be open to people of *all* ages."

- o "Create an integrated system of trails that will allow *all* visitors to experience *all* areas of the park."

These quotations taken directly from the Vision Statement document make it clear that the Common Pool Regime intended for this specific park to be accessible, and suggested developments that would ensure it was.

The resulting rules and regulations encouraged appropriators and monitors to abide by the guidelines proposed in the Vision Statement. At the time of Vision Statement creation, the Common Pool Regime had collective-choice decision making power. This allowed them to enforce these guidelines as formal rules and regulations for

the duration of their time governing the park, despite the fact that the Vision proposal was never formalized as official policy. Unlike other city parks, the Dakota Nature Park was intended to be, "a special place set apart from the city and its other fine parks… [it was to be a place] where nature prevails and *all* humans are guests… [allowing] other [appropriators] to experience a sense of solitude and uniqueness…" (DNP Mission, 2010, re-approved, 2018). Therefore, any activities perceived as being too exclusive to other users or degrading the physical landscape were not only discouraged, but banned from the park land. Accessibility became highly valued for appropriators and governance over the park, and the resulting rules and regulations upheld by both appropriators and monitors are proof of its long lasting prioritization.

Allocation of specific geographical spaces for appropriator activities

Over the course of the formalization stage, as appropriators were required to adhere to regulation from the City Parks, Recreation and Forestry Department, the different physical elements of the land were analyzed and assigned activities and amenities. Some parts of the resource, such as the ponds, were used for several different appropriator activities throughout the year, while other locations were selected for single activities. For the first time, appropriators were confined to the space allotted them by the Common Pool Regime. Members of governance indicated that these allotments of space were assigned in an effort to preserve each section of the park and discourage conflicting uses. Some of these land allocations required minimal physical development, and even aligned with the allocations informally established by the appropriators during the Open Access stage. Each of the following activities was allocated a specific space and monitors

enforced these allocations by reprimanding appropriators who misused the different

spaces in the park land.

<u>Water Use</u>

Suggestions for approved water uses include fishing, kayaking, canoeing, row

boating, and float tubes. It was decided that the park would be a, "…primarily…put-and-

take urban fishery," so that the Common Pool Regime could align their regulations with,

"South Dakota Game Fish and Parks (SDGFP) regulations," (DNP Vision, 2010).

Interviewees who served as employees for the city during this time of formalization

indicated that the alignment of regulations was beneficial for both the city and the state,

and gave the regulations validity and weight. Their argument was that requiring

fishermen/women to abide by the already existing rules would make regulation

straightforward and credible, while supporting the SDGFP as a regulating entity. It also

shifted the responsibility to create and implement new rules off of the Parks and

Recreation Department in favor of granting regulatory control to the already experienced

and equipped SDGFP. Certain ponds were stocked with specific breeds of fish to allow

for diversification of species and enhancement of water qualities, as well as provide a

variety of catch options to fishermen/women. It was included in the Vision Statement that

if necessary, "…catch and release requirements could be placed on predator species in

the…fishery in the future…" but at the time of initial regulation formalization, no such

requirements were enforced.

Along with some of the fishing regulations that supported the physical health of

the resource, several of the rules regarding water recreation were also suggested with the

intention of supporting the health of the water systems at the park and protecting the

safety of park users. The restriction of motor powered boats was not discussed in any interviews. However, based on the reasons for restricting all other motorized recreational equipment at the park, it is likely that the motorized boats were determined disruptive and misaligned with the mission for the park. Sailboats and sailboards were also prohibited at this time, despite their lack of a motor. The reason is discussed by the Common Pool Regime, as the sailboats/boards are too big for the pond. The Vision Statement (2010) specifically says that, "use of sailboats or sailboards will not be allowed due to the relatively small size of the ponds." In their interviews, members of the initial Common Pool Regime indicated the intentional creation of each of these regulations because this was the first time any of the appropriators were being regulated at all. One interviewee especially emphasized that many hours were spent ensuring that each regulation was tailored to meet the needs of the community while adjusting to ensure the park space was being used to its fullest potential. The implication was that the proposed mission was also the ideal projection for the park's "fullest potential" as this interview participant referred to it.

<u>Land Use</u>

Water was not the only regulated amenity. The land was divided up with the intention of creating some natural spaces with a native prairie landscape, trails for walking/bike riding/running, trails for only walking and running, a nature center building, a mountain biking training track and a mountain biking track. In order to do so, regulations had to be created that would encourage appropriators to participate in certain activities within their assigned places in the park. Plans were made to maintain the sites' open meadows and restore native prairie grasses to open spaces. This meant that certain

areas of the park would be preserved for the growth of different species, and therefore unavailable for appropriators to use.

Walking was restricted to an integrated trail system that connected to the city's bike path. In the winter, the trails were to be used for winter sports and therefore not plowed. This restricted runners and walkers to summer use, or trudging through the deep snow on the sides of the trail where the ski tracks were laid. Many of these changes did not dramatically affect the appropriation of the park by walkers, runners and winter users. If anything, many of them recalled how much more they were able to use the park after these regulations were upheld. The trails were created with intention to accentuate the different natural elements of the park. One of the contributors to the park shared that the different sidewalk widths were intentional and intended meet American Disabilities Act compliance (ensuring greater accessibility) while giving users different experiences. Similarly, the northern corner and side of the park were allocated by governance as wildlands to "…dial people back." The hope was to try to slow people down and help them engage with the natural environment rather than just get their walk done. The allocation of specific walking areas did increase the necessary regulatory actions on behalf of the Common Pool Regime, but it also created natural spaces where the park could be enjoyed by appropriators.

Another group whose use of the space increased post-regulations and development were the mountain bikers. Rather than continuing to create their own trails over the mounds throughout the park, mountain bikers were allotted land where they would be able to utilize tracks made specifically for their activity. The trails were to be located, "on a portion of the former landfill and also…through a portion of the adjoining

shelter belt…" on the North end of the park (DNP Vision, 2010). The trail was to be

"exclusively" for mountain bikers and separated from other trails to ensure the safety of

all patrons of the park (DNP Vision, 2010). The mountain biking trail was initially

intended to be in the South East corner of the park, but was moved to the North because

of the increased shielding by the shelter belts of trees. The city thought this would

provide more protection for the bikers from debris in heavy winds. Additional reasoning

for the placement of the tracks was the proximity to the softball fields. The Common Pool

Regime determined "…softball and bikes are both active sports so it made sense to put

them together." They also ruled that putting the bike tracks on the outer edge of the park

preserved the, "…tranquil center of the park." The trails were proposed, and due to their

extensive monetary requirements were one of the last developments to be completed.

This created some conflict with the mountain bikers, as they felt they had lost their riding

space without being provided new space. They were allowed on the existing walking

trails, but had no bike specific amenities. This is discussed later in reference to

appropriator's ability to participate in rule creation. The Common Pool Resource

determined, despite some objection, that the centralized biking space was best for the

park and its appropriators, and allocated the location accordingly.

Another group of appropriators who were supposed to receive intentional space

for their activities were the dog trainers and hunters who appropriated the park. As

development was underway, several former parks department employees discussed the

infeasibility of allowing hunters to shoot blanks over the water and allow their dogs to

run off leash to train them. One volunteer recalled his/her fear of bringing grandchildren

to the park because there were always so many dogs running around. It was decided that,

"…the core area of the Nature Park is not the best long-term location…" for training and retrieval practice (DNP Vision, 2010). The solution was to allocate a specific space to the hunters and dog trainers, where they could work with their dogs without interfering with other appropriator activities. The proposed site for this use was not yet owned by the city, so all regulations involving the site were hypothetical until the land was purchased. The proposal from the City sought to work with the dog trainers to develop a new space that included water and upland areas for training. The city sought to mitigate the resentment expressed by the dog trainers by citing a dog park at another location. Because the site had not yet been obtained at this point in development however, the dog trainers were required to cease all training that could not be done on a leash. The dog trainers' responses and interactions with the city in light of these restrictions are discussed in the following section.

Discussion of principle two

Overall, the city worked to assign spaces to certain activities to increase safety for future appropriators and encourage a wider variety of patrons to attend the park. While the land sat undeveloped, only individuals who self-initiated appropriated it. The parks department sought to encourage more community members to make the park their own through their resource specific regulations. The regulations were designed to allow for maximum appropriation without degrading the natural amenities or causing disruption for other park users. Although this created tension with some park users, it allowed others the freedom to participate in their activities without interference or fear of harming other appropriators. The parks department was intentional when creating and publishing rules for the park, and they invited the input of not only the landscape architecture firm and Ad

Hoc committee, but the entire community. As the following section will discuss, it was as a collective whole they were able to agree upon or at least understand each other's intentions for park use.

Principle 3: Those affected by the rules participate in their creation

Prior to this stage of development, the city Parks and Recreation Department had been working alongside a landscape architecture firm and an Ad Hoc Committee made up of citizens to develop the fundamental park plans. With some guidelines and absolutes in place, they opened up the floor to input from the community. Those deemed "stakeholders" by the landscape architecture firm were contacted and asked for input regarding park development. The landscape architecture firm determined the following individuals and groups were stakeholders: the Parks and Recreation Board, the City Council, the Ad Hoc Committee, the Parks and Recreation staff, the Fire Department, Public Works, the ADA Compliance officer in Brookings, the Mayor, mountain biking enthusiasts (who would later become a formal association), school teachers, and influential private community members. The fire department was contacted because their training station was located so close to the proposed park. Public Works was contacted because one of their head architects had studied the park while working towards his Ph.D. The school teachers were contacted to see how the park could be the most beneficial to them, and private community members were contacted because of their influence in the city.

In addition to seeking out stakeholder input and appropriating the land themselves to help determine the best development plans, the Common Pool Regime hosted four public meetings to allow for community input. All of this was done prior to the

publication of the Vision Statement and Program. Not all of those who were affected by the rules participated in their creation, but the city tried hard to make sure they were all given a chance. The major voices throughout the partnership of community and city governance were the Recreationalists and the Naturalists. Specifically, the mountain bikers and dog trainers showed up to share their input. With the help of some reporters at the local newspaper and announcers on the local radio stations, the Parks and Recreation Department was able to spread the word about their public meetings intended to help shape the development of the DNP.

According to those present at the public forums, one of the first highly contested topics involved the decision to give South Dakota Game, Fish and Parks regulatory control over fishing at the Dakota Nature Park. The argument on behalf of the City Parks and Recreation Department was that SDGFP had all of the resources and experience necessary to manage the water well. Attendees of the forum recalled arguments on behalf of the community that although the land was public, it should be excluded from State level regulation. The department stood firm in their decision, making the argument that if the resource was public, and therefore available to everyone, it should incur the same regulations as any other common pool body of water. Ultimately, the regulations were upheld and adults fishing out of the ponds at the DNP had to abide by SDGFP rules. Those who were present shared that despite the lack of agreement about the topic, at least everyone was heard.

Another heavily discussed regulation was the decision to ban off leash dogs. The appropriators most deeply influenced were the hunters and dog trainers. A collection of hunters and dog trainers attended the second public meeting to express their

discontentment with the plans for park development. In the recollection of attendees of the meeting, the hunters' argument was that they had used the land to shoot blanks and throw dummies into the water for the "past twenty years", so they shouldn't be one of the few appropriator groups kicked off because of park development. They felt targeted by the Common Pool Regime because their activities were ones that not everyone could participate in. The argument on the part of the Parks Department was that there was "nothing wrong with the way they were using the land, but Brookings needed more parkland so it was a decision for the common good."

The landscape architects heard the arguments of the hunters at the second public meeting and made a commitment to come to third meeting having considered their opinions and brainstormed options for mitigating their discontent. During that third meeting both sides presented their cases and participated in discussions about resolving their own interests. Neither side wanted the other to miss out on opportunities to use the resource, but their uses did not appear to be compatible. Ultimately the Director of Parks and Recreation made the commitment to propose allocation of other city owned land to be a natural dog park for hunters to train on. Those who participated in the meeting felt that the hunters left unhappy but also understanding the development was in the community's best interest. Developing the trust of appropriators who wanted to hunt and train their dogs allowed the Common Pool Regime to mitigate potential conflict that could have disrupted park development. The hunters were invited to participate in rule creation, and it resulted in plans for an improved training area they could use.

The third major group of appropriator voices present at meetings for park development were mountain bikers. Originally the plans for trail use excluded all forms

of biking. According to members of the mountain biking association, this was because of the inherent dangers of having people going quickly around wooded corners on bikes as well as the potential disruption of tranquility in the park. Local community bikers organized amongst the biking community and showed up to each of the public meetings with 10-15 people. At each meeting they represented the biking community and lobbied for the installment of bike specific trails and for permission to use the walking trails. The biking community was persistent and because of their consistency and large numbers, they were able to argue that a big enough percentage of the community wanted bike trails to warrant consideration. After several more private meetings between members of the biking groups and members of the Parks and Recreation staff, it was established that the Mountain Biking Association would come alongside the Parks Department, and together they would fund, build, and maintain mountain biking trails throughout the park. It was also decided that trails would be adapted to meet the needs of bikers as well as walkers and runners. This is the clearest example throughout park development of the way that a group of appropriators directly influenced the rules and regulations being imposed on them.

The fishermen, hunters, and bikers were not the only community members who showed up for the public meetings. They were however the ones who represented their cause and reached compromises that allowed them to continue appropriation on city owned land in some capacity. Their persistence and representation at meetings did not always change the outcome of development, but it did create an open and adaptable culture between appropriators and monitors. The Common Pool Regime was careful to consider and not only accept the community's input, but to seek it out. It was through

time spent together, representation, and willingness to collaborate that appropriators were able to affect the rules governing the resource they were using.

Principle 4: Monitors are accountable to Appropriators or are Appropriators themselves

Finding data regarding Principle four was much more difficult than the preceding principles. This is largely due to the lack of formal written documentation of the decisions made during this period of time. There are a few ways that appropriators indicated that monitors of the park were accountable to users. Some formal external entities were brought in during this formalization stage of development: the Brookings Police Department, Animal Control, and South Dakota Game, Fish and Parks. There is no data regarding the accountability of these entities to users. Often the monitors of the park were users themselves, and held themselves accountable to other users. There were also opportunities provided for users to voice concerns about monitors in the public meetings and at a published email address. Although the Parks Department took on full monitoring responsibilities, they encouraged appropriators to continue holding each other accountable as they used the land.

The primary reason that the formal monitors of the park were accountable to users is because they held themselves accountable. They provided opportunities for appropriators to critique their decisions and make suggestions. The director of the landscape architecture firm stressed that the Parks and Recreation Department was extremely open to public opinion, so much so that several interviewees thought they created as many opportunities as possible to gather it. This also provided contexts where they could be held accountable for their decisions. As discussed in the previous section, monitors were adaptable to the needs of the community. When the appropriators who

used the park to bike lobbied for bikes to be allowed in the park, the Parks Department listened. On top of listening, they changed their decision and moved to allow bikes on the trails. Additional accountability was maintained by providing opportunities for people to anonymously share thoughts and concerns with the Common Pool Regime. Emails were collected at public meetings and community members were sent updates about each future meeting. Then at the meeting, sheets of paper were handed out with 3-4 quick questions and then a large space for comments. The sheets of paper could be placed in a box at the end of the night or left for the parks department to read at any time. This gave a voice to appropriators and community members who were uncomfortable sharing their opinions in the meetings. Interviewed appropriators implied that the parks department stayed receptive following the series of community meetings, allowing appropriators to continue holding them accountable.

Some monitors were appropriators themselves, which also aided in their receptivity to accountability. In interviews, appropriators recalled that the formal monitors of the park (the Parks and Recreation Department) were frequently seen appropriating the park themselves. Some called the park land an oasis, while others expressed that they felt a responsibility to check up on it. Still others talked about using the land for recreational fishing and bird watching. Whatever their reason for using the space, their presence provided opportunities for other appropriators to hold them accountable. Employees referred to the relationships they built with fellow appropriators, explaining how even just being present at the park made other appropriators feel more trust towards them. Appropriators supported this claim, indicating that it made them feel comfortable enough to confront them about rules and regulations. It also gave monitors

clearer perspective about the uses of the park, and the best monitoring practices. While

the system was not full proof, none of the interviewees who were appropriators of the

park at the time could recall a single conflict that the Parks and Recreation Department

did not listen to and address. This does not mean that those conflicts did not exist; simply

that at least some were mitigated. Interviewees indicated that this was partially because

the governing body put themselves, as leaders and decision makers, in positions where

the community of park users could and did hold them accountable. This resulted not only

in monitor accountability to appropriators, but also in the support and confidence of

monitors and appropriators regarding repercussions to regulations.

Principle 5: Rules are enforced in graduated sanctions

There has been evidence that some repercussions were enforced by users and

monitors throughout this entire formalization stage. When park users were not abiding by

the rules and regulations that ensured inclusivity and accessibility for all, other

appropriators and monitors were the ones who stepped up to enforce repercussions.

Repercussions typically involved verbal reprimands and exclusion by other appropriators.

For deviations from the rules that were non-harmful, appropriators may not be

reprimanded at all. However, as formalization of development continued, so did

increased enforcement of new rules and regulations. Most individuals presented with the

new rules committed to uphold them because they perceived that the benefits of doing so

outweighed the risks of deviant appropriator behaviors. The clarity of the new

regulations, and their commitment to the rules, having helped to create them, led to a park

culture where park users and monitors were willing to enforce most repercussions for

deviant appropriators.

The monitors of the park were the formal enforcers of repercussions. On several accounts, interviewees referenced times they had to enforce park regulations with appropriators who were deviating from permitted park uses. One member of governance shared that he had many conversations with community members who wanted to use the space for large gatherings that it was not intended for. He shared that on several occasions couples would come in and ask if they could be married in the building, and when he said no, they would grab their photographer and stand outside to be wed. He shared that the nature of regulatory deviations like this one were light hearted enough that often they would be lightly reprimanded. If the city employee had given the fullest extent of repercussions for a small rule violation, he may have lost credibility with other appropriators and with the monitors he worked with. This is in line with Ostrom's (1990) findings that governance is most likely to be sustainable if graduated sanctions are applied depending on seriousness and context of the offense.

More serious deviations such as riding motorcycles or four-wheelers on the walking paths had much more severe repercussions. One park employee remembered biking around the park and having an entire family of four-wheelers race past him and out of the park. He tried to chase them down and was eventually able to find them outside of the park. The first set of repercussions was verbal, and when the family continued to ride through they escalated to the point of being banned from the park on their vehicles. Because of the inclusive culture of the park, banning appropriators is the last measure taken, but when the safety of fellow appropriators is at stake, it may become necessary. Other employees brought up similar accounts of chasing down college students on four-wheelers and small motorcycles to give them warnings that their activities were

prohibited. While the four-wheeling was disruptive and broke park rules, some employees experienced deviant behavior that required the most legitimate authority over the park, the police. Because of the secluded parking lots at the park, several employees had experienced walking in on or watching drug deals. In these situations, the activities far exceeded any repercussions enforceable by park governance, and the Brookings Police Department was called. These situations occurred infrequently, but are a good example of the range of consequences for behaviors appropriators participated in.

Formal park and city governing bodies were not the only ones to uphold regulations. Appropriators aided in efforts to enforce repercussions by taking action themselves and by replaying information about deviant behaviors to the Common Pool Regime. In reference to appropriator accountability, one park employee shared that when the rules were first being implemented, "…a lot of people were kind of fussing about certain things they couldn't do, and even driving in there…but as people started to use the nature park they turned them in in a heartbeat." He continued to discuss how they would get in trouble very quickly if other appropriators caught them deviating from the rules. His perception was that appropriators who adopted the rules and regulations over the park were willing to ensure other users were abiding by the rules as well. One appropriator of the park shared how they will chase down every person who doesn't have their dog on a leash and politely ask them to put the leash on. If they do not, this individual will threaten to turn them in, and if they continue to frequent the park without their dog on a leash this appropriator will call animal control so the person gets a citation. These levels of enforcement are also in line with the graduated sanctions discussed by Ostrom (1990). Each repeated action had increasingly more severe consequences. Other appropriators

shared stories of enforcing repercussions that involved turning in youths who were disrupting other appropriators or participating in dangerous activities and cars who were speeding around the parking lots. Repercussions in each instance may not have been enforced by fellow appropriators, but they were incited by them.

It is difficult to determine exact levels of sanction enforcement by monitors and appropriators. Much of the enforcement that occurred was informal, and therefore went undocumented. It is apparent through appropriator interviews that many individuals who did not have to enforce repercussions for deviant behavior would have been willing to, should the occasion have arose. The more severe sanctions were enforced similarly to Ostrom's (1990) suggestion that repercussions be dealt out in gradual sanctions. Appropriators who violated rules were given graduated consequences to encourage ceasing behavior before reaching the most severe consequence, banning from the park. During this stage it is apparent that at the very least, monitors and appropriators felt connected enough with the new rules and regulations to enforce them when the perceived necessary.

Principle 6: Appropriators and Governance have access to low-cost conflict resolution arenas

Much of the formalization stage is characterized by compromise and collaboration to resolve conflicts and avoid future disputes. Throughout the community input process, physical locations for conflict resolution were actively provided for appropriators and monitors. Following this process, appropriators were encouraged to continue giving feedback to the Parks and Recreation Department at their offices or via messaging. The park land has always been owned and managed by the City of Brookings, so the City offices have always been available for appropriators and/or governance to work through

disputes. Additionally, other public spaces may have been used for conflict resolution, such as the park space itself, local businesses such as coffee shops, and other public buildings.

During this stage, many of the conflicts discussed by appropriators or monitors were addressed at the public meetings held by the Parks and Recreation Department and landscape architecture firm. Community members were given multiple means to express concerns, leading to straight forward conflict resolution. Following the four meetings, if appropriators had conflicts with governance, resolution of conflict could occur at the offices of governing officials or at city council meetings. One park appropriator who was displeased with the potential banning of his activities at the Nature Park met with the Director of Parks and Recreation at the public library. While no other conflicts needing resolution were discussed by interviewed appropriators, members of governance made it clear that any public building was available for such resolution.

Principle 7: Appropriators develop institutions without challenge from external authority

Unlike during the first stage of development when there was very little regulation over the park space, this stage is characterized by formalization of proposed rules for land use. Members of the governing body who also appropriated the park began to shift from being appropriators to being perceived as external authorities by other appropriators. External refers to acting and enforcing rules outside of the body of appropriators. However, since the governing body maintained ownership of the land, they were never really "external." It becomes difficult to discern who is an external authority and who is not, the City of Brookings owns the land, which means that some of the branches of city governance are not external to park governance. Therefore, the institutions they

developed, such as the park Mission Statement, were never external either. Many of the members of governance were appropriators themselves, and they collaborated with appropriators to develop many of the social organizations that were reproduced to institutionalize the mission. Examples of truly external authorities include South Dakota Game, Fish and Parks, the Brookings Police Department, the City's Animal Control Unit and any other entity with the formal authority to make overarching decisions regarding the park.

For the purposes of the following discussion of Principle Seven, "external" is used in reference to those entities which are *perceived* as external by park appropriators. Most of the appropriators who felt their right to institutionalize was being challenged by external authorities, were actually being challenged by the Parks and Recreation Department in some capacity. The other external entities were only enforcing what the Common Pool Regime had dictated was necessary. Groups who felt their rights were challenged include fishermen who wanted unregulated fishing access, and hunters/dog trainers who wanted access to the lands water. Interviewed stakeholders recounted these specific cases because conflict arose between the groups and the Common Pool Regime. There may have been appropriator institutions that were not challenged by external authorities, but for unknown reasons, they were not discussed by appropriators out documented.

In both cases where appropriator's rights to collectively act were challenged by external authority, the governing body deemed their decisions best for the general population of park users. Attendees of the public meetings recalled heated discussions between a group of men and women who fished out of the ponds and wanted the water to

remain unregulated. They argued that the public nature of the park went beyond state regulation and should therefore be as unregulated as any other city park. What they did not take into account, however, was that there were no ponds in other city parks. Their requests were not appeased, and ultimately SDGFP was given regulatory control over the park's waters. Similarly, the hunters that felt their right to use the land was challenged were arguing for freedom to use the land to train their dogs. This would entail shooting blanks over the water and allowing several dogs to run loose at a time. They attempted to self-organize and lobby for the right to use the ponds. Their arguments were heard, and other land was allocated for the creation of a dog park that would meet their needs, but they were not allowed to organize on Nature Park land any longer.

Discussion of Stage 2: Formalization leads to external regulation

The formalization stage is characterized by the creation and enforcement of rules and regulations over the formerly empty park land. As the City of Brookings Parks and Recreation Department took on the roles and responsibilities of Common Pool Regime over the resource, new challenges arose and collaboration with the community was a top priority. As plans for the park became more concrete, the informal rules and regulations established by appropriators were replaced by more formal rules and regulations from the city. For some appropriators this meant a shift in perception, as they stopped viewing city employees as fellow appropriators, and began to view them as external monitors. There was a distinct shift for appropriators from the perception of open access land with opportunities for internal organization, to city-owned land with common property characteristics. Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities all took on a new ambiance as change was established.

Ostrom's (1990) Eight Principles outline eight characteristics of Common Pool

Regimes that contribute to their success at gaining the compliance of future generations

of appropriators. We saw in the previous stage that three distinct stakeholder groups

(Appropriators, Monitors, and Collaborators) contributed to resource governance. In this

stage, those three entities came together to establish one organized body of stakeholders.

The Parks, Recreation and Forestry Department shifted from a role as formal monitors of

the park, to the Common Pool Regime governing the resource. The collaborating groups,

the Ad Hoc Committee and landscape architecture firm, came alongside the Parks

Department to propose new ideas, which were then presented for appropriator input. In a

series of public meetings appropriators were able to contribute to rule creation and

regulatory control. The Common Pool Regime used formal authority to make some

decisions, but gave informal authority to appropriators, allowing them to influence the

direction of park development. Within the Common Pool Regime each of the Eight

Principles came into play at some point during this stage, which may have contributed to

their success at getting appropriators to commit to and monitor the institutional

arrangements over the park land.

The users permitted at the park were clearly defined, so Principle One was met.

Governance and Appropriators outlined the mission of the park and determined which

appropriator activities were in line with that mission, and which required expulsion due to

deviation from the community's best interests. This led to the creation of rules that were

specific to the future park and its appropriation, meeting design Principle Two. Rules

included allocation of geographical spaces to different appropriator activities to ensure

the safest and highest quality experiences of each park user. Most appropriators were able

to contribute to rule creation, which allowed those affected to influence the regulations that were set, meeting Principle Three. Because appropriators were able to contribute to rule creation, they largely supported and understood the necessity of the new regulations. This created conditions that led them to monitor the park and their fellow appropriators to ensure rules were being upheld, meeting Principle Four. Other monitors of the park included the Common Pool Regime, which held itself accountable to appropriators by consistently inviting public input and maintaining transparent decision making. Appropriators who broke the rules were regulated by their fellow appropriators and monitors, meeting Principle Five.

Appropriators were discouraged from participating in activities that deviated from those outlined in the Vision Statement and Program through graduated sanctions. There was little discussion, but evidence that appropriators and monitors had access to low-cost conflict resolution sites, meeting Principle Six. Because the governing body was a part of the city, all public buildings were available for conflict resolution at no cost to appropriators. Principle Seven is much more difficult to assess than the other six because of the complexity of who is defined as "external authority" during this stage. Ultimately, the data indicates that some appropriators' rights to institutionalize were challenged, but only on the grounds that they were not in line with the mission and vision for the park. There is little data regarding any other attempts at institutionalization, so while those attempts may or may not have occurred, they cannot be discussed here.

This stage of development was largely defined by the formalization of previously proposed rules and regulations. The reactions of appropriators were new and required mitigation and cooperation from the Common Pool Regime to strive for a harmonious

transition from open land to a developed Nature Park. The following section discusses the present state of governance, as the park development is completed and a there is a new generation of governance and appropriators. Throughout the final stage of development, the institutions discussed in this section and the previous section take on new meanings, and balance between different park uses is pursued.

Stage 3: Institutionalization

Introduction

Stage three takes place from 2011-2018, which involves several big events in the physical development of the park. 2011 was the official ground breaking for park development. In 2013 the park was closed for construction of trails and buildings, and by 2015 most developments were completed. Current and former Parks and Recreation staff members indicated that the initial plans for expansion were expected to take 10 years, but thanks to generous donations from community members the entirety of park developments were completed in 2-5 years. Rapid resource expansion and amenity additions created an environment where a large majority of the city's resources, including time and money, were being invested in upkeep of the newly developed space. High rates of internal turnover also consumed a large amount of resources as time was invested training new employees and adopting their passions for the future of park development.

As a new generation of park users began appropriating the space, and a new generation of park governance took over decision making responsibilities, the final stages of institutionalization have ensued. The new park users and monitors have begun to explain the major institution (the mission) of the park in new ways. This involves deviating from the institutionally programmed courses of action because the realities experienced by the mission's creators were not the same realities experienced by new park governance (Berger and Luckman, 1966). The process is gradual, as fewer and fewer original members of the Common Pool Regime are in roles of formal governing authority over the decisions affecting the park. The reduction was due largely to natural causes, including retirement, relocation for different professions, and completion of

duties relating to park development. While the previous stage of development was characterized by implicit values that became formal regulations, this stage is characterized by formal regulations whose meanings are finding new value with new appropriators and monitors. This creates problems in the perceived legitimacy of the institution (Berger and Luckman, 1966). Using Ostrom's (1990) Eight Principles, the following will discuss findings regarding the past eight years of governance over the park in an attempt to understand more fully the legitimation process as it applies to the mission of the park and its effects on current and future resource appropriators.

Principle 1: Clear Usership Definition

In the previous two stages of development, users were being defined for the first time. In this final stage of development, users have not only been defined, but allotted specific geographic spaces throughout the park to participate in activities. At the beginning of this case study, no park specific rules or regulations were posted at the park or online, potentially making it difficult for appropriators to determine if their activities were permitted. The regulatory impacts are discussed in more detail in the analysis of resource specific rules and regulations. Throughout the course of data collection, rules and regulations were posted both online and around the park on signs. This provides a clearer definition of who was not to use the park, as well as providing a list of acceptable uses and a map of activity sites. Over time, appropriators have adjusted to the permitted uses and disruptive deviations have become less common. However, based on responses from current park users, there is still confusion about how the land can be used.

During their interviews, members of the current Common Pool Regime identified most of the park uses that were proposed in the previous stage of development. Their

perception was that "75-80%" of park users are recreationalists in some capacity, and that all of those individuals participate in permitted park activities. Similarly, most appropriators of the park identified the permitted uses of the park and felt that most other people participated in only those permitted activities. For example, several parents' pointed out that they wanted to have fires and go camping at the park, but knew that it was not permitted so refrained. There were occasional references to deviant youths or reckless college students who needed to be reminded of the acceptable uses of the park, but for the most part the consensus was that the users are clearly defined, and that people know and abide by these definitions. However, upon the completion of observation of the park it became very clear that either the accepted uses of the park are not clearly defined, or that they are and people are ignoring them.

While there were very few disruptive behaviors observed, there were several behaviors that deviated from those permitted by current park governance. Some of those uses include swimming in the ponds, catching and not releasing the fish, having parties out on the patio of the Nature Center (which is for rentals only), and putting up hammocks in the trees. Appropriators who participated in interviews did not identify themselves as appropriating the park in these ways, despite the fact that they were observed doing so. The diversity of amenities provides so many outlets for new groups of appropriators, that it may be inefficient or ineffective to monitor every single use of the park. Perhaps in a CPR like the park, it is more effective to define users who are *not* permitted, rather than users who are. The following section analyzes the rules and regulations for park development, specifically those that are related to the conditions of the park itself.

Principle 2: Restricting rules are resource specific

As the land has continued to evolve into a diverse park setting it has been transformed from general open space to an intentionally natural mosaic of open space, ponds, and recreational areas. Some of the rules and regulations created during the second stage of development, which was characterized by formalization of development, were upheld into the present stage of organization. Other resource specific rules were also adopted to meet the needs of the growing appropriator population and governing body. The formal rules, published in 2018 on the City's website and on physical signs at the park, embody the current regulatory needs as perceived by the present Common Pool Regime. Most new regulations were stricter than those proposed by the previous governing body. This supports Berger and Luckman's (1966) findings that as time progresses, new generations of appropriators may deviate from the institutionalized courses of action. Appropriators had not been a part of the institutionalization of inclusivity, accessibility, and environmentalism in the park, so formal rules had to be installed to ensure general understanding. The rules were still resource specific and they gained credibility through their formalization. These rules were formalized for three main reasons: meeting appropriator needs, protecting the natural elements of the park, and in response to deviant behaviors by appropriators.

The first established rules, that all dogs must be leashed and all owners must clean up after their pets, were formalized to meet the needs of park appropriators. Current governing employees explained that the formalization is the result of finding common ground between people who want their dogs to have free run of the park and users who want all dogs banned from the park. The employee indicated that some Recreationalists

were lobbying for permission to use the ponds for dog training again, and this time they had the support of recreational dog walkers who wanted to use the space as a dog park. They were in contention with bird watchers who were frustrated by the lack of wildlife in the park due to the dog's presence. The decision to allow dogs but restrict them to leashes was therefore a response to the social environment at the park, making it resource specific. A similar situation involved equestrians and appropriators who used the trail. Equestrian riders were leaving their horse's waste on the trails, which led to increased frustration for other park users. Members of the governing body shared that these individuals argued that their experience was being diminished by the equestrians, and the result was a ban of "horses and large animals" from the park space.

While rules like the one discussed above were implemented for the quality of the experience of appropriators, other rules were implemented for the quality of wildlife and wild habitats at the park. It became a formal rule that wildlife were not to be harassed at the park. Park employees say this rule was created in direct correlation with groups of young boys being caught chasing and throwing sticks at geese and their goslings. Similar stories were shared of kids chasing off other wildlife or trying to throw sticks and rocks at birds, frogs, squirrels, and turtles. The deviant behavior on behalf of the boys may have been because of misinterpretation or lack of understanding the institutionalized value of nature preservation. It also could have been due to increased amenities at the park there were higher rates of park appropriation and new demographics of users that were not previously at the park. Both of these reasons may have also led to the need to regulate fires and garbage in the park. Teenagers and young adults who appropriated the space were caught having small bonfires in secluded areas. Users had also started leaving large

amounts of food wrappers, water bottles, and dog waste bags around the trails. It is difficult to determine if appropriators had always exhibited these behaviors and were not caught because of minimal monitoring and lower appropriation by other community members, or if they were new to the park. Interviewed stakeholders expressed belief that either could have been the case.

The final motivation behind new rule implementation was to ensure the safety of appropriators. Such rules include the discouragement of swimming in the ponds and the ban from diving off of bridges. As usership increased at the park, so did the number of people using the ponds to swim in. This became problematic because the majority of appropriators using the park were minors under the age of 18 and there is no lifeguard or monitor on duty to uphold safety precautions. The Common Pool Regime determined that because of "…various water depths and clarity, swimming is discouraged," (cityofbrookings.org, 2018). Similar reasoning led to the ban on diving off of bridges at the park. The water below the bridges is not consistently deep enough to be safe for diving, in addition to the potential harm that could come from large rocks hidden below the surface of the water. Governance felt that the increase in participation in these activities was likely the result of increased usership of the park.

The diversity of new park users led to some increased rules and regulations on behalf of the Common Pool Regime. These rules were created specifically to serve and support the appropriators of the Nature Park as well as the park itself. While they didn't differ greatly from previous rules, they did formalize norms and values that were previously assumed. Some of the new regulations expounded and solidified previously assumed behaviors, such as good stewardship over the wildlife and cleanliness of the

land. Other regulations were created to adapt to new groups of appropriators, for example, unsupervised youths and a growing college student population. Many of these new users did not participate in initial rule creation, and therefore applied their own experience and interests to the amenities at the park. This is discussed in the following section, which analyzes the affect appropriators have on the regulations guiding their usership.

Principle 3: Those affected by the rules participate in their creation

As the last section discussed, most current park appropriators were not appropriators of the undeveloped park land during the formalization of rules and regulations, nor were most members of governance. As the rules and regulations outlined at that time were based on existing institutions, they were formalized in writing, but never published and upheld as official park policies. Therefore, it is the current governing body that published the first official rules for the park. The rules published by the current Common Pool Regime operate at both collective-choice and operational levels. In their interviews, current members of the Common Pool Regime indicated that many of these rules and regulations are based on institutionalized values and expectations for the park, while others (as discussed above) are based on perceptions of necessity as new appropriations of the park emerge. The regulations that have been carried over from the past stage of governance were based on appropriator input, as park users had numerous opportunities to contribute to their creation. New regulations, however, have been created without direct input from community members. Some new regulations are created with input from the Parks and Recreation Board, which is made up of community members but appointed by the mayor. Other rules and regulations are the interpretation of the Park

mission by seasonal employees and volunteers, and are not formally documented or enforced. While the current Common Pool Regime explained that any community member can share their input at any time, most of the regulations discussed above were created by the governing body based on public trust and under the assumption that they were acting on behalf of the appropriators.

Public trust is essential to the decision making of any governing body, and during this stage of organizational development, public trust has been especially crucial. The previous governing body had employed the resources necessary for intensive community-involved rule creation, and the current governing body has been tasked with enforcement and completion of regulatory formalization. Therefore, despite their lack of participation in initial rule making, the governing body is responsible for acting on behalf of the best interests of appropriators while enforcing previously constituted regulations. Provided the appropriators trust the governing body to make informed decisions regarding land allocation and usage, the governing body has the freedom to centralize resources in other places. Since it is unfeasible to recreate the rules for every new generation of appropriators, current appropriators have similarly had to adapt to the existing regulation at the park. They do so under the assumption that the rules were created to allow them to use the park to its fullest extent, while maintaining and preserving the park for future generations. All new formal rules and regulations stemmed from perceived needs at the park and appropriator input which was discussed and applied to regulations by governance. The following section discusses the positive and negative consequences that follow decision making that stems from this public trust mentality.

Principle 4: Monitors are accountable to Appropriators or are Appropriators themselves

In the previous stages of development, monitors were often also appropriators of the park, giving them inside access and personal understanding about the different ways the park was being used. During this present state of governance, the monitors are no longer appropriators of the park themselves, creating disconnect where in the past there has always been monitor-appropriator relationships. This lack of proximity makes monitoring difficult for monitors, because the majority of the time they are spending at the park is for job-related tasks, rather than use of the amenities. This has contributed to the perception by appropriators of a lack of accountability on behalf of monitors. Other contributors to this lack of accountability include the current election/appointment methods of those in decision-making roles, and a lack of perceived transparency between monitors and appropriators. The result has been frustration on behalf of the governing body and the collective groups of park users who feel their voices are not being heard.

Table 9 located below this paragraph outlines the structure of the governing body as it is composed of both elected and appointed positions. Members of the governing body explained during their interviews that community members can share input at any level of governance, but that those roles depicted in the table have formal authority over decisions regarding the park. Their appointment vs. election is significant because it indicates the influence that potential appropriators have over the people chosen for each role. The Mayor, City Council, and City Manager deal exclusively with constitutional level rules and budget approvals, and have very little participation in Nature Park governance. The Mayor and City Council are all elected by voters, while the City Manager is appointed by the Mayor with the guidance of the City Council. The Parks and

Recreation Director deals directly with both collective-choice and operational rules, and is appointed by the City Manager with advising from the City Council. The Director has the authority to influence rules and regulations as well as budgets along with the Parks and Recreation Board. The Parks and Recreation Board members are appointed by the mayor and are composed of community members and two students. Based on these breakdowns, community members have no formal authority to influence park decisions unless they are elected to one of these roles. It could be argued that they have influence over decisions by their participation as voters, but then one has to consider who the voting population is compared to the appropriator population. Considering that comparison is outside of the bounds of this study, for further discussion purposes, it is assumed that only individuals in these roles have formal authority and decision making power.

Table 9: Park Governance by Election/Appointment

Mayor (elected)
City Council (Mayor+ 6 elected)
City Manager (appointed by city council)
Parks and Recreation Director (appointed by City Manager with advising by City Council)
Recreation Manager (appointed by Parks and Recreation Director)
Parks and Recreation Board (appointed by Mayor with advising by City Council)

In previous stages of development monitors had similar levels of authority as they do presently, and to maintain accountability they proactively sought the opinions and input of appropriators. The current Common Pool Regime does not make these efforts, and it has led to feelings of being overlooked and unappreciated by some appropriators. For others it has simply discouraged them from coming forward with ideas for the park.

Those who have come forward explained that they did not feel they got adequate responses for the denial of their ideas, and some even felt as if they were being ignored. This example is discussed in further detail below, when principle six is assessed. Ultimately, the appropriators who described attempts to share ideas for the park felt as if monitors were inaccessible, and therefore not willing to hear them out or look into their ideas. The idea of public trust comes into play here as well, as some appropriators who were interviewed indicated their acceptance and endorsement of decisions made without their input due to belief that the governing body is acting on their behalf. However, even those who entrusted decision making authority entirely to the Common Pool Regime expressed a desire for heightened transparency and opportunities to share input.

Principle 5: Rules are enforced in graduated sanctions

While there were not very many accounts of repercussions for rule breaking, each member of governance and many appropriators expressed willingness to enforce the rules in graduated sanctions if necessary. If rule breaking were to occur, members of the governing body indicated that verbal warnings would be given, followed by expulsion from certain activities, then expulsion from the park, and if need be, involvement by the Brookings Police Department. Seasonal employees of the park indicated that they were given large amounts of autonomy over the enforcement of sanctions regarding park regulations. This led to the employees' belief that while they had the authority to influence formal regulations, they also had the authority to determine if people's behavior was conducive to the park's mission and act accordingly. Some of their assumed authority led to safer conditions for appropriators at the park, while some led to

frustration on behalf of appropriators who were reprimanded for activities that were not outside of the rules of the park.

For the first few years of park operation, the bridges and waters at the park did not have regulatory signs posted. Part time park employees were seen reprimanding youths for diving off the bridges several times throughout the summer. While these youths were not breaking any official rules, their behaviors were dangerous due to shallow water and hidden rocks below the surface. One employee verbally reprimanded them twice before they left the park for the day. When they came back at another time they were told that if they deviated from the rules again the police would be called. Outside of threatening to call the police, this employee felt that she he/had very little authority to enforce any other sanctions, should the youths continue to jump off of the bridges. Throughout the course of the summer the rules were enforced more heavily, and signs were put up on the bridges cautioning people not to jump. Additionally, employees were trained to approach situations where users were deviating from the rules posted on the signs and give one or two warnings, and then call the police or an external authority with the ability to enforce the regulations. Ultimately, the employee's decision to reprimand the behavior of the youths led to safer park conditions for them and future appropriators.

Monitors were not the only stakeholders willing to enforce sanctions. Some appropriators expressed feelings of responsibility for the upkeep of the park, and the enforcement of its rules and regulations. Examples of more severe rule enforcement escalated to screaming and filing reports with external authorities. Most conflict however was less severe, and included verbal reprimands between appropriators for dog walking off leash, riding bicycles on the walking-only path, and keeping kids under control while

using the water equipment. One appropriator expressed their use of consistency when reprimanding other appropriators to avoid serious conflict, while another outlined the sanctioning process as beginning with polite comments and escalating to calling animal control on dog walkers who do not use a leash. These appropriators were never given formal training or direction about regulation enforcement, but their consensus was that graduated sanctions were the most effective means of enforcing consequences. The following section will discuss the means of conflict resolution that escalate beyond what is resolvable at the physical park space.

Principle 6: Appropriators and Governance have access to low-cost conflict resolution arenas

Previous sections alluded to the access of low-cost conflict resolution arenas for appropriators because of the public ownership of the park. The city's role in governance means that every city owned public space is available for conflict-resolution. Previous stages of governance utilized these spaces, as well as creating a culture of approachability, so that appropriators were aware of opportunities to address conflict with the governing body. The city is still in procession of the land, so those same public buildings and areas are still available for free or low-cost conflict resolution. However, during interviews appropriators expressed little awareness of the availability of these spaces to make their voices heard. The physical arenas for conflict-resolution were unchanged, indicating that it is the governance-appropriator culture that has experienced a shift.

When asked about opportunities for conflict resolution, the current governing body indicated that they do not actively seek the public's opinion in favor of addressing the Parks Board to represent the park appropriators. They also indicated that any

community member can call or email the department to share input. This differs greatly from the first Common Pool Regime, which emphasized accessibility and inclusivity of appropriators and their expression of input above all. While retired members of governance engaged in conversation about all of the ways the community was brought into the decision making processes in previous stages of development, the only mentions of community input during interviews regarding this stage were in response to specific questions. Some members of the original Ad Hoc Committee who appropriated the open land and now use the park explained that in the past their opinions were sought out for decisions, and now they are entirely unacknowledged. This has led to accounts from a wide range of appropriators claiming that the governing body is unwilling to listen, or unavailable to listen to their input.

The indication from all of these events is that miscommunication is not due to the inaccessibility of space, but the perceived inaccessibility of the Common Pool Regime to appropriators. Without the inherent knowledge of how to access the governing body to share information and influence departmental decisions, some appropriators are experiencing frustration and resentment at their inability to contribute. While some appropriators are content to let the Common Pool Regime make decisions on their behalf, many expressed their desire for clearer communication and more transparency on the behalf of the Common Pool Regime. The data indicates that while there are physical low-cost spaces for conflict resolution, appropriators do not perceive opportunities to address issues, making the physical spaces useless.

Principle 7: Appropriators can develop institutions without being challenged by external authority

Throughout this stage of development, some appropriator's institutions were challenged and some were not. Some were challenged on the basis of misalignment with the park's mission, while some were challenged for the sake of safety for park users or wildlife. Others have been challenged with little explanation as to their denial, causing confusion and hurt feelings between appropriator groups and the Parks Department. This exploration of appropriator's rights to develop institutions will assess the institutions discussed by appropriators and governance in their interviews, as well as the reasons for their acceptance or denial.

Misalignment with the mission of the Dakota Nature Park is the primary reason members of the current governing body gave for denying appropriators' attempts to institutionalize. The Common Pool Regime determined that allowing certain activities would take away from the experiences of other park users, and therefore denied requests for development to enhance amenities to meet the needs of proposed activities. Examples of denied institutions include a disc golfing course, campfires and camping sites, and birder-only trails. The disc golfing course was denied on the basis that it would be disruptive to the natural features of the park if disc golfers were walking across the native grasses and flowers to retrieve discs and follow the course. Additionally, the course was deemed unfeasible because of the disruption it would cause to walkers/bikers/and other park users if discs were flying around the air across trails and ponds.

Similarly, the fires and campsites were denied because they would have subtracted from the natural elements of the park. The governing body determined that having fires and people using the land 24/7 would have scared away the little wildlife left living on the

land. The bird-watching trails would have had the opposite effect on the park, drawing in wildlife, but they were determined to be misaligned with the park mission because they decreased the accessibility of the park to all people. Allowing only a small demographic of the population to use a trail would require intensive monitoring, which would necessitate Parks Department resources, as well as excluding the majority of park users at the time. Despite the restrictions felt by Appropriators' right to create institutions, in every situation there were obvious misalignments between the proposed ideas and the mission governing the park. These misalignments were shared with appropriators, and in every case attempted conflict resolution occurred.

One situation was shared, however, where the institution that was challenged was not out of alignment with the mission statement, making it very confusing to the appropriators why they were denied the right to institutionalize. There is a sizeable group of individuals who advocate for nature-based activities at the Nature Park and organize events like bird watching and banding for the community to participate in. Members from this group of individuals have repeatedly proposed educational exhibits, art projects, and programs that would increase people's access to nature education. Their most recent proposal was for an osprey nesting box with a camera that people could access via the internet to see the birds as they nested. The primary reason they received for the denial of this request was that there was "insufficient funding" for such an endeavor. To overcome this barrier the group raised funds from private outside entities and was able to raise enough money for both the box and the camera with the live feed. When they went back to the department to re-request its installation they were denied again, this time on the grounds that there was not a high enough demand for it at the park. Because of this

insufficient reasoning, members of the group grew to perceive the governing body as inconsistent and lacking vision. Their conflicts with the governing body continue to persist as they attempt to institutionalize in ways that are in line with the mission of the park, and are continually denied by the Common Pool Regime.

Discussion of stage three: institutionalization

As the park's physical development was completed, there was a shift in governance and appropriators from the original stakeholders who participated in regulatory creation to new stakeholders with no prior experience with the Nature Park's rules and regulations. As these individuals adopted the mission and institutions from the previous stage of development, they applied their own experiences and understandings. Through the final processes of institutionalization, the current governing body and appropriators of the park are "…producing new meanings that serve to integrate the meanings already attached…" to institutional functions (Berger and Luckman, 1966). This process has led to a variety of new regulations and interpretations of the regulations already in existence.

The users of the park who were defined in the previous stage of governance remained clearly defined into this present stage, meeting principle one. As the meanings of past uses of the park were integrated to meet the needs of current users, there were shifts in permitted usership that occurred. Some of the assumed uses of the park were formalized through rules and regulations, while others were excluded from use. Another part of the institutionalization process is the redefinition of rules and regulations. Norms and values that had been institutionalized during the first two stages of development lost some of their meaning in the present stage, requiring modified regulations that addressed

previously normal behaviors. Modifications addressed issues such as littering, destruction of the land, and harassment of wildlife. These regulations are all resource specific, as well as being appropriator specific, meeting the requirements of principle two.

Because many of the rules and regulations that were formalized during this stage had already been proposed in the previous stage, there were few opportunities for current appropriators to participate in rule generation. The new rules that were introduced during this stage were created by the Common Pool Regime. Some rules were the result of appropriators voicing concerns, but as that was the highest level of influence appropriators had over rule creation, principle three was not met. Principle four was also not met, as appropriators expressed concerns that there was little accountability for the monitors of the park. While this was due in part to the election and appointment system of hiring, it was also caused by a lack of transparency between the governing body and the appropriators being affected by decisions. There were appropriators who felt that as public servants, they entrusted decision making over the park to the governing body, but they also wanted opportunities for open communication. Other appropriators were discouraged and offended at the lack of communication and transparency, failing to meet principle five. These were also the appropriators who felt the lack of low-cost conflict resolution arenas the hardest.

While physically there were plenty of spaces for low-cost conflict resolution to occur, including the park itself, there are few opportunities for appropriators to confront governance, therefore failing to meet principle six. Lack of opportunities for conflict resolution creates even deeper tension between appropriators and monitors, leading to ongoing frustration that continues today. Several of the frustrated appropriators are part

of groups who tried to institutionalize but were challenged by the Parks Department, who for this case is considered an entity "external" to the park users themselves. There were groups of appropriators who were not permitted to develop institutions due to the inconvenience it would cause to other appropriators or the ill-fit for the park itself. For these appropriators, the challenge to their institutions was for the greater good and did not result in ongoing conflict. However, because there were groups whose rights to institutionalize were challenged when those institutions were in line with the park's mission and created little to no inconvenience for the Common Pool Regime, principle seven was not met.

There are many reasons why the current Common Pool Regime is not meeting the principles defined by Ostrom. The first involves problems of legitimacy, as discussed by Berger and Luckman (1966). As appropriators continue to question their role in relation to governance over they park, the governing body is not stepping up to provide opportunities for participation or clear, straightforward explanations for decision making. They are also a government in transition who has experienced high levels of turnover. This has led to a strain on resources as each new person adjusts to their role. The incorporation of seasonal employees only adds to the resource strain, as each new employee must adjust to the existing institutions and interpret them based on their own experiences and values. The governing body now is also composed of individuals who have expressed different priorities and who have different past experiences than those from previous stages of governance. This had led to different directions for park development and resource investment. Finally, it cannot be overlooked that the park is young and was finished five years earlier than expected, putting immense pressure on it

Common Pool Regime to manage and maintain resources they were not planning to

manage for another five years. All of these reasons are discussed in the final chapter of

this case study, which addresses the people who influenced the Common Pool Regime

and therefore the success of the institutional arrangements in sustaining the resource and

gaining the compliance of future generations of appropriators.

CHAPTER THREE

Stakeholders and their Contributions to Institutionalization

Introduction

In the beginning of her book, *Governing the Commons*, Elinor Ostrom's (1990) editors write that, "…institutions evolve in response to individual incentives, strategies, and choices." This section will analyze the individuals and the incentives, strategies, and choices that led to their influence over the Common Pool Regime throughout the development of the Dakota Nature Park. An idea that has been heavily discussed throughout this study is *salience.* According to Ostrom (2000), salience is the dependency of appropriators on a resource for the majority of their activities. Salience therefore creates motivation for people to invest in some capacity in the resource they are dependent on. It can be argued that every stakeholder is in some capacity dependent on the Nature Park for their own purposes. Mountain bikers depend on the bike trails, fishermen depend on the fishing, families depend on the walking paths, and members of governance depend on their jobs which depend on the resource they govern.

Table 10 below outlines each identified stakeholder group over the course of park development. The following chapter will discuss these stakeholder groups and their influence over institutionalization in the park. Not all stakeholders had formal authority because of their roles, but all did have varying levels of influence over the park as a resource. Table 3, Table 6, and Table 7 outline the specific roles within each categorization of stakeholders. The following will discuss only those roles that were not already analyzed during previous chapters. Specifically, this chapter will emphasize the influence of specific individuals on institutionalization. This chapter will conclude with a

discussion about overlooked stakeholders, which will focus on the idea that not every

stakeholder that fits into one of the stakeholder groups below had/has an opportunity to

exert their influence, despite the impacts that each decision has on them.

Table 10: Definition of Stakeholders by Group

Governance	Formal Park Monitor, has authority to make decisions influencing development and operational/collective-choice/constitutional rules influencing park, can also be an Appropriator
-Committed	Member of governance who also appropriates the park and is committed to resource function outside of formal duties
-Responsive	Member of Governance who also appropriates the park and is willing to learn more and be involved outside of formal duties
Appropriator	Park User
-Committed	Appropriators committed to resource function
-Responsive	Appropriators willing to learn more and be involved
Contributor	Provides/Provided Resources but is not a user of the park

Governance

As the park moved from open access land to a more formalized future-park, those

in appointments with formal authority maintained their roles throughout the development

process. Max Weber's (1964:215) "charismatic authority" and "rational authority" are

used to describe the governing body during the first and second stage of development.

Weber (1964) defined charismatic authority as, "resting on devotion to the exceptional

sanctity, heroism or exemplary character of an individual person, and of the normative

patters of order revealed or ordained by [them]." Rational authority on the other hand,

"rests on a belief in the legality of enacted rules and the right of those elevated to

authority under such rules to issue commands" (Weber, 1964: 215). Rational authority is

evidenced through the governing body's formal authority to make decisions regarding the

resource as a future park based on their appointed roles within the city. Charismatic

authority is evidenced through the governing body's leadership by the Director of Parks

and Recreation. His expression of novel ideas about the future of parks, ability to sway

people's attitudes and values in support of those ideas, and commemoration post-

retirement and after passing away are exemplary indications of charismatic leadership. As

the plans for the park became formalized, so did the governing body's role as monitors of

the space. In several appropriator interviews, members of the inaugural parks department

are credited with sparking interest in not only the revitalization of city owned lands, but

the creation of natural spaces where people living in the city of Brookings and

surrounding areas could experience a native landscape in a peaceful setting. Their roles as

groundbreakers, innovators and nature advocates influenced even the most introductory

plans for the land, while their formal decision making authority within the government

allowed them to bring their ideas to fruition. The following will discuss the impact of the

Common Pool Regime and their charismatic authority, as the preceding chapter about

"Organization" analyzed the impacts of traditional authority on the governing body.

Understanding the charismatic leadership of this governing body is essential to

understanding the historical context from which the beliefs and values that helped to form

the present mission statement stemmed. The head of the department is remembered by

current park employees and volunteers as emphasizing teamwork and idea sharing, values

that were progressively institutionalized over the course of development. He served on

several committees within the National Recreation and Parks Association (NRPA); the

most important being the registration committee, which emphasized the importance of

recruiting a variety of individuals. Under his advisement, the parks and recreation

department sought to gain the most holistic understanding of the needs and necessary resulting actions by governance within the Brookings community. Through his involvement in this organization, he had access to all of the individuals in South Dakota with outdoor recreational experience, as well as his own convictions about the importance of integrating nature with recreation. Thus, even before the formal institutionalization of the mission statement, it's most basic principles and priorities of accessible recreation and environmental sustainability were developing. One interviewee who sat on committees with this Director said that he, "… always asked for feedback, always had information, never made a quick decision on something without getting everybody's input and then very diplomatically [said] okay, this is what we're going to do." This is significant because the entire organization of the governing body was founded in the priorities these individuals established, and they continue to be the guiding criteria for resource development. Other members of the Common Pool Regime expressed the same admiration and respect as appropriators for the initial governing body, and more specifically the Director of Parks and Recreation. Contributing stakeholders expressed that their interest in the project was based solely on the Director's leadership and aspirations for development. Their support of his initiatives and respect for his management led them to support the park with resources and knowledge. When he was discussed in interviews, stakeholders used words like, "respect," "knowledgeable," "committed," and "hard-working," to describe him.

One member of the current governing body attributed his entire career's investment in the park to this first Director. He told this story about his first day on the job: As the new employee was getting a tour of the nature park land, the Director noticed

that one of the parks maintenance workers was struggling with a task. He took off his suit jacket and helped the man finish the job, telling the new employee that if he was going to make it in the Department he would have to embrace a culture of getting dirty and doing what it takes to help get the job done. The employee explained that ever since that day he has tried to replicate the community-mindedness expressed by the Director. Another interviewed employee referred to the Director, who has now passed away, as a mentor and advice giver, stating several times that he still thinks about talking to him and wishes he could "dig him up and have a conversation." The Director is remembered just as fondly in his absence as he was while he was still actively involved in governance. Other tributes to the profound influence of this man include a memorial to him on every park sign in Brookings, as the entire trail system is named after him.

While the original governing body is not responsible for the all institutionalization at the Dakota Nature Park, they are responsible for pioneering the park as a natural and recreational space for the community. As discussed in the introduction to this paper, Parks and Recreation Department in the late 1990's was largely focused on providing green spaces for urban and rural cities. The Brookings Parks and Recreation Department wanted to expand the reach of the park to a natural environment where stewardship of the land is prioritized, and recreational opportunities are available to people who may otherwise not be able to access them. To gain the compliance of the appropriators of the park and community members, the governing body engaged them and allowed them to be part of the decision making process. A combination of charismatic leadership and formal authority to make decisions were the major contributors to the introduction of good land stewardship, recreation and accessibility in the Dakota Nature Park.

While stages one and two of park development were overseen by the same Common Pool Regime, the present stage of development has experienced high rates of turnover within the governing body. This has led to a Common Pool Regime largely characterized by rational authority (Weber, 1964). As individual actors have transitioned in and out of positions of authority, the decision making power remains centered on the position rather than the person who fills it. The lack of personal connection that led to followership based on support in previous stages of development, has led to followership based on position in this stage of development. Additional results of the current state of governance have been shifted priorities over a short period of time, requiring centralized resources for different developments and frustration and confusion on behalf of park appropriators. The data indicates that this is largely due to high rates of turnover and the prior experience of people in decision making roles being solely in the field of recreation.

After the retirement of the first Parks and Recreation Director, one individual served in the position within four years, until 2015 when the current Director was hired. In that same time, the Recreation Manager position experienced 2-3 different changes until the current Manager was hired in 2016. Each individual who filled these positions had different backgrounds and experiences, and therefore brought different goals and ideas to the team. Under the direction of each new member of governance, the legitimation process started over, and new meanings were produced to explain the institutions which already existed (Berger and Luckman, 1966). As Berger and Luckman (1966) have explained, this legitimation process is both natural and necessary for new stakeholders to find meaning in the existing institutions that affect their lives. However,

because with each new role transition the legitimation process started over for those with formal decision making authority, the result has been delayed integration.

Examples of the legitimation process can be seen progressively throughout the seven years that make up the institutionalization stage of development. The second round of governance followed the retirement of the first director. The candidate selected was a long time employee of the Parks Department and had served under the charismatic leadership of the first Director for several years. Under his leadership most of the major park developments were physically created, including the Larson Nature Center and most of the trail systems. Similarly to the previous governing body, his passion was non-invasive outdoor recreation, including fishing, kayaking and birds of prey. During his time as Director there was an increase in rental equipment purchases for fishing and kayaking. As a supporter of non-invasive recreational activities, he explained in his interview that he made it a priority to limit activities that would overload the park or take away from its peaceful, natural environment. He limited events held in the Larson Nature Center to educational programs and allowed appropriators who were involved with programming to maintain autonomy over lesson plans and educational applications. He also did not allow events such as 5k races or biking competitions at the facility due to the increased traffic it would bring to the park. Ultimately, he expressed that the existing institutional order made sense to him, and so he left it as it was. The intention to balance recreation and sustainability was sustained through careful planning and maintenance of the existing institutions, as the expansions he made were in line with the existing value of accessible natural resources to the entire community.

The most recent governing body is the furthest removed from the original Common Pool Regime because none of its members were directly associated with the original governing body. Therefore, their experience has been one of intense legitimation, as they are dealing with institutions they have had no influence on or interactions with in the past. All of the implicit and assumed norms, values and rules that had been passed down through two generations of park governance have become explicit for the newest governing body. They are reliant upon their past experiences to translate existing rules and regulations and apply them to the park context. A combination of existing values and knowledge have merged with those already existing at the park to define the governing body as it exists today. The current Common Pool Regime is made up of members with largely recreational backgrounds who have experience with city parks and recreational centers, such as pools and playgrounds. With no natural resource background, they have idealized the park as a recreational destination park, rather than an environmentally minded nature park. In interviews, members of governance expressed perceptions that the park is mainly appropriated by recreationalists, and should therefore be tailored to meet their needs. The Department had little to say regarding pushback from long-time appropriators who are familiar with historically rooted institutions and continue to lobby for a more natural space.

Institutional shifts include the expansion of Nature Center uses to include birthday parties for children, and talk of paving the only gravel path in the park so that it is easier for walkers and runners to use. The educational centered programs are beginning to include more recreational elements, and some have been eviscerated of any educational components at all. This is the result of the perception of the current governing body that

parents and children may *just* want to have fun at the park, not learn. During interviews there was much talk of allowing the park to "evolve" into what it is meant to be. This differs greatly from the previous intentionality of the governing body to shape the park into a natural space with a variety of opportunities for the entire community. Through the lens of current governance, providing recreational opportunities and generating revenue are what make sense, and there is evidence they will continue to adapt existing regulations to fit their ideas for the future of the park. Interestingly, the majority of the decisions that are "allowing the park to evolve" are being made without the input of park appropriators. The Parks Board, which is also made up of community members with primarily outdoor recreation backgrounds, is consulted, but no outreach has been done to attract input from stakeholders who appropriate the park. There has however, been significant input from stakeholders who do not appropriate the park. These individuals have been identified as Contributors and are discussed below.

Contributors

Some contributing entities were donors, while some were contracted for development. The Contributors that are discussed in this section are the donors who influenced the development of the park. Three key donors influenced not only the rate of development at the park, but the institutionalization as well. By directing their donations at specific activities, developments or park uses, they ensured those activates, developments and uses would be invested in by the Common Pool Regime.

The first major donation came from a local family who supplied the resources necessary to jump start safe fishing for youth out at the park. As has already been discussed, access to fishing is one of the most deeply institutionalized values at the park,

and this family contributed to the beginning of organized fishing on the land. One member of the governing body explained that the ponds had been unmonitored up until that point, so there had already been fish dumped into them. When the donation helped stock the ponds with greater diversity, it allowed the ponds to become a "pretty good fishery" that became heavily frequented by youth and adult fishermen and women. The same family contributed more money to investigate the development of the land even further. That money was used to assemble the Ad Hoc Committee, and the next two years were spend brainstorming for the park. After the two years were up the Department realized they needed to hire someone to formalize their plans, and the family supplied further donations to hire the landscape architecture firm that contributed to the creation of the Vision Statement and Program for the park. That Vision Statement contains the mission that continues to define governance over the park today.

Following the creation of the park vision and mission, the Common Pool Regime planned to spend the next ten years or so funneling money into the development, so that eventually there would be a completed Nature Park. However, this ten year plan was shortened to two years when another local businessman stepped up and provided a donation that equaled 2/3 of the cost of development. Members of the governing body remember his interest in the park was specifically regarding its creation as a *nature* park, and he contributed more money as development continued to ensure the space remained natural through the use of sustainable, eco-friendly materials. Other contributors include anonymous donors and grant awards from South Dakota Game, Fish and Parks. Several other amenities, including the docks in the ponds, were donated by community members who got behind the mission of the park. Interview participants indicated that the resource

was targeted for these donations because of its unique potential to serve a wide variety of community members by providing access to natural amenities and outdoor recreation. Through financial support, these donors were able to influence the development and available amenities available at the park.

Appropriators

The influence of appropriators in Stages 1 and 2 on the mission of the park has already been discussed in the previous chapter, "Organization". The appropriators during the open stage of development and throughout the formalization of rules and regulations were given many opportunities to share their input and contribute to the decision making process. After the finalized plans for development were created, resources were redirected to the actual implementation of those plans. Now that the physical park developments are complete, it is the way that the mission functions as an institution that is facing questions involving legitimacy. Along with the governing body, appropriators have an unclear understanding of what balancing recreation with sustainability looks like. They are undergoing the legitimation process, and are creating new meanings for the existing institutions. Two of the institutions being legitimized are accessibility to recreation and maintenance of the natural spaces at the park. Their broadness as concepts has led to a diverse user group who is willing to invest time or resources to enhance either one, but feel they do not have the knowledge or opportunities to do so. These individuals have been organized as either "Committed" or "Responsive" park Appropriators. Committed appropriators are individuals who are investing in resource function either with time, money, or another resource. Responsive appropriators are appropriators who were interviewed and expressed interest in opportunities to invest in

resource function through time, money, or another resource. Not all interviewed
appropriators fit into these categories, as some were content to refrain from contributing
to development at the park and will not be included in this discussion. Each of the other
groups is discussed below.

Committed Appropriators

Committed appropriators are those who in addition to using the Nature Park,
invest in its well-being and future. While some committed appropriators may invest
monetarily, more commonly the investment is through time or resources. committed
appropriators self-identify as going above and beyond the expectations of the average
park user to uphold what they perceive to be the mission of the park. For one group of
appropriators that means providing bird seed and bird feeders for the park when the
governing body told them there was not room in the budget for it. Every year bird
feeders and hundreds of pounds of bird seed are anonymously donated to the park.
Individuals who know the donors expressed that their belief is that without the bird seed
there would be less diverse bird species attracted to the park. Their argument is that this
would minimize the opportunities for bird watchers to view the birds, and for other park
users to learn about and be exposed to different animal life.

For similar reasons, a separate donor allowed the use of many of the animal
species and educational displays that are in display cases inside of the Larson Nature
Center. Still another donor has allowed the Center to use all of the rest of the displays,
along with all of the educational materials used for programming. This includes four
floor-to-ceiling shelves full of educational materials for toddlers through adults. Other
contributions are invested in the form of time spent for the park. Examples of time spent,

include the volunteers who assist with programs for small children. A group of retired

women in the community was observed assisting every morning with preschool

programming, despite not being on the payroll. Other appropriators commit time every

week or every month to walk around the trails and clean up garbage and fallen tree

branches. These appropriators expressed an obligation to the park to upkeep it and sustain

it.

Responsive Appropriators

Those that are identified as Committed Appropriators have already found ways to

invest in the park. Some of these individuals expressed the desire to invest even more

time or resources and were unsure of how to go about doing so. Another group of

appropriators that is willing to invest but is not currently doing so are the Responsive

Appropriators. The Responsive Appropriator group is largely composed a new generation

of park users who were not a part of either of the other two stages of developments. All

responsive appropriators expressed their excitement about the existence of the park and

most commended the efforts of everyone involved with its development. They continued

to share that while they enjoy the park as it is, they would like to invest time or resources

to see certain improvements made. Some changes are unfeasible, such as adding

campfires or camping spots as they have already been deemed misaligned with the

mission of the park. Additionally, a past Director of the department indicated that the

State of South Dakota has placed a moratorium on city camping sites to avoid taking

profits from private campgrounds.

However, some changes may be feasible with partnership from the community.

These changes include: increased rental hours, increased building hours, more

wildflowers, an educational recycling club for kids, book reading and hot chocolate at the center in the mornings, more pollinator plots, demonstrations of pump track use and safety, a butterfly area that is not sprayed by chemicals, winter rental equipment and events, more community events, more programming, collaboration with the outdoor adventure center, and more "natural trails." The general consensus from the invested appropriators is that they are willing to become more involved with the park; they just need opportunities and direction as to how to go about doing so. As more amenities have become available, more people use the park space. While most responsive appropriators expressed positive perceptions of the park as it is, they also expressed that they do not feel that they have received adequate representation or opportunities to share their suggestions with the Parks and Recreation Department. Another group of individuals who has not received adequate representation or opportunities to share suggestions are the overlooked appropriators discussed below.

Overlooked Stakeholders

So far this discussion has centered on appropriators who are either involved with the Common Pool Regime or desire opportunities for further involvement. By referring to these appropriators as stakeholders of the resource, the assumption has been that all individuals who wish to be involved can be. However, there is no guarantee that every stakeholder who is impacted by decision making has had a say in those decisions. All of Ostrom's (1990) principles revolve around participation and inclusion of appropriators in governance decisions, which makes it especially important to address those who may not have contributed. Due the constraints of this study, there are almost certainly groups that

have been overlooked throughout the process of park development. The one discussed here is the subsistence fishermen.

Subsistence fishing is recognized by appropriators and monitors as a consistent park activity for some appropriators, yet there is no indication that any subsistence fishermen or women have ever participated in decision making for the park. Many appropriators discussed these fishermen and women in some capacity, emphasizing their dependency on the ponds for fish. There were many perceptions from interviewed stakeholders about these individuals. Some appropriators and seasonal park workers expressed disdain for their fishing habits, criminalizing their activities and employing monitoring techniques to ensure they abided by the suggested "catch-and-release" regulation. Other appropriators expressed indifference or understanding for the subsistence fishermen and women. One member of governance shrugged off questions about rule enforcement regarding the fishermen, and several others briefly explained that the rule serves as a guideline while implying that the guideline is loose for individuals who need the fish for food. Although not all members of the governing body addressed the fishermen and women, the majority expressed at a minimum some acknowledgement of their presence at the park and uses of the resources.

While their participation in appropriation has been addressed, their participation in governance and monitoring efforts has not. Throughout the second stage of development, the open access stage, efforts were made by a collaborator group, the landscape architecture firm, to collect input from subsistence fishermen and women at the park. A member of the firm discussed his intentionality in seeking the fishermen and women out to ensure they were not excluded from giving their input about park

development. He specifically referenced a conversation he had with a student who supplemented his meals with fish from the park when he could not afford groceries. He also identified several other conversations, indicating that they were with elderly individuals who regularly fished out of the ponds for subsistence. Outside of his interview, no other stakeholders referenced any attempts to reach out to the subsistence fishermen and women. This may cause disconnect between the subsistence fishermen/women as an appropriator group and the monitors, because, "where external authorities are the only enforcers of rules, the distribution of costs and benefits is more likely to benefit the winning coalition and may impose costs on those who did not agree to the rules (Walker et. al, 2000). For the governing body, overlooking even a small appropriator group creates opportunities for the perpetuation of misunderstanding and missed opportunities to understand the uses of the park as a whole.

Throughout the course of this analysis it has become clear that appropriators of the park land understand their dependence on the space for outdoor recreation or activities. Each group of park users who participated in interviews expressed gratitude for the space, shared stories of the adventures they have had with their partners, friends or families there, and commended the city on such a beautiful natural space. They also expressed willingness to continue to improve the park space through different contributions. Committed Appropriators described specific ways they are investing in the park, and explained tangible plans for continued caretaking of the land. Some appropriators felt they're contributions were no longer welcome, or that there were not opportunities for investment any longer. Similar things were felt by Responsive

Appropriators, or desired deeper investment in the park as a natural resource, but expressed feeling uncertain about how to go about doing so.

The indication based on these results is that the appropriators are expressing attributes that lead to cooperation, but they are not being given opportunities to actually impact the park. The result is frustration on behalf of some appropriators, and complacency on behalf of others. Some appropriators explained that if the governing body is not interested in using their talents and abilities, then soon they will begin investing in other resources where they feel they can be "used." Other appropriators of the park have been overlooked entirely, especially throughout the final stage of institutionalization. The final chapter of this study will further discuss potential methods to mediate frustration and employ appropriators who are willing to invest in the park to ensure its sustainability over time. It will also address opportunities for the inclusion of appropriators whose input has not been sought out in recent years.

Conclusion

Ultimately, not all of the stakeholder groups discussed above had opportunities to influence the direction of park development. Some of them were able to influence the institutions at the park, or create their own institutions, while others were neither able to influence institutions nor did they try to. In the beginning stages of development Overlooked Appropriators were sought out by the governing body to ensure holistic understanding about their needs were met. As development has progressed and governance has shifted, these voices have been lost and are no longer contributing to decision making. Overlooked Appropriators may be overlooked due to their own lack of participation or unawareness on behalf of decision makers, what is significant to note

here is that no matter what the reason, they are deeply affected by park decisions but are not considered when those decisions are made. Overlooked Appropriators differ from Committed and Responsive Appropriator groups, as the latter groups express recognition that the park can have significant impacts on the community and have acted, or continue to act, out of a desire to catalyze that impact. Salience of the park for activities leads to investment which for many of these stakeholders, has led to connection to the resource through the contribution of their curiosity, time, money, knowledge, or experience. These individuals and groups influenced the organization at all three stages of development, and will likely continue to impact the direction of the park going forward. It is because of this that it is crucial to understand, and continue understanding the interconnection of stakeholders, organizational development, and institutions. The final section will discuss the interactions of people, organization, and institutions that make up the Dakota Nature Park's Common Pool Regime, and make suggestions for their sustainability going forward.

DISCUSSION

The intention of this study is to answer the question, how does the governing body over the Dakota Nature Park sustain itself as a Common Pool Regime? Elinor Ostrom's (1990) Eight Principles were applied as a framework to more effectively answer this question. As the study progressed, the data indicated that the mission of the park served as its guiding institution. That mission was influenced by, and influences three distinct stages of governance organization over the Nature Park land. The first was characterized by two distinct stakeholder groups, the Appropriators and Monitors who, with influence from a group of Collaborators, began to create their own institutions. In the second stage of development, these groups came together and created a formal vision and mission for the park, putting into writing the already evolving institutional framework of the mission and the normalization of accessibility and inclusion. The current stage of development is in the final phases of institutionalization, as monitors and appropriators adapt to the preexisting mission and rules. As they continue to associate their own meanings with the rules, actions, procedures and information determined by the mission, problems associated with the legitimacy of the governing body's decisions are coming into question (Berger and Luckman, 1966). Table 11 below outlines each of the principles and their presence or absence in each stage of development.

Table 11: Summary of principles throughout stages of development

Principle	Stage 1: Open Access	Stage 2: Formalization	Stage 3: Institutionalization
1. Users are clearly defined	*Absent* There were no regulations addressing who was permitted to use the park.	*Present* Fishing, water recreation, winter recreation, mountain biking are all defined as permitted uses.	*Present* Users are defined, definitions evolve with changing park culture and development.
2. Rules are resource specific	*Absent* Monitors began assessing the physical and social characteristics of the park to propose resource specific rules.	*Present* Vision statement outlines resource specific rules, focusing on accessibility through allocation of space for activities.	*Present* Resource specific rules are formalized and upheld, rules adapt as needs are perceived by governing body.
3. Those affected participate in rule creation	*Present* Appropriators begin creating informal rules. Monitors and Collaborators also began creating rules.	*Present* Monitors, Appropriators, and Collaborating entities cooperate to create proposal of rules for park.	*Absent* Those affected by rules for the most part do not participate in their creation.
4. Monitors are accountable to users	*Present* Appropriators held each other accountable as Monitors.	*Present* While no formal accountability is established, Monitors hold selves accountable to Appropriators.	*Absent* Monitors are public servants and receive input from users when given, however they are not formally accountable to users.
5. Repercussions are enforced in graduated sanctions	*Absent* Not addressed in this stage of development.	*Present* Repercussions are enforced in graduated sanctions by some stakeholders.	*Present* Repercussions are enforced in graduated sanctions, typically by Monitors.
6. Low-cost conflict resolution arenas are available	*Absent* Not addressed in this stage of development.	*Present* Low-cost conflict resolution arenas are available.	*Absent* Physically, conflict arenas are available at a low-cost, but due to culture shift they are perceived as inaccessible.
7. Appropriators can develop institutions	*Present* Appropriators and Monitors began developing institutions.	*Present* Appropriators' right to develop institutions is fairly challenged	*Absent* Appropriators can organize; institutions will be regulated by the Monitors.

Summary

In Stage 1 of development we see an environment characterized by low levels of formal organization and high levels of appropriator autonomy. This is evidenced through the presence of principles two, three and seven (rules are resource specific, those affected by rules participate in their creation, appropriators have the right to institutionalize without external imposition) and the absence of all other principles. Appropriators used the space congruously with monitors, and had the freedom to organize themselves to successfully avoid outside regulation. Leading into Stage 2, members of the appropriating groups joined forces with the monitors and plans for formalization of the land into a park began. Similarly to the process described by Robert Michels (2001) in reference to formalization in bureaucracies, the governing body with formal authority (Parks and Recreation Department) began to enforce their authority as decision making power became more centralized. It must be emphasized here that while authority became more centralized, it did not embody all of the characteristics of centralized authority. This is partially due to consistent intentionality on behalf of the governing body. Appropriators remained actively involved in decision making, giving them opportunities to apply years of implicit knowledge and understanding and contribute to the mission statement, elements of which were already becoming institutionalized. A combination of increased levels of organization with the maintenance of high appropriator autonomy contributed to the presence of all eight of the principles.

As physical park development progressed, there was another organizational shift and the governing body entered the final stages of institutionalization where rules were solidified and enforced. The present stage of governance is characterized by high levels

of organization and low levels of appropriator autonomy. This is evidenced by the presence of principles one, two and five (users are clearly defined, there are resource specific rules, repercussions are enforced in graduated sanctions) and the absence of all principles addressing appropriator involvement in decision making. While the formalization of the governing body has brought with it stability and uniformity regarding permitted park uses, it has lost understanding of the particular conditions and values through which the park was created (Michels, 2001). There has been a recent turn from collaborative decision making involving appropriators as relevant stakeholders in favor of internal decision making and collaboration with organizations external to the park. Without collaborative relations with appropriators who understand and experienced the implicit values and norms that were used to shape the mission as an institution, the mission has become a regulatory umbrella rather than a guide for collective decision making.

Ultimately the result has been a perceived loss of transparency of the governing body by the appropriators who are affected by decision making, as a loss of legitimacy. The governing body is experiencing a phenomenon best described as "mission strain" as those in positions with formal authority make decisions affecting but not influenced by most stakeholders of the park. The decisions being made are not in contention with the mission, but favor one objective more than the other (recreation over environmentalism), causing the constraints inherent in the mission to have reached a point of constant tension. This is evidenced most clearly as stakeholders respond to the governing body and act out of pursuit of what they perceive to be the collective good, as well as their own needs and goals (Meyer & Jepperson, 2000). However, it is also apparent through the

complacency of stakeholders who feel their voices are not being heard and the

perceptions of appropriators that the park is functional but inefficiently operated by park

governance. The result has been an inability on behalf of the governing body to make

clear decision supporting the mission and serving the appropriators who use the park. The

following section provides suggestions for the governing body in response to these

findings.

Recommendations based on findings

Taking into account that to some extent the nesting of the park inside of the larger

bureaucracy of the City of Brookings limits the ability of the governing body to make

changes, these suggestions focus on changes that might be made directly regarding the

DNP. It is clear by looking at the data that appropriator's of the park have lost much of

their freedom to organize and utilize the park outside of the restraints set by the

governing body. Providing opportunities for appropriators to share in the decision making

processes is the most straightforward suggestion. The provision of opportunities is

different than passive acceptance of input from stakeholders because it creates an open

communication platform for all stakeholders, rather than solely the stakeholders willing

to reach out. As public servants, the governing body is subject to receiving comments and

complaints from citizens about a wide variety of topics and has come to accept them as

representative of the whole stakeholder population. Providing outlets for input such as

public meetings would provide community members opportunities to engage in real

conversations with those with formal authority. This would create an environment where

stakeholders feel acknowledged as well as meeting principles three and six by allowing

affected appropriators to participate in rule creation and creating an environment where

conflict-resolution is encouraged. For decisions which are outside of the influence of stakeholders, simple transparency measures can be taken to reduce miscommunication and misperceptions.

These efforts to increase transparency could include connection through social media or the Parks Department website laying out decisions and why they are made. Several appropriators mentioned that they did want any more involvement in decision making, but wanted an easily accessible means of receiving park updates. Creating a space online and at the park where updates are readily available to the public provides access to decision making information for those appropriators who desire it. Additionally, it increases the accountability of monitors to appropriators as each of their major decisions would then discussed with appropriators in relation to the mission. Accountability would also be increased if the members of governance were physically present at the park to observe its users and uses. By becoming appropriators of the park themselves, even if solely in the context of learning about other appropriators, park monitors would have first-hand experience with appropriators and their needs. This would also address the issue of overlooked stakeholders, as members of governance could begin to consider the appropriators that choose not to participate in decision making and outreach, but are still heavily affected by decision making.

These suggestions are not exhaustive, but hopefully give the governing body some direction going forward based on the results of this study. It is evident from this that in early development when appropriators were able to participate in decision making, the overall function of the governing process was more efficient and effective. Examples supporting this statement include the ability of different groups of appropriators to

compromise on permitted park users, the responsibility expressed by appropriators to take ownership of the park and take measures to sustain it over time, and the depth and creative development solutions that were reached through collaboration between appropriators and monitors. Stern and colleagues (2002:457) argue that, "one of the key design principles for institutions is reconciling conflicting values and interests and noting that 'success means different things to different people." The results of this study indicate that not only is his argument true, but the reconciliation of values and interests, along with acknowledgement and acceptance of the ideas of stakeholders can even improve CPR operation. By decentralizing who is invited to participate in decision making, the current governing body can give stakeholders opportunities to bring their ideas and knowledge to the table, creating a more diverse, and more inclusive decision making body as well as increase the perceived legitimacy of the governing body.

Contributions to existing scholarship

The history of Common Pool Resources has revolved around traditional CPR's such as fisheries and grazing land. This study contributes to existing Common Pool Resource research by addressing governance over a new common pool resource, the Dakota Nature Park, and expanding upon our understanding of the commons and their interrelationships with the people who use them. Focusing specifically on Common Pool Regimes, this study applied Elinor Ostrom's (1990) Eight Principles of Common Pool Resources to the governing body of the DNP over time, resulting in greater understanding of the formalization process and resulting impacts on institutions over time. Typically Ostrom's (1990) Eight Principles address governance over organizations and institutions from a rational choice perspective. However, this study incorporates organizational

analysis with phenomenology to discuss phases of formalization and institutionalization over time in meeting the principles.

Realist institutionalism, while traditionally focused on the capacity of actors, has become inclusive of a focus on taking into account institutional environments (North, 1981). Elinor Ostrom's (1990) Eight Principles address elements of a realist institutional line of thinking, as they consider the structural and organizational dimensions of institutions. They excel beyond realist thinking into more modern sociological institutionalization as they address the empowerment and control of actors by institutional contexts. The principles address the effects that institutions have on actors and the influence actors can have on institutions, but do not investigate the ways that stakeholders as actors are constructed in and by their environment (DiMaggio and Powell, 1983). By applying Ostrom's principles with a more phenomenological approach I have sought to address the formalization of the governing body over the DNP and the mutual influence of institutionalization on stakeholders and stakeholders on institutionalization.

Much of the existing literature regarding institutions conceptualizes the social life as composed of rational, purposive actors embedded in larger structures or cultures (Meyer, 2007: 789). A specific emphasis has been placed on the tension between actors and their environments; in the case of the DNP the emphasis is on the stakeholders and organization of the DNP as they are affected by the mission as an institution. While Ostrom's (1991:243) research was grounded in her belief that individuals, "compare expected benefits and costs of actions prior to adopting strategies for action," this study addresses that "conformity to standard models may not involve much 'influence' or

decision making," (Meyers, 2007:805). In the case of the DNP, much of the intentionality was abandoned in the present stage of governance in favor of allowing the organization to "evolve" while maintaining the mission as an institution. The linkages that create institutions are complex and varied, and this study asserts the significance (when applying the Eight Principles) of addressing the ways that stakeholders are constructed in and by their institutional environments (DeMaggio and Powell, 1983). It is clear from this research that phenomenology can be incorporated with rationalism to more clearly explain the interactions of governing bodies and the appropriators regarding formalization and institutionalization within common pool resources.

Practical limitations and suggestions for future researchers

As this is a case study, one limitation to the application of this research for future studies is its low generalizability. That is not to say that the results cannot provide valuable insight into the commons, however they are specific to city parks and city governance as common pool regimes. Going forward, the continued application of Ostrom's (1990) principles in a more phenomenological approach would contribute not only to our understanding of new commons, but of the process and relationships between resource users and the institutions that define their resource use. Other areas requiring further attention include the relationship of social capital and network theory to stakeholder motivations and actions. Understanding the different forms and levels of social capital would increase accuracy when determining the levels of impact that stakeholders have on institutions and vice versa. Similarly, understanding place based attachment would contribute to our depth of understanding stakeholder motivation in institutional settings, especially over time.

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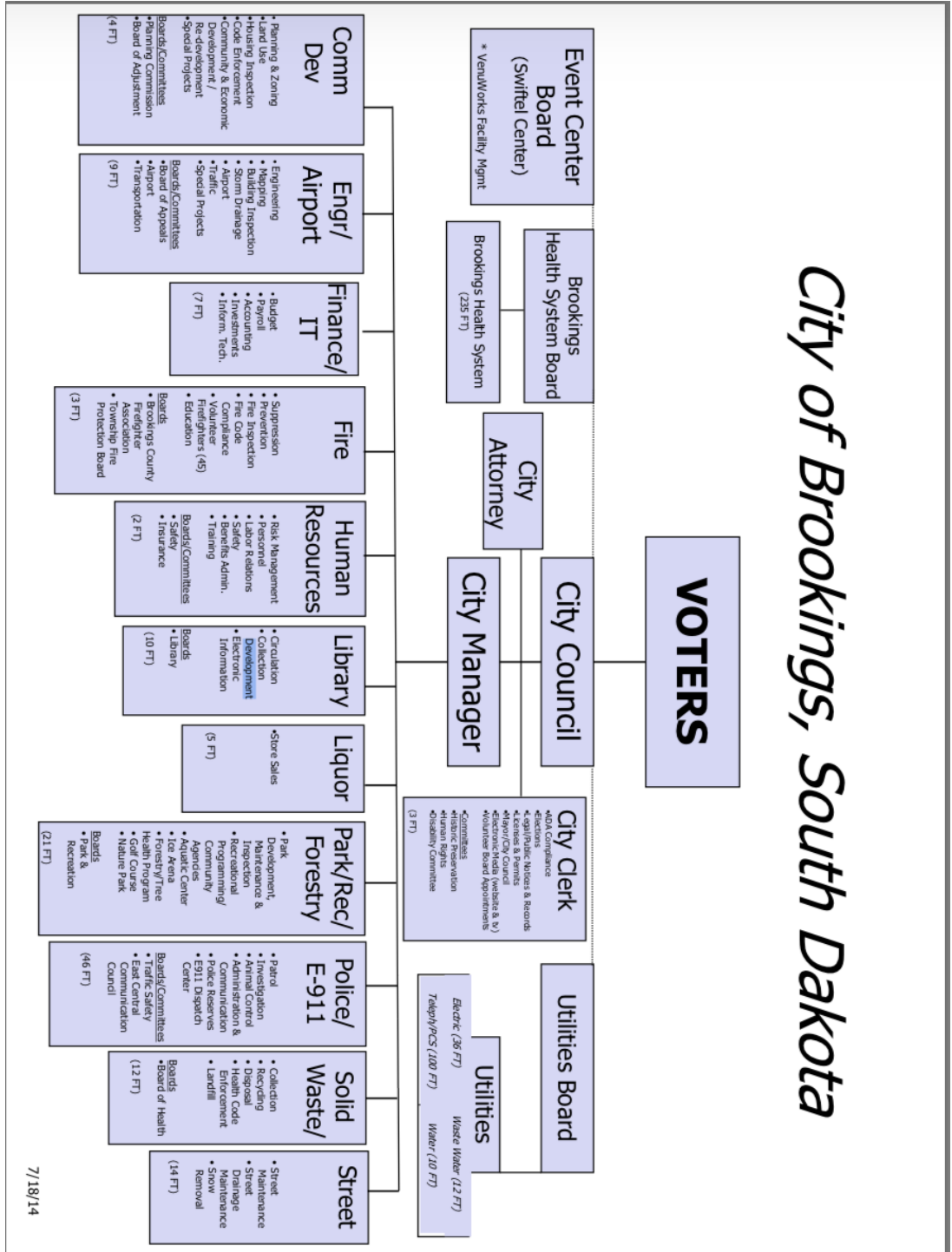
APPENDIX A: FIGURES

Figure 3: City of Brookings Governance, cityofbrookings.org

PARK REGULATIONS

1. No motor vehicle access beyond the parking lots without BPRD authorization.
2. All SDGFP fishing regulations are in effect.
3. Practice catch & release fishing whenever possible.
4. No transplanting fish into the ponds.
5. Only electric trolling motors may be used on the ponds.
6. Dogs must be leashed at all times. Owners please clean-up after your pets.
7. No large animals allowed in the park, including horses..

Figure 4: Park Regulations, cityofbrookings.org

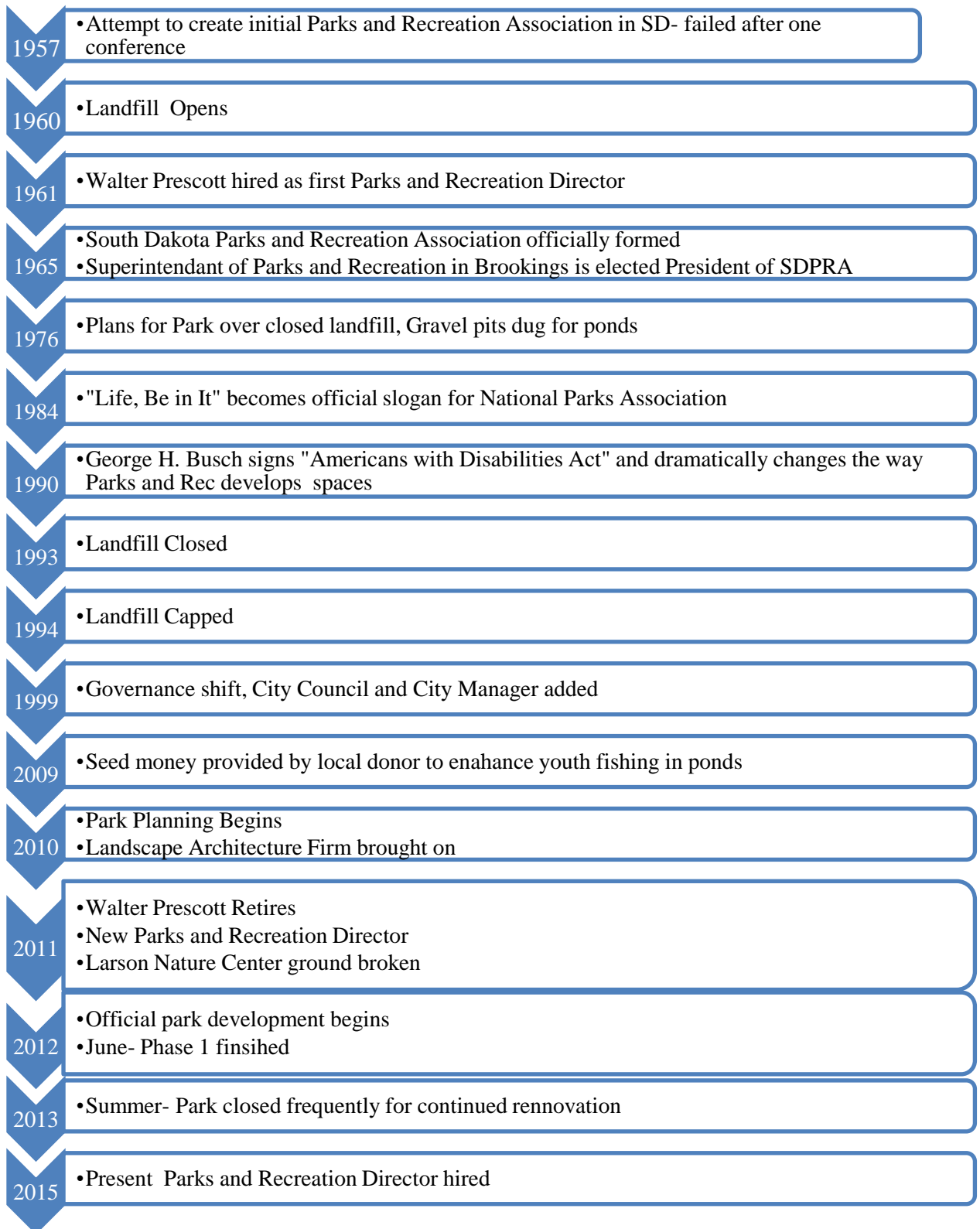*Figure 5***:** Map of the Dakota Nature Park, cityofbrookings.org

Appendix B

Table 12: Eight Principles of Sustainable Common Pool Regimes (Ostrom, 1990)

1. Individuals with the right to utilize the resource must be clearly defined, along with the conditions of the resource itself
2. Rules restricting the resource must be specific to that resource and its cost
3. Most of the individuals who are affected by the rules should have a say in creating them
4. Monitors (of resource conditions and patron behavior) are accountable to the appropriators (those who take possession of or legislate the park for specific uses), or are patrons themselves
5. Appropriators who violate clearly defined rules are likely to receive repercussions for their actions by officials or other appropriators
6. Conflicts between appropriators and officials can be resolved in a low-cost, easily accessible manner
7. External authorities do not challenge the rights of the appropriators to develop their own institutions
8. Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized into multiple layers of nested enterprises (note: this Principle will be analyzed only at a local level)

Table 13: Attributes of CPR's that are Supportive of Emergence of Cooperation

Feasible Improvement	Resource Conditions are not so deteriorated or underused that it is useless to organize
Indicators	Reliable and valid indicators of the condition of the resource are available at a low cost
Predictability	the flow of resource units is relatively predictable
Spatial Extent	the resource system is sufficiently small so that appropriators can develop accurate knowledge of external boundaries and internal micro environments

Timeline of Significant Events

1957
- Attempt to create initial Parks and Recreation Association in SD- failed after one conference

1960
- Landfill Opens

1961
- Walter Prescott hired as first Parks and Recreation Director

1965
- South Dakota Parks and Recreation Association officially formed
- Superintendant of Parks and Recreation in Brookings is elected President of SDPRA

1976
- Plans for Park over closed landfill, Gravel pits dug for ponds

1984
- "Life, Be in It" becomes official slogan for National Parks Association

1990
- George H. Busch signs "Americans with Disabilities Act" and dramatically changes the way Parks and Rec develops spaces

1993
- Landfill Closed

1994
- Landfill Capped

1999
- Governance shift, City Council and City Manager added

2009
- Seed money provided by local donor to enahance youth fishing in ponds

2010
- Park Planning Begins
- Landscape Architecture Firm brought on

2011
- Walter Prescott Retires
- New Parks and Recreation Director
- Larson Nature Center ground broken

2012
- Official park development begins
- June- Phase 1 finsihed

2013
- Summer- Park closed frequently for continued rennovation

2015
- Present Parks and Recreation Director hired

Appendix C

Interview Questions

Questions addressed in this research will include the following. The first set of questions will be used when interviewing park staff and volunteers and the second set will be used when interviewing patrons (attendees):

Question Set 1-Parks Department Employees and Volunteers
1. What is your role at the Dakota Nature Park?
    a. What drew you to this role?
    b. How does your role influence the day to day operation of the Park?
    c. How does your role influence the long term progress at the Park?
2. What were the priorities and goals for the park when you began your time here?
    a. Have those priorities and goals shifted? If yes, how?
    b. How are these priorities and goals being met? And by whom?
3. How did the nature park come to be? Were you involved in the planning process?
4. How does the Nature Park operate?
    a. What services are offered?
        i. What does the Nature Park offer than other parks do not?
    b. Who ensures the services are at an acceptable quality?
    c. Who determines the rules and enforces them?
    d. What steps are taken if rules are broken repeatedly?
5. Who attends/participates at the Nature Park?
    a. Who does not attend?
    b. Why? What is being done to extend the park's outreach (if anything)?
    c. Do those who participate at the Nature Park have a say in the way the park is run or will be run in the future? How?
6. What are the positive and negative impacts of the Nature Park as it currently exists?
    a. What will be the positive and negative impacts as the park continues to progress?

Question Set 2: Other Park Stakeholders
1. Are you from Brookings? If not, where are you from?
2. How long have you been coming to the Dakota Nature Park?
3. How often do you typically come?
4. What activities do you like to do?
5. What activities/amenities would you like to see added?
6. Do you think the posted rules and regulations are fair? Do you follow them?
    a. Are there any rules you want to change? How would you go about doing so?
7. What benefits does the Nature Park bring to the community? Are there any negative impacts of the park?
8. Do you have any other comments or questions?

Appendix D

CONSENT TO PARTICIPATE IN A RESEARCH STUDY
South Dakota State University

TITLE OF STUDY: Understanding the Dakota Nature Park as a Common Pool Resource

PRINCIPAL INVESTIGATOR: Keahna M. Margeson, Masters Student.; keahna.fenwick@jacks.sdstate.edu;
Department of Sociology & Rural Studies

PROJECT DESCRIPTION AND OBJECTIVES: This is an invitation for you to participate in a research project. The project is an exploration of the Dakota Nature Park in Brookings, South Dakota. You will be asked about experiences involving your role with the Nature Park and how you perceive the park's impact on the Brookings community. Locations of interviews will be determined on an individual basis and will be conducted at the agreed upon meeting place and at your convenience. The length of interviews may last from 5-15 minutes or 30 minutes to an hour.

Interviews may be tape-recorded. Initial here if you consent to the use of a tape recorder: _____

BENEFITS & RISKS OF PARTICIPATION: There are no direct personal benefits to participating in this research. By participating in this study, you will help me understand the unique ways the Nature Park is operated and the things you and other community members would like to see and experience at the park. The hope for this information is that it will be helpful to city officials and board members in South Dakota or other regions with innovative natural spaces.
There are no known risks to participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher has and will continue to take reasonable safeguards to minimize any known, potential, and unknown but potential, risks.

YOUR PARTICIPATION IN THIS RESEARCH IS VOLUNTARY: If you decide to participate in the study, you may withdraw your consent and stop participating at any time.

COMPENSATION: There is no compensation (payment) for taking part in this study.

CONFIDENTIALITY: I will keep all research records that identify you private, to the extent allowed by law. Your information will be combined with information from other people taking part in the study. When I write about the study to share it with other researchers, I will write about the combined information that was gathered. You will not be identified in these written materials. While the results of this study may be published, I will keep your name and other- identifying information private.
Every effort will be undertaken to prevent anyone from knowing the information you supplied, or that you participated in the study. Recorded and transcribed interviews will have the code and participant responses. You should know that there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court.

QUESTIONS?: Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions about the study, you can contact me, the Principal Investigator, Keahna Margeson at Keahna.fenwick@jacks.sdstate.edu. If you have any questions about your rights as a volunteer in this research, you can contact the SDSU Research Compliance Coordinator at (605) 688-6975 or SDSU.IRB@sdstate.edu. I will give you a copy of this consent form to take with you.
Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received, on the date signed, a copy of this document containing 1 page.

_____   _____
_____
Signature of person agreeing to take part in the study   Printed name of person taking part in the study
Date

_____   _____
Signature of Researcher   Date