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**FINAL DELIVERABLE**

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## Abstract

Boone County Conservation is exploring the feasibility of constructing a disc golf course at Don Williams Park, located in Iowa. Disc golf continues to grow in popularity across the United States and is becoming one of the premier recreational sports. It is minimally invasive to the environment, needing little land alteration to construct and no harmful chemicals or practices to maintain. Disc golf allows for people of all ages and skill levels to participate. Further research and expert interviews indicate that Iowa is a major hotbed for the sport, leading the nation in courses per capita. A unique and challenging course design enables organizations to host large tournaments that bring in a significant number of competitors along with generating revenue. Don Williams Park contains the space and landscapes to hold a high caliber course and will help Boone County Conservation accomplish their goals of increasing park usage and community involvement in conservation.

Key words: disc golf, Frisbee golf, recreation, conservation, community, tourism

## Introduction

The Boone County Conservation Board approached the University of Iowa's Office of Outreach and Engagement about creating a relationship with a student to facilitate research into the value, feasibility, and implementation of a disc golf course in Don Williams Park. Don Williams Park, located north of Ogden, Iowa, is a 600-acre recreational area that also serves as the headquarters for Boone County Conservation. The park holds a number of attractions including a 150-acre "no wake" lake popular with fisherman, 150 electric campsites, luxury cabins for rent, a 9 hole golf course, hiking trails, wildlife viewing, and playgrounds (Schuermann, 2018). The Boone County Conservation Board is looking for methods to increase usage of their parks and to continue creating mutually beneficial relationships between the public and natural spaces. A disc golf course was one proposed solution.

Disc golf, oftentimes called Frisbee golf, is a recreational sport that first found notoriety in the 1970's and continues to increase in popularity to this day. It is organized a lot like traditional golf. It is played on a course with different "holes", and to complete each hole you must make a target in the least amount of attempts from each hole's tee box, making each subsequent throw from the landing place of the previous. However, instead of a literal hole in the ground, there is a basket attached to a pole above ground. Instead of a small ball and various clubs for different shots there are different discs optimized for throwing varying distances and shots. Disc golf courses can be 9, 18, or 24 holes and generally are in natural areas that combine open grassy areas with trees and terrain changes as obstacles (PDGA, 2018)

## Literature Review

Disc Golf is a rapidly expanding recreation activity in the United States. Since its beginnings roughly 40 years ago, disc golf has reached nearly every part of the country, and it did it in half the time it took traditional golf to gain such traction. In 2013 there were 2,7000 disc golf courses in the United States. However, in the first 40 years traditional golf was in the states there were only around 1,000 courses. An important aspect to the rapid diffusion of disc golf is that the vast majority of courses are public. The low cost and use of preexisting public recreation areas allows disc golf a wide reach in attracting participants. The Upper Midwest was one of the first regions the sport really took off with a growing number of courses to this day. Between 1991 and 2000 central Iowa had one of the greatest concentrations of new courses built, making it a hot bed for disc golf courses in the US (Oldakowski, 2013). As one can imagine the growth of the sport has also caused it to reach new demographics. The old notion that Frisbee golf is a sport only for “counter culture hippies with long hair” is no longer applicable. The availability of courses makes it a fun activity for families and provides an opportunity to for all to get some exercise and enjoy our natural spaces. It has become more of a power in the sports world as well, having a professional tour, with payouts to winners and sponsorships for well-known players (Koczwara, 2012).

The growing popularity of disc golf is also creating a niche sports industry. There are over 30 manufacturers of various discs, baskets, and other accessories for disc golfers. Many disc golf courses allow individuals to buy or rent discs right at the

course (Koczwara, 2012). Not only has disc golf had a positive impact on public park usage but can also be a stable source of revenue. Creating an exceptional course can be a solid investment for a public park. Many state parks in Utah are spent tens of thousands of dollars to renovate courses making them more attractive to passionate disc golfers. There is a state park in Michigan that reports receiving \$57,000-\$75,000 per year the last three years in merchandise and course fees, about \$4 per person a day (Olson, 2012).

One advantage of disc golf over traditional golf and other outdoor recreational activities is the limited impact it has on the surrounding environment. Traditional golf courses require significant shrubbery and tree removal, irrigation, and constant application of pesticides and herbicides. There are three primary ways that Frisbee golf can effect the environment: soil erosion, soil compaction, and vegetation destruction. Soil erosion is the prominent concern of those who maintain courses. It generally occurs round tees and baskets, but other high traffic areas on a course can cause the soil to compact leading to more erosion. Destruction of ground level vegetation due to trampling can also play a major role in erosion on a course. A lesser concern is the damage done to trees while being struck with a disc in the air which maybe a problem in areas with rather delicate or sensitive species (Marion, 2017). However, with regular maintenance these ecological effects are relatively inconsequential and can be mitigated. Disc golf participants try to maintain a culture of participant maintenance of courses. Many courses have signs encouraging players to pick up waste, avoid certain areas of natural habitat, or even identification and removal of invasive species (Trendafilova, 2011).

## Methods

The constitution of this project is more related to a consultation than traditional research. However, despite having less existing numerical data I still took an academic approach to gathering information on the value and process of creating a disc golf course in Don Williams Park.

I first set out to familiarize myself with my stakeholder, the Boone County Conservation Board. Their mission statement is as follows, “To protect, conserve, maintain our natural resources and provide education and recreation for the benefits of current and future generations. “ This mission statement is the core of all of the organization’s endeavors. I sent emails to my contact and executive director, Tanner Scheuermann. We discussed the current usage of Don Williams Park and their goals of increasing recreation participation and community involvement in conservation. Tanner mentioned that maintenance workers at the park has occasionally found Frisbees of campers who had played using trees as holes, which became the inspiration for this project.

With clear goals for the project in mind, I continued to further educate myself on the sport of disc golf. I had played a handful of rounds at my local 9-hole course in high school but that was the extent of my knowledge. I visited Sugar Bottom Disc Golf Course, Wetherby Disc Golf Course, and Peninsula Disc Golf Course in the month of September. At each course I took notes on the lengths of each hole, general course design, how the landscape and shrubbery was used. I also took pictures of signage and unique holes. With the lack of academic research existing on the sport

of disc golf, I utilized other online sources to. The Pro Disc Golf Association, the professional tour for the sport, has a website that is very comprehensive. It explains the history of the sport, game rules, lists registered courses and events, even basics to course design and cost estimates.

The next step in the research process was to make a site visit to Don Williams Park. On September 27<sup>th</sup>, accompanied by Kelly Carr from the Office of Outreach and Engagement, I traveled to the park for a first hand perspective of what opportunities the park had to offer. Tanner and his associate gave us a tour of the area where envisioned the course to begin and end, pointing out placement of potential holes, obstacles to work around, and areas of high traffic to avoid completely. After the tour he presented me a map of the park in its entirety, and together we marked the areas we talked about certain aspects of the potential course.

After the considering all the information I had pertaining to the project goals, disc golf in general, and the prospects discussed on the site I created a “mock course” of my own. Although it seemed to be a sensible course in my mind, I realized my role as a consultant wasn’t necessarily to design the course myself, it was to facilitate the best design possible to my stakeholder. With an understanding of my shortcomings and expertise in this project, I determined designing Frisbee golf courses definitely fell in the former. However, an area I am proficient is creating connections and communicating with others. Tanner and I agreed to reach out to people in our respective parts of the state. The first person I contacted was, Joe French. I got his contact information through Kelly Carr. Joe owns two disc golf stores in Iowa, and is an avid player. He was able to provide me valuable

information on pricing and equipment; however, he had never designed a course himself before. While doing more research on Frisbee golf experts in Eastern Iowa, I discovered that new course would be opening in the near future. I also discovered the name of the designer, Jeff Harper. Jeff has been a professional disc golfer since 1985. He's played in 266 PDGA sponsored events, and his 71 career wins. He's designed multiple courses all over Iowa including most in the area. I communicated with Jeff via email for months, and he has provided crucial information to the project, and was willing to help design the course as well. Tanner ended up selecting Steve Kenton, a friend of Jeff's who lives in Ames, to spearhead the design process because of his proximity to Don Williams Park. Steve has played professionally for a number of years as well. Nonetheless, Jeff stated that we are "in good hands" with Steve, and that they would be in communication throughout the design process.

### Results/Recommendations

After research into the value and practicality of creating a disc golf course at Don Williams, I truly believe it is vital taking Don Williams Park to the next level in terms of usage, community involvement in conservation, and generating revenue for Boone County. Iowa is a hot bed for Frisbee golf. While interviewing disc golf expert Jeff Harper, he was quoted saying, "Disc golf in Iowa is extremely popular. The PDGA website lists 279 courses across the state. Not all are 18 hole courses, but that puts Iowa near the top for the country. The disc golf community has trouble trying to fit in all the tournaments that cities want to host each year as there are restrictions on how close sanctioned tournaments can be. Iowa has also hosted two PDGA World

Disc Golf Championships – 1989 Waterloo and 2004 Des Moines - with rave reviews from the players who attended.” Clearly, the population of active people in this state who enjoy the outdoors is already immersed in this sport. Another major active hobby in Iowa is cycling. The renowned High Trestle Trail is within riding distance of Don Williams Park and adding disc golf could allow us to further tap into a number of people who enjoy the outdoors. The course could also facilitate spreading awareness of conservation efforts and public involvement. Many courses have signage that warns players of spreading invasive species, limiting littering and pollution, and being aware of nearby wildlife to keep both parties safe. The spot of disc golf aligns with all of the values stated in Boone County Conservations mission statement.

Not only does the evidence support implementation of a Frisbee golf course, but the creation of a unique, high quality course would allow Boone County Conservation to maximize the benefits, and even see some beyond their original goals. Steve Kenton and Jeff Harper collaborated to design Peninsula Disc Golf Course in Iowa City. Every hole has two tee boxes and multiple pins, allowing for different challenges to players with different skill levels. Peninsula is Pro level course, while having shorter and more basic hole placements for beginners. Variety in holes makes it more interesting to come back and play again. Harper states that Peninsula Disc Golf Course gets around 40 rounds a week on weekdays in season, and over 100 on weekends during that time of the year. Even out of season course usage only falls to 10 rounds on a weekday and 25 on weekends. Not to mention the

tournaments they can host because of the technical and long distance holes. Peninsula was built in the fall of 2006 and hosted the state championships the following year. New and elite level courses can host major tournaments and even PDGA sanctioned events. Large Tournaments can bring hundreds, even over a thousand competitors to the area to participate (pdga.com, 2018)

Cost estimates obviously vary depending on the design, especially using a system where holes have multiple tee boxes and baskets. Costs would definitely increase but building a course at Don Williams Park has some advantages. The vast majority of the area set aside for course is already mowed and has existing trails cutting down on preparation work, making construction cheaper and faster. Joe French, Steve Kenton, and Jeff Harper all made comments about the importance of including locals in construction, upkeep and maintenance. They mentioned a common practice when building a new course is utilizing volunteer help when pouring cement for tee boxes and basket placement. Finding volunteers in central Iowa to help would not be difficult; especially with the caliber of course people would be excited to have a hand in it. All labor costs could be absorbed through volunteer work and Boone County Conservation employees.

Final Cost Estimate (Joe French estimates using Peninsula design model):

36 tee boxes:  $\$170 \times 36 = \$6,120$

36 baskets:  $\$400 \times 36 = \$14,400$

Signs and waste baskets:  $\$90 \times 18 = \$1,620$

**=\$22,140.00**

Although higher than the median for disc golf course, this is a reasonable price for a course that's able to significantly increasing park usage (discgolfassociation.org, 2018). The capability of hosting large tournaments would not only increase revenue for Don Williams Park but also for the surrounding communities. I believe a course fee isn't wise, however, there are still ways to generate revenue on a day-to-day basis as well. Disc sales or rentals at the newly constructed bait shop could bring in some dollars as well as encourage people to give the course a try. Course t-shirts or merchandise could also be sold. Allowing memorial or local business sponsorship on holes would be another way to offset construction costs and increase community connection to the course.

### Conclusions/Next Steps

This project has involved significant cooperation between Tanner and Boone County Conservation and myself. Their willingness to offer me insight to their goals, strengths and weaknesses has allowed this project to be specifically tailored for their best interest, and also allows it to be set in to motion immediately. Steve Kenton mad his first site visit to Don Williams Park in late November, and will be back before the new year for some definitive surveying. During the winter and into the spring Steve will create a solid course design. Tanner and myself believe this

project is ready to begin implementation next year. The Boone County Conservation fiscal year ends in June. The best way to fund our new disc golf course is to account for it in the 2019-2020 budget. This would require that the course design is set in stone in June, and immediately in July construction is started. Also during the spring and summer months, using the help of Jeff and Steve, we will continue to educate and promote our new course to the Iowa disc golf community. This support will be vital to find volunteers to help with construction, and to sell memorial holes. Much like Altmaier Park, I think an opening pro/am tournament before the close of the season in 2019 would be a great way to gain some notoriety for the course at Don Williams, and build excitement for the following year. After examining existing research, conducting interviews and investigation of disc golf's popularity in this state, I believe Don Williams Park has the potential to hold one the state's most reputable courses, and bring hundreds of people to this great park each year.

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