

Market Study and Economic Impact Analysis over the Proposed Kearney Whitewater Parks

Serving as an informational guide for interested parties, potential contributors, and to municipalities considering a similar project.

Kearney, Nebraska
Completed August 2020



Source: Fowler, E. October 2018. Kearney Water Trail

Prepared for:

Kearney Whitewater Association, <http://www.kearneywhitewater.org/>
Bruce Karnatz, (KWA Board Member), (308) 627 5268

Prepared by:

Daniel Zavadil, Lead Investigator, UNK Accounting Student, zavadildj@lopers.unk.edu

Mentored by:

Dr. Bree Dority, PhD, Associate Dean and Associate Professor of Finance, UNK

March 10, 2020

Daniel Zavadil
Dr. Bree Dority
Department of Accounting, Finance, Economic
Development

IRB Number: #022620-1

Project Title: Kearney Whitewater Park Economic Impact Analysis

Dear Investigators:

This letter is to officially notify you of your project's approval by the Institutional Review Board for the Protection of Human Subjects. Based on the information provided in your IRB application received February 26, 2020, and the revisions received March 9, 2020, it is the Board's opinion that you provide adequate safeguards for the rights and welfare of the participants in this study. Your proposal complies with this institution's Federal wide Assurance and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46). Your project is approved as an Exempt protocol.

Date of Review: March 10, 2020

Date of Approval: March 10, 2020

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

If you have any questions, please contact the IRB office at (308) 865-8843. Thanks!

Good luck with your project,



Matthew R. Bice, Ph.D., IRB Director
Janna Shanno, IRB Coordinator
University of Nebraska at Kearney
Institutional Review Board
Warner Hall Suite 1000
Kearney, NE 68849
(308) 865-8843
unkirb@unk.edu

Part I: Introduction

Overview

Nature of the assignment

The Kearney Whitewater Association (KWA) hired Daniel Zavadil, a student at the University of Nebraska at Kearney (UNK) under the mentorship of Dr. Bree Dority, to conduct an economic impact study over the proposed Kearney whitewater parks. This research inspects two different sites: 1) Proposed Turkey Creek Whitewater Park and the 2) Proposed Tailrace Whitewater Park.¹ The proposed Turkey Creek Whitewater site will create recreational whitewater terrain that calls for improvement measures within an 800-foot stretch of the Turkey Creek in South Kearney a quarter mile North of Interstate 80 (I-80). The Proposed Tailrace Whitewater site will span 952 feet down the Kearney Canal and runs southbound through UNK's campus.

Specifically, this study analyzes market conditions, estimates the increase in economic activity, and measures the fiscal impacts associated with the proposed whitewater park. The report is outlined as follows: Market Study, City of Kearney Study, Economic and Fiscal Impact, and Proposed Tailrace Whitewater Site Study.

Executive Summary

Whitewater parks are a popular development option for communities located along rivers as they transform established and underutilized rivers into recreational and entertainment hotspots. United States whitewater parks have grown in popularity since the early 1980s, and in 2018, was home to 66 open parks, 3 under construction, 24 planned, and 63 proposed (KWA Bruce Karnatz 2018). These parks are located throughout every U.S. region and have a reputable track record of adding tangible community value. The Kearney whitewater park venue is anticipated to be a unique attraction within the state of Nebraska while providing an important recreational resource for the residents and visitors of Kearney.

Whitewater parks not only benefit the community and increase the quality of life for local residents, but they also attract visitors who spend money on lodging, restaurants, gas, shopping, entertainment, and at other businesses. This new spending supports economic output, employment, and wages within the regional economy. This study estimates the annual economic and tax revenue impact of the proposed Kearney Whitewater Park in Kearney, Nebraska. To do so, we relied on national paddle participation trends to estimate annual attendance and utilized spending allocations from comparable economic impact reports to measure visitor spending. IMPLAN software was used to calculate the relevant economic multipliers and regional tax levies were applied to spending to arrive at fiscal impacts.

We find that the economic and tax revenue impacts from the proposed whitewater park could add a significant addition to the Buffalo County economy and tourism industry. We estimate that the Proposed Turkey Creek Whitewater Site will attract 7,900 paddle sport enthusiasts annually, and of these, 45% or 3,550 are anticipated to be non-Buffalo County Visitors. The proposed Turkey Creek Whitewater Site is estimated to create a total economic impact of \$1.6 million, \$1 million will be recurring. These impacts support 13 full time year-round equivalent jobs. The one-time

¹ The Market Study, City of Kearney, and Economic Impact Sections focuses on the Proposed Turkey Creek Site. All findings related to the Proposed Tailrace Site can be found in Section V.

construction activities generated a total economic impact of \$600,000. All economic activity is taxed by local and federal tax authorities, we estimate that the economic impacts generate \$161,000 per year stemming from a mixture of property, sales, occupation, payroll, lodging, excise, and fuel tax categories. The Proposed Tailrace Whitewater Site has an estimated total economic impact of \$3.02 million where \$1.12 million is recurring. This new economic activity supports 14 full-time year-round jobs. The one-time construction activities generated a total economic impact of \$1.9 million. This spending and value additions to adjacent property will generate an estimated \$160,000 in new annual tax revenues.

Overall, tourism activity in Central Nebraska has slowly grown over time and could benefit from a new investment in tourism related amenities. This proposed whitewater park could add an exciting new draw to the area that provides both monetary and social benefits to the city and to the citizens, businesses, and visitors within. This project provides an easy high return on investment for its relatively low costs and few barriers to entry.

Table 0. Overview of the Economic Impacts

	Turkey Creek			Tailrace		
Visitor Spending						
	Direct Impact	Multiplier Impact	Total Impact	Direct Impact	Multiplier Impact	Total Impact
Output (\$millions)	\$0.62	\$0.38	\$1.00	\$0.70	\$0.42	\$1.12
Labor Income (\$millions)	\$0.21	\$0.11	\$0.32	\$0.24	\$0.12	\$0.36
Employment	10	3	13	11	3	14
Construction Expenditures						
Output (\$millions)	\$0.40	\$0.20	\$0.60	\$1.30	\$0.60	\$1.90
Labor Income (\$millions)	\$0.10	\$0.10	\$0.20	\$0.40	\$0.20	\$0.60
Employment	3	1	4	8	4	12
Totals						
Output (\$millions)	\$1.02	\$0.58	\$1.60	\$2.00	\$1.02	\$3.02
Labor Income (\$millions)	\$0.31	\$0.21	\$0.52	\$0.64	\$0.32	\$0.96
Employment	13	4	17	19	7	26

Acknowledgements

I have to start by thanking my research advisor and mentor Dr. Bree Dority, who guided me throughout the entire study, thank you for standing by me during every struggle and success involved with this research. The University of Nebraska at Kearney and the College of Business and Technology was very supportive and provided the resources necessary to complete this work. Thank you UNK for a memorable, engaging, and challenging college experience.

A special thanks goes to the following professors and Central Nebraska community members who all supported this research in a unique fashion:

Sherrie Dusch, EA, for validating the fiscal impact section amidst the busy tax season. Dr. Greg Broekemier for the providing survey and infographic insights. Professor Marsha Yeagley for helping craft the survey process. Sarah Borchers, the best academic advisor a student could ever ask for, the knowledge acquired within the accounting curriculum has equipped me with the skills necessary to write something like this. Derek Rusher, for helping distribute the survey, keep up the good work you do. Brock Burney, for the hospitality while conducting the traffic counts at Mormon Island State Park. Judi Sickler, for a great telephone conversation. Dr. Joel Johnson, someone who contributed greatly to beautify and help preserve the Spillway Park vicinity, thank you for the history lessons and may your efforts never be forgotten. Odee Ingersoll, serving the Nebraska Business Development Center. Thanks for helping with the ESRI reports.

To everyone else both near and far:

Tom Knoblauch my editor. Eric Thompson with UNL BBR, for assisting with the IMPLAN outputs. Kurt Christiansen, CPA, for helping develop and validate the fiscal section methodology. Gabe Preston with RPI Consulting, thanks for allowing us to use your study structure found in the Cedar Falls Study. Scott Shipley with S20, for sharing comparable Econ Studies.

Thank you to the Kearney Whitewater Association (KWA) for engaging this research project and for all the great work you do for the City of Kearney.

Table of Contents

Part I: Introduction	3
<i>Overview</i>	3
Nature of the assignment.....	3
Executive Summary	3
Acknowledgements	5
Part II: Market Study	9
<i>Market Study Findings</i>	9
Visual Representations & Semantic Drawings of the Proposed Sites	10
<i>Current Project Status</i>	13
<i>Whitewater Parks in the United States</i>	14
<i>Market Population Geographies</i>	15
<i>Hotel Tax Collections</i>	17
Comparable County Hotels	18
<i>Market Populations and Paddler Demographics.....</i>	20
Community Survey Results.....	20
Regional Paddler Number Estimates.....	21
<i>National Participation Trends</i>	22
US Outdoor Participation Trends	22
Paddle Sport Market and Demand Shifts	23
Year over Year Paddle Sport Participations.....	23
<i>Whitewater User Demographics</i>	24
Activity Participation by Gender.....	25
Activity Participation by Ethnicity	25
Activity Participation by Age Group	26
Youth Participation.....	26
Activity Participation by Annual Household Incomes and Education.....	27
Crossover Activity Participation	28
<i>Comparable Park Interviews</i>	29
<i>Whitewater Park User Day Estimates</i>	33
<i>Whitewater Park Participation Activity.....</i>	34
Whitewater Park Detailed Calculations.....	34
<i>Greater Market Capture Variables.....</i>	36
College and University Populations.....	36
Corporate Events / Safety Training	36
<i>Regional Whitewater Parks.....</i>	37
Nebraska Water Trails and Float Industry	38
Seasonality of Area Whitewater Activities	39
Seasonality of the Kearney Canal	40
Kearney Water Trail Hydrology & Overview	40
Part III: The City of Kearney and Interstate Study.....	42
<i>Summary of Findings.....</i>	42

<i>City of Kearney Industry & Statistics</i>	42
Industry & Employment Attributes of Buffalo County	42
<i>Regional Population Growth</i>	44
<i>Buffalo County Annual Events</i>	44
<i>Kearney Parks and Recreation</i>	46
Local Attractions.....	46
<i>Interstate 80 (I-80)</i>	47
I80 Kayak Count.....	48
<i>Annual Kayak Traveler Estimates (Based on Counts)</i>	48
Part IV – Economic Impact Analysis	50
<i>Summary of Findings</i>	50
<i>Recreation Economy in Nebraska</i>	50
Impacted Industries.....	51
<i>Comparable Whitewater Park Economic Impacts</i>	51
<i>Economic Impact</i>	52
Economic Impact Results.....	55
Construction Impact.....	55
<i>Fiscal Impacts</i>	57
<i>Social and Other Effects</i>	58
Part V: Proposed Site II Tailrace on the Kearney Canal (University)	59
<i>Background</i>	59
<i>Summary of Findings</i>	60
<i>Economic Impact of the University of Nebraska at Kearney</i>	61
<i>Economic Impacts of the Proposed Tailrace Whitewater Site</i>	62
Tailrace Economic Impact Results	63
Construction Impacts	64
<i>Fiscal Impacts</i>	66
<i>Campus and Surrounding Community Developments</i>	68
University Village.....	69
Campus Demolitions	71
Coincidental Developmental Ties.....	72
<i>Proposed Site Attributes and Development Issues</i>	74
Hydrology & Site Design	74
Development Concerns	77
Land Ownership	77
<i>Marketing</i>	79
Campus Related Programming.....	79
UNK Recreation Department.....	80
Wellness Center & Cushing Coliseum.....	80
Colorado/Kansas in-state program	81
Colorado School Cost Comparison	81

UNK Student Survey	83
Site Frequency & Visitations.....	83
Enrollment Draw / Recruitment	85
NE Migration Patterns	85
Part VI: References	86
Part VII: Appendix	90
<i>Kearney Canal and Related Project History.....</i>	<i>90</i>
<i>180 Kayak Traveler Projection Methodology</i>	<i>92</i>
<i>Survey Results</i>	<i>94</i>
Grand Island Community Survey Results	94
Kearney Community Survey Results.....	99
<i>Tailrace Economic Impact Spending Allocations</i>	<i>105</i>
<i>Fiscal Collection Methodology</i>	<i>107</i>
Collections from Spending Methodology	108
Payroll Tax Collection Methodology.....	111
Property Premium Methodology	112

Part II: Market Study

The market study paints a picture of who whitewater participants are both regionally and nationally. This section also discusses the methodology used to arrive at visitor estimates used for the economic impact analysis along with many other relevant data.

Market Study Findings

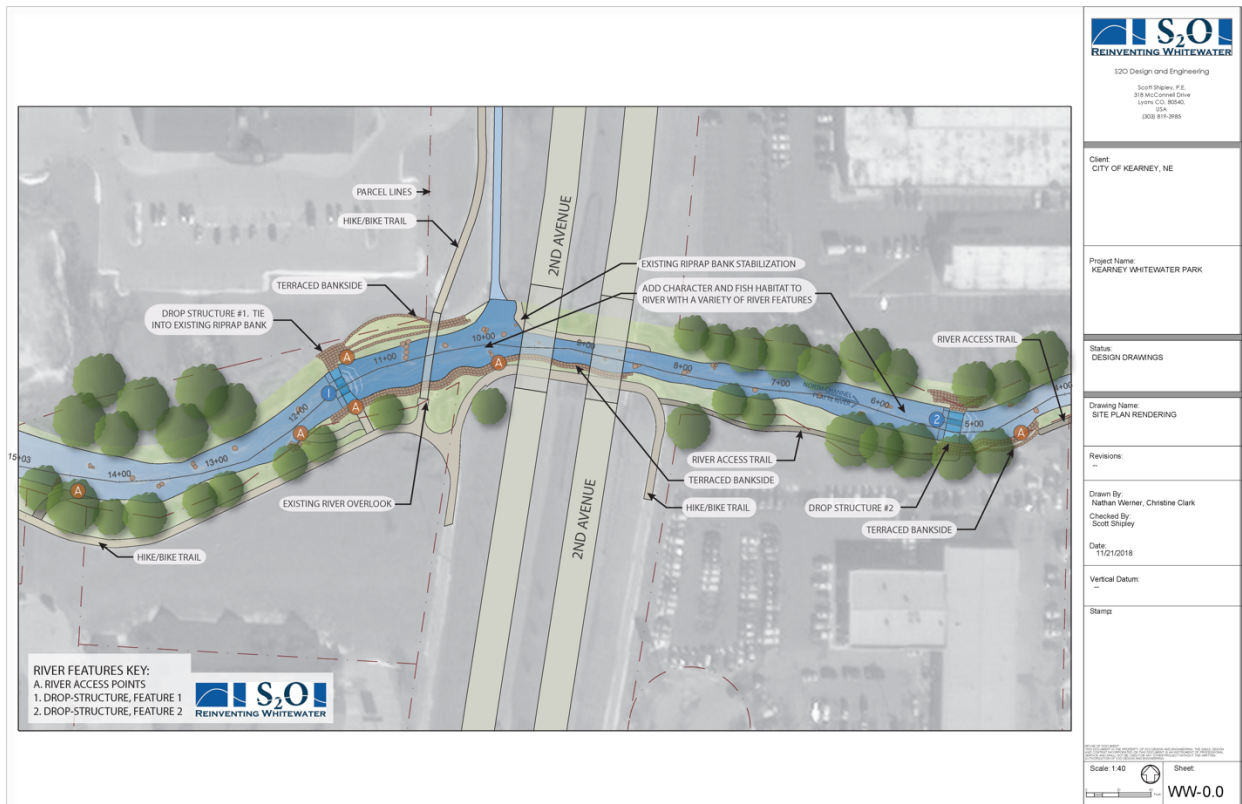
- In terms of whitewater parks Nationally, there are 70 opened parks, 3 under construction, 24 planned, and 63 proposed.
- As of 2020, 202,000 people reside within a 1-hour drive time radius of Kearney Nebraska.
- In 2019, Buffalo County Hotel Sales were \$27.4 million which yielded \$1.09 in lodging tax revenue.
- Buffalo County has the 4th highest bookings in the State of Nebraska shortly behind Sarpy County.
- Based only on lodging tax collections, Buffalo County sees an average of 585,000 visitors annually or 18x its population of 33,000.
- In 2018, 22.9 million Americans or 7.6 percent of the US population participated in at least one paddle activity.
- We estimate Kearney has a paddle participation rate of 5-8% home to 2500 to 3500 paddlers.
- Paddlers seem to be purchasing more nimble boats including inflatable kayaks, SUPs, and river surfers, while larger floating boats such as rafting, and canoeing have been declining in popularity.
- The region that is home to most paddlers in the United States is the South Atlantic region home to over 4.7 million paddle participants followed by the East North Central (Great Lakes area) at 3.8 million paddle participants. There is a clear correlation between water abundant regions and paddler participation rates.
- For kids ages 6-17, whitewater kayaking has had an average annual growth rate of 16.3% year over year and has nearly doubled in participation since 2013. There are currently 830,000 youth whitewater kayak participants.
- 55% of the US paddling population has a household income greater than 75k.
- Walking, jogging, and hiking are the most common crossover participation activity exercised by paddlers followed by road biking, fishing, and camping.
- From the comparable park interviews, 4/4 parks were completed within 5-10 years after initially planning the project.
- 2/4 parks interviewed issued bonds to fund construction.
- The largest source of Midwest whitewater park funds stem from the DNR, State tourism and revitalization grants, low head dam removal grants, and other city & state sources.
- 3/4 projects went overbudget by 0 to 35%.
- All parks interviewed experienced new businesses move near the park.
- A few whitewater park events ideas include cardboard boat races, slalom races, wave jams, farmer markets venues, and miscellaneous city programmed events.
- The Turkey Creek whitewater park is expected to attract between 7,900 and 11,500 user days per year

- The City of Kearney is on track to be the 2nd city to adopt a whitewater park within the State of Nebraska following the City of Norfolk
- Nebraska is home to 5-8 river service outfitters and offers 4 known whitewater sites
- There are 7 colleges within a 100-mile drive time radius of Kearney

Visual Representations & Semantic Drawings of the Proposed Sites

The four figures below demonstrate a semantic rendering and a recent photo of the two proposed sites.

Figure 1. Proposed Turkey Creek Conceptual Design



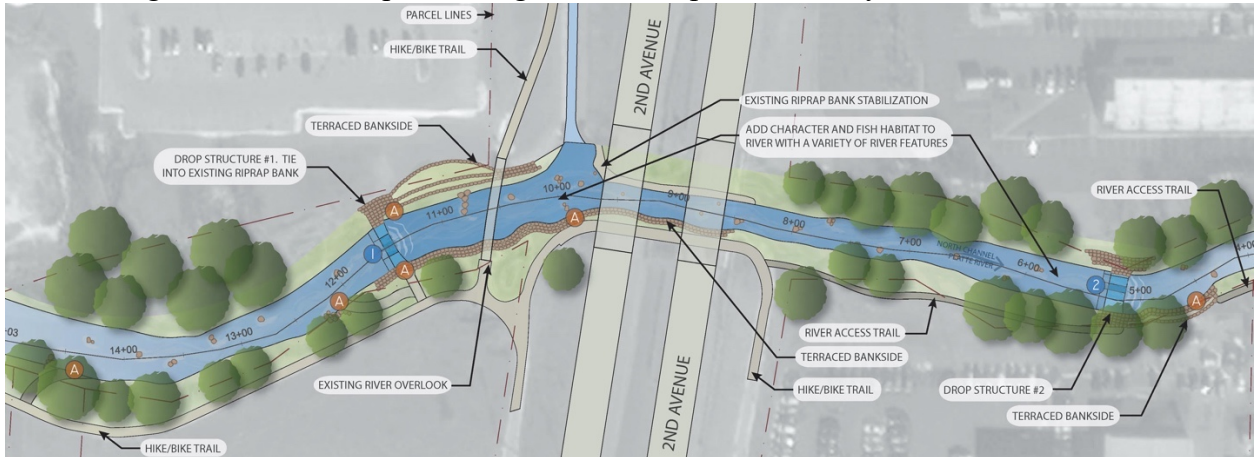
Source: Shipley, Scott. August 2016. Retrieved from S2O Site Visit and Conceptual Design Study

Figure 2. Turkey Creek Site Looking upstream from the base of U.S. Route 44



Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

Figure 3. The Conceptual Design for the Proposed Kearney Canal Tailrace Site



Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

Figure 4. Kearney Canal Tailrace looking upstream from the Nyquist Memorial Bridge



Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

The table below illustrates the design, hydrology, and cost differences between the two sites.

Table 1. Proposed Whitewater Sites with Park Attributes

Site	Number of Drop Features	Length (ft)	AVG Summer Flows (CFS)	Est. Construction Cost
Turkey Creek (Site 1)	2	800	250	\$ 650,000
Tailrace on Kearney Canal (Site 2)	4	938	225	\$ 1,289,025

Source: Information Sourced from the S20 Site Visit and Conceptual Design Study

Current Project Status

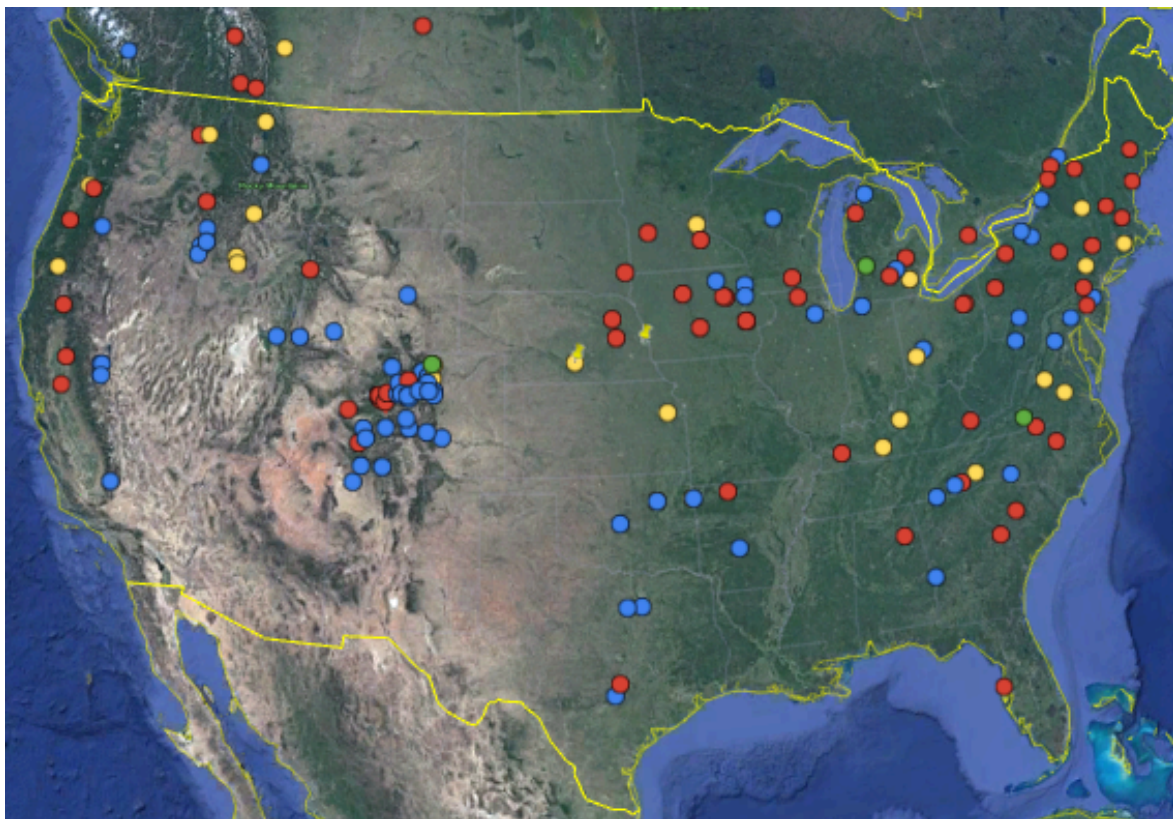
The idea for a public use water trail was discussed among city staff and citizens for decades. In 2012, a local group of paddlers banded together forming the Kearney Whitewater Association also known as KWA with the ultimate goal of developing a whitewater park along the Kearney Water Trail. It wasn't until Spring of 2016 when KWA and the City of Kearney agreed to split the costs needed to construct a paddler put-in at Yanney Park and a take-out near Central Avenue (Fowler 2020). In September of 2016, KWA commissioned S20—a whitewater design and engineering firm to complete a site visit and conceptual design study to analyze the feasibility of a whitewater run.² S20 found that both Turkey Creek and Tailrace sites are suitable for a whitewater park run. The City of Kearney and KWA have prioritized the Turkey Creek site over the Tailrace site, given the barriers to entry seen at the proposed Tailrace Site. KWA is still pursuing efforts to improve Tailrace but have shifted focus on completing the Turkey Creek site first. In terms of project funds, the city has invested significantly while KWA is committed to running the fundraising and capital campaigns. Construction on the riverbed is planned to begin after the appropriate amounts of funding is secured.

² S20's design study will be referenced multiple times throughout this report

Whitewater Parks in the United States

There are a handful of whitewater park efforts across the United States. Many communities with these established whitewater parks realized many positive benefits associated with the river improvements therefore, many municipalities are following suit. As of 2018, the US was home to 66 open parks, 3 under construction, 24 planned, and 63 proposed whitewater parks. Only time will tell in determining which parks come to fruition. According to a recent article published in January of 2020 there were 70 open parks. (Schaffran 2020)

Figure 5. Whitewater Parks across the US & Canada



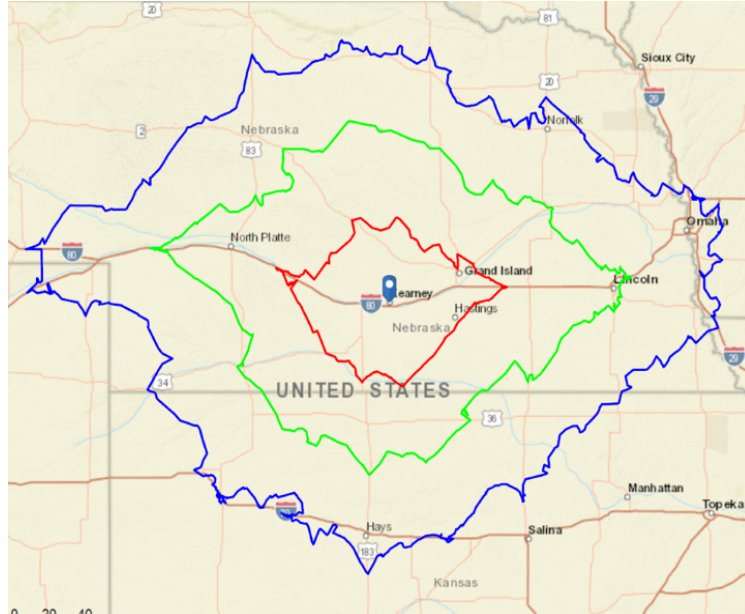
Source: Bruce Karnatz. 2018, KWA

Market Population Geographies

The regional market considered for the proposed whitewater park is within a three-hour drive time radius of Kearney. As drive time increases, the visitation rates to this facility are expected to decrease due to the general travel behavior of kayak travelers. In addition to the populations within 1-3-hour drive time radius, we analyzed three traveler/visitor related metrics including (1) Buffalo County Lodging tax collections (2) Estimated overnight visitors (3) Average Interstate 80 traffic counts.

The nearest competing whitewater park is located near downtown Denver known as Confluence Riverside Park located 358 miles away or 5 hours away from Kearney. There are several other whitewater parks nestled amongst the front range towns of Golden, Denver, Boulder, Lyons, and Fort Collins. Iowa has three whitewater parks with the closest being located in Cedar falls which is a 6 hour and 30-minute drive from Kearney. Given this wide separation between recreation points, Kearney's whitewater park may benefit greatly from the lack of recreational amenities surrounding the area. The figure below displays the market population boundaries extending 3 hours outside Kearney. The populations residing within these boundaries were used in our kayak visitor estimate calculation.

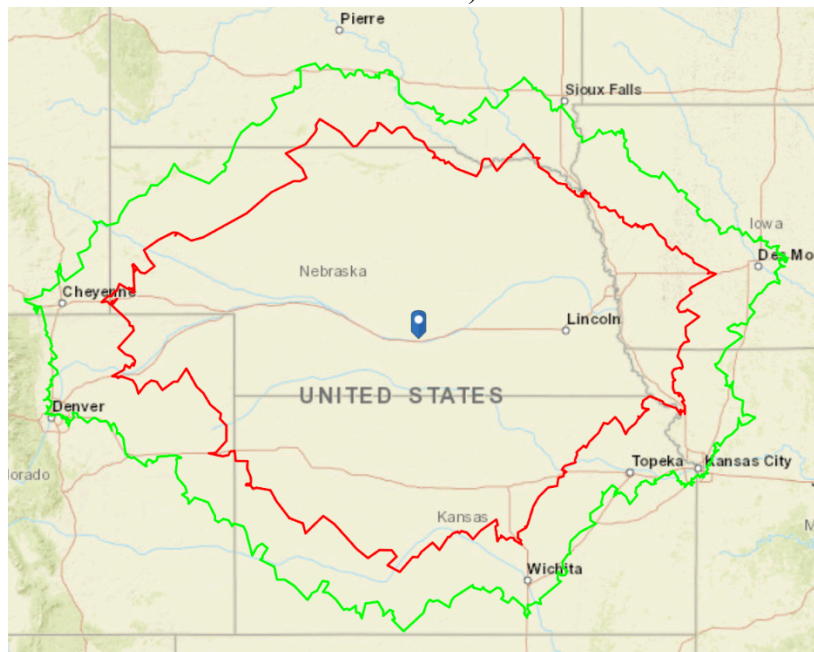
Figure 6. 60, 120, & 180-minute drive time radii of Kearney



Source: ESRI GIS

The map below shows the market population boundaries extending 4 and 5 hours outside the center of Kearney which includes the city of Denver, Wichita, Topeka, Kansas City, Des Moines, and Sioux Falls. The populations within this 4 to 5-hour drive time radius were not factored into our visitor estimates.

Figure 7. 240- & 300-minute drive time radii of Kearney NE (not considered to arrive at visitor estimates)



Source: ESRI GIS

The populations of this market are categorized as total populations and marginal populations. As of 2019, the total population within a one-hour drive time radius of Kearney was 201,957 while the marginal population is 168,196 which excludes the population of Kearney. In addition to the population of nearly 2 million found within the 1-3-hour drive time radius, there was an estimated 208,596 hotel room bookings within the City of Kearney based on Buffalo County Lodging tax collections in 2018. We primary focused on market populations residing within a 1, 2, and 3-hour drive times from Council Bluffs, Iowa to Sterling, Colorado.

Table 2. Market Populations within 1-3 Drive Time Radius of Kearney, NE

	Total Population	Marginal Population	Source
Kearney	33,761		2018 Census
1 Hour Drive Time	201,957	168,196	ESRI
2 Hour Drive Time	617,712	415,755	ESRI
3 Hour Drive Time	1,975,049	1,357,337	ESRI
Visitors		564,801	Our Estimate

Source: ESRI GIS & Kearney Census 2018

Hotel Tax Collections

Hotel tax collections were used to estimate the number of overnight visitors staying in the Kearney area. Other forms of overnight booking data were difficult to obtain, including the count of visitors staying with friends/relative and those using online booking platforms such as Airbnb were not accounted for, thus we stuck with hotel tax collections to estimate visitors. According to the 2018-2019 Visit Nebraska Lodging Tax Collection Report, Buffalo County collected \$1,094,668 in lodging tax collections (excluding lodging occupancy tax). This \$1.09 million in lodging tax collects was the result of a 4% lodging tax levy applied to all lodging sales collected at hotels, motels, and RV parks. Based on lodging tax figures we determined that buffalo county hotel revenue was \$27,366,700 in fiscal year 2018-2019 (Visit Nebraska State & County Lodging Tax Reports). The average per night receipt was \$117 which indicates there were around 226,000 hotel rooms booked per year. The average travel party size in 2019 was 2.5 people meaning there were an estimated 564,801 visitors to Kearney in 2018-2019.

Table 3. Buffalo County Lodging Tax Collections (from 2011-2019)

Year	Collections
2011	\$824,152
2012	\$904,718
2013	\$914,991
2014	\$1,017,039
2015	\$1,094,119
2016	\$1,131,864
2017	\$1,155,123
2018	\$1,150,288
2019	\$1,094,668

Source: Information Gathered from Visit Nebraska State & County Lodging Tax Reports

In addition to Buffalo County Lodging tax collections, we also investigated lodging tax collections from counties that contain Interstate 80 (I-80) throughout Nebraska providing us with some information about I80 traveler overnight stay preference. Douglas County, home to Omaha collected the most lodging tax in Nebraska at \$7.7 million in 2019 followed by Lancaster, Sarpy, and Buffalo County falling into fourth place (Visit Nebraska State & County Lodging Tax Reports). Buffalo County sees more hotel visitors than any other county West of Lancaster (containing Lincoln). Buffalo County also has a relatively high number of annual visitors and hotel businesses since Kearney hosts numerous high attendance events and holds a geographic comparative advantage.

Comparable County Hotels

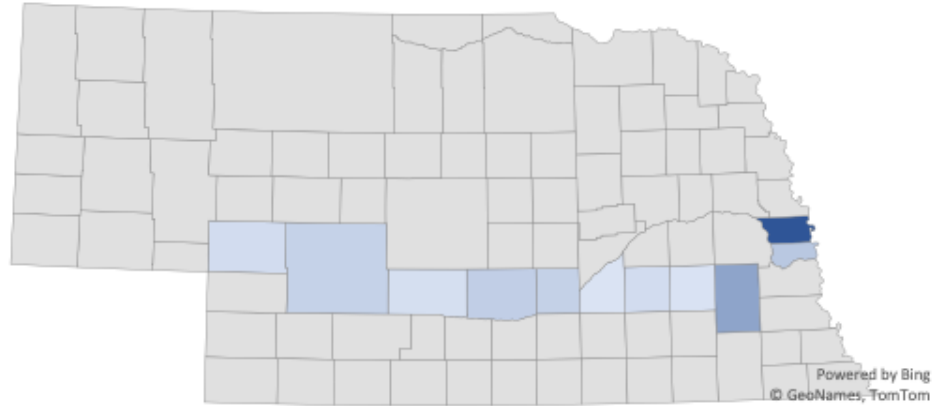
Table 4. Nebraska Counties Containing I-80 and Average 5 Year Lodging Tax Collections

County	5 Yr Avg. Lodging Tax Collections
Douglas	\$7,669,545
Sarpy	\$1,489,169
Lancaster	\$3,425,281
Seward	\$42,994
York	\$381,775
Hamilton	\$14,045
Hall	\$991,097
Buffalo	\$1,125,213
Dawson	\$256,141
Lincoln	\$935,038
Keith	\$366,250

Source: Information Gathered from Visit Nebraska State & County Lodging Tax Reports

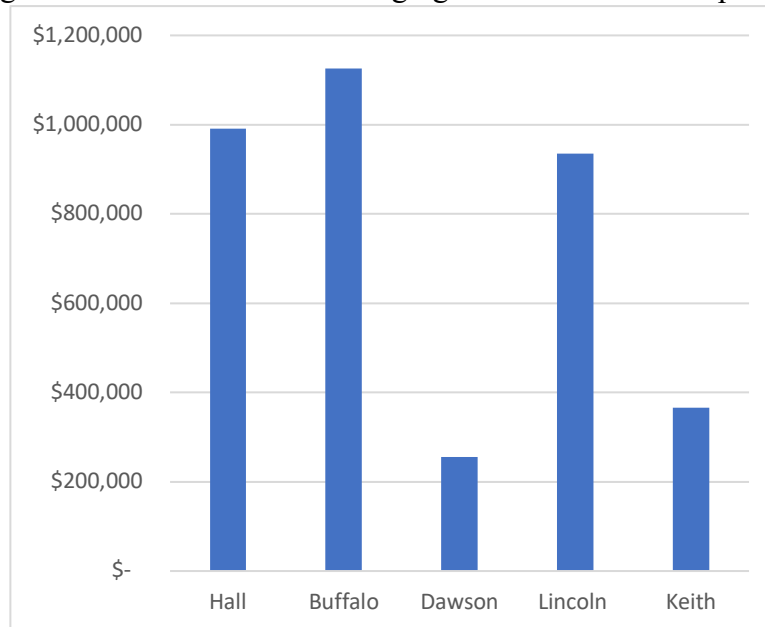
A whitewater park located near Kearney’s main lodging development could provide visitors with a unique surrounding neighborhood experience which offers more things to do and see. Overnight Interstate visitors may favor Kearney over surrounding counties.

Figure 8. I-80 Nebraska Counties Analyzed in Table 4



Source: Microsoft Excel

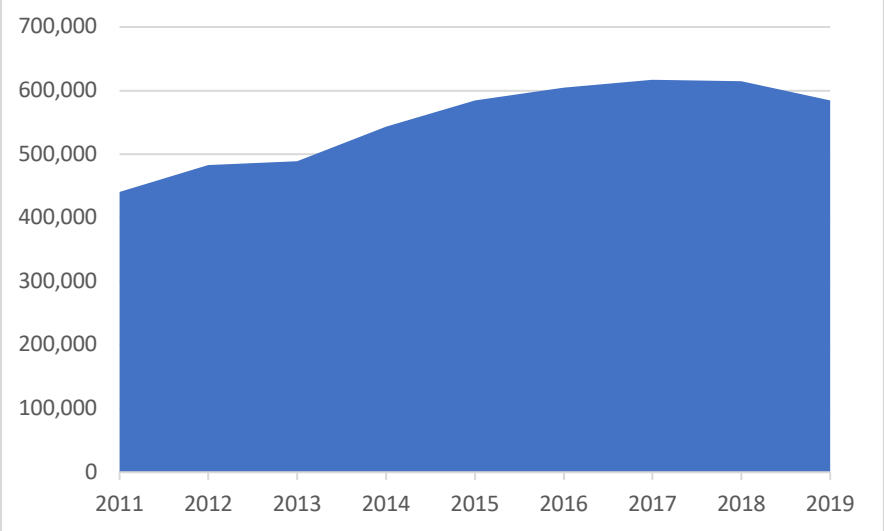
Figure 9. Western Nebraska Lodging Tax Collection Comparison



Source: Information Gathered from Visit Nebraska State & County Lodging Tax Reports 2018

The increase in tax collections year over year seen in Table 3 indicates an increase in visitors to the area. As a result, many new lodging options have been constructed within the last 10 years in order to keep up with the number of annual visitors and interstate travelers.

Figure 10. Buffalo County Overnight Visitor Estimates Since 2011



Source: Visit Nebraska Lodging Tax Collection Report 2018 and Our Estimate

Market Populations and Paddler Demographics

Community Survey Results

We wanted to better understand the preferences found within the Kearney community to more accurately predict participation patterns and to identify if this proposed project is something locals want to see. Overall, Kearney residents show significant enthusiasm for the proposed project. A full expansion on the Grand Island and Kearney Community Surveys can be found in the Appendix. 141 of the total 150 survey participants have paddled before and only 92 of these 150 have paddled the Kearney Canal before. Survey participants favorite land activities in order include walking/jogging, camping/hiking, and hunting/fishing similar to the national crossover participation preferences seen in figure 18. 65% of participants think the Proposed Tailrace Site looks favorable while the remaining 35% think the Proposed Turkey Creek Site would be more optimal. 46% of paddler participants prefer recreational kayaking, 43% prefer river, while 9% prefer whitewater paddling.

Table 5. Kearney Resident Kayak Experience Preference

Recreational (Lakes)	45.60%	83
Sea/Touring	1.65%	3
Whitewater	9.34%	17
River	43.41%	79
Total	100%	182

We designed a question to identify how often local residents paddle and how often they would utilize the Kearney Whitewater park. Results show that regional paddlers have interest in visiting the whitewater park multiple times per season once operating.

Table 6. Kearney Resident Paddle & Whitewater Park Frequency

Question	Never		1-2 Times		3-4 Times		5-7 Times		8+ Times		Total
On average, I paddle this often per season	10.22%	14	37.23%	51	21.90%	30	17.52%	24	13.14%	18	137
On average, I would utilize the proposed whitewater park _____ per season	5.11%	7	24.09%	33	32.12%	44	19.71%	27	18.98%	26	137

Regional Paddler Number Estimates

The Midwest participation rate for paddle activities is 3.70% compared to the national average participation rate of 10% (OIA, Special Report on Paddle Sports & Safety 2019). As of 2019, Buffalo County has a population of 49,700 or 1,840 paddlers using the 3.70 going rate. We estimate Kearney has a paddle participation rate of 5-7.5% and is home to 2,500 to 3,800 paddle participants

We assume that Buffalo County has a higher than average overall participation rate based on the factors:

- High inventory turnover of kayaks seen at local stores that sell them
- Physical observations seeing many boats in yards and on vehicles
- High number of paddlers who utilize the Kearney Water Trail
- Survey figures identified 137 paddling participants among a survey that was sent to 2,500 individuals or an effective rate of 5.5%
- The Kearney Whitewater Park Facebook Page has over 4,200 followers

Table 7. Buffalo County Paddle Participant Estimates

Low (3.7%)	Mid (5%)	High (7.5%)
1,839	2,485	3,728

Source: UNK Estimate

94% of the paddle-friendly survey participants say that they would utilize the whitewater park more than 1 time per season, validating that a whitewater park has the potential to attract over 2,500 - 4,000 participants per season internally.

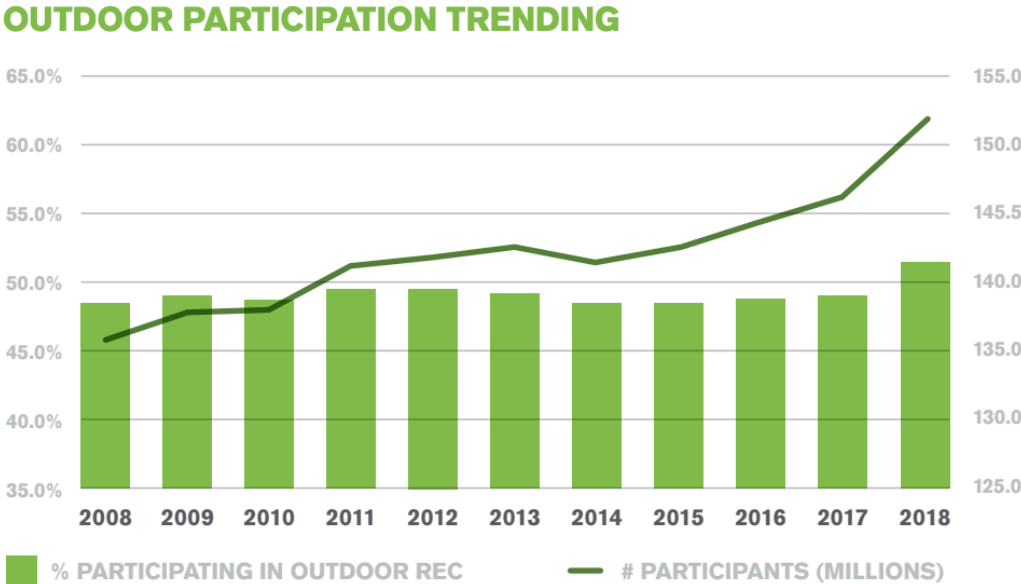
National Participation Trends

The Outdoor Industry Association (OIA) started conducting outdoor-sport-specific surveys and reports in 2004. In 2009, the OIA released their first paddle specific report focusing on kayak, canoe, and rafting activities.³ We utilized OIA’s Special Report on Paddle Sports and Safety to identify regional and national paddle participation trends. This report outlines canoe, kayak, raft, and SUP data. Many of the following tables and figures rely on data gathered from the 2019 Special Report on Paddle Sports & the 2019 OIA Outdoor Participation Report.

US Outdoor Participation Trends

The United States has been a global leader for the outdoor recreation industry. From having a wide variety public lands located across multiple climates to hosting innovative companies and individuals who have historically invented and continually improved outdoor performance gear. “Outdoor recreation participation grew through the 1960s and 1980s. Activities such as camping, canoeing, kayaking, and bicycling grew rapidly, influenced partly by improving equipment technology. New activities appeared, while a few activities declined in participation” (Cordell 2012). Between 1999 and 2009, nature-based outdoor recreation generally increased, although trends differ across individual activities. The number of U.S. participants in 50 nature-based outdoor recreation activities increased 7.1 percent between 1999 and 2009” (USDA Federal Outdoor Recreation Trends: Effects on Economic Opportunities 2016). In the US, 50 percent of the population participated in an outdoor activity at least once in 2018 (Outdoor Recreation Participation Report 2019). Unfortunately, this also means half of the US spent little to no time in the outdoors. Luckily, outdoor activity participation trends have been growing throughout the last 10 years.

Figure 11. US Outdoor Overall Outdoor Participation Percentage



Source: OIA Outdoor Participation Report 2019

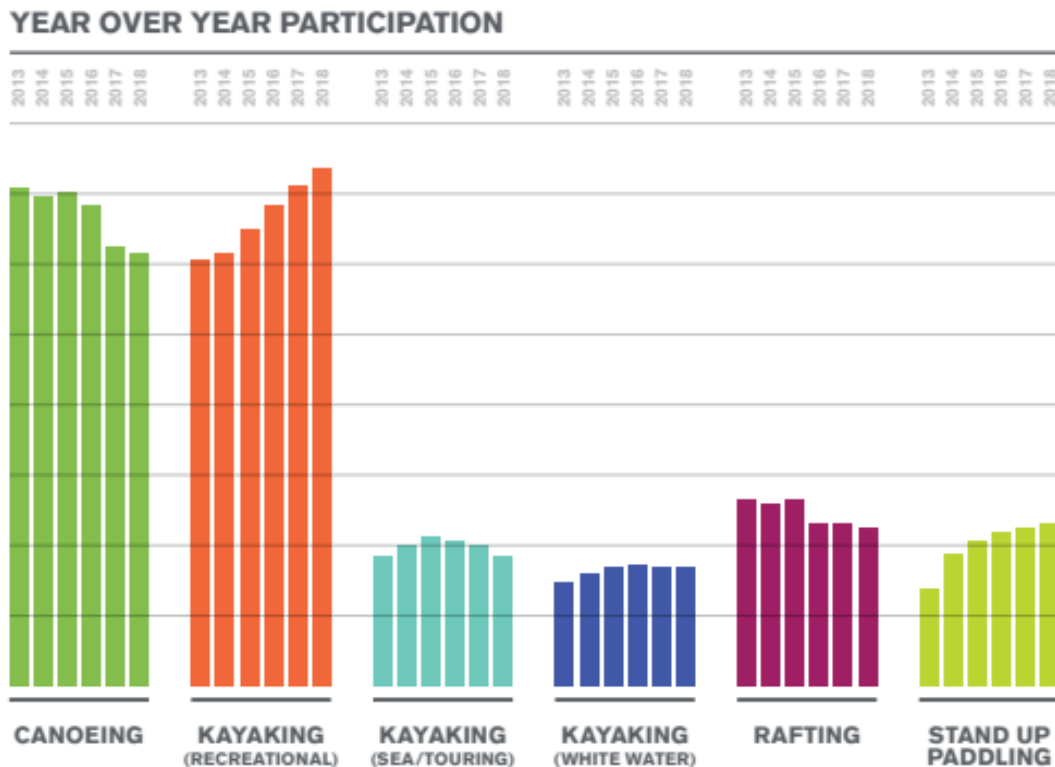
³ The OIA has added tour and SUP categories since the original paddle sports report in 2009, river surfing is likely to be a future new addition given its rise in popularity and there being an increase in US whitewater parks with surf waves.

Paddle Sport Market and Demand Shifts

In 2018, 22.9 million Americans or 7.6 percent of the US population participated in at least one paddle activity (OIA, Special Report on Paddle Sports & Safety 2019). Paddle sport popularity has varied over the last 5 years, where bulkier boat activities including rafting and canoeing has declined while the smaller and niftier boats categories including inflatable kayaks, stand up paddleboards, and river surfers have increased in popularity.

Year over Year Paddle Sport Participations

Figure 12. Year over Year US Paddler Sport Participation Trends



Source: OIA Paddle sports Report, 2019

Nationally, 4.2% of the population participate in kayaking. Specifically, 0.8% participate in whitewater kayaking, 0.9% sea/touring, and 3.4% recreational. On average, these kayakers participate in 5.5 outings per season while rafters and paddle boarders go on an average of 5.25 outings per season. In 2018, rafting participation accounted for 1% of the US population while stand up paddle boarders made up 1.1%, and canoeing at around 4%. The overall US average paddle participation rate is 10% while participation rates found in the West North Central (Midwest) region is 3.70% (OIA, Special Report on Paddle Sports & Safety 2019). The behavior and frequency of paddlers residing within the West North Central region were used to compute visitor estimates found in Table 12.

Table 8. Paddle Sport Participation Rates Midwest and Nationally

	Midwest Participation Rate (2018)	National Participation Rate (2018)
Kayaking (Rec)	0.55%	3.40%
Kayaking (WW)	0.55%	0.80%
Kayaking (Sea)	0.50%	0.90%
Canoeing	1.00%	2.80%
Rafting	0.50%	1.00%
SUP	0.60%	1.10%
SUM	3.70%	10.00%

Source: OIA, Special Report on Paddle Sports & Safety 2019

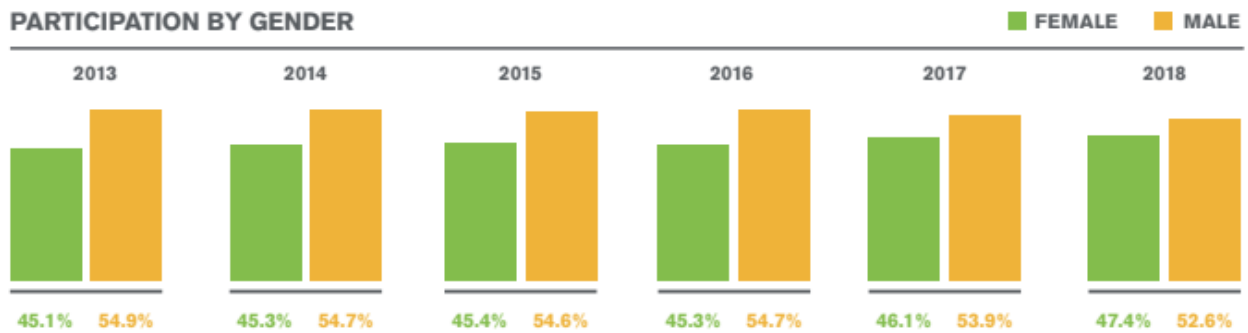
Whitewater User Demographics

Understanding the demographics of the potential whitewater park users can help the city and state curate relevant marketing strategies and to develop a better understanding of the target market. Broadly speaking, the stereotypical paddler is a college educated Caucasian with a household income of at least \$75,000. There tends to be a higher paddler population density in regions where water and rivers are more abundant. The region that is home to most paddlers in the United States is the South Atlantic region—home to over 4.7 million paddle participants and followed by the East North Central (Great Lakes area) at 3.8 million paddle participants. The Outdoor Industry Association (OIA) did notable work researching and reporting detailed demographics of domestic paddlers and will be the primary source of information for this demographic section.

Activity Participation by Gender

There are slightly more male paddle participants than female, however this 6-year trend shows that paddle sports are enjoyed by an increasing number of females. At this rate, one could assume that there will be an equal balance of male and female paddlers seen sometime within the early 2020's.

Figure 13. Paddle Activity Participation by Gender

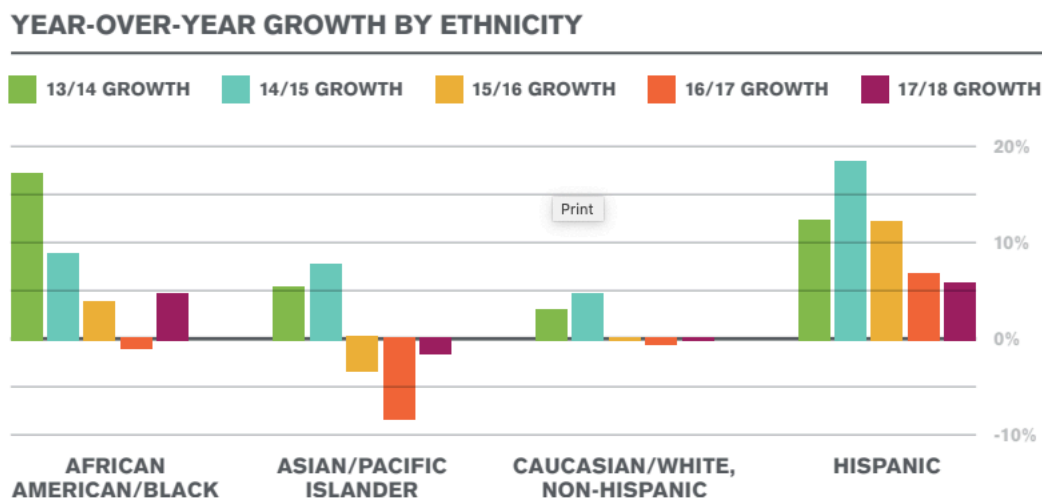


Source: OIA, Special Report on Paddle Sports & Safety 2019

Activity Participation by Ethnicity

Paddling has declined in popularity amongst participants with Asian/Pacific Islander & Caucasian descents. Alternatively, participation by those of African American and Hispanic descents is increasing. High growth has been realized amongst Hispanic and African American groups.

Figure 14. Activity Participation by Ethnicity

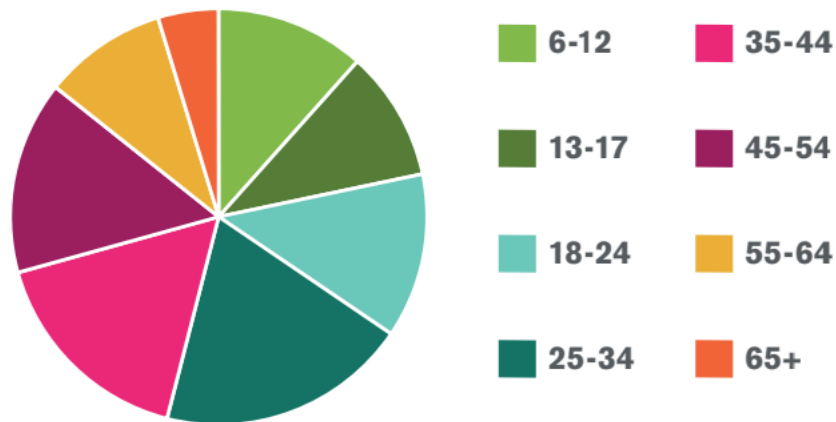


Source: OIA, Special Report on Paddle Sports & Safety 2019

Activity Participation by Age Group

Nearly half of the US paddler population are 18-44 years old and the other half is 44-65+; this indicates that there is a fairly balanced average paddler participation age.

Figure 15. Participation by Age Group
% OF PADDLING PARTICIPANTS BY AGE



Source: OIA, Special Report on Paddle Sports & Safety 2019

Youth Participation

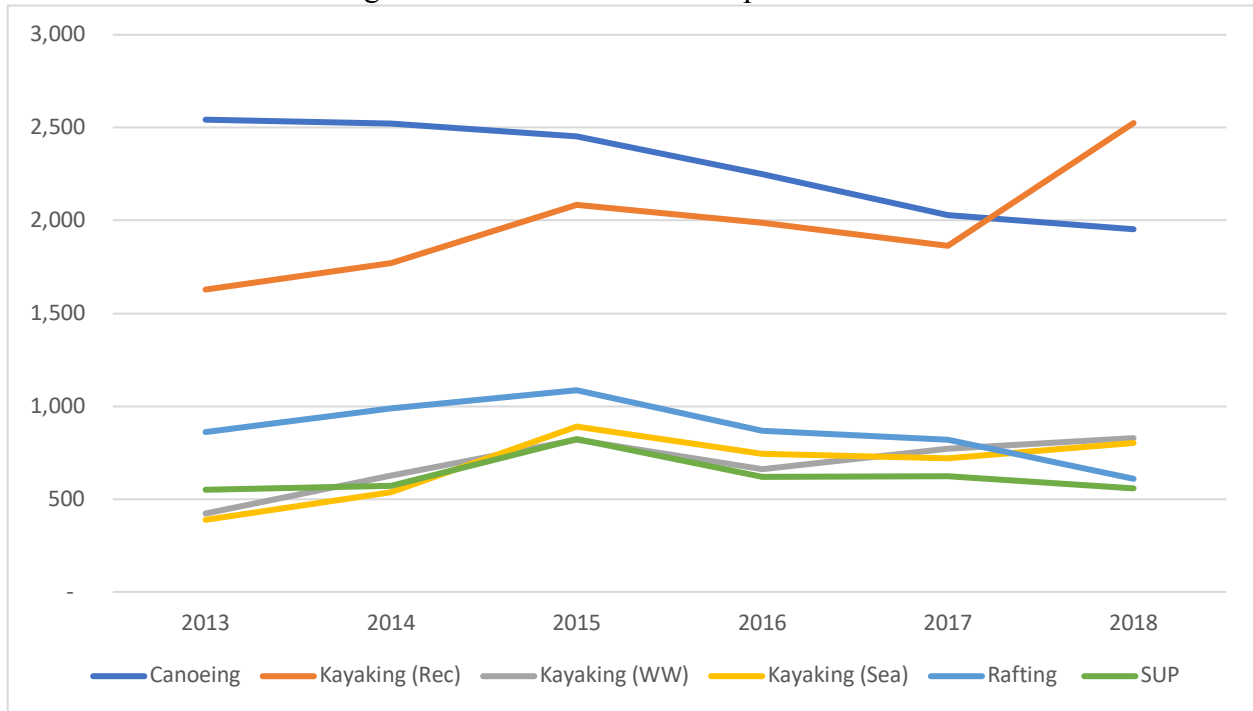
Youth participation rates was a notable mention for this demographic section. This section will define **youth/kids** as kids ages 6 to 17. According to the OIA, youth participation is a strong indicator of future activity for example, adults that were active outside as children were twice as likely to be active when they became adults. There is both good and bad news when it comes to American youth outing figures. Unfortunately, American youth went on 15 percent fewer annual outdoor outings than they did in 2012. Most notably, whitewater kayaking among American youth has had an average annual growth rate of 16.3 percent and has nearly doubled in participation since 2013. The strong youth participation trends could translate to a younger participant utilizing the proposed whitewater park and is overall healthy for the industry and future participation numbers.

Table 9. Youth Whitewater Kayak Participation (In # 000's)

Year	2013	2014	2015	2016	2017	2018
Whitewater Kayaking	422	628	819	661	772	828

Source: Figures gathered from the OIA Special Report on Paddle Sports & Safety 2019

Figure 16. Youth Paddle Participation Trends

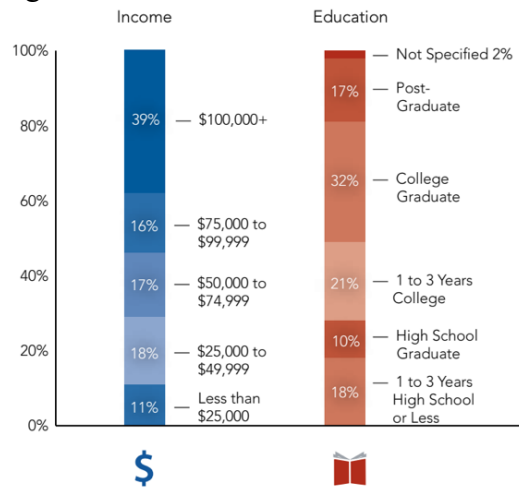


Source: Chart Generated from the OIA, Special Report on Paddle Sports & Safety 2019

Activity Participation by Annual Household Incomes and Education

Looking into paddler household incomes, over 55% of participants have a household income greater than \$75,000, which means that this group has a higher than average disposable income containing a greater propensity to spend. Many recreational and action sports activities (including paddling) are costly to participate in given the high cost of equipment and gear which acts as a barrier to entry for those making lower incomes. These high average household income levels may indicate that there will be some sparing spending taking place by kayak visitors; this may lead to spending beyond our estimates.

Figure 17. Paddler Income and Education

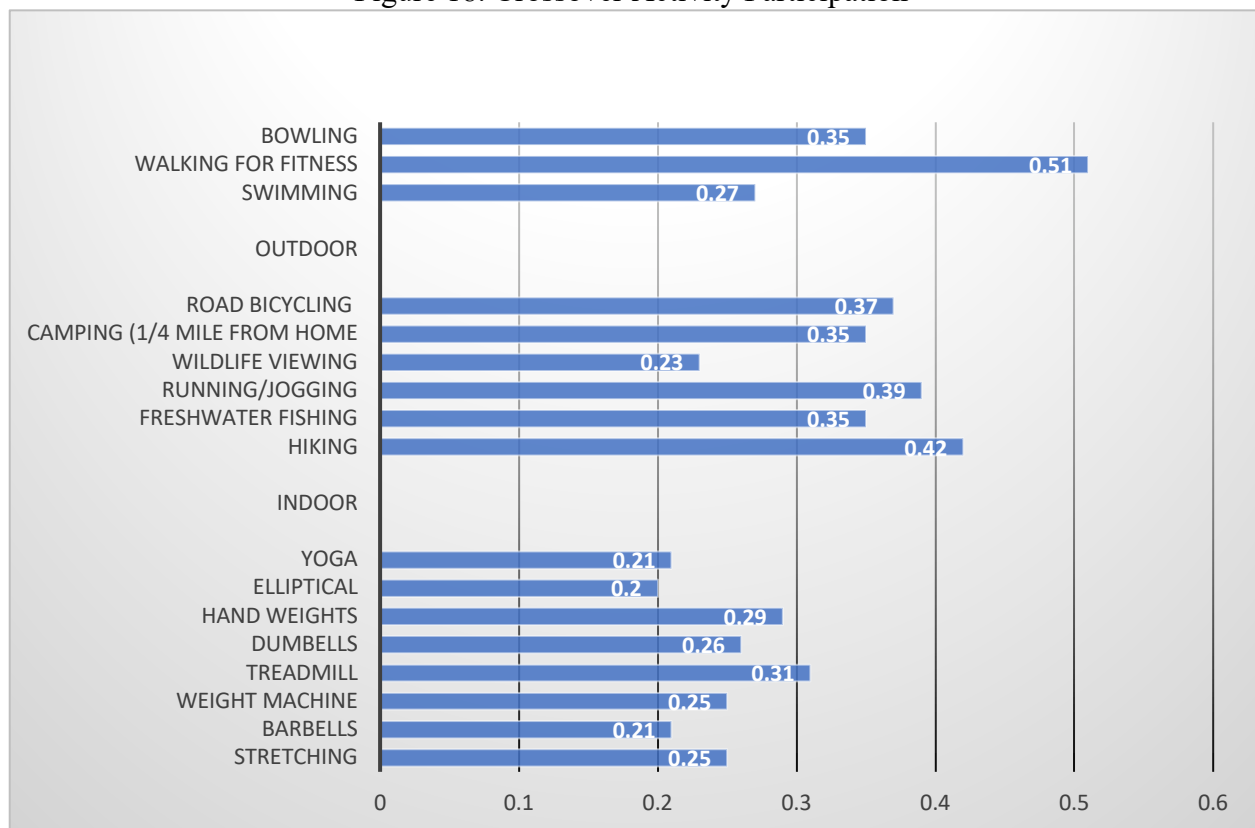


Source: Coleman Company & OIA Paddle Sports Report 2015

Crossover Activity Participation

In general, paddler populations enjoying spending time in the outdoors keeping an active lifestyle. The top three activities that paddlers enjoy off the water include walking for fitness, hiking, and running/jogging. Both proposed sites have established exercise trails following the water trail which nicely align with paddler activities. The presence of exercise trails at both sites provides paddlers with a convenient way to participate in other enjoyable outdoor activities.

Figure 18. Crossover Activity Participation



Source: Coleman Company & OIA Paddle Sports Report 2015

Comparable Park Interviews

To obtain a better understanding of a whitewater park operation, we interviewed four individuals who oversee four different whitewater parks across the Midwest.⁴ We asked questions ranging from project background, funding, realized benefits, to annual attendance. Readers of this report can learn from these comparable park insights to better tune whitewater park plans and operations. Below lists a series of interview questions and an overview of combined responses.

Table 10. Comparable Park Interviewees

City	State	River	Fee	Year Constructed	# of Features	Length of Run (in Feet)	Average CFS	Notes
Charles City	IA	Cedar River	No	2017	3	1200	2000	Solid park
Elkader	IA	Turkey River	No	2013	1	0	1500	Single Feature
Manchester	IA	Maquoketa River	No	2014	6	1000	400	Solid Park
Wausau	WI	Wisconsin River	Yes	1972	10	1862	650	Slalom Focus
South Bend	IN	St. Joseph River	Yes	1970	8	1900	400	Raft Focus

Source: American Whitewater Association National Whitewater Inventory

Who instigated the project?

Long time city or river management employees pitched these river improvement projects throughout the late 80s and 90s. It took many cities and towns a while to accept the idea of building artificial whitewater courses on existing rivers. These projects began to increase in popularity in the early 2000’s. The three Iowa whitewater projects (Manchester, Elkader, and Charles City) were completed from the years 2010-2018.

What major challenges did you encounter with environmental, zoning or funding?

Some history conservationists disagree with the removal of the low head dams. A Few miscellaneous complaints arose from citizens in cities that issued bonds to fund their whitewater project. The key success element to getting these projects done was a close collaborative relationship with the project instigators, city, and river management groups.

Who designed the park?

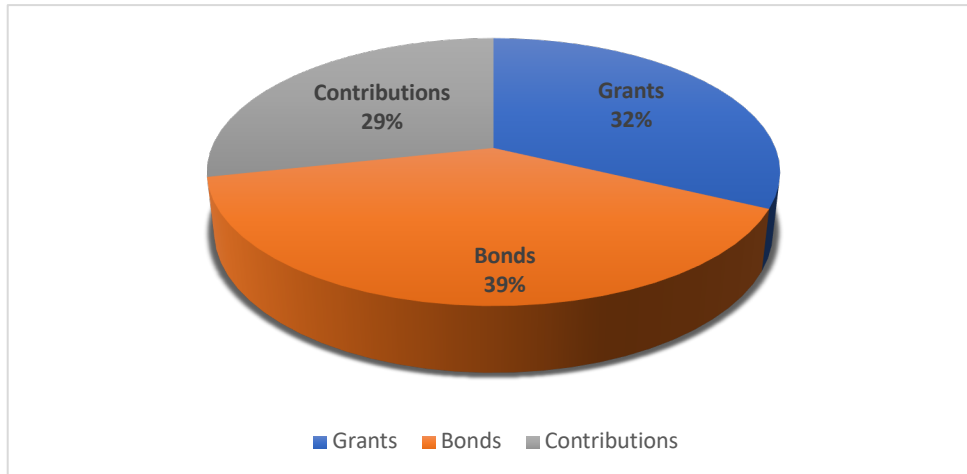
2 of the 4 participants interviewed hired specialty whitewater park engineering groups to design and manage park construction including REP & S20. Wausau and Elkader utilized local engineering groups to design and oversee whitewater park construction and improvements.

What private, city, state, federal assistance did you receive? What was the proportion of each?

Cities used a variety of fundraising methods to cover construction related expenses ranging from \$500,000 to \$5 million throughout the Wisconsin & Iowa parks interviewed. Most kayak park construction costs were funded using a mixture of contributions, grants, and bonds. Some cities chose to issue bonds while others steered clear of issuing any debt. A few common sources of contributions include money from the DNR, state issued tourism grants, low head dam removal grants, and city revitalization grants. 2 of the 4 participants interviewed received regular in-kind services from local contractor and professional businesses to help keep things operational.

⁴ South Bend’s whitewater park is referred to as East Race and Charles City was unable to interview.

Figure 19. The Manchester City Whitewater Park Fund Raised \$2.08 million to fund construction



Source: Whitewater Fact and Info Sheet, Delaware County received by Doug Foley,

Who maintains the park now and who funds ongoing maintenance? Costs associated?

City departments typically cover facility, marketing, and capex related responsibilities. Think about what it takes to upkeep a small city park; a whitewater park will require similar levels of maintenance.

Construction and annual expense budget?

4/4 of those interviewed spent more than anticipated from meeting breakeven to running 30% overbudget. In terms of annual operational expenses prepare to spend 5-10k/year on repair, upkeep, maintenance, and capex related expenses and another 5-10k/year on marketing, events, and PR. Many whitewater parks are heavily backed by local business who provide in-kind services. City park services—prepare to take on a responsibility similar to the upkeep involved associated with a small city park as mentioned above.

New economic activity?

Typically, new economic activity tends to arrive at or around whitewater park sites. Restaurant and drink places, park facilities, rental shops, and luxury real-estate builders tend to be attracted to lots or existing business near whitewater parks. Manchester City, with a population of 4,900, claimed that new businesses arrived including a new brewery opened across the street, a new deli and bar opened, food trucks always park nearby, and a few popups have set up. The whitewater park sparked the downtown rehabilitation and gas station and hotels have seen increased sales. South Bend, IN claims that they celebrated 79 million worth of economic development on the 30th anniversary of the park's construction.

Do you host any events?

Hot days attract more paddle participants. Ongoing annual events bring in around 500-1000 visitors in a given day. A few events and festivals that are hosted include cardboard boat races, slalom races, and wave jams.

Programming & organization utilization.

Miscellaneous city, club, business, and safety related programs that have visited the interviewed whitewater parks include the Boy Scouts, Veteran training programs, coaching/group lessons, American Red Cross, water safety training groups, and university organizations.

What category of paddlers use it most (SUP/Tubers/Kayakers)?

Float participation type tends to reflect the design and purpose of the whitewater park. Turkey creek may experience more tubers than Kayakers while Tailrace is geared to attract experienced whitewater and slalom kayakers. Manchester City had a rough guess in participation mentioning that 60% were tubers and the remaining 40% was composed of paddlers.

How many users do you get per year? Was this more or less than expected?

On a busy we generally expect to see around 250 people per day- Manchester 2000-4000 paddlers per season. In general, for every paddler there are 1-2 people watching alongside the banks. This park only has 30 operational days per season since it is a diversion channel of a hydro dam. – Wausau

Around 6-8k per year (East Race charges for entry) and 18,000 people showed up during the first year of operations - South Bend

Table 11. East Race Waterway Annual Attendance Since 2009 (South Bend, IN)

Year	Rafting and Kayak Attendance	River Rescue Schools	Concert Attendance
2009	6,124	3	7,900
2010	7,449	2	3,710
2011	5,157	2	3,700
2012	6,377	2	3,970
2013	6,314	7	4,595
2014	5,803	6	5,090
2015	7,450	3	3,920
2016	5,700	5	5,975
2017	6,968	4	2,700
2018	8,647	6	-
2019	8,349	7	-

Source: City of South Bend Venues Parks & Arts received by Cynthia Fish,

Do you attract many out of state visitors? (local vs out of state)

Midwestern whitewater parks tend to attract people from neighboring states. One Iowa group reported having an even stream of out of state visitors. 50% were from out of county/state and the remaining 50% of participants were from the same or nearby county.

What unforeseen problems or costs has this whitewater park brought to the city? River parks with higher flows (above 400) tend to worry more about safety than parks below this threshold. Locals encourage and promote the use of lifejackets. The Elkader whitewater park had a rock move downstream and its positioning messed with the side of their single wide draw feature.

What advice would you give anyone beginning a project such as yours?

Work closely with your community, take advantage of local services and natural resource offerings. Build the river features strong and right the first time. Get people on your side, the big sale to make to people is a long term commitment, speak on the environmental side of things we are adding a very unique piece of recreation that nobody else has; it's a big differentiator. It's not an overnight benefit, it keeps the community vibrant, ask yourself what do we have to offer. What's going to be the hanging card on the wall. – Manchester, IA

I would say don't try to cheap out—that is what I feel we did. We have 1 or 2 (depending on how you view it) drops—and the main feature is more for playboaters to develop their skills. People were expecting it to be like Manchester's—were anyone basically could float through it. It's hard to tell people, “Well, it probably isn't that great for families.” So, I think a lot of locals are disappointed by this—that we can't really hold events (except for specialized ones) and there is only one drop. We said would we come back and add drops later, but there is no way we can do that now—not with the problems we have had with this one drop, and with the negativity from the locals over the construction. – Elkader, IA

Financially what you bring to the town is great including the quality of life that it brings to the town. More people become drawn to the area. Every night there are at least 6-10 people hanging around. It's for the health of the city and its people. If you don't have an area that's enjoyable people won't be as excited to visit or spend time there. – Wausau, WI

Whitewater Park User Day Estimates

The user day estimates are based on regional market populations, visitor numbers, and average outing frequencies. Three estimates are provided: a total market and a high/low rate of market capture. The **participation rate** is the percentage of population in a selected region that currently participates in a whitewater park related activity. **Outing Frequency** is the average number of times a participant participates in the given activity per year. We will use the term **paddler**, this will be defined as one who participates in either canoe, kayak, raft, or stand up paddle activities (RPI 2018). User day estimates were based on marginal populations of drive time to avoid a double count. These low user day estimates found in Table 12 were applied to calculate spending categories used inputs for to generate the economic impact. Listed below are assumptions used to form the foundation for our counts:

- The Kearney whitewater park will primarily appeal to whitewater kayakers, standup paddle boarders, and tubers. Canoe, raft, and tubing populations will not be considered. The current proposal for the park is Class II play features.⁵
- Market Capture: The total market represents the total number of user days in the market area. The low market capture represents a conservative baseline estimate of potential attendance. The high market capture rate represents a ceiling or upper target for paddler participation.
- Options for paddling remain the same with an increase in distance but paddler capacity and willingness to travel long distances decrease as distance increases therefore participation rates in outer market regions will be lower.
- Insights from comparable Midwest whitewater park interviews. We asked many questions about participation rates to make certain our estimates are within reasonable range.
- Regional market analysis does not go beyond a three-hour drive time radius, but the visitor populations considered will extend past these parameters.
- Visitors will often stay overnight in the city, but this conservative estimated assumes they will only spend one day at the Kearney Whitewater Park.
- A capture rate of 1 assumes that one day of the participant's annual outings will take place at the proposed river run. A capture rate of 0.3 assumes that 3 days per 10 participants will occur at the river run.

⁵ All whitewater rapids are rated on a scale of I to VI. The rapids receive ratings based on a combination of difficulty and danger (I is easy while VI is difficult)

Whitewater Park Participation Activity

The proposed Turkey Creek Whitewater Park is expected to attract between 7,900 and 11,500 paddle participants per year. The estimates show that areas located in the two to three-hour drive time range has considerably large populations (home to Lincoln and Omaha). Based on attendance patterns of other whitewater parks, it is likely that the Kearney Whitewater Park will experience the low market capture rate in early operational years until the facility becomes more widely recognized. Meeting the high target rate would require intense levels of target marketing and additional draw catalysts such as hosting large annual events may help increase the overall number of annual visitors. The low capture rate is still substantial considering the small population of Central Nebraska. The City of Kearney attracts an estimated 564,801 overnight visitors annually (Visit Nebraska Lodging Tax Collections and UNK Hotel Taxes Visitor Estimate, 2019). The whitewater park could add an exciting and attractive new experience to visitors to the area and can add to the overall annual visitor count, therefore improving Kearney’s tourism economy.

Table 12. Summary of Whitewater Park Market Capture Days Estimates

Activity	Total Market User Days	Low Market Capture User Days	High Market Capture User Days
WW Kayaking	84,577	4,802	6,960
Recreational Kayaking	130,641	1,518	2,199
SUP	110,305	1,656	2,399
Total	325,524	7,976	11,559
	Total Market User Days	Low Market Capture User Days	High Market Capture User Days
Kearney	574	654	948
1 Hour Drive Radius	3,248	1,506	2,182
1-2 Hour Drive Radius	9,390	1,854	2,687
2-3 Hour Drive Radius	30,178	3,002	4,351
Visitors	9,602	960	1,392
Total	52,992	7,976	11,559

Whitewater Park Detailed Calculations

Kearney is located in the West North Central Region of the United States, which includes the states of Kansas, Missouri, Nebraska, Iowa, South Dakota, Minnesota, and North Dakota. The Midwest region is home to 1.1 whitewater kayak enthusiast for every 200 people. Between whitewater kayaking, recreational kayaking, and standup paddle boarding there were a considerable difference in amount of use. The user with the highest utilization of the whitewater park is likely to be the whitewater kayak group, recreational kayakers, and tubers (which wasn’t considered). We used the Midwest participation rates to arrive at total visitors.

Table 13. Paddle Sport Participation Rates from Midwest and National Radius

Activity	Midwest Participation Rate (2018)	National Participation Rate (2018)
Kayaking (Rec)	0.55%	3.4%
Kayaking (WW)	0.55%	0.8%
Kayaking (Sea)	0.50%	0.9%
Canoeing	1.00%	2.8%
Rafting	0.50%	1.0%
SUP	0.60%	1.1%
SUM	3.70%	10.00%

Source: OIA, Special Report on Paddle Sports & Safety 2019

Figure 20. Estimated Visitors by Paddle Type and Detailed Calculations

Whitewater Kayak User Day Calculations									
Geography	Marginal Population	WW Kayak Participation Rate	Total Potential Participants	Annual Outings	Total Potential User Days	Low Capture Rate Days	Low Capture User Days	High Capture Rate Days	High Capture User Days
Kearney	33,761	0.55%	186	7.50	1,393	3.00	557	4.35	807
1 Hour Drive Radius	168,196	0.55%	925	7.50	6,938	1.00	925	1.45	1,341
1-2 Hour Drive Radius	415,755	0.55%	2,287	7.50	17,150	0.50	1,143	0.72	1,657
2-3 Hour Drive Radius	1,357,337	0.55%	7,465	7.50	55,990	0.25	1,866	0.36	2,705
Visitors	564,801	0.55%	3,106	1.00	3,106	0.10	311	0.14	450
Total	2,539,850		13,969		84,577		4,802		6,960
Recreational Kayak User Day Calculations									
Geography	Marginal Population	Recreational Kayak Participation Rate	Total Potential Participants	Annual Outings	Total Potential User Days	Low Capture Rate Days	Low Capture User Days	High Capture Rate Days	High Capture User Days
Kearney	33,761	0.55%	186	7.00	1,300	0.25	46	0.36	67
1 Hour Drive Radius	201,957	0.55%	1,111	7.00	7,775	0.25	278	0.36	402
1-2 Hour Drive Radius	617,712	0.55%	3,397	7.00	23,782	0.10	340	0.14	492
2-3 Hour Drive Radius	1,975,049	0.55%	10,863	7.00	76,039	0.05	543	0.07	787
Visitors	564,801	0.55%	3,106	7.00	21,745	0.10	311	0.14	450
Total	3,393,280		18,663		130,641		1,518		2,199
SUP User Day Calculations									
Geography	Marginal Population	SUP Kayak Participation Rate	Total Potential Participants	Annual Outings	Total Potential User Days	Low Capture Rate Days	Low Capture User Days	High Capture Rate Days	High Capture User Days
Kearney	33,761	0.6%	203	6.30	1,276	0.25	51	0.36	73
1 Hour Drive Radius	201,957	0.6%	1,212	6.30	7,634	0.25	303	0.36	439
1-2 Hour Drive Radius	617,712	0.6%	3,706	6.30	23,350	0.10	371	0.14	537
2-3 Hour Drive Radius	1,975,049	0.6%	11,850	6.30	74,657	0.05	593	0.07	859
Visitors	564,801	0.6%	3,389	1.00	3,389	0.10	339	0.14	491
Total	3,393,280		20,360		110,305		1,656		2,399

Source: Our Estimate Utilizing RPI 2016 Methodology

Greater Market Capture Variables

The proposed whitewater park is likely to attract a wider array of visitors than just kayakers. We expect other groups to utilize the park including college populations, special training groups, tubers, photographers, and other sportsman.

College and University Populations

Within 100 miles of Kearney, there are 9 primary colleges and universities. These higher education institutions may provide additional whitewater park user groups. College students are typically young and active and often seek adventurous, off-campus activities. They are considered an ideal market because they may be converted into a whitewater user in the future. College graduates may land higher paying jobs, continue to participate in whitewater related activities, and pass down the activity to their kids and future generations.

Table 14. Colleges Within 100 Miles of Kearney

College	Latest Enrollment Release	Location	Distance from Kearney (In Miles)
UNK	6,327	Kearney	0
CCC Kearney	728	Kearney	3
CCC Holdrege	22	Holdrege	30
CCC Lexington	117	Lexington	39
Hastings College	1,080	Hastings	44
CCC GI	2,416	Grand Island	45
CCC Hastings	2,033	Hastings	52
York College	440	York	85
Mid Plains CC	2,216	North Platte	86

Source: UNK Fact Book, US News, CCC Admissions Department Telephone Call Spring 2020

Corporate Events / Safety Training

Many whitewater parks across the country enjoy hosting different training related events including the Swiftwater rescue training program. Potential groups that may have interest in hosting training sessions at the river site include the Swift Water Rescue Program, Nebraska Safety Council, Nebraska National Guard, Red Cross, YMCA, and the UNK Kinesiology and Sport Science Department.

Regional Whitewater Parks

As of today, Kearney is on track to be the second city to adopt a whitewater park within the State of Nebraska. The City of Norfolk located in Northeast Nebraska (149 miles away from Kearney) is currently in the planning stages of a whitewater park facility along an offshoot of the Elkhorn River. In April 2020, \$1.125 million dollars was donated through the Civic Community Center Financing Fund (CCFF) to help fund riverfront improvements. Construction is anticipated to begin Fall of 2021 (City of Norfolk 2020). Sioux Falls, South Dakota has is also considering a river revitalization project on the Big Sioux River running through the Northside of town, these efforts are still in the process of gaining traction (Sioux Empire Paddlers).

Figure 21. Norfolk River Improvement Site



To further elaborate on surrounding whitewater parks, we created this table.

Table 15. Kayak Parks within 513-mile drive time radius of Kearney NE

Status	Distance from Kearney (Miles)	Town	River	# of features	Length of River Run	Avg Summer flows (mem-labor day)
Proposed S1	0	Kearney	Turkey Creek	2	800	150
Proposed S2	0	Kearney	Kearney Canal	4	938	225
Proposed	149	Norfolk	Elkhorn	2	1000	400
Iowa						
Complete	462	Charles City	Cedar River	3	1200	2000
Complete	513	Elkader	Turkey River	1	0	1500
Complete	488	Manchester	Maquoketa River	6	1000	400
Colorado						
Complete	367	Golden	Clear Creek	8	1320	400
Complete	338	Fort Collins	Poudre River	2	300	400
Complete	358	Denver	Platte River	10	300	Offshoot

Source: Figures Sourced from American Whitewater Association National Whitewater Inventory

Nebraska Water Trails and Float Industry

Nebraska is home to 5-8 paddle related outfitters; these are small businesses that provide unique floating experiences and tours on Nebraska rivers (Nebraska Whitewater Rafting). These tour outfitters are primary located along the Platte, Dismal, Niobrara, and Loup Rivers. Some notable Nebraska paddle routes include the scenic Dismal River or the Niobrara River Outlaw trail.⁶ The American Whitewater Association identifies only four Nebraska whitewater sites all under class III as seen below:

Table 16. Notable Nebraska Whitewater Spots & Class Rapid Class

Site	Class
Berry Bridge Creek	III
Dismal	II
Niobrara	I-II
Snake	III

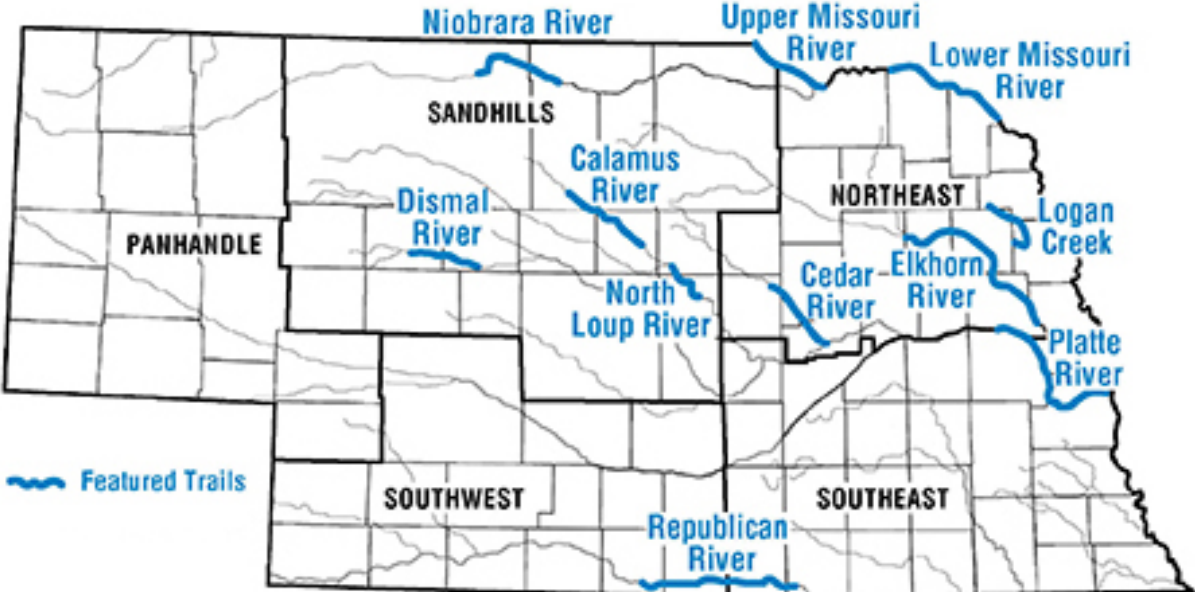
Source: American Whitewater Association National Whitewater Inventory

Source: Nebraska Whitewater Rafting River Details, Guides, & Rentals

⁶ Tanking is gaining popularity in Nebraska; this involves floating down a river in a cattle tank (a galvanized bin normally used to store water for livestock).

The following map identifies Nebraska’s most notable water trails.

Figure 22. Map of Nebraska’s Established Water Trails

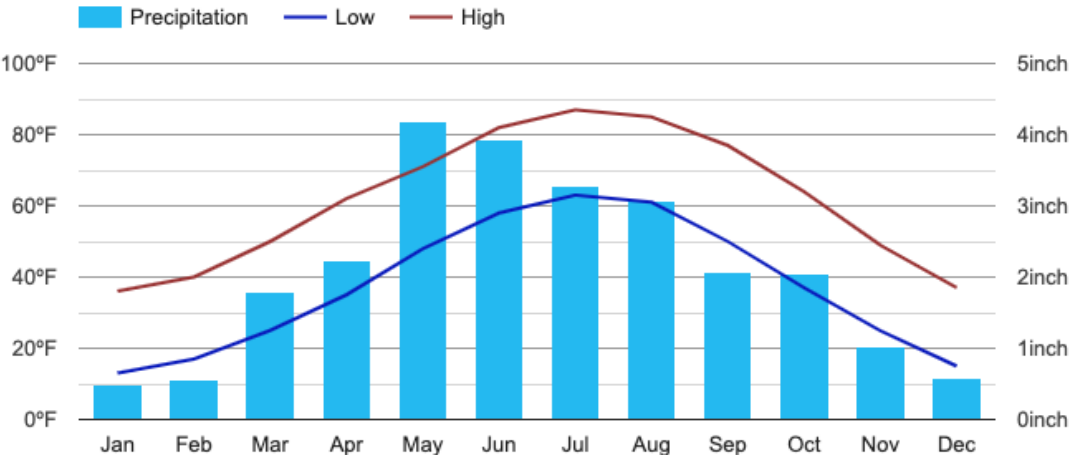


Source: Nebraska Game and Parks, Water Trails, 2020

Seasonality of Area Whitewater Activities

Kearney tends to have hot, humid summers with cold, breezy winters. Kearney could benefit from additional water amenities for its hot summers. Other close by publicly available water amenities include two city pools, UNK’s splash pad, and swimming beaches at Fort Kearney and Sandy Channel State Parks.

Figure 23. Average precipitation and temperatures in Kearney, NE



Source: US Climate Data, 2020

Seasonality of the Kearney Canal

Watersport participation strongly correlates with weather conditions—especially temperature. Periods of rapid precipitation or snowmelt can provide serious paddlers favorable conditions while dryer seasons can make certain water trails to be unpassable. The water flows of Kearney Canal and Turkey Creek are primarily dependent on water channeled from the Platte River 17 miles West of town near the town of Elm Creek. The Nebraska Public Power District (NPPD) owns and maintains the diversion channel and therefore controls the flow of the Kearney Canal. Seasonally speaking, the canal is open between the last frost and the first frost dates of the year (late April to late October). This course is designed to provide a novice whitewater experience during the average flows. Larger, surf-like features may be enjoyed during runoff events. Controllable waterflows are often preferred for whitewater courses.

Kearney Water Trail Hydrology & Overview

In 2016, the trail first opened thanks to an effort between KWA, NPPD, and the City. The water trail entrance is located at Yanney Park, the trail flows straight south for 2500 feet and joins the meandering Turkey creek flowing East bound which eventually meets the landing located on the East side of 2nd avenue. The total length of the water trail is 2.3 miles long (as the boat floats from Yanney to 2nd Ave). The Kearney Whitewater Association has played a major role in developing the water trail.

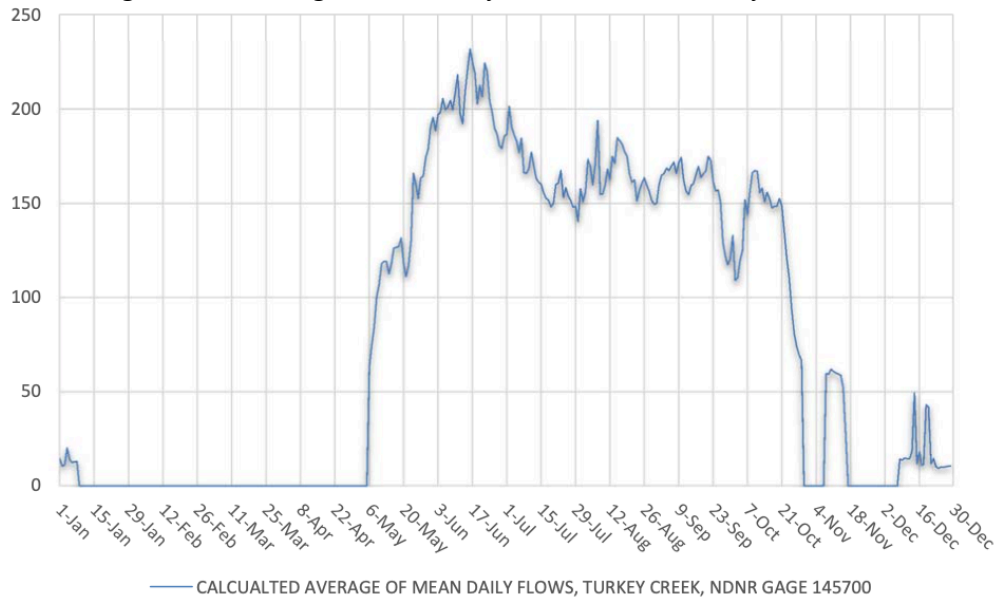
Figure 24. Kearney Water Trail Yanney Park Entrance and Map



Source: City of Kearney Parks and Recreation Department, 2016

The figure below shows a hydrograph describing the average mean daily flows at Turkey Creek with an average summer flow of 150-200 cubic feet per second (NEDNR Nebraska).

Figure 25. Average Mean Daily Flows at the Turkey Creek Site



Source: NDNR Gauge, S20 Site Visit, 2016

Part III: The City of Kearney and Interstate Study

The push westward by the pioneers, farmers, armed services, and Union Pacific Railroad gave birth to the city of Kearney community eventually incorporating in 1873. Kearney is the economic and tourism hub of Southwest Nebraska, where the mild, temperate climate begins to meet the semi-arid climate of the American West. Kearney is located alongside the Platte River and I-80. The town is accessible by both Kansas City and Denver both located within a five-hour drive. Some people think of Kearney as a “Midway City” given it is a geographical midway point from the Atlantic and Pacific Ocean. Kearney is also home to a monument familiar to many I-80 travelers called the archway and the University of Nebraska at Kearney (UNK). It is the fastest growing city in the western half of the State of Nebraska (Home Snacks 2020)

Summary of Findings

- Kearney is conveniently accessible by both Kansas City and Denver located within a five-hour drive. Some people think of Kearney as a “Midway City” given its a geographical midway point from the Atlantic and Pacific Ocean.
- The Kearney and Buffalo County economy is oriented around manufacturing, agriculture, distribution, education, healthcare, hospitality and tourism.
- Kearney is the fastest growing city in the western half of the State of Nebraska.
- Kearney’s biggest event draws include the biggest draws include the Sandhill Crane Migration, Kearney Cruise Night, Gateway Cattleman’s Classic, its numerous annual wrestling events, and State Speech Competition.
- Kearney is home to 17 city parks (577 acres of parkland) and has over 24 miles in paved exercise trails.
- Community leaders are looking for new ways to retain and attract talent. Some of the retention strategy includes investing in more affordable housing, arts, entertainment, recreation, education, job creation, mass transit, digital connectivity, diversity and inclusion, and cost of living.
- There has been a 22% increase in I-80 average daily traffic volume since 2009.
- On average, the I-80 stretch through Buffalo County welcomes 22,790 motor vehicles within a 24-hour basis.
- During a 12 hour Westbound I-80 traffic count, we observed 52 vehicles carrying 68 kayak related boats and 335 RV’s. I-80 is a popular route for recreational travelers plus Kearney is well positioned to be an attractive stopping point.
- Our analyses indicated that I-80 sees a minimum of 7,800-9,300 vehicles carrying kayak related boats per summer season from Labor Day to Memorial Day or a 106-day season (this excludes all kayaks transported inside vehicles and all other potential paddlers who rent).

City of Kearney Industry & Statistics

Industry & Employment Attributes of Buffalo County

The Kearney and Buffalo County economy is oriented around manufacturing, agriculture, distribution, education, healthcare, hospitality, and tourism. The cities location along Interstate 80 (I-80) near the geographical center of the United States make it favorable for logistic companies. The Platte River Valley has an abundance of water and fertile soil creating favorable conditions for grain and livestock farmers. Tables 17-18 identify key Kearney economic attributes in 2018.

Table 17. Top Employers in Kearney Area

Employer	# of Employees
University of Nebraska at Kearney	1000+
Good Samaritan Hospital	1000+
Kearney Regional Medical Center	1000+
Kearney Public Schools	750-1000
Baldwin Filters	750-1000
Kearney Public Schools	750-1000
Buckle	750-850
Walmart	500-750
Cash-Wa Distributing	250-500
City of Kearney	250-500

Source: Wikipedia Kearney, NE

Table 18. Kearney People & Housing Statistics

Population Estimate (2017)	33,082
H.S. Diploma or More - % of Adults 25+ (2017)	95.00%
Bachelor's Deg. or More - % of Adults 25+ (2017)	36.70%
Households (2017)	12,970
Total Housing Units (2017)	13,615
Percent of Total Units Vacant for Seasonal or Recreational Use (2017)	0.70%

Table 19. Kearney Employment & Income Statistics

Labor Force (persons working in the area) (2017)	19,788
Unemployment Rate (2017)	3.3
Median Household Income (2017)	\$51,494
Median Family Income (2017)	\$73,152
Poverty Rate (2017)	17.6
Mean Travel Time to Work (minutes) (2017)	12.5

Source: Data USA Kearney, NE

Regional Population Growth

As farms began to scale up over the years, rural residents began to move to larger regional cities. Kearney’s population grew at a mild rate over the last 10 years increasing at an average rate of 1% year over year (Data USA Kearney NE). The growth rate has begun to flatten after 2017 but is still mildly increasing. Community leaders are looking for new ways to retain and attract talent. Some of the strategy includes investing in more affordable housing, arts, entertainment, recreation, education, job creation, mass transit, digital connectivity, diversity and inclusion, and cost of living (Blueprint Nebraska Forum March 2020).

Table 20. Kearney Population Trends

Year	Population	+/-
2018	33,761	83
2017	33,678	270
2016	33,408	444
2015	32,964	376
2014	32,588	247
2013	32,341	292
2012	32,049	589
2011	31,460	466
2010	30,994	3,563
2000	27,431	3,035

Source: World Population Review Kearney NE 2020

Buffalo County Annual Events

Given Kearney’s geographic location near the center of Nebraska, it tends to attract big conferences and events to the area. The biggest draws include the Sandhill Crane Migration, Kearney Cruise Night, Gateway Cattleman’s Classic, its numerous annual wrestling events, State Speech & Cross-Country competitions. Kearney has held event contracts with the Nebraska State Athletic Association (NSAA) for many consecutive years. The following table lists Kearney’s largest annual events. These events may draw additional visitors to the whitewater park, or the whitewater park may recruit more people to attend the annual events hosted throughout Buffalo County.

Table 21. Annual Kearney Events from January to December

Month	Event
January	UNK Wrestling Tournament
	Storm Hockey Begins
February	Cattleman’s Classic
	Cornhole Tournament
	State Duals Wrestling
March	Husker land State Duels (Wrestling)
	Sand Hill Crain Migration Begins
	State Speech
April	Midwest Classic (Wrestling)
	Celebrate Kearney
	End of Sandhill Crane Migration
May	Night Market
	State Golf
	Weekly Weekend Farmers Market Begins
	Downtown Bricks Concert
	Outdoor Expo
	Indoor Auto Show
June	Shrine Bowl
	Masonic All-Star Marching Band
	Heritage Days
	Hereford Days
	Trails and Rails Half Marathon
July	Cruise Night
	Nostalgia Drag Race
	Buffalo County Fair
August	Nebraska Senior Games Qualifiers (biennial)
	Blue and Gold Ceremony
	UNK Fall Semester Begins
September	UNK Football Season Begins
	Storm Hockey
October	State Cross Country
	October Fest
November	Six Man Football
	Gateway Farm Expo
	Regional Volleyball Tournament
December	PBR Rodeo
	Lights at Yanney

Source: Telephone Conversation with Tourism & Convention Sales Manager Sarah Focke

Kearney Parks and Recreation

Kearney has an impressive array of park facilities that are diligently managed. Many residents and visitors are amazed by the quality and quantity of parks scattered across town. “Kearney is home to 17 city parks which contains 577 acres of parkland and has over 24 miles of paved exercise trails. With enjoyable amenities including 2 marinas, 4 splash pads, 2 public swimming pools, 3 city lakes, 15 playgrounds, 1 dog park, 28 athletic fields, 16 tennis courts and many other unique facilities, amusement for all ages is guaranteed” (LinkedIn - City of Kearney About).

The crossover activity section found in Figure 18 indicate that paddle participants enjoy spending time in the outdoors. Park related recreation may act as a secondary or filler activity that could be appreciated by the visiting paddling population. Kearney’s city park system offers additional activities that paddle participants may enjoy off the water. The proposed whitewater park is a very unique and attention-grabbing facility that will greatly strengthen the already very strong reputation of Kearney Parks.

Local Attractions

Beyond the city parks, Kearney is home to 6+ official museums and has multiple other additional amenities that visiting paddlers may enjoy, including several state recreational areas scattered along the Platte River, countless shopping/food/bar venues, camping, and Kearney programs weekly events throughout the year (but more frequently during summer months). The following table lists state and city funded attractions and their attendance.

Table 22. Buffalo County Tourist Attractions and Attendance

Name of Attraction	Total Attendance	% Attendance from Out of State	Summer Attendance (Mem-Labor Day)
Fort Kearney State Recreation Area	70,900	41%	
Kearney Area Children’s Museum	64,569	15%	19,805
Archway	53,081	70%	26,076
Fort Kearney State Historical Park	32,278	41%	
Crane River Theater	18,491	40%	15,570
Museum of Art	15,459	7%	5,497
Classic Car Collection	10,471	53%	4,458
Trails and Rails Museum	6,509	9%	2,416
NE Firefighters Museum	3,400	10%	1,600

Source: Visit Nebraska Attendance Attraction Counts 2018

Interstate 80 (I-80)

The Nebraska section of Interstate 80 (I-80) was completed in October of 1974. It follows many historic roads, trails, and landmarks including the Lincoln Highway, Oregon, Mormon, California Trail, Union Pacific Railway, and the Platte River. I-80 enabled efficient transportation from New York to San Francisco. The Nebraska Department of Transportation in cooperation with the Federal Highway Administration, operates a total of 64 traffic counters across Nebraska, 12 of these counters are positioned along I-80. The Nebraska Department of Transportation (NE DOT) records and publishes Nebraska traffic count data for the use of determining standard design, classification of highways, development of improvement and safety programs. The figures we are investigating result from the annual average daily traffic volume count captured on the East Kearney Exchange during 2019. A higher I-80 traffic volume may increase the number of in-town visitors. Since 2009, there has been a 22% increase in average daily traffic additionally, the I-80 stretch through Buffalo County welcomes 22,790 motor vehicles on a 24-hour basis (NE DOT 2019).

Table 23. I-80 Traffic Count at East Kearney Exchange

Year	Drive Count
2009	17,700
2010	18,614
2011	18,042
2012	17,716
2013	18,099
2014	18,696
2015	20,673
2016	21,423
2017	22,521
2018	22,478
2019	22,790

Source: NE DOT Continuous Traffic Count Data, 2019

180 Kayak Count

On July 2nd, 2020, we conducted a traffic count looking for: 1) vehicles carrying kayaks (kayaks, canoes, rafts, stand up paddle boards, and river surfers), and 2) vehicles carrying recreational toys including (RVs, boats, toy haulers, bikes, campers, etc) and 3) Semi hauler brands (for fun). To remain within the scope of this report, we will only elaborate on kayak numbers. Observations were recorded at Mormon Island State Recreation area located South of Grand Island, Nebraska. Traffic data was collected from 6 A.M. through 6 P.M. for a total of 12 hours. The rationale behind this observational study was to pinpoint how many vehicles carry kayak related boats on I-80 daily and to provide future marketers with some I-80 recreational data for interstate related marketing (billboards and misc. advertisements at rest stops/convenience stores).

Findings:

- We counted kayaks at combined average rate of 6.2 kayak boats per hour
- The 12-hour day count on July 2nd noticed 52 vehicles carrying 68 boats for an observational day time rate of 5.7 boats per hour.
- A second, I-80 observational study on July 3rd was conducted on the Eastbound return to Omaha for a total travel time of 2 hours (Grand Island to Omaha I-80 & 370). During this travel period, we counted an additional 15 vehicles carrying 27 kayak related boats at a rate of 6.75 boats per hour. Since traveling in an opposite direction at the same rate as the Westbound traffic, it was necessary to use a multiple of 4 hours to arrive at the results.

Annual Kayak Traveler Estimates (Based on Counts)

Based on the counts above, we made some models to estimate the number of kayak travelers per summer season. Note to marketers, this excludes people who are carrying inflatable flotation devices and all enthusiasts who rent and pay for guided tours. Our estimates are conservative and should be considered a low range since it does not capture 100% of I-80s traveling paddlers. To avoid a double count, we only considered new travel traffic and did not take return home trips into consideration. Numbers are based on the quantity of kayaks observed, for every kayak seen there must be one or more participants. The appendix expands upon this methodology and shows how we broke down weekday and Eastbound estimates.

The season we are working with includes days in between Memorial Day (5/25) & Labor Day (9/7). This time frame includes 32 weekend days and 74 weekdays (Mon-Friday). We estimate that there are between 8,500-9,300 paddlers hauling kayaks per summer season which excludes paddlers with inflatable equipment, those who will participate in guided tours, those who rent, and those traveling before Memorial Day or post Labor Day.

Table 24. I-80 Kayak Traveler Estimates

	Low	Mid	High
Weekend Day	97	104	111
Weekday	64	71	78
Total Summer	7,845	8,587	9,329

The following table classifies how many new kayaks pass by per hour (K/Hr.) and per 6-hour (6 Hr.) basis. Weekends see an estimated 111 kayaks per day while the weekdays welcome 78 kayaks per day (this includes both West and East bound counts)

Table 25. Methodology Summary of I-80 Kayak Traveler Estimate

West Bound		East Bound		
		6		
Weekend	K/Hr.	6 Hr.	K/Hr.	Hr.
6am-12pm	5.0	30	1.5	9
12pm-6pm	5.0	30	1.5	9
6pm-12am	3.5	21	1.1	6
12am-6pm	0.8	5	0.2	1
Totals		86		26
Weekday				
6am-12pm	3.5	21	1.1	6
12pm-6pm	3.5	21	1.1	6
6pm-12am	2.5	15	0.7	4
12am-6pm	0.5	3	0.2	1
Totals		60		18

Part IV – Economic Impact Analysis

Developing a whitewater park in Kearney will produce lasting benefits for Kearney and the greater area. Regional residential spending and visitor traffic will drive the impacts that this section measures. This report examines both the economic impact of developing a whitewater park and explains its role as a regional visitor destination. The whitewater park could increase the novelty of Kearney’s offerings and can add to the overall diversity of its economy.

Summary of Findings

- The Nebraska travel industry generated \$4.9 billion in travel expenditures, was responsible for 49,360 full time job equivalents, and generated \$732 million in tax revenues by domestic and international travelers.
- The proposed whitewater park is expected to attract between 7,900 and 11,500 paddle enthusiasts annually.
- 55% of whitewater park visitors stayed overnight while the remaining 45% were non county resident day trippers.
- The proposed whitewater park is projected to create over \$1 million in new economic activity on an annual basis. Thirteen new jobs are expected to be created supporting \$320,000 in labor income.
- The construction associated with the river improvements is expected to cost \$430,000 (or \$500,000 accounting for overhead). The construction will generate \$600,000 in economic activity and will create a one-time equivalent of 4 full time jobs receiving over \$200,000 in wages.

Recreation Economy in Nebraska

The Nebraska travel industry generated \$4.9 billion in annual travel expenditures, was responsible for 49,360 full time job equivalents, and generated \$732 million in tax revenues by domestic and international travelers (OIA Nebraska Outdoor Recreation Economy Report 2017). The proposed Kearney Whitewater Park would add to the state’s recreation economy and could be showcased throughout Nebraska tourism marketing materials. Some of Nebraska’s most notable tourism draws include Omaha’s Henry Doorly Zoo and Aquarium, Berkshire Hathaway Meeting, College World Series, Nebraska football games, the Sandhill Crane Migration, Nebraska’s award winning sandhill golf courses, and Lake McConaughy.

Figure 26. Nebraska Recreation Industry Highlights



Source: OIA Nebraska Outdoor Recreation Economy Report 2017

Impacted Industries

The greatest impacts of the proposed Kearney Whitewater Park will be realized within the hospitality, food, and the retail sector. Also, new kayak-related business opportunities may arise, and new businesses may find Kearney to be an attractive place to call home.

Comparable Whitewater Park Economic Impacts

Most whitewater parks across the country have experienced an increase in economic activity within areas surrounding whitewater parks. When examining these sites on a map, one will notice the improvements made to lands adjacent to these river parks. Table 26 lists consistently positive results surrounding these types of developments. The average economic impact per whitewater visitor from this chart is \$119 (excluding the outlier Durango at \$486 per visitor). Our estimates indicate that Kearney Whitewater Park visitors will generate an impact of \$127 per person or \$8 above the average.

Table 26. Comparable Whitewater Park Economic Impacts

City	River	Annual Users	Economic Impact	Impact Per Visitor
Golden, CO	Clear Creek	14,000	2,200,000	\$ 157
Durango, CO	Animas River	37,000	18,000,000	\$ 486
Saratoga, N.Y.	Sacandaga River	25,000	3,700,000	\$ 148
Kent, Ohio	Cuyahoga River	40,000	1,700,000	\$ 43
Steamboat Springs, CO	Yampa River	75,000	7,200,000	\$ 96
Levy County, FL	Withlacoochee River	64,700	9,300,000	\$ 144
Kearney, NE	Turkey Creek	7,900	1,000,000	\$ 127

Source: PRB - The Rise of Urban Whitewater, Shipley 2020

Economic Impact

An economic impact is a calculation based on visitor quantity and visitor spending. The following four tables list the different figures used to generate the economic impact results found in Table 31. Figure 20 estimates the number of whitewater park user days between 7,976 and 11,500, resulting in the low range visitation estimate of 7,976 during the first operating years. As the proposed park becomes more widely recognized by Nebraska residents and travelers, the number of annual visiting participants is likely to gradually climb to the upper range of 11,500.

Simply stated, the formula needed to arrive at the input for estimating the economic impact is:

Number of Visitors * Spending Per Visitor = Total Spending (divided amongst 5 Industries)

This total spending result is imputed into IMPLAN software⁷ which applies economic multipliers by industry to estimate the overall economic impact. The following tables summarize the relevant information needed for the estimation. First, Table 27 shows the estimated visitor counts.

⁷ IMPLAN is widely utilized for economic impact analysis by federal government agencies, state and local governments, universities, and private businesses. IMPLAN modifies the U.S. Input-Output Accounts for local economies based on detailed economic data for counties, or combinations of counties, to produce a local Social Accounting Matrix.

Table 27. Turkey Creek Whitewater Park Annual Participant Count

Activity	Total Market User Days	Low Market Capture User Days	High Market Capture User Days
WW Kayaking	84,577	4,802	6,960
Recreational Kayaking	130,641	1,518	2,199
SUP	110,305	1,656	2,399
Total	325,524	7,976	11,559
	Total Market User Days	Low Market Capture User Days	High Market Capture User Days
Kearney	574	654	948
1 Hour Drive Radius	3,248	1,506	2,182
1-2 Hour Drive Radius	9,390	1,854	2,687
2-3 Hour Drive Radius	30,178	3,002	4,351
Visitors	9,602	960	1,392
Total	52,992	7,976	11,559

All visitors were assigned into three spending categories including overnight hotel, overnight camping, and day trippers where each category has different spending amounts. For example, overnight hotel visitors are anticipated to spend an average of \$161 per day per visitor. This higher amount is due to the cost associated with hotel lodging and staying longer durations on average. At the other end of the spending spectrum, we have day trippers who are non-Buffalo County visitors that are enjoying the park for a single day or afternoon spending a majority of their \$60 on gasoline and at food/drink places.⁸ All spending amounts (\$161 for overnight, \$88 for campers, and \$60 for day trippers) were weighted based on HVS’ Economic Impact Analysis of the St. Charles Illinois Active River Project completed in April 2019. Also, the University of Idaho Extension Study conducted a survey of whitewater participants at two Idaho whitewater parks and found that 25% of whitewater visitors stayed overnight in a hotel, 20% preferred to camp, and the remaining 55% were single day trippers (Braak, W. 2012. Economic Impact of Kelly’s Whitewater Park in Cascade, Idaho. University of Idaho Extension). We rely on these previous studies’ findings when estimating our visitor counts.

Table 28. Visitor Spending Breakdown

	Hotel	Campers	Day Trippers
Visitors	1,994	1,595	4,387
Dollars Spent Per Visitor	\$161	\$88	\$60

⁸ Spending breakdowns by visitor type can be located in the Appendix

Total visitor spending was divided into five common industries that travelers tend to spend their money on such as hotels, food, entertainment, etc. To arrive at total low and high spending we multiplied total visitors by total dollars spent per visitor. The three visitor types in Table 28 had different spending amounts for different categories; therefore, what you see in Table 29 is the sum of all visitor types and spending amounts. The low spending estimates includes the exact figures that were entered into IMPLAN to generate the economic impact.

Table 29. Estimated Total Direct Spending from Whitewater Park

Category	Low Spending	High Spending
Hotel/Lodging	\$121,263	\$175,744
Food and drinks	\$223,524	\$323,956
Gasoline/Fuel	\$130,284	\$188,822
Shopping	\$130,503	\$189,135
Entertainment	\$258,842	\$375,135
Total	\$864,416	\$1,252,793

Table 30 illustrates whitewater visitor behavior in terms of lodging and duration of stay preferences. The reasons for staying or leaving was weighted based on the survey conducted by the University of Idaho Extension. The stay preferences are listed to show paddlers' motive to stop at whitewater parks. Only 21% stopped by because they were already in the area, 54% visited because the whitewater park was one of several things they wanted to see while in the area, and 25% of the visitors stopped because it was their primary trip motive. Reasons for visiting were not considered for the economic impact calculation but it does provide additional information on paddler motives. We anticipate that Kearney whitewater visitors will have similar reasons for visit.

Table 30. Whitewater Park Visitation Figures

Estimated Paddle Visitors	7,976
% Overnight Visitors	45%
% Day-trippers	55%
Weighted Avg Length of Stay	1.3
Principal reason (%)	25%
One of several reasons (%)	54%
Already in Area (%)	21%

Source: Braak, W. 2012. Economic Impact of Kelly's Whitewater Park in Cascade, Idaho

Economic Impact Results

The Proposed Turkey Creek Whitewater Site is anticipated to generate a total of \$1 million in new economic activity on an annual basis creating 13 year-round full-time jobs providing \$320,000 in labor income. To better grasp these economic impact concepts, Table 29 shows total visitor spending is estimated to be \$864,000; however, this spending amount does not entirely stay in Kearney because some money leaks out due to how the supply chain functions and out of county spending. The Direct Impact of \$620,000 is the total estimated spending that actually stays in Kearney. The Multiplier Impact of \$380,000 takes into consideration how the \$620,000 in Direct Impact will cycle and switch hands throughout the local economy. Adding the Direct Impact plus the Multiplier Impact gives us an overall economic impact of \$1 million that will flow through the local Kearney economy year after year. The Direct Economic Impact created 10 jobs; 3 more jobs were a result of the multiplier. A total of 13 new jobs or \$320,000 in labor income will be created.

Table 31. Economic Impact Results (in #000’s Except for Employment)

Impact Category	Direct Impact	Multiplier Impact	Total Impact
Visitor Spending			
Output (\$millions)	\$0.62	\$0.38	\$1.00
Labor Income (\$millions)	\$0.21	\$0.11	\$0.32
Employment	10	3	13

Source: IMPLAN

Construction Impact

IMPLAN has multipliers for over 536 different industries within an 11-industry sector basket (also seen within the S&P 500). We split S20’s conceptual cost estimates into two construction related industries including Engineering & Architecture at 21% and Construction and Building Materials at 79%. The construction associated with the river improvements is expected to cost \$430,000⁹. The construction will generate \$600,000 in economic activity and will create four full time jobs receiving over \$200,000 in wages throughout the duration of the construction project (estimated one to two years to complete construction).

Table 32. Turkey Creek Construction Economic Impact

Impact Category	Direct Impact	Multiplier Impact	Total Impact
Output (\$millions)	\$0.40	\$0.20	\$0.60
Labor Income (\$millions)	\$0.10	\$0.10	\$0.20
Employment	3	1	4

Source: IMPLAN

⁹ Construction estimates have changed since the date of entering the above cost of \$430,000. The updated construction cost estimate is \$647,000 which includes all related construction costs from design, admin, permitting, materials, labor, and an estimated contingency of 20%

Table 33. Turkey Creek Conceptual Cost Estimates

Project: Kearney Whitewater Park				
Issue Date: 11/4/2015				
Developed By: JR				
Turkey Creek: Estimated Design and Construction Costs				
Description	Quantity	Unit	Unit Cost	Item Total Cost
Site Setup				
Install & Maintain Best Management Practices	1.0	LS	\$ 5,000.00	\$ 5,000.00
Circulation Paths & Access Steps				
Excavate & Grade Native Materials	378.9	cy	\$ 22.00	\$ 8,335.56
Furnish & Install Class 6 Road Base	255.8	Tons	\$ 35.00	\$ 8,951.25
Furnish & Install Crusher Fine Path	255.8	Tons	\$ 35.00	\$ 8,951.25
Furnish & Install Landscape Fabric	1136.7	SY	\$ 6.00	\$ 6,820.00
Furnish & Install Quarried Limestone Steps	27.5	Tons	\$ 300.00	\$ 8,250.00
Unclassified Hauloff	378.9	cy	\$ 20.00	\$ 7,577.78
In Stream River Structures				
Operate & Maintain Water Control	2.0	LS	\$ 15,000.00	\$ 30,000.00
Install Equipment Access Ramps & Roads	4.0	EA	\$ 1,500.00	\$ 6,000.00
Reclaim Equipment Access Ramps, Roads, & Staging Areas	4.0	EA	\$ 2,500.00	\$ 10,000.00
Furnish & Install Boulder (Avg 36" B Axis)	1000.1	Tons	\$ 85.00	\$ 85,011.30
Excavate & Grade Native Alluvium	770.6	CY	\$ 22.00	\$ 16,952.36
Furnish & Install Bedding Material	583.7	Tons	\$ 30.00	\$ 17,510.40
Furnish & Install Miraf 180n Filter Fabric	1351.1	SY	\$ 8.00	\$ 10,808.89
Furnish & Install Concrete Grout, Including Rebar, & Marine Epoxy	89.8	CY	\$ 272.00	\$ 24,434.39
Furnish & Install by Hand Washed Rock Veneer	160.2	Tons	\$ 120.00	\$ 19,228.97
Unclassified Hauloff	770.6	CY	\$ 20.00	\$ 15,411.24
				\$ -
Additional Included Items				
Additional Excavator Time as directed by S2o	40	HR	\$ 220.00	\$ 8,800.00
PROJECT SUBTOTAL				
				\$ 298,043.38
Contingency (15%)				
				\$ 44,706.51
CONSTRUCTION SUBTOTAL				
				\$ 342,749.89
Bathymetric/Topographic Survey				\$ 3,427.50
Engineering Design				\$ 20,564.99
Hydraulic Modeling				\$ 3,427.50
Permitting 404, 401				\$ 6,855.00
Permitting Floodplain				\$ 6,855.00
Construction Bonding/Ins				\$ 10,282.50
Mob and Demob				\$ 10,282.50
Construction Stakeout				\$ 1,713.75
Construction Monitoring				\$ 27,419.99
TOTAL PROJECT COST OPINION				
				\$ 433,578.6

Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

Fiscal Impacts

The fiscal section further identifies new tax revenues that are brought about from the whitewater parks economic impacts. This new tax revenue is derived from visitor spending, new payrolls, and property valuation increases. These tax revenue estimates identify where dollars originate from and who benefits from them. Methodology and detailed calculations can be found in the appendix.

Turkey Creek Fiscal Findings:

- Visitors: 7,976
- Spending Per Visitor: \$108
- Impact Per Visitor: \$125
- Average Spending Tax Collections Per Visitor (less payroll & property tax): \$8.50
- Payroll Tax Collections: \$51,200
- Property Tax Collections: \$42,400
- Total New Tax Collected: \$161,000

Table 34 lists the beneficiaries of the new tax collections. For example, the City and County of Kearney and Buffalo County will receive an estimated \$60,000 which is the sum of all occupation, city sales, lodging, and property tax. Other beneficiary groups such as the State of Nebraska and the Federal Government benefited from other tax levy’s including state sales, fuel, excise, and payroll taxes.¹⁰

Table 34. Beneficiaries of New Tax Collections

Beneficiary	% Share	DV
City & County	37%	\$60,062
State	39%	\$62,294
US Government	24%	\$38,785
SUM	100%	\$161,141

Table 35 lays out the total annual tax revenues by levy type. For example, Nebraska’s State sales tax is 5.5% in 2020, this 5.5% generated a total of \$37,943 in state sales tax revenues. Most levies were sensitive to a spending or impact category such that lodging tax can only be paired with lodging spending and property taxes were sensitive to assessed property values surrounding the specific proposed site. The Proposed Turkey Creek Whitewater Site is expected to generate up to \$161,000 in annual tax revenues that will be shared by the beneficiaries in Table 34.

¹⁰ Construction impacts were not included within the fiscal collection estimates since it is not a reoccurring revenue

Table 35. New Tax Revenues by Levy Type

Levy Type	Turkey Creek
Sales (State)	\$ 37,943
Sales (City)	\$ 10,348
Fuel	\$ 10,814
Lodging	\$ 4,851
Occupation	\$ 2,425
Excise	\$ 1,122
Payroll	\$ 51,200
Property	\$ 42,438
Annual New Collections	\$ 161,141

Social and Other Effects

Other qualitative impacts are equally if not more important. The attractiveness of the community for residents, businesses, and students is of utmost importance to the vitality of Kearney. This park will be more than a regional whitewater attraction, but it may act as a development catalyst for the area. When a community invests in river restoration and recreation, it creates a ripple effect in the neighborhoods around it. New businesses open, the community builds a stronger sense of pride and identity, and the quality of life increases. The whitewater park would complement the larger community-wide environmental, recreational, economic efforts made by the city and may help build Kearney’s identity as a neat place to visit, work, and play.

- New businesses may be attracted to the area
- Expanded variety of things to do for locals
- An increase in park and recreation offerings leads to a more active community
- Attracts a greater diversity of residents and visitors
- May act as a catalyst for new real estate developments
- Creates good PR & marketing content for the City of Kearney
- Differentiates Kearney from other Midwestern cities
- Enhances the existing park and trail system
- Interesting family activity

Part V: Proposed Site II Tailrace on the Kearney Canal (University)

Background

The University of Nebraska at Kearney (UNK) was established in 1905 as the Nebraska State Normal School at Kearney. UNK’s campus is comprised of 49 buildings on a 514-acre parcel of land. Enrollment as of Fall 2019 was 6,279 students (UNK Fact Book). UNK has three colleges including the College of Arts & Sciences, Business & Technology, and Education. Theme colors are blue/gold and the school’s mascot is the Loper. The Kearney Canal flows directly through the center of campus. This site has the potential to become the first whitewater park to be constructed on a college campus in America and could add an exciting new draw for students, residents, and visitors. Part V will be divided into four sections including an Economic Impact, Campus Development, Canal/Land, and Marketing sections.

Figure 28. Aerial View Looking Northwest Across UNK’s East Campus. Notice the Spillway at the Top Left Corner of the Photo



Source: University of Nebraska at Kearney. (2018, May 12) UNK Ranked One of Best Colleges. www.Facebook.com/UNKearney

SECTION DISCLAIMER: KWA requested us to elaborate on the potential for the proposed Tailrace Site. Even though this site has the optimal hydrology and passes the feasibility test conducted by S20. It is less likely to be constructed due to liability and land ownership. Consider this section to be an “as if” scenario.

Summary of Findings

- According to a UNK economic Impact Study completed in 2009, UNK's campus attracts over 130,000 visitors annually. 62% are visitors of students, 20% are campus event attendees, and 16% are visitors of faculty and staff.
- The proposed Tailrace whitewater park is expected to attract between 12,700 and 16,700 paddle enthusiasts annually.
- As the proposed park becomes more widely recognized by Nebraska residents and travelers, it is likely that the annual number of visiting participants will climb to the higher range of visitors of 16,700.
- The proposed whitewater park is projected to create over \$1.12 million dollars in new economic activity on an annual basis. 14 new jobs are expected to be created supporting \$360k in labor income.
- The natural rock whitewater park design will cost an estimated \$1.3 million to construct which generates 1.9 million in total economic impact terms which creates an equivalent of 12 jobs paying an average annual salary of \$50k (for the duration of construction).
- Over the last 10 years, UNK and the Board of Regents approved 4 campus improvement projects including the Village Flats Residential Hall, STEM (Discovery Hall), UNMC, and the Early Childhood Education Center costing around \$74 million.
- In the late 90's and early 2000's, there was a group called the Spillway Committee who built two pedestrian bridges and a giant retaining wall to help beautify the canal on campus.
- As of Summer, 2020 there are two planned projects at the University Village development site including the Millennium multifamily housing project and the indoor Tennis Complex. These projects are expected to be completed Fall of 2021.
- The park offers 6 different features and is 938 feet long.
- We have identified 13 different student organizations and 10 departments of study that may have interest in whitewater park related programming.
- UNK has seen a 15% year over year increase in Colorado students and a 20% increase in Kansas resident students (second year after the instate program started).
- UNK has a strategic price advantage compared to all Colorado Universities.
- 82% of student participants think Site 2 (Tailrace on the Kearney Canal) looks more favorable.
- 86% of student survey participants think that the proposed whitewater park would be beneficial to the campus as a whole.

Economic Impact of the University of Nebraska at Kearney

To better illustrate UNK's importance to the Kearney community, we decided to include some excerpts from an Economic Impact Study completed in 2009 when the student body population was 6,500. "UNK is a significant stimulant to the Kearney MC economy" sums up the findings of a UNK economic impact study completed in 2011. The Table below examined the expenditures of four broad academic community categories: 1) spending by UNK including its faculty and staff, 2) spending by UNK-related units, 3) spending by students, and 4) spending by visitors. It found that the UNK academic community's total expenditures were \$164.4 million in fiscal year 2009-2010. Of this amount, it was estimated that \$81.5 million was spent locally and was subject to the multiplier effect. The overall economic impact of UNK on the Kearney MC including the multiplier effect was \$115.1 million. That is, on average, every dollar of local, direct UNK academic community-related spending generates an additional 41 cents for the Kearney MC economy. Furthermore, the study estimates the employment multiplier was 1.3 which means that three additional jobs are created in the Kearney MC for every 10 jobs directly created in the area by UNK academic community-related spending (Dority and Kaskie 2011).

Table 36. UNK Annual Visitor Numbers

Table 14: Summary of UNK Visitor Spending, Fiscal Year 2009-2010

Spending Group	Visitors from Outside of Kearney MC	Local Spending	
		Amount (\$)	%
Visitors of Students	68,468	8,478,339	62.1
Attendees of UNK Events by College, Division, or Program	50,533	2,686,663	19.7
Visitors of Faculty and Staff	14,208	2,222,108	16.3
Out-of-town Athletic Teams	n.a.	217,374	1.6
Attendees of Alumni Association Events	346	38,819	0.3
Total	133,555	13,643,303	100.0

n.a. = not available

Table 37. Economic Impact Results from UNK study

Table 16: Total Impact of UNK, Fiscal Year 2009-2010

Item	Amount (\$)
Total Expenditures by UNK, UNK-related units, students, and visitors	164,374,912
<u>Less Estimated Spending Leakage</u>	<u>82,846,023</u>
Direct Local Expenditures by UNK, UNK-related units, students, and visitors	81,528,889
<u>Plus Multiplier Effect</u>	<u>33,572,679</u>
Total Local Impact	115,101,568

Source: Dority, Bree. and Kaskie, Shawn. May 2011. The Economic Impact of the University of Nebraska-Kearney Fiscal Year 2009-2010

Economic Impacts of the Proposed Tailrace Whitewater Site

The methodology used to generate the Tailrace Whitewater Site economic impact is near identical to the methodology used in the Turkey Creek Whitewater Site impact. The key difference is that we examined eight visitor spending categories rather than three. We analyzed the spending patterns associated with the low estimate of 12,700 to generate the economic impact. As the proposed park becomes more widely recognized by Nebraska residents and travelers, it is likely that the annual number of visiting participants will climb to the higher range of visitors of 16,700. The Tailrace Whitewater Site is expected to attract more visitors than Turkey Creek Whitewater Site because the park is bigger and offers the hydrology that is suitable for competitive events, plus it is located in the middle of the University campus which attracts around 130,000 visitors annually.

We estimate that the Proposed Tailrace Whitewater Site will attract 12,726 annual paddle participants annually. All visitors were grouped into eight different spending categories including overnight hotel, overnight camping, day trippers, spillover visitors (visitors who are stopping by after other primary event), student visitors, picture visitors (those visiting for photography purposes), festival/event (those visiting due to an event that is hosted at the whitewater park), and tubers (those utilizing the whitewater park with an inflatable tube). Most of these spending categories have different spending amounts associated with them. For example, overnight hotel visitors are anticipated to spend an average of \$161 per day given the higher cost associated with hotel lodging and staying more than one day. Conversely, tubing visitors may only spend around \$10.50 per day because this group is composed of more locals who bring their own equipment and stay only for a day or afternoon. Spending amounts of (\$161, \$88, \$60, \$10.50) were weighted based on HVS' Economic Impact Analysis over the St. Charles Illinois Active River Project completed in April 2019. The spending amounts of \$68.40 that is applied to spillover visitors was an estimate from the University of Idaho Extension Study (Braak, W. 2012. Economic Impact of Kelly's Whitewater Park in Cascade, Idaho. University of Idaho Extension). Table 38 describes visitor stay and spending attributes.

Table 38. Visitor Types & Related Spending

Low Allocation	Visitor # of Visitors	Spending PP.	% of Visitors
Overnight Hotel	1,994	\$160.93	16%
Overnight Camping	1,595	\$88.45	13%
Day Trippers	4,387	\$60.15	34%
Spillover Visitors	500	\$68.40	4%
Student Visitors	1,000	\$10.47	8%
Pictures	250	\$10.47	2%
Festivals/Events	2,000	\$30.41	16%
Tubing	1,000	\$10.47	8%
Totals	12,726		1

Total visitor spending was divided into five common industries that travelers tend to spend their money on such as hotels, food, entertainment, etc. To arrive at total low and high spending we multiplied total visitors by total dollars spent per visitor. What you see in Table 39 is the sum of all visitor types and spending amounts. The low spending estimates includes the exact figures that were entered into IMPLAN to generate the economic impact. The Proposed Tailrace Whitewater Site will attract an estimated 12,726 annual visitors who will spend over \$983,000 which averages out to \$77.24 per visitor.

Table 39. Tailrace Visitor Spending by Industry

Category	Low Spending	High Spending
Hotel/Lodging	\$124,248	\$ 180,081
Food and drinks	\$275,849	\$ 399,812
Gasoline/Fuel	\$150,676	\$ 218,394
Shopping	\$154,808	\$ 224,378
Entertainment	\$275,807	\$ 399,744
Other	\$1,605	\$ 2,327
	\$982,993	\$ 1,424,736

Tailrace Economic Impact Results

Table 39 shows a total visitor spending amount of \$982,993; this spending sum does not entirely stay in Kearney because some of this money leaks out and gets spent in different counties. The Direct Impact of \$700,000 is the total spending that stays in Kearney. The Multiplier Impact of \$420,000 takes into consideration how the \$700,000 in direct impact will cycle through the local economy. Adding the Direct Impact plus the Multiplier Impact gives us an overall economic impact of \$1.12 million dollars that will flow through the local economy every year. A similar concept applies to the jobs whereas 11 full time jobs were created, 3 jobs as a multiple for a total of 14 new jobs or \$360,000 in labor income.

Table 40. Tailrace Economic Impacts in (#000's Except for Employment Figures)

Impact Category	Direct Impact	Multiplier Impact	Total Impact
Visitor Spending			
Output (\$millions)	\$0.70	\$0.42	\$1.12
Labor Income (\$millions)	\$0.24	\$0.12	\$0.36
Employment	11	3	14

Source: IMPLAN

Construction Impacts

In addition to the Economic Impact, we generated a construction impact derived from the S2O's cost opinion. The Conceptual design study had two design cost estimates including costs for a natural rock bottom channel at \$1.3 million and a more expensive concrete-line channel at \$2.5 million. The natural rock bottom is more likely to be chosen given budget constraints therefore we went with the \$1.3 million-dollar cost estimate. We divided construction costs into two industry sectors including Engineering & Architecture at 21% and Construction/Material at 79%. The associated cost impacts will be analyzed below.

Table 41. Tailrace Construction Impact

Impact Category	Direct Impact	Multiplier Impact	Total Impact
Output (\$millions)	\$ 1.3	\$ 0.6	\$ 1.9
Labor Income (\$millions)	\$ 0.4	\$ 0.2	\$ 0.6
Employment	8	4	12

Source: IMPLAN

Table 42. Tailrace Construction Cost Estimates

Project: Kearney Whitewater Park- Kearney Canal Tailrace				
Issue Date: 6/6/2016				
Developed By: CC				
Kearney Canal Tailrace: Estimated Design and Construction Costs				
Description	Quantity	Unit	Unit Cost	Item Total Cost
Site Setup				
Install & Maintain Best Management Practices	1.0	LS	\$ 5,000.00	\$ 5,000.00
Circulation Paths & Access Steps				
Excavate & Grade Native Materials	748.1	cy	\$ 22.00	\$ 16,459.26
Furnish & Install Class 6 Road Base	505.0	Tons	\$ 35.00	\$ 17,675.00
Furnish & Install Crusher Fine Path	505.0	Tons	\$ 35.00	\$ 17,675.00
Furnish & Install Landscape Fabric	2244.4	SY	\$ 6.00	\$ 13,466.67
Furnish and Install Concrete Steps	562.5	cy	\$ 400.00	\$ 225,000.00
Unclassified Hauloff	748.1	cy	\$ 20.00	\$ 14,962.96
Retaining Wall, Face	6000.0	sqft	\$24	\$ 144,000.00
Furnish and Install Native Seed Mix	14000.0	SF	\$ 2.50	\$ 35,000.00
In Stream River Structures				
Operate & Maintain Water Control	1.0	LS	\$ 15,000.00	\$ 15,000.00
Install Equipment Access Ramps & Roads	3.0	EA	\$ 1,500.00	\$ 4,500.00
Reclaim Equipment Access Ramps, Roads, & Staging Areas	3.0	EA	\$ 2,500.00	\$ 7,500.00
Furnish & Install Boulder (Avg 36" B Axis)	1112.2	Tons	\$ 85.00	\$ 94,533.45
Excavate & Grade Native Alluvium	1088.2	CY	\$ 22.00	\$ 23,940.55
Furnish & Install Bedding Material	756.1	Tons	\$ 30.00	\$ 22,683.60
Furnish & Install Mirafi 180n Filter Fabric	1750.3	SY	\$ 8.00	\$ 14,002.22
Furnish & Install Concrete Grout, Including Rebar, & Marine Epoxy	99.9	CY	\$ 272.00	\$ 27,171.29
Furnish & Install by Hand Washed Rock Veneer	178.2	Tons	\$ 120.00	\$ 21,382.81
Furnish and Install 10" Boulder Armoring	2227.3	CY	\$ 50.00	\$ 111,364.22
Additional Included Items				
Additional Excavator Time as directed by S2o	40	HR	\$ 220.00	\$ 8,800.00
PROJECT SUBTOTAL				\$ 840,117.04
Contingency (15%)				\$ 126,017.56
CONSTRUCTION SUBTOTAL				\$ 966,134.59
Bathymetric/Topographic Survey				\$ 18,557.51
Engineering Design				\$ 106,274.81
Hydraulic Modeling				\$ 19,322.69
Permitting 404, 401				\$ 19,322.69
Permitting Floodplain				\$ 19,322.69
Construction Bonding/Ins				\$ 28,984.04
Mob and Demob				\$ 28,984.04
Construction Stakeout				\$ 4,830.67
Construction Monitoring				\$ 77,290.77
TOTAL PROJECT COST OPINION				\$ 1,289,024.5

Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

Fiscal Impacts

The fiscal section further identifies new tax revenues generated by the whitewater parks economic impacts. This new tax revenue is derived from visitor spending, new payrolls, and property valuation increases. The following tax revenue estimates identify where these dollars originate from and who benefits from them. Both sites have a similar impact where Turkey Creek has an estimated \$161,000 in tax revenue collections while Tailrace will experience an estimated \$160,000 in tax collections. The main differences lie within the property tax collections and spending collections. Tailrace has significantly higher spending related collections but has far less property tax collections because the surrounding neighborhood is home to mostly single and multifamily residences with lower assessed values. We applied the same methodology here as seen in the Turkey Creek Fiscal Impact Section (Table 34 & 35). See the appendix to examine methodology used.

Tailrace Fiscal Findings:

- Visitors: 12,700
- Spending Per Visitor: \$77
- Impact Per Visitor: \$94
- Average Spending Tax Collections Per Visitor (less payroll & property tax): \$7
- Payroll Tax Collections: \$55,000
- New Property Tax Collections: \$15,200
- Total New Annual Tax Collections: \$160,000

Table 43 lists the beneficiaries of the new tax collections. For example, the City of Kearney and Buffalo County will receive an estimated \$34,000 annually from new tax collections which is the sum of all occupation, city sales, lodging, and property tax. Other beneficiary groups such as the State of Nebraska and the Federal Government benefited from other tax levy’s including state sales, fuel, excise, and payroll taxes.

Table 43. Beneficiaries of New Tax Collections (Tailrace)

Beneficiary	%	DV Collections
City & County	21%	\$34,296
State	47%	\$75,771
US Government	31%	\$49,776
	100%	\$159,843

Table 44 displays the total annual tax revenues collected by levy type. For example, Nebraska’s State sales tax is 5.5% in 2020, this 5.5% generated a total of \$48,841 in state sales tax revenues. Most levies were sensitive to a spending or impact category such that lodging tax can only be paired with lodging spending and property taxes were sensitive to assessed property values surrounding the specific proposed site. The Proposed Tailrace Creek Whitewater Park is expected to generate up to \$160,000 in annual tax revenues that will be shared among the beneficiaries listed in Table 34.

Table 44. New Tax Revenues by Levy Type

Levy Type	DV Collections
Sales (State)	\$48,841
Sales (City)	\$19,070
Fuel	\$12,506
Lodging	\$4,970
Occupation	\$2,485
Excise	\$1,498
Payroll	\$55,138
Property	\$15,226
Annual New Collections	\$159,735

Campus and Surrounding Community Developments

American Universities invest significant amounts on fancy facilities to replace depreciating buildings and to remain attractive and competitive. Over the last 10 years, UNK and the Board of Regents constructed four campus improvement projects including the Village Flats Residential Hall, STEM (Discovery Hall), UNMC, and the Early Childhood Education Center in total costing UNK around \$74 million (excluding capital improvements, renovations, and land purchases). The University is likely to see continued expansion into University Village area southwest of Campus. The proposed whitewater park is relatively inexpensive compared to past university construction projects and has the potential to improve the quality of life for UNKs campus and surrounding neighborhoods.

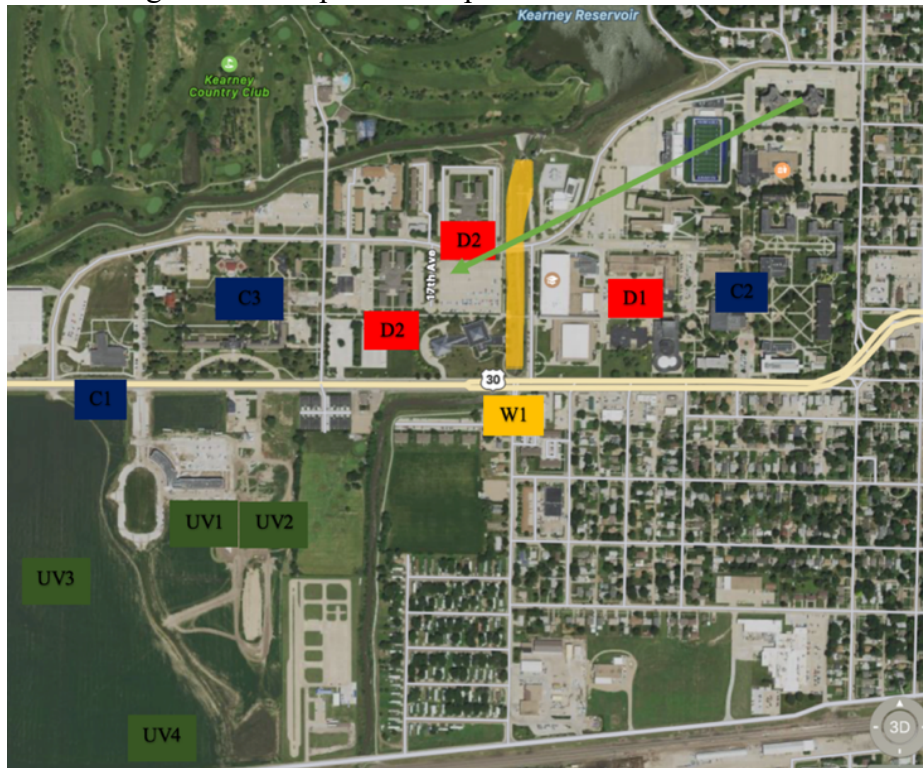
Table 45. Recent UNK Campus Developments (2015-2020)

Key	Facility	Completed/Anticipated Completion	Budgeted Cost
C1	UNMC - Kearney	Summer 2015	\$19,707,915
C2	Fountain	Fall 2020	NA
C3	STEM Building (Discovery Hall)	Fall 2020	\$30,000,000
W1	Tail Race	Unknown	\$ 1,289,025
UV1	Village Flats	Summer 2018	\$15,860,423
UV2	Plambeck Early Childhood Education	Fall 2019	\$ 7,800,000
UV3	Millennium Housing Project	Summer 2021	\$14,000,000
UV4	Tennis Complex	Fall 2021	\$ 6,500,000
D1	Otto Olsen	Fall 2021	NA
D2	URN/URS	Unknown	NA

Source: UNK News & Telephone conversation with UNK Communications Senior Director Todd Gotulla, May 2020

UNK’s first campus building was constructed on the Southeast corner of the current day campus. New buildings arose over the years slowly expanding westward overtime. Some individuals consider West Campus to be the new heart of UNK given that West Campus is now home to the STEM building, UNMC, the Childhood Education Center, and is much closer to the University Village Lots where further expansion is anticipated to occur. The proposed Tailrace site is located near the center of campus almost acting like an East West centerline. Facilities lining the proposed site include the NPPD hydro plant, campus power plant, URN Resident Halls, Health and Sports Center, and the College of Education. A Facilities Development Plan completed in 2006 indicated that “developing a façade sensitive to this history and integrating it with the Spillway Park will benefit both the campus and the community” (UNK Facilities Development Plan 2006-2015). The riverfront area can act as a stopping point for students who migrate across campus on the daily and may be a halfway destination from whichever corner on campus. The proposed riverfront improvements would provide a great atmosphere for students to relax, study, or play during the day.

Figure 29. Campus Developments Areal Visualization



University Village

The 108+ acre University Village (UV) development site is owned by the Nebraska Board of Regents. Current plans call for a mixed-use development containing retail, residential, academic, and green space. The University Village is currently home to Village Flats and the Plambeck early Education Center. UV is the future home for the Millennium Apartment Complex, a six-court indoor tennis facility, and is welcoming any new construction investments that fit within the plans laid out for the development. The final feature along the proposed Tailrace site seen in Figure 34 is .7 miles away from the center of the University Village roundabout. In other words, those located at or near the University Village town center can expect a 13-minute walk, 6-minute bike ride, or 1-minute car ride to the nearest whitewater feature. Potential builders, businesses, and investors may find the neighborhood whitewater park to be another reason to relocate to the area. The following figure displays semantic renderings of the University Village development, notice the canal bordering the development to the East.¹¹

¹¹ A well planned study completed in October of 2014 by HDR analyzes potential uses for the University Village Development (UNK South Campus - University Village, HDR) can be found at https://www.unk.edu/offices/facilities/planning_contstruction/university_village.php

Figure 30. University Village Semantic Drawings



Source: HDR UNK South Campus University Village Land Use Analysis

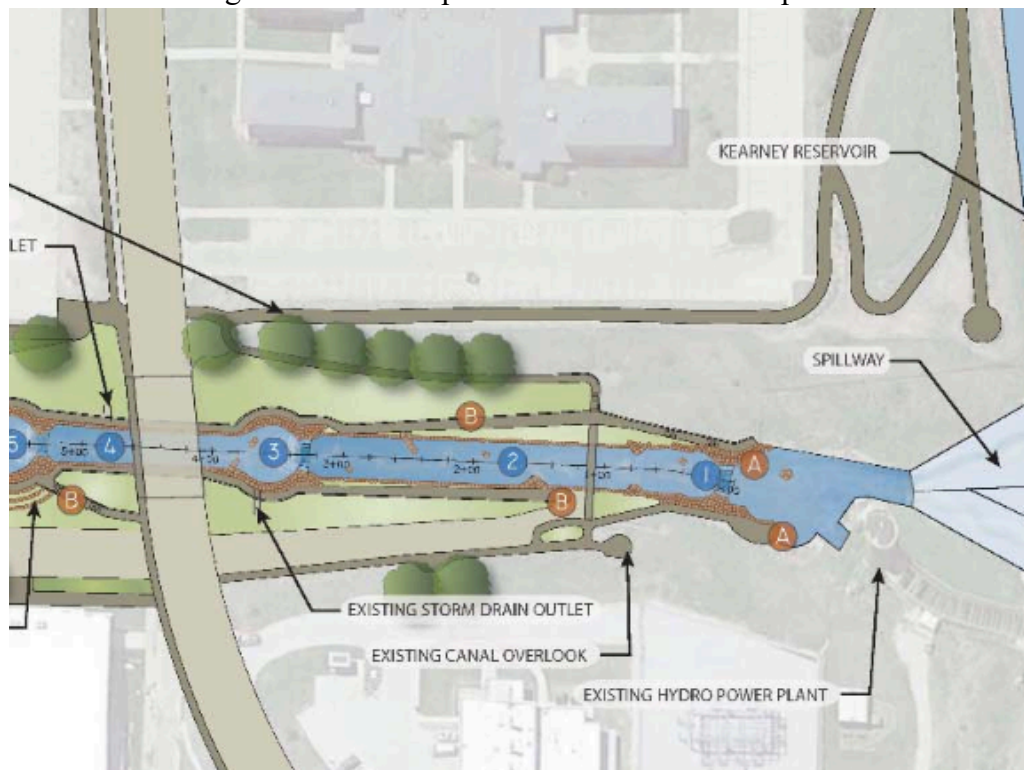
Campus Demolitions

UNK plans the future demolitions of:

- Otto Olson – Unknown future land use
- URN & URS Greek housing pods – Unknown future land use

The 2006-2015 Facilities Development Plan indicated there are “possibilities to adjust vehicular traffic patterns, and property uses, especially along UNK’s eastern boundary and adjacent to the Spillway Park on the north side of campus” (UNK Facilities Development Plan 2006-2015). URN and URS (University Residents North and South) have experienced ongoing maintenance issues and have exceeded the buildings intended useful life. URN & URS functions are planned to be relocated to Nester Hall on East Campus. The demo site that is noteworthy for the purpose of this report is the URN site which adjoins the Tailrace Site. Otto Olson was the long-term home to UNK’s Computer Science, Construction Management, Aviation, and Interior Design departments. The functions served in this building will be moved into the new STEM facility located on West Campus. Recent discussions with University administrators have not led to any indication of future use for this property. More than likely, UNK will utilize this newly available space to construct additional parking space. Having this newly available space will provide the city and the university with an opportunity to plan for an alternative land use. Having this freed up space within the foreseeable future provides leaders with a great land planning opportunity, something that can be geared towards providing amenities for the whitewater park such as restroom facilities, play spaces, community event centers, and parking space.

Figure 31. Areal representation of the URN Space



Source: S20 Site Visit and Conceptual Study, 2016

Coincidental Developmental Ties

There are some interesting coincidences between UNK's building projects and the proposed whitewater park plans. These coincidences generate a whitewater like theme which can be used for marketing, PR, and recruitment purposes.

- The HDR Schematic design for the University Village Development calls for a series of ponds laid parallel to the Kearney Canal which may add to West Kearney's recreational lake space.
- UNK has been working toward the construction of a splash pad over recent years. The fountain/splash pad was completed in July 2020.
- Efforts lead by the spillway committee in the early 2000's with the goal of preserving the sites historical features and to provide a place of beauty for both the university and city. This group has interest in reorganizing as committee and to revitalize the canal front
- A put in and landing were constructed in 2016 to provide locals with a way to access the Kearney Canal and Turkey Creek. The Yanney Park put in site is located 1.2 miles downstream from the final proposed feature. The proposed Tailrace Whitewater Park could add a great entry point and extension to the existing water trail.
- UNK's theme colors are blue and gold similar to the colors of water.
- UNK has a strong recreational and outdoor venture program which is great infrastructure to have in place for future programming and events.
- The canal and spillway project undertaken in the late 1800's was both innovative and beneficial to the community. The proposed whitewater park plans are similar to the initial canal plans in which they are inventive and provide benefit to locals. The construction and operation of a whitewater park can be a great way to commemorate how the canal was brought about.
- Kearney is located along I80 which is a summer pipeline for recreational travelers
- The riverbanks of the Kearney canal near the spillway are already graded for a pedestrian trail.

Figure 32. UNK Fountain Schematic Design coming Fall 2020



Source: UNK News June 2019

Figure 33. Tailrace Improvements Completed in 2002 by the Spillway Committee & UNK Facilities Department



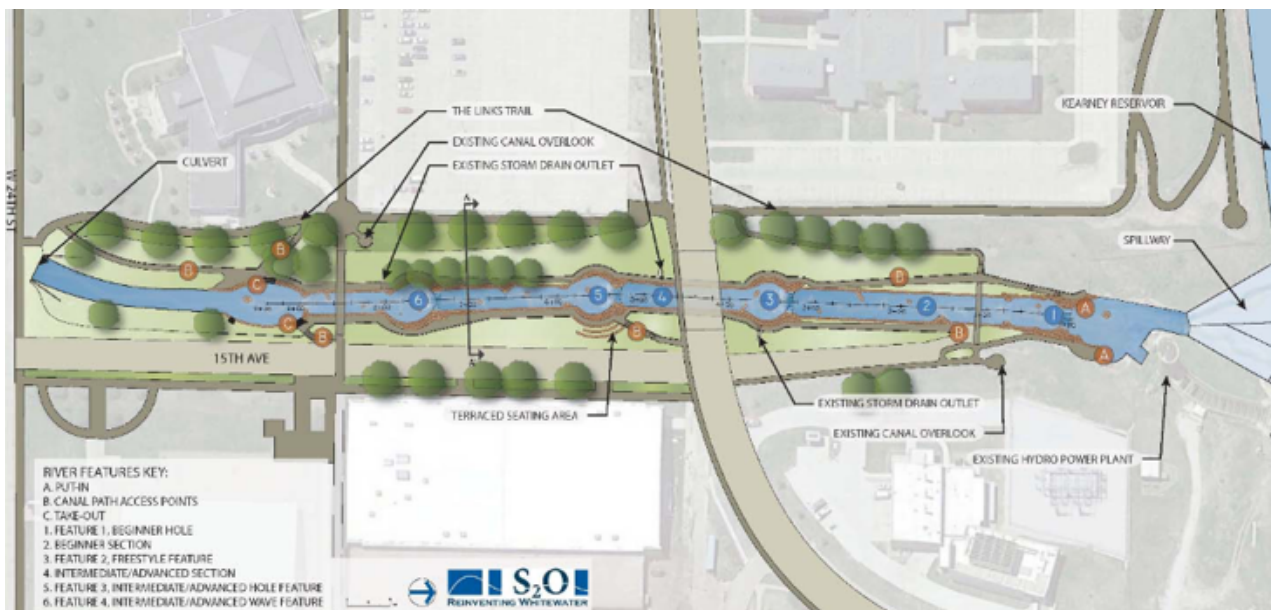
Source: UNK Archives

Proposed Site Attributes and Development Issues

Two proposed designs have been created for this site. The first design utilizes natural rock and stone to reinforce the existing ditch canal in order to create whitewater features along its length. Both designs feature a pool/recovery area located at the downstream end of the project to help prevent boaters from passing under the underpass. Design improvements and maintenance at the underpass will ensure that this is an open pathway and not a danger to boaters who might miss the take-out.

Hydrology & Site Design

Figure 34. The Proposed Natural Rock Conceptual Design

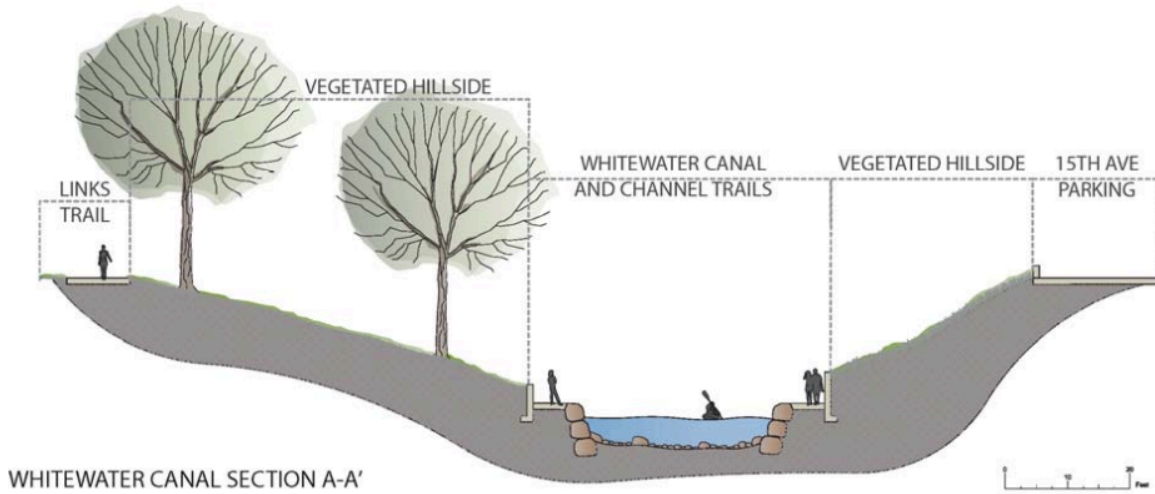


Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

Source: S20 Kearney Whitewater Park Conceptual Design Study, 2016

S20s design calls for natural rock drop structures that are hydraulically designed to create chutes, waves, eddies, and other whitewater features. The park offers 6 different features and is 938 feet long and features a series of pools between the drop structures that would create eddies and recovery points for paddlers. The pools would provide nice seating areas and gathering points along the river for those interested in studying, walking, or sitting by the river to relax. A series of trails are also shown on the design.

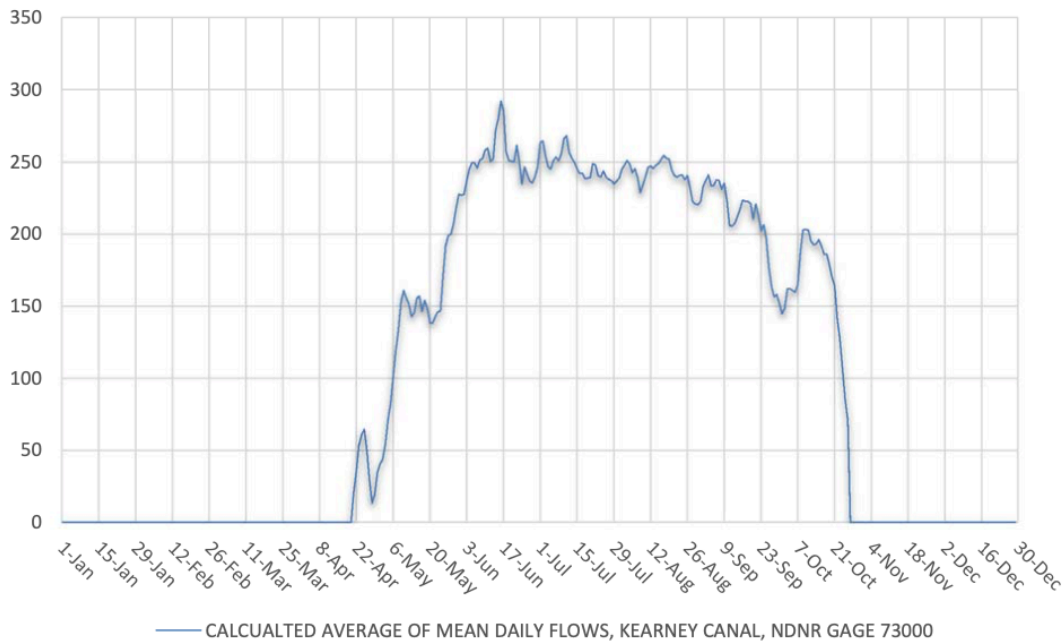
Figure 35. The Proposed Natural Rock Cross Section



Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

The seasonal flows at this site are not significant in relation to other whitewater parks. Freestyle events and national level slalom events tend to be held at flows of 700cfs or higher. Typical float parks feature flows between 100-300cfs and are good for beginner kayaking, tubing, and float trips. This reach has an average summer flow around 200 – 250cfs, with peak flows in the range of 300 -400cfs, so it has great design potential to be an enjoyable introductory whitewater experience for many users, however whitewater enthusiasts will likely only pursue advanced kayaking at the site during high flow events such as rainstorms. Controllable water flows benefits both the construction and paddle experience.

Figure 37. Average Mean Daily Flows at the Turkey Creek Site



Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

The following three figures demonstrate the current status of the site captured on May 2020 with flows around 170 CFS.

Figure 38. Tailrace Hydrologic Jump near the spillway



Figure 39. View of the Tailrace Site looking towards the Spillway



Development Concerns

Based on comparable whitewater project spending more than anticipated on construction related overhead. We guess that the cost of construction will end up costing 20% more than expected. This takes a 3% inflation rate into consideration (4 years since the 2016 cost estimate and the 20% overhead costs). Tailrace Whitewater Park could end up costing \$1.4 - 1.8 million, which does not include park facilities and other capital improvements to the area.

The reach is roughly 35 ft wide, with steep banks and would require a trail directly adjacent to the canal both for safety of floaters and for ease of spectating.

Concerns have been raised over the potential safety hazard of the tunnel at the bottom of the reach. S20 is not as concerned about this tunnel as safety measures can be easily installed. Appropriate safety measures should be put in place including maintenance inspections, design for passage, and take-outs above and below the culvert.

Currently, no floating is permitted through this section of the canal. Permission would have to be granted by the canal's owner, Nebraska Public Power District. Liability is the biggest concern.

There are multiple historically significant sites located directly adjacent to the proposed whitewater course and could potentially pose a challenge to permitting and town approval. A complete archeological assessment of both proposed sites may be required to determine impacts to the proposed project sites in order to receive 404 Authorization to begin construction. Though this assessment typically has little impact on in-channel river parks, the project owner should be aware of this potential requirement as it could result in significant delays and/or costs to a project if an impact to a culturally or historically significant site is found.

Source: Shipley, Scott. August 2016. Retrieved from S20 Site Visit and Conceptual Design Study

Land Ownership

The Kearney Canal and its water are owned by the Nebraska Public Power District. All proposed changes to the channel and developments of the overbank area for access and ease of spectating would require the written approval of both landowners.

Figure 40. Floating Activities are Not Permitted from the Spillway to Yanney Park



Marketing

Table 46. Greater Market Capture Variables

Participation Type
Rafting
Tubing
Fishing
Trail Users
Pictures
Student Gathering Space
Event Gathering Space
Campus Programming

Campus Related Programming

We have identified select groups that may have interest in participating and sponsoring whitewater related activities. Utilizing student led organizations and talent found at the University can facilitate better community collaboration and participation of the Proposed Tailrace Site. UNK has 180 student run organizations. We have identified 13 different student organizations and 10 departments of study that may have interest in kayak park related programming.

Table 47. Student Organizations that may Have Interest in River Park Related Activities

Related Club Interest
Campus Can
CEO
Exercise Science Club
Greek Affiliated
Intramurals
Recreation/Travel & Tourism Club
Sports Administration Majors Club
Student Government
UNK Ad/PR Club
UNK Campus Recreation
UNK Climbing Team
UNK Physical Education
Yoga Community

Source: <https://unk.presence.io/>

UNK offers 120 undergraduate majors, 20 pre-professional programs, and 27 graduate programs (UNK Admissions) that from this variety of study paths we have identified 10 different disciplines that may play a role in developing, programming, and educating people on the whitewater course.

Table 48. UNK Academic Programs that Tie into Whitewater Park Related Activities

Related Study Interest
Athletic Training
Construction Management
Event Management
Exercise Science
General Physical Education
Marketing
Natural Resource Management
Outdoor Pursuits Emphasis
Recreation Management
Safety Education

Source: <https://www.unk.edu/academics/list-of-majors.php>

UNK Recreation Department

UNK has a well-situated recreation department. Most notably UNK has a 30-foot-tall indoor rock-climbing wall, offers recreational rentals, and hosts a series of outdoor adventure trips every semester. UNK recently hired a new outdoor adventure coordinator before the 2019-20 Academic season. Justin Stout has an extensive background in paddle equipment sales and is extremely passionate about the whitewater efforts. Having an already strong Recreation Department in place can help get new people on the water and may sponsor whitewater related programming.

Wellness Center & Cushing Coliseum

The Wellness Center's proximity to the canal is worth a mention being situated across the street. Every term, the Wellness Center or Cushing Coliseum host numerous athletic and intramural events that attract sport teams and fans from throughout the country. Many sport fans that visit UNK's campus are often looking for time filler activities. A kayak park could be another reason to make this trip to Central Nebraska worthwhile. The bus station where all the sports teams arrive and depart is conveniently located off 15th avenue, the perfect placement for visiting schools/teams to view the kayak park upon arrival.

Colorado/Kansas in-state program

Beginning in Fall 2018, UNK started offering in-state tuition rates for both Colorado and Kansas residents. The new advantage effectively decreases UNK hourly tuition rate to \$198 for both Colorado and Kansas Residents to those who qualify (*UNK to offer in-state tuition to Colorado, Kansas students*, UNK News October 2017). Colorado is home to over 15 whitewater parks, over 1,000 water trails, and has a higher whitewater kayak participation rate than Midwestern states (American Whitewater Association National Whitewater Inventory). Colorado residents looking into Nebraska education may be attracted to the Whitewater Park Facility that runs through UNK's campus. The whitewater park is a way to mimic some of the highly coveted recreational amenities that mountainous cities benefit from and can be a fantastic recruitment tool. The figure below illustrates the effects of the new instate tuition program and how it affected enrollment.

Table 49. UNK Enrollment Counts Sorted by Articular States

State	2018	2019	YOY % Increase
Colorado	106	124	14.5%
Kansas	64	80	20.0%

Source: UNK Factbook & UNK News

Colorado School Cost Comparison

On average, Colorado in-state tuition rate is 36% higher than Nebraska's in-state cost per credit hour. With UNK's instate program, Colorado residents have the opportunity to attend UNK at a 36% discount compared to their home state intuitional average cost. This cost variance provides UNK with a cost saving competitive advantage. UNK needs to focus recruitment and marketing efforts towards Colorado high school students, especially by focusing on Colorado high school students who have parents that that are Nebraska transplants. Having a strong recreational scene automatically increases the attractiveness to the increasing number of outdoor friendly students from all across the country.

New Nebraskan Scholarship

Beginning Fall 2021, on-campus undergraduate students from any state will receive in state resident rates from the current of price of \$455 to \$209 per credit hour (Ellyson, 2020). This opens the door for a more geographically diverse student body, and it may increase overall enrollment. An operational whitewater park may contribute greatly as a recruitment tool for out of state students considering UNK.

Table 50. Nebraska/Colorado Public Institution Cost Comparison (2019 tuition rates)

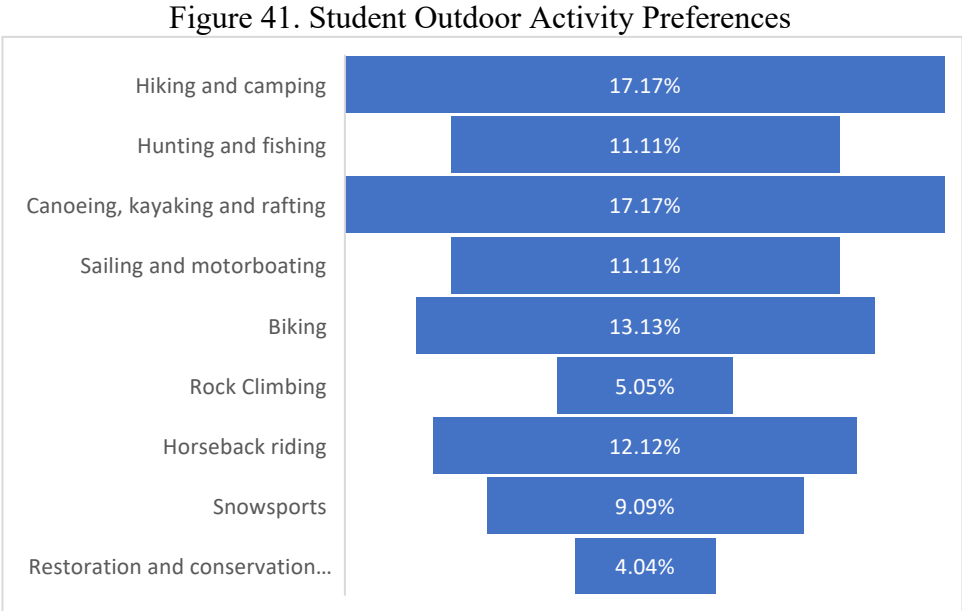
City	State	Miles to Kearney	School	Instate Rate per Credit Hr.
Omaha	NE	182	UNO	\$ 223
Lincoln	NE	132	UNL	\$ 245
Kearney	NE	0	UNK	\$ 203
Greeley	CO	328	U of Northern Colorado	\$ 304
Fort Collins	CO	337	CSU - Fort Collins	\$ 428
Denver	CO	358	CU - Denver	\$ 330
Boulder	CO	372	CU - Boulder	\$ 427
Co Springs	CO	425	UCCS	\$ 325
Pueblo	CO	471	CSU - Pueblo	\$ 265
Gunnison	CO	554	Western Colorado University	\$ 361

Source: CollegeSimply.com

A special survey was designed to gather UNK student feedback. Only 26 student responses were recorded.

Demographics:

55% of Survey respondents were male and 45% female. 91% of these survey participants have paddled before and every participant was a full-time student at the time of taking survey. The following figure indicates UNK student outdoor participation preferences.



Site Frequency & Visitations

Site visitation can be broken down into two categories including the paddler and the non-paddler. 71% of participants would utilize the whitewater park for the purpose of participating in water activities. The remaining 24% would utilize the site as a hangout spot, while 5% would never bother to check it out. 100% of surveyed students said they will visit the whitewater park at least once post completion.

Table 51. UNK Student Utilization of the Proposed Whitewater Park

Never	1-2 times	3-4 times	5-7 times	8+ times
0%	33%	30%	27%	20%

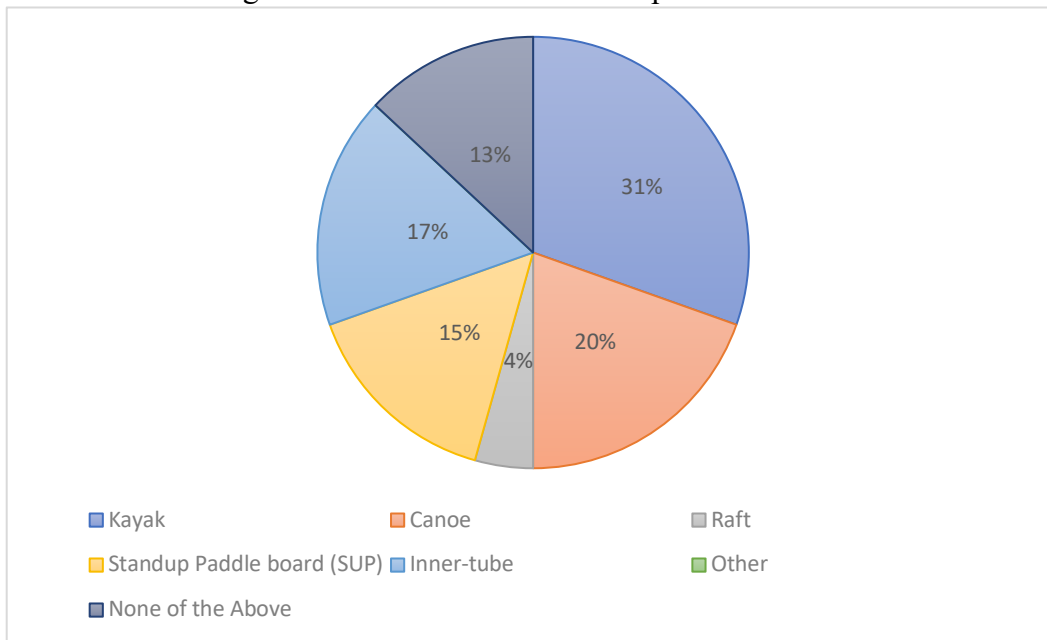
Table 52. Visitation Frequency by Non-Kayaking UNK Students

Visit Frequency	% Visit
Never	0.00%
Once a year	33.33%

1-2 times per year	23.81%
3 times per year	42.86%
Total	100%

31% of UNK students own or have access to a kayak. 68% of the participants prefer flatwater or recreational kayaking the most. If the proposed whitewater park is completed, UNK’s recreation department should consider purchasing kayak related rentals.

Figure 42. UNK Student Paddle Sport Preference



Site Sentiment

- 82% of student participants think Site 2 (Tailrace on the Kearney Canal) looks favorable.
- 86% of student survey participants think that the proposed whitewater park would be beneficial to the campus

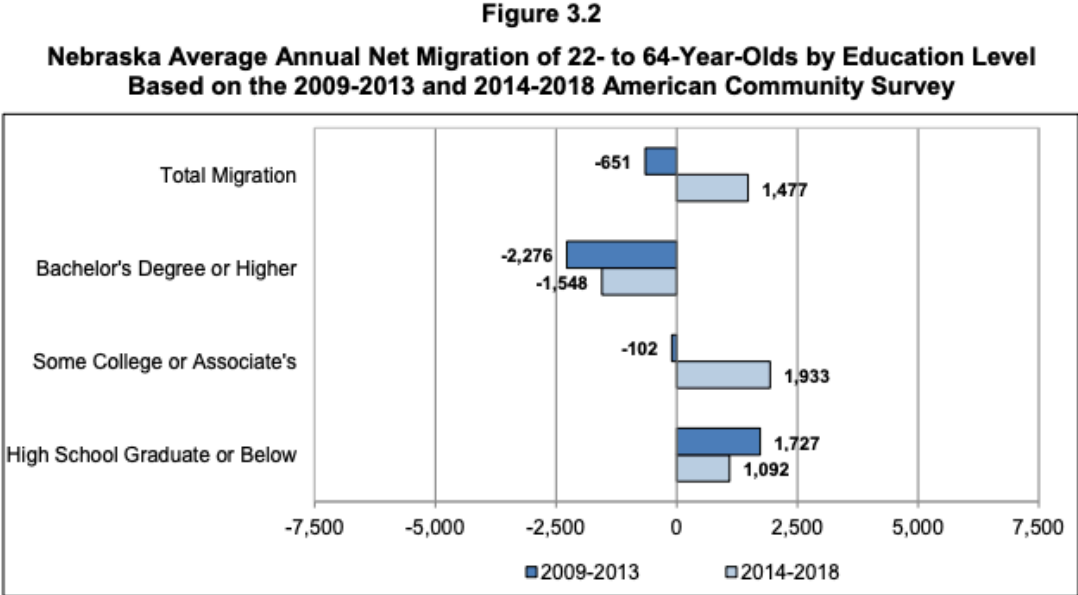
Enrollment Draw / Recruitment

A whitewater park has the potential to be a recruitment tool that can draw new students from across the state and country to UNK. Recent enrollment trends at University of Nebraska schools indicate a slight decline in enrollment. Having the best whitewater course in the state of Nebraska will naturally be attractive to potential students who have kayak related experience plus it can also be attractive to student segments who enjoy regular outdoor activities. Recruiting more outdoor oriented groups could lead to a healthier local lifestyle trend and it may encourage some people who do not get outside regularly to explore more.

NE Migration Patterns

Net migration is the difference between the estimated numbers of individuals who moved to or from Nebraska. If net migration is positive, the number of people who moved to the state is higher than the number who left Nebraska. If net migration is negative, the number of people who left the state exceeded the number who moved to Nebraska. Migration estimates from the ACS PUMS surveys are based on survey results gathered from a small number of working-age adults that moved in to or out of Nebraska. Figure 43 shows a negative net migration of individuals with a bachelor’s degree. Nebraska has a great need to retain and attract high pay and high skill jobs. There is a saying along the lines of “If you build the amenities, people will come and be more likely to stay.”

Figure 43. Nebraska Average Annual Net Migration



Note. See Table A13.2 in Appendix 13 for supporting data. Data source: U.S. Census Bureau, American Community Survey five-year Public Use Microdata Sample (PUMS) files, 2009-2013 and 2014-2018. Compiled and prepared by: David Drozd, Center for Public Affairs Research, University of Nebraska Omaha.

Source: CCPE Higher Education Progress Report 2020

Part VI: References

Intro/ Marketing Section References

Eric Fowler. May 2020. Retrieved from

<http://magazine.outdoornebraska.gov/2020/04/kearney-water-trail/>

Fowler, E. (2020, April 27). *Kearney Water Trail* • *Nebraskaland Magazine*.

<http://magazine.outdoornebraska.gov/2020/04/kearney-water-trail/>.

Shipley, S. 2016. Site Visit and Conceptual Design Study. S20, Lyons, CO.

Schaffran, C. (2020, January 29). *The Rise Of Urban Whitewater*. Parks & Rec Business Magazine (PRB). <https://www.parksandrecbusiness.com/articles/2020/1/the-rise-of-urban-whitewater>.

Karnatz, B. (2018). *Water Trail Map*. Kearney Whitewater Association.

<https://www.kearneywhitewater.org/maps-3/>

Visit Nebraska. (2020). *State & County Lodging Tax Reports*. VisitNebraska.com.

<https://visitnebraska.com/state-county-lodging-tax-reports>.

2019 Special Report on Paddlesports and Safety. Outdoor Industry Association. (2019).

<https://outdoorindustry.org/resource/2019-special-report-paddlesports-safety/>.

Federal Outdoor Recreation Trends: Effects on Economic Opportunities. USDA. (2016).

https://www.fs.fed.us/pnw/pubs/pnw_gtr945.pdf

Paddlesports Report 2015. Outdoor Industry Association. (2015, August 11).

<https://outdoorindustry.org/article/paddlesports-report-2015/>.

National Whitewater Inventory. American Whitewater Association.

<https://www.americanwhitewater.org/content/River/view/>.

Manchester City Whitewater Park Funding Figures. Whitewater Fact and Info Sheet, Delaware County received by Doug Foley,

East Race Annual Attendance Figures. City of South Bend Venues Parks & Arts received by Cynthia Fish,

Norfolk Awarded \$1.125 Million for Improvements. Norfolk Awarded \$1.25 Million for Improvements. (2020, April 15).

[https://norfolkne.gov/government/departments/communications-office/news/norfolk-awarded-\\$1.125-million-for-improvements.html](https://norfolkne.gov/government/departments/communications-office/news/norfolk-awarded-$1.125-million-for-improvements.html).

Sioux Falls Whitewater Park. Sioux Empire Paddlers. (2020, July 13).

<https://siouxempirepaddlers.org/whitewater-park/>.

Nebraska White Water Rafting River Details, Guides, & Rentals. go. <https://www.go-nebraska.com/White-Water-Rafting/>.

Water Trails. Nebraska Game and Parks. (2019, December 4). <https://outdoornebraska.gov/watertrails/>.

Weather averages Kearney, Nebraska. US Climate Data Kearney NE . <https://www.usclimatedata.com/climate/kearney/nebraska/united-states/usne0265>.

Turkey Creek CFS . NeDNR Stream Gaging. <https://nednr.nebraska.gov/realtime/Stations/Details/00145700>.

City of Kearney References

Park and Recreation. Park and Recreation | City of Kearney, NE <https://www.cityofkearney.org/497/Park-and-Recreation>.

Kearney, Nebraska's 1733 Identity. History Nebraska. <https://history.nebraska.gov/blog/1733-miles-where-kearney-nebraska%E2%80%99s-1733-identity>.

Kolmar, C. (2020, May 3). *10 Fastest Growing Cities In Nebraska*. HomeSnacks. <https://www.homesnacks.net/fastest-growing-cities-in-nebraska-127088/>.

Wikimedia Foundation. (2020, July 26). *Kearney, Nebraska*. Wikipedia. https://en.wikipedia.org/wiki/Kearney,_Nebraska.

Kearney, NE. Data USA. <https://datausa.io/profile/geo/kearney-ne>.

Kearney Nebraska Population 2020. Kearney, Nebraska Population 2020 (Demographics, Maps, Graphs). <https://worldpopulationreview.com/us-cities/kearney-ne-population/>.

2019 Continuous Traffic Count Data and Traffic Characteristics on Nebraska Streets and Highways (2020, February) <https://dot.nebraska.gov/media/3811/annual-traffic-count-data.pdf>

Economic Impact Study References

Nebraska Tourism launches spring/summer campaign "Nebraska. Honestly, it's not for everyone". <https://visitnebraska.com/press-releases/nebraska-tourism-launches-springsummer-campaign-nebraska-honestly-its-not-everyone>.

Share Nebraska's Outdoor Recreation Economy Report. Outdoor Industry Association. <https://outdoorindustry.org/share-nebraskas-outdoor-recreation-economy-report/>.

Braak, Willem, "2011 Economic Impact of Kelly's Whitewater Park in Cascade, Idaho" (2012). <http://poudrewhitewaterpark.com/wp/wpcontent/uploads/2013/08/2012KellysEconomicImpact.pdf>

University Section References

Welcome to the UNK Factbook. UNK Factbook | Factbook | University of Nebraska at Kearney.
<https://www.unk.edu/factbook/index.php>.

University of Nebraska at Kearney. (2018, May 12) UNK Ranked One of Best Colleges.
www.facebook.com/UNKearney Retrieved from
<https://www.facebook.com/UNKearney/photos/a.10151274236620059/10155221550010059/?type=1&theater>

Dority, Bree. and Kaskie, Shawn. 2011. *The Economic Impact of the University of Nebraska-Kearney Fiscal Year 2009-2010.* University of Nebraska at Kearney

Braak, W. 2012. *Economic Impact of Kelly's Whitewater Park in Cascade, Idaho.* University of Idaho Extension
<http://poudrewhitewaterpark.com/wp/wp-content/uploads/2013/08/2012KellysEconomicImpact.pdf>

UNK Facilities Development Plan 2006-2015. 2006.
https://www.unk.edu/offices/facilities/_files/facilities_development_plan.pdf

UV Village
https://www.unk.edu/offices/facilities/_files/University%20Village%20Presentation%20-%2023Oct2014.pdf

HDR. UNK South Campus - University Village 2014
https://www.unk.edu/offices/facilities/planning_construction/university_village.php

Ellyson, T. (2019, June 28). *New Cope Fountain should be flowing this fall.* UNK News.
<https://unknews.unk.edu/2019/06/28/new-cope-fountain-should-be-flowing-this-fall/>.

Admin. (2018, September 27). *UNK to offer in-state tuition to Colorado, Kansas students.* UNK News. <https://unknews.unk.edu/2017/10/19/unk-to-offer-in-state-tuition-to-colorado-kansas-students/>.

CCPE Higher Education Progress Report 2018
https://ccpe.nebraska.gov/sites/ccpe.nebraska.gov/files/PR_2018.pdf

Ellyson, Tyler. "UNK Launching 'New Nebraskan' Scholarship for out-of-State Students." *UNK News*, 14 Aug. 2020, unknews.unk.edu/2020/08/14/unk-launching-new-nebraskan-scholarship-for-out-of-state-students/.

Appendix References

Part II. The Kearney Canal 1887 and After. http://www.bchs.us/BTAles_197807.htm.

Comparable Report References

RPI Consulting. (2018). Cedar Falls, Iowa Whitewater Park Market Study and Economic Impact Analysis. <http://www.cedarfalls.com/DocumentCenter/View/7599/Cedar-River-Market-and-Economic-Analysis?bidId=>

HVS Consulting. (2019). Presentation of the Active River Project Economic Impact Analysis. <https://www.stcharlesil.gov/sites/default/files/event/packetitems/4b.%20HVS%20Study%20presentation.pdf>

Glynn, D. Hsu, T. Marcouiller, D. Ryan, B. (September 2018). Potential Economic Impacts of a Proposed Whitewater Park: A Market-based Case Study of Stoughton, WI. <https://static1.squarespace.com/static/58efe5c78419c24fe696a016/t/5c5de289fa0d6032b2e8cb85/1549656716728/Whitewater+Park+Economic+Impact+Report+vfinal.pdf>

Braak, W. 2012. Economic Impact of Kelly's Whitewater Park in Cascade, Idaho. University of Idaho Extension <http://poudrewhitewaterpark.com/wp/wpcontent/uploads/2013/08/2012KellysEconomicImpact.pdf>

Fiscal Collection References:

Nebraska and County Lodging Tax. Nebraska Department of Revenue. (2019, November 4). <https://revenue.nebraska.gov/government/nebraska-and-county-lodging-tax>.

Nebraska Sales and Use Tax Guide for Prepared Food and Beverage Service. Nebraska Department of Revenue (2018, June) <https://revenue.nebraska.gov/sites/revenue.nebraska.gov/files/doc/info/6-432.pdf>

GSB-61: Progress Report # 3 for December 2016: Actual Business Evaluation & Sales Analysis of a Real Store. Gas Station Business 101 Podcast - How to Start, Run and Grow a Successful Gas Station Business. <https://gasstationbusiness101.libsyn.com/gsb-61-progress-report-3-for-december-2016-actual-business-evaluation-sales-analysis-of-a-real-store>.

Lin, I-Hui, "Assessing the Effect of Parks on Surrounding Property Values Using Hedonic Models and Multilevel Models" (2016). Theses and Dissertations. 1291. <https://dc.uwm.edu/etd/1291>

Part VII: Appendix

Kearney Canal and Related Project History

The Kearney canal was originally developed for hydroelectric generation and irrigation. In 1876 - Surveyor Simon Murphy planned a canal stretching twelve miles long, twelve feet wide, and three feet deep. Mr. Murphy estimated that this earth moving project would cost an estimated \$57,660 an equivalence of \$1.4 million in 2020. By August of 1886 after a few trials and tribulations, the canal and spillway projects were completed. This site was also home to one of Americas first hydroelectricity plants beginning to produce power from the canal in 1888. The canal property has switched hands many times throughout the 1900's and finally settled into the hands of the Nebraska Public Power District (NPPD) in 1970 who currently utilizes the spillway for hydroelectric generation producing water driven energy at 1 MW/hr. The Kearney Canal merges with the Turkey Creek 1.5 miles South of the spillway and supplies a majority of the summertime water volume for the Turkey Creek.

Figure 44. Early photo of the spillway featuring the old powerhouse to the right of the ungraded banks



Source: UNK Special Collections and Archives

Figure 45. Construction photo of the turbine power tower captured in the early 90's



Source: Buffalo County Historical Society - Volume 1, No. 7

Figure 46. Early Kearney State Students Canoeing on the Kearney Lake



Source: UNK Special Collections and Archives

Table 53. Kearney Canal and Water Right Ownership Timeline

Year	Event
1882	Kearney Canal Water Supply Company
1885	George W. Frank had acquired four-fifths of the KCWSC (above stock
1888	H. D. Watson secures a one-half interest in Frank's properties
1898	Sale of canal and power facilities to the Northwestern Heat and Electric Company. Mortgage holders secured a decree of foreclosure against the canal company
1905	(Northwestern)
1908	Electric Powers Company took over the canal and power facilities.
1917	Purchased by L. E. Meyers of Chicago
1919	Purchased by Central Power Company
1970	Purchased by Nebraska Public Power District

Source: UNK Special Collections and Archives & Buffalo County Historical Society

180 Kayak Traveler Projection Methodology

The season we are working with includes days in between Memorial Day (5/25) & Labor Day (9/7). This time frame includes 32 weekend days and 74 weekdays (Mon-Friday). We estimate that there are between 8,500-9,300 paddlers hauling gear per summer which excludes paddlers with inflatable equipment and those who will participate in tours.

Table 54. Conservative Summer Kayak Traveler Estimates

	Low	Mid	High
Weekend Day	97	104	111
Week Day	64	71	78
Total Summer	7,845	8,587	9,329

The following table classifies how many new kayaks pass by per hour (K/Hr.) and 6-hour (6 Hr.) basis. Weekends see an estimated 111 kayaks per day while the weekdays welcome 78 kayaks per day.

Table 55. 24 Hour Kayak Traveler Count Summary

West Bound			East Bound	
	K/Hr.	6 Hr.	K/Hr.	Hr.
			6	
Weekend				
6am-12pm	5.0	30	1.5	9
12pm-6pm	5.0	30	1.5	9
6pm-12am	3.5	21	1.1	6
12am-6pm	0.8	5	0.2	1
Totals		86		26
Weekday				
6am-12pm	3.5	21	1.1	6
12pm-6pm	3.5	21	1.1	6
6pm-12am	2.5	15	0.7	4
12am-6pm	0.5	3	0.2	1
Totals		60		18

We had to make two key assumptions since we only counted for a 12-hour duration on one single summer day that was equivalent to a weekend.

East Bound Estimates:

Since the eastbound lanes were not studied, we made the assumption that they took on only 30% of the total West bound traffic kayak volume note the 86 & 26 total counts in table above is the reason for this 30% assumption.

- There are fewer recreational and whitewater offerings in the East
- Travelers are looking to escape the Midwest heat by spending time in the mountains therefore, you see more recreational travelers with Westbound destinations.

- The East has notable whitewater trails and scenic lakes especially as travelers reach cross Minnesota, Wisconsin, Eastern Iowa territories.

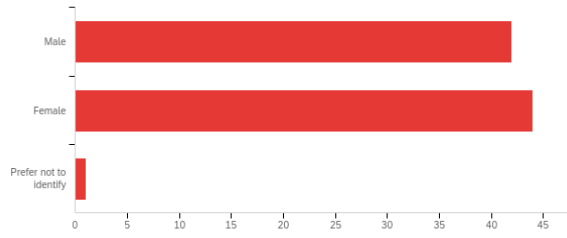
24 Hour Estimates:

We counted kayaks at an average rate of 6.2 kayak boats per hour during daylight hours. Since this day had a higher recreational traveler volume than the average summer weekend, we lowered the daytime average kayak per hour down to 5 and used 1.5 for an average week-day frequency. For the night we assumed that recreational travel crowd slows down significantly.

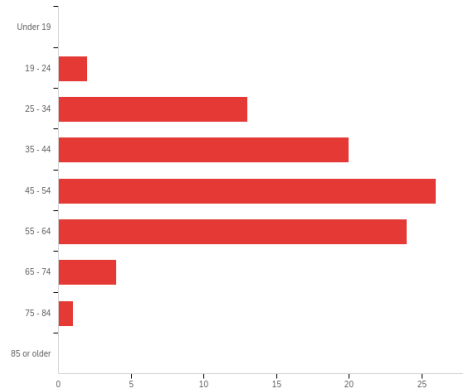
Survey Results

Grand Island Community Survey Results

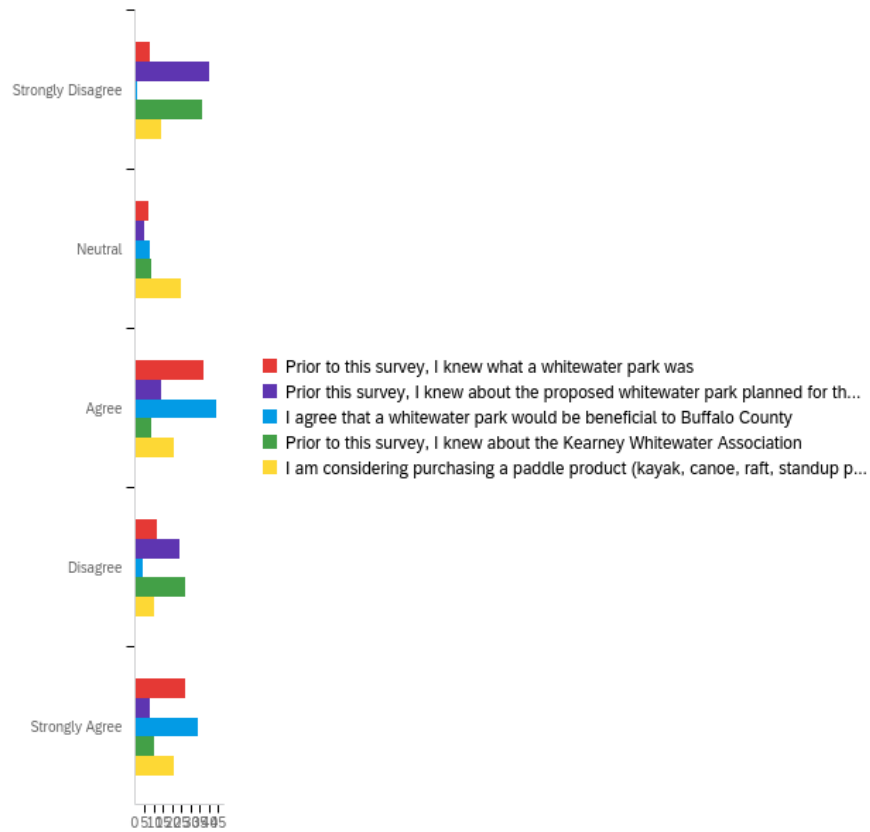
My Gender is



My Age is



To what extent do you agree with these statements:



I have paddled before (kayak, canoe, raft, standup paddle board, inner-tube)

#	Answer	%	Count
1	Yes	94.51%	86
2	No	5.49%	5
	Total	100%	91

I have paddled or floated the Kearney Canal

#	Answer	%	Count
1	Yes	15.29%	13
2	No	84.71%	72
	Total	100%	85

I own, have access to, or have rented (check all that apply):

#	Answer	%	Count
1	Kayak	27.65%	60
2	Canoe	19.35%	42
3	Raft	9.22%	20
4	Standup Paddle board (SUP)	11.98%	26
5	Inner-tube	24.88%	54
6	Other	2.76%	6
7	None of the Above	4.15%	9
	Total	100%	217

I have been paddling for

#	Answer	%	Count
1	1 year	12.82%	10
2	2 years	14.10%	11
3	3-4 years	21.79%	17
4	5-7 years	10.26%	8
5	8-10 years	8.97%	7

6	11+ years	32.05%	25
	Total	100%	78

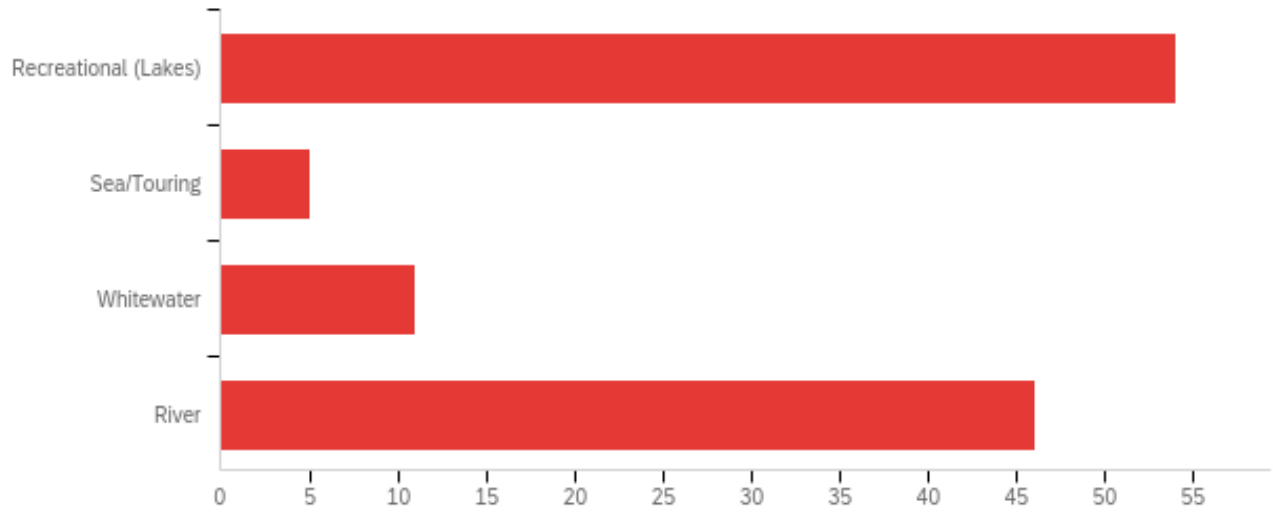
I find the following outdoor recreation activities appealing (check all that apply):

#	Answer	%	Count
1	Hiking and camping	17.60%	72
2	Hunting and fishing	11.74%	48
3	Canoeing, kayaking and rafting	18.09%	74
4	Sailing and motorboating	10.27%	42
5	Biking	14.67%	60
6	Rock Climbing	3.91%	16
7	Horseback riding	9.29%	38
8	Snowsports	7.09%	29
9	Restoration and conservation volunteering	6.36%	26
10	Other	0.98%	4
	Total	100%	409

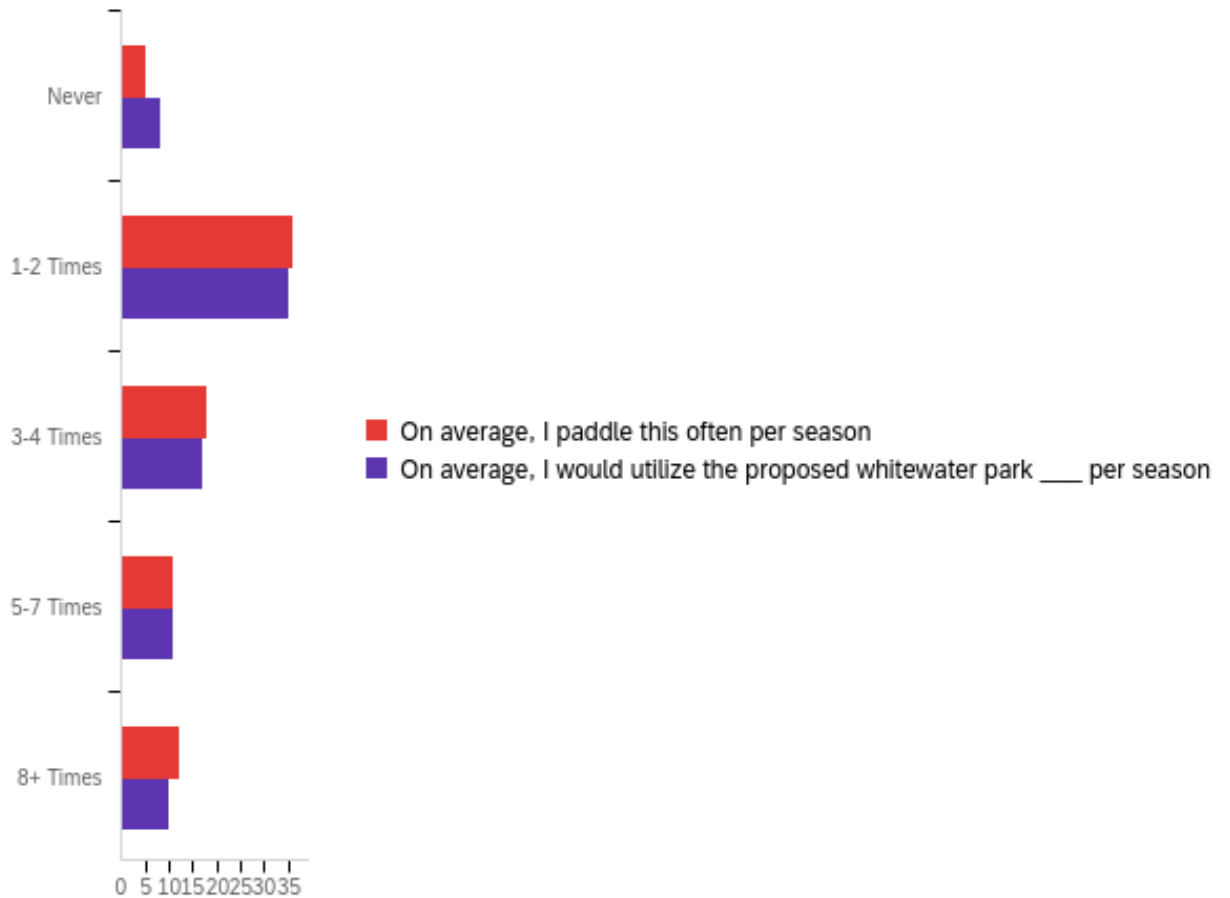
I find the following to be of concern in a whitewater park (check all that apply):

#	Answer	%	Count
1	Vandalism	5.94%	12
2	Non sufficient usage	16.34%	33
3	Operating Cost	20.30%	41
4	Water Quality	11.39%	23
5	Safety	17.33%	35
6	Funding	20.79%	42
7	Other	1.49%	3
8	None of the above	6.44%	13
	Total	100%	202

I spend the most time paddling (check all that apply):



In terms of how often I paddle, please answer the following:



Is there any other feedback you would like to provide us with

Is there any other feedback you would like to provide us with?

Impact on other parks in the state

I believe the Kearney White Water Park is a wonderful addition to the community

I live in Grand Island. I would hope to utilize the park at least once a year but the logistics of taking our kayaks 45 miles would be our only set back

All Positive

Build one in Hall County too please!

This would be an amazing attribute to the community! I live in GI but would gladly go to Kearney for something like this. What a great idea!

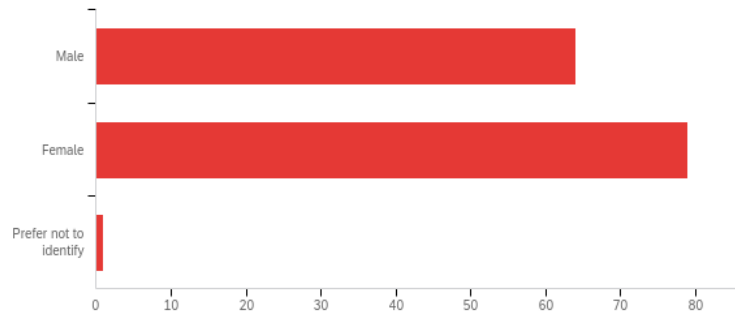
I feel that this park would be a huge asset for the city of Kearney!

I hope this happens!!! This would be great to get more people out and active in nature and facilitate healthier lifestyle choices, which is much needed in our area.

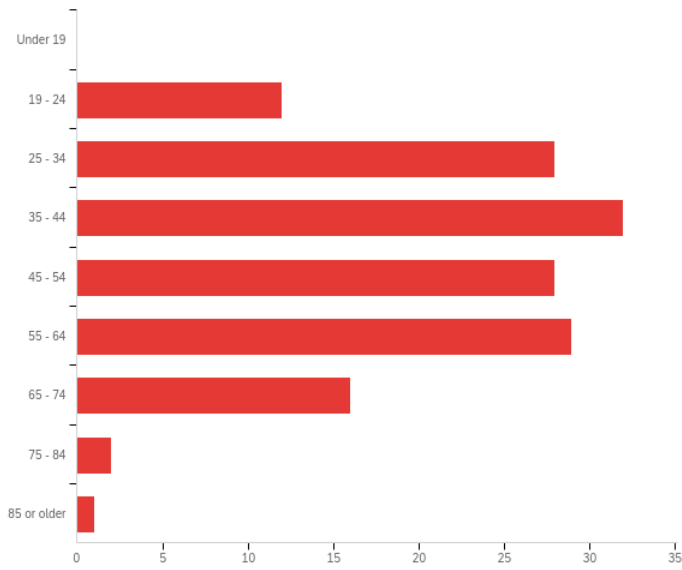
Love this idea! I live in Grand Island, but would definitely go to Kearney just to do this.

Kearney Community Survey Results

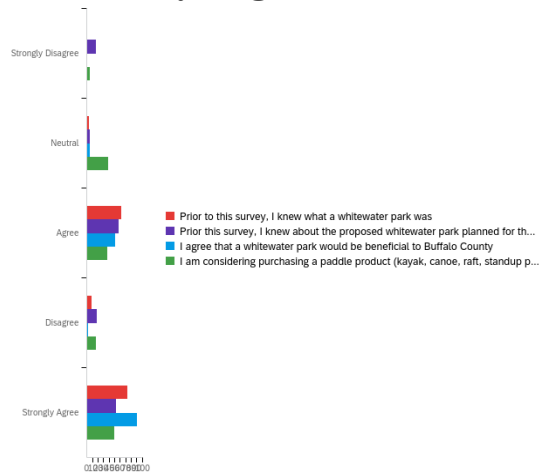
My Gender is



My age is



To what extent do you agree with these statements:



I have paddled before (kayak, canoe, raft, standup paddle board, inner-tube)

#	Answer	%	Count
1	Yes	94.00%	141
2	No	6.00%	9
	Total	100%	150

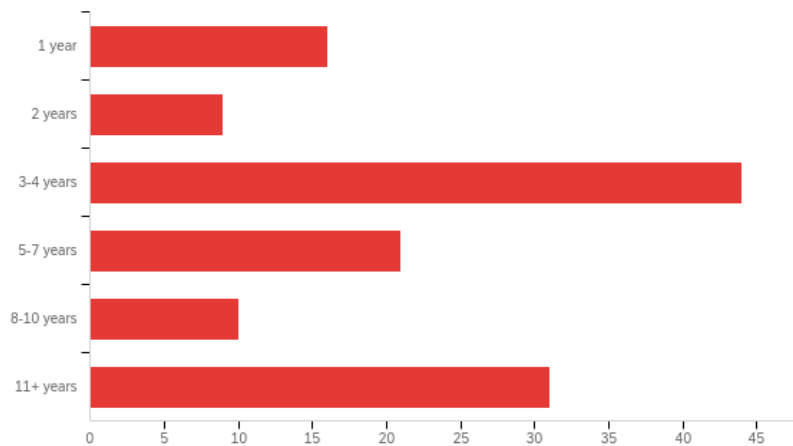
I have paddled or floated the Kearney Canal

#	Answer	%	Count
1	Yes	65.71%	92
2	No	34.29%	48
	Total	100%	140

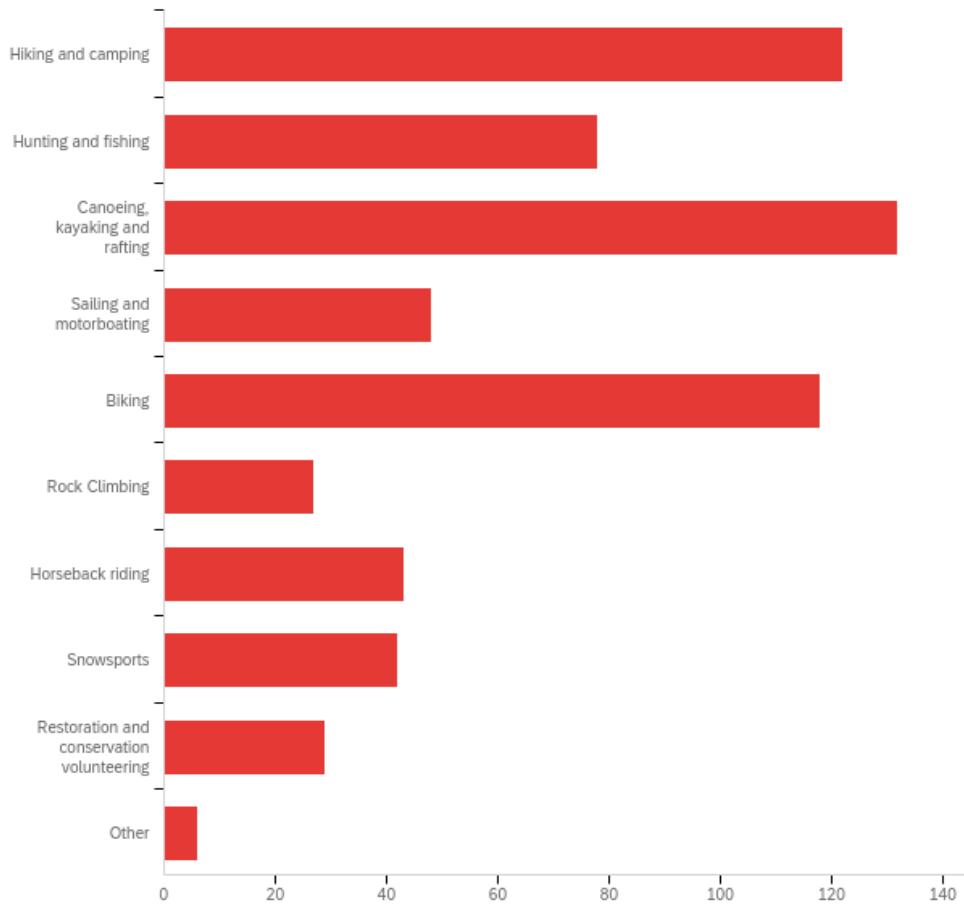
I own, have access to, or have rented (check all that apply):

#	Answer	%	Count
1	Kayak	39.46%	118
2	Canoe	18.06%	54
3	Raft	8.36%	25
4	Standup Paddle board (SUP)	6.69%	20
5	Inner-tube	23.08%	69
6	Other	1.00%	3
7	None of the Above	3.34%	10
	Total	100%	299

I have been paddling for



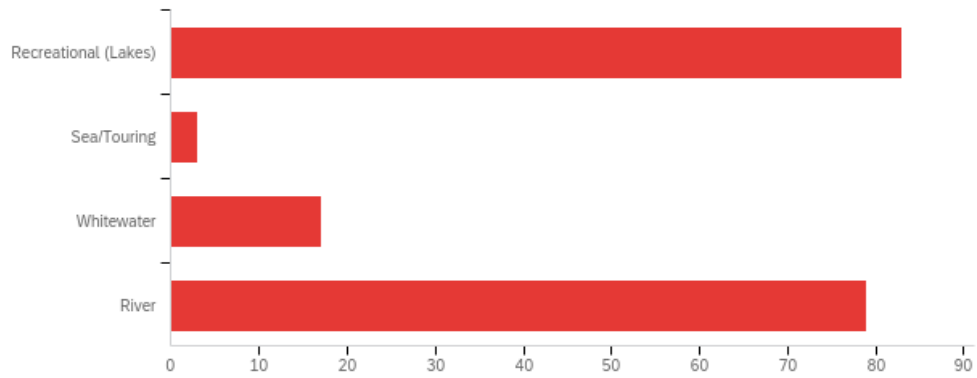
I find the following outdoor recreation activities appealing (check all that apply):



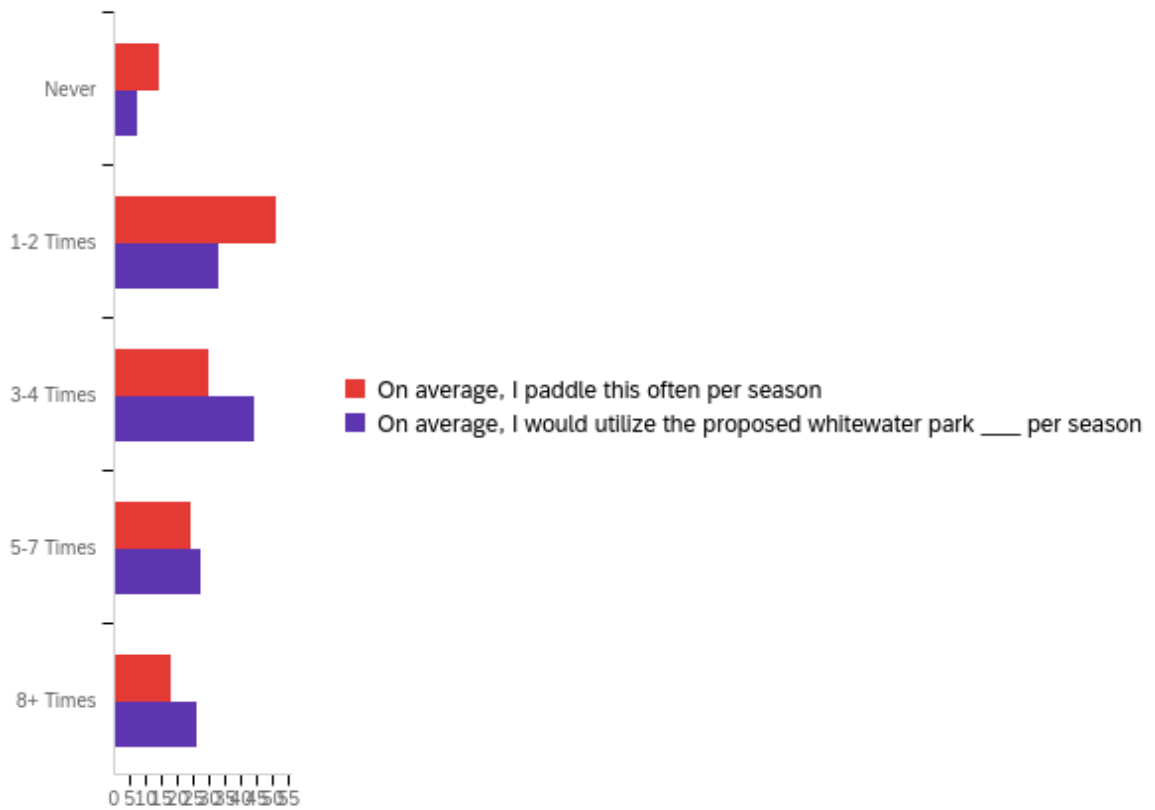
I find the following to be of concern in a whitewater park (check all that apply):

#	Answer	%	Count
1	Vandalism	11.11%	30
2	Non sufficient usage	5.19%	14
3	Operating Cost	17.41%	47
4	Water Quality	8.89%	24
5	Safety	16.67%	45
6	Funding	30.37%	82
7	Other	2.22%	6
8	None of the above	8.15%	22
	Total	100%	270

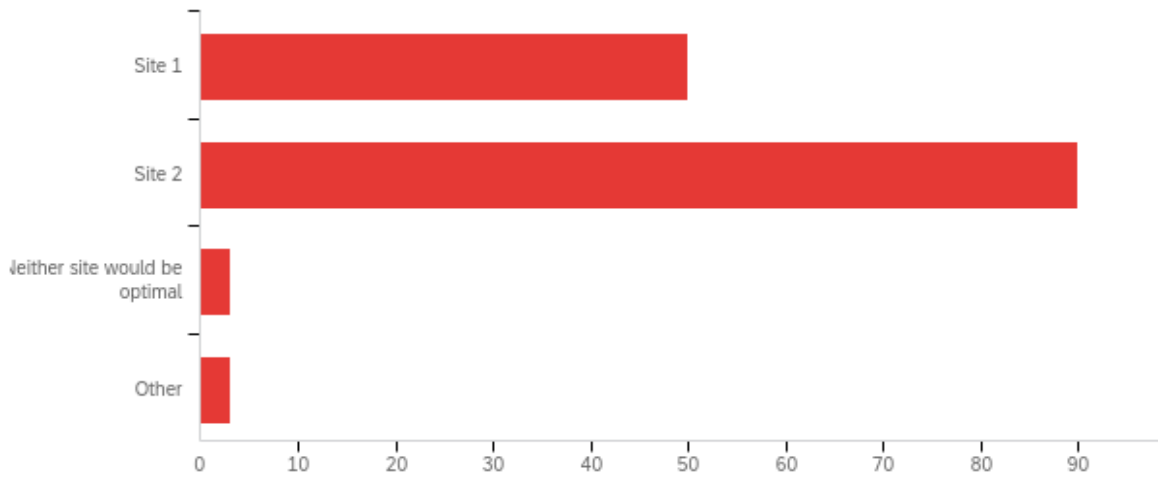
I spend the most time paddling (check all that apply):



In terms of how often I paddle, please answer the following:



In terms of optimal location within Kearney, this proposed site looks most favorable
Site 1 - Turkey Creek Site 2 - Kearney Canal Tailrace



Is there any other feedback you would like to provide us with?

Would be a great addition to our area.

I think this is a good idea but once again if it extends the time or ammount of water diverted from the Platte River then I am against it. These diversions have a negative impact on our natural resource and the wildlife that rely on it.

After spending the past several summers paddling in Colorado the biggest difference, I have noticed between a good whitewater park and a “death hole” is continued maintenance. Water changes things and the managers of the park must be prepared to make incremental changes each year during the off season. Fortunately, the canal water patterns make this easy.

I'm probably too old at 84 to do these but I've answered thinking my children and grandchildren would certainly like to

no

It would be a great addition for recreation in Kearney.

We have owned and used canoes and now kayaks for 30+ years. There was a time when we rented canoes and were called Kearney Canoe Rentals. We kayak now and would do it more often if the trail was longer. We do enjoy the short trail once in a while, but we would love to see it lengthened.

Feel blessed to have the driving force of the group and our community behind this project.

I personally know a group of 10 or so people that have been extremely excited about this since it was first proposed. I really hope they are able to move forward with it.

Has great potential to add to the assets of Buffalo County.

It is important for Kearney to stay relevant and constantly increase/review the tourism appeal!

this would be very important to setting Kearney apart. The college location would be more for UNK the south Kearney canal would be for both tourists and UNK. Visibility fo visitors would give greatest impact. Local UNK students and residents will go to wherever it is located. Tourists will be less likely to know about it if next to UNK.

Since the Kearney canal and Turkey Creek Park has opened up it allowed people a nice shirt trip on the water

Great idea if the need is here in the community. Cost of operating makes me worried.

Wonderful idea! Kearney will have it all!

Make the course a longer distance, start at UNK and travel to Central Ave

SITE 1 WOULD BE USED MORE FOR THE CASUAL KAYAKER SINCE IT IS PART OF CURRENT TRAIL SYSTEM. SITE 2 WOULD BE A GREAT OVERALL ENHANCEMENT TO THE WHITEWATER SYSTEM IN KEARNEY BUT WOULD HAVE SOME LOGISTICS AROUND THE AREA (UNK)

Can't be completed fast enough

Not sure that UNK would ever give consent to the site on campus so not sure why it is listed

The Tailrace definitely seems to be a better location in terms of features, water flow, etc., but the 2nd Avenue location would be such a wonderful welcome to Kearney for people coming off of I80.

I feel that some of the tree branches on the Canal / Turkey Creek could be cleared out better.

I would like to see camera's installed at the hike/bike underpass on I-80 to help eliminate the graffiti problem and catch the culprits.

I really do think this would provide a boost to our adventure and tourism areas in Kearney and the surrounding region.

I have seen some of the plans for the whitewater park and I have no real concerns with safety if the plans are put in place as I have seen them.

We need to monitor the water level during rain times to make sure that we don't get flooding like we had in 2019

I would be in favor of either of the sites proposed. We just need to get this done. It would be a great benefit to Kearney

Tailrace Economic Impact Spending Allocations

Table 56. Spending Allocations for the Proposed Tailrace Site

Overnight Visitors

Visitors	1994
Hotel/Lodging	\$47
Food and drinks	\$27
Gasoline/Fuel	\$26
Shopping	\$31
Entertainment	\$29
Other	
Total	\$161

Overnight Camping Visitors (2)

Visitors	1595
Hotel/Lodging	\$0
Food and drinks	\$35
Gasoline/Fuel	\$18
Shopping	\$7
Entertainment	\$28
Other	
Total	\$88

Day Visitors

Day Trippers (3)

Visitors	4387
Hotel/Lodging	\$0
Food and drinks	\$18
Gasoline/Fuel	\$6
Shopping	\$8
Entertainment	\$28
Other	\$0
Total	\$60

Spillover Visitors from Campus Events

Visitors	500
Hotel/Lodging	\$6
Food and drinks	\$22
Gasoline/Fuel	\$22
Shopping	\$13
Entertainment	\$2
Other	\$3
Total	\$68

UNK Student - Outside Friend Visit (5)

Visitors	1000
Hotel/Lodging	\$0
Food and drinks	\$8
Gasoline/Fuel	\$2
Shopping	\$0
Entertainment	\$1
Other	\$0
Total	\$10

Pictures/Scenery (6)

Photography	
Visitors	250
Hotel/Lodging	\$0
Food and drinks	\$8
Gasoline/Fuel	\$2
Shopping	\$0
Entertainment	\$1
Other	\$0
Total	\$10

Festivals/Events (7)

Event Visitors	2000	Tubing (8)	
Hotel/Lodging	\$0	Local Tubing	
Food and drinks	\$12	Visitors	1000
Gasoline/Fuel	\$3	Hotel/Lodging	\$0
Shopping	\$9	Food and drinks	\$8
Entertainment	\$7	Gasoline/Fuel	\$2
Other	\$0	Shopping	\$0
Total	\$30	Entertainment	\$1
		Other	\$0
		Total	\$10

Table 57. References for Spending Categories & Report Inspirations

Publisher	Study	Spending
RPI	Cedar Falls	\$161
HVS	St. Charles Active River Project	\$10 & 60
Wisconsin Cooperative Extension	Stoughton WI	\$30
Idaho - Extension	WW Cascade, ID	\$88

Source 1: (RPI): RPI Consulting. (2018). Cedar Falls, Iowa Whitewater Park Market Study and Economic Impact Analysis.

Source 2: (HVS): HVS Consulting. (2019). Presentation of the Active River Project Economic Impact Analysis.

Source 3: (Wisconsin): Glynn, D. Hsu, T. Marcouiller, D. Ryan, B. (September 2018). Potential Economic Impacts of a Proposed Whitewater Park: A Market-based Case Study of Stoughton, WI.

Source 4: (Idaho): Braak, W. 2012. Economic Impact of Kelly's Whitewater Park in Cascade, Idaho. University of Idaho Extension

Fiscal Collection Methodology

Findings:

Turkey Creek

Visitors: 7,900

Spending Per Visitor: \$108

Impact Per Visitor: \$125

Average Spending Tax Collections Per Visitor (less payroll & property tax collections): \$8.50

Payroll Tax Collections: \$51,200

Property Tax Collections: \$42,400

Total New Tax Collected: \$161,000

Tailrace

Visitors: 12,700

Spending Per Visitor: \$77

Impact Per Visitor: \$94

Average Spending Tax Collections Per Visitor (less payroll & property tax collections): \$7

Payroll Tax Collections: \$55,000

New Property Tax Collections: \$15,200

Total New Tax Collected: \$159,000

Table 58. Beneficiaries of New Tax Collections

Beneficiary	%	Turkey		%
		Creek	Tailrace	
City & County	37%	\$60,062	\$34,296	21%
State	39%	\$62,294	\$75,771	47%
US Government	24%	\$38,785	\$49,776	31%
	100%	\$161,141	\$159,843	100%

Table 59. New Tax Revenues by Levy Type

Levy Category	Turkey Creek	Tailrace
Sales (State)	\$ 37,943	\$ 48,841
Sales (City)	\$ 10,348	\$ 19,070
Fuel	\$ 10,814	\$ 12,506
Lodging	\$ 4,851	\$ 4,970
Occupation	\$ 2,425	\$ 2,485
Excise	\$ 1,122	\$ 1,498
Payroll	\$ 51,200	\$ 55,138
Property	\$ 42,438	\$ 15,226
Annual New Collections	\$ 161,141	\$ 159,735

Table 60. Spending by Proposed Site

Category	Turkey	Tailrace
Hotel and motel services	\$ 121,263	\$ 124,248
Food services and drinking places	\$ 223,524	\$ 275,849
Retail Services - Gasoline stations	\$ 130,284	\$ 150,676
Retail Services - clothing and clothing accessories	\$ 130,503	\$ 154,808
Amusement and recreation	\$ 258,842	\$ 275,807
Other	\$ -	\$ 1,605
Total	\$ 864,416	\$ 982,993

Collections from Spending Methodology

The following tables display the methodology used to reach the above fiscal impacts. Each literature breakdown utilizes the Turkey Creek spending and economic impact figures not the Tailraces.

Hotel/Lodging:

Whitewater Visitors are anticipated to spend \$121,000 on overnight hotel lodging and camping. Buffalo County collects a 4% Lodging tax, a 2% Occupation tax on hotel/camping receipts, and a 7% sales tax. A recent look into a buffalo county hotel and RV park showed collections in the 13%-14% range.

Table 61. Hotel Lodging Collections

	Tax	Turkey	Tailrace
Hotel/Lodging/Camping Spending		121,263	124,248
Lodging Tax	4.00%	\$ 4,851	\$ 4,970
Occupation Tax	2.00%	\$ 2,425	\$ 2,485
State Sales	5.50%	\$ 6,669	\$ 6,834
City Sales	1.50%	\$ 1,819	\$ 1,864
Hotel/Lodging Collections	13.00%	\$ 15,764	\$ 16,152

Source: *Nebraska and County Lodging Tax*. Nebraska Department of Revenue. (2019)

Food Services and Drinking Places:

The University of Idaho Extension conducted an economic impact to study and survey the river related activities at Kellys and Cascade whitewater parks in Idaho and did a great job gathering detailed spending information from the summer paddlers in 2012.

\$8.50 restaurants and bars
 \$9.30 groceries & take out
 17.80 total food related spending

U of I's survey indicated that kayakers spent \$17.80 on food categories. \$8.50 or (48%) was spent at restaurants and bars while \$9.30 (52%) went towards groceries and take out.

Based on the U of I Extension study and short duration of stay experienced by our visiting paddlers, we figured that 70% of the visitor food and drink spending was subject to prepared food tax given that the average stay of overnight visitors is only 1.3 days and the day trippers will stick around for a day depending on visitor objectives. In other words, many whitewater visitors do not have the patience or equipment to prepare meals. A small excise tax of \$1000 was achieved through tobacco, alcohol, and other related sales (college visits more so at the Tailrace site will be a majority contributor). New food and drink related collections added up to \$12,000.

Table 62. Food and Drink Service Place Collections

	Turkey	Tailrace
Food & Drink Spending	\$ 223,524	\$ 275,849
Percent of Food Sales Subject to Tax	70%	70%
Food and Drink Sales Subject to Tax	\$ 156,467	\$ 193,094
State (5.5%)	\$ 8,606	\$ 10,620
City (1.5%)	\$ 2,347	\$ 2,896
Sales Tax	\$ 10,953	\$ 13,517
Excise	\$ 1,000	\$ 1,310
Food and Drink Collections	\$ 11,953	\$ 14,827

Source: Nebraska Sales and Use Tax Guide for Prepared Food and Beverage Service 2018

Retail Services - Gasoline stations:

As of July 1st, 2020, the state of Nebraska collects 33.2 cents per gallon of motor fuel sold. Kayak visitors are anticipated to spend \$130,284 at gasoline stations in total. 25% of those sales went toward in store purchases while 75% when towards fuel purchases. This breakdown was according to Shabbir Hossian, a convenience store Entrepreneur and author on gasstationbusiness101.com. We used this ¼ sales split to determine tax collections.

Source: <https://gasstationbusiness101.com/>

- \$32,571 was spent on in store purchases, we assumed that 50% of the instore purchases were subject to a sales tax of 7% and a small excise tax of \$120 was also applied. In store tax collections was \$1700.
- At the pump, visitors purchased 32,500 gallons of gasoline. Multiplying gallons sold by the State fuel tax of 33.2 cents tax per gallon brings us to the fuel tax collection estimate of \$10,813. New tax collections provided by gas station spending is \$12,116.

Table 63. Gas Station Spending and Collections by Sales Category

	Sales	Tax Collections	Sales	Tax Collections
Total Spending	\$ 130,284	\$ 12,532	\$ 150,676	\$ 14,540
Inside Sales	\$ 32,571	\$ 1,718	\$ 37,669	\$ 2,034
Fuel Sales	\$ 97,713	\$ 10,814	\$ 113,007	\$ 12,506

Table 64. Inside Store Sales & Collections

Particulars	Turkey	Tailrace
Inside Sales (Gadgets & Prepared Food)	\$ 32,571	\$ 37,669
Subject to Sales Tax (70%)	\$ 22,800	\$ 26,368
State (5.5%)	\$ 1,254	\$ 1,450
City (1.5%)	\$ 342	\$ 396
Excise (7.5% inside sales)	\$ 122	\$ 188
Inside Collections	\$ 1,718	\$ 2,034

Table 65. Gas Station Spending & Collections

Particulars	Turkey	Tailrace
Fuel Spending	\$97,713	\$113,007
Price Per Gallon	\$3	\$3
Gallons Purchased	32,571	\$37,669
Fuel Tax Per Gallon	0.332	0.332
Fuel Tax Collections	\$10,814	\$12,506
Total Gas Station Collections	\$12,116	\$14,540

Retail Services (Shopping):

100% of retail shop spending is subject to a combined city and state sales tax of 7%.

Table 66. Retail Services Spending & Collections

Particulars	Turkey	Tailrace
Spending	\$130,503	\$154,808
State (5.5%)	\$7,178	\$8,514
City (1.5%)	\$1,958	\$2,322
Retail Collections	\$9,135	\$10,837

Entertainment Collections:

100% of entertainment spending sector collects a city and state sales tax of 7% (excluding nonprofits entertainment groups)

Table 67. Entertainment Industry Spending & Collections

Particulars	Turkey	Tailrace
Entertainment Spending	\$258,842	\$275,807
State (5.5%)	\$14,236	\$15,169
City (1.5%)	\$3,883	\$4,137
Entertainment Collections	\$18,119	\$19,306

Total Spending Collections:

Turkey Creek: \$67,000
 Tailrace: \$75,600

Payroll Tax Collection Methodology

Payroll Tax estimates were based on the labor income provided by the economic impact results which states that 13 new jobs were created due to the new economic and business opportunity indirectly provided by the new white waterpark distributing \$320,000 in labor income. \$320,000 labor income / 13 jobs = \$24,615 average new job salary and associated income bracket.

Based on the 2020 Federal Income Tax Table and Nebraska State income tax requirements, we determined that 10% of wages will be subject to federal tax while 6% is subject to state taxes. In total, annual Federal income tax collections will be in the \$32,000 range and State income tax collections will average around \$19,000 annually.

Table 68. Turkey Creek Economic Impact (for labor income reference)

Impact Category	Direct Impact	Multiplier Impact	Total Impact
Visitor Spending			
Output (Millions \$)	\$0.62	\$0.38	\$1.00
Labor Income (Millions \$)	\$0.21	\$0.11	\$0.32
Employment	10	3	13

Table 69. Payroll Tax Collection Breakdown

Particulars	Turkey	Sum Employees	Tailrace	Sum Employees
Jobs Created	13		14	
Avg Annual Salary	\$ 24,615		\$ 24,615	
Federal	\$ 2,462	\$ 32,000	\$ 2,462	
State	\$ 1,477	\$ 19,200	\$ 1,477	\$ 34,462
Fed & State Taxes	\$ 3,938		\$ 3,938	\$ 20,677
Sum Payroll Tax Collections	\$ 51,200	\$ 51,200	\$ 55,138	\$ 55,138

Property Premium Methodology

Increased foot traffic and new business activity tend to unfold around national whitewater sites and the overall desirability of the neighborhood goes up. Given this, we decided to assign new property values surrounding the proposed whitewater park sites. Property surrounding the Turkey Creek was mostly commercially zoned. Food service, retail, and entertainment businesses had their fair share within the 990-foot property capture radius. The multiple retail, food/drink, and hotel options seem to provide a good mix of entertainment activities for kayak park visitors having several nearby amenities to enjoy. The proximity to these amenities may drive additional spending within the surrounding neighborhood area. Traveling visitors may value the ability to play, eat, and stay all within a convenient walking distance. The following figure displays an aerial view of the properties considered for a new premium; each radius line represents a 330-foot difference. We will first look at the Turkey Creek site properties and then Tailrace. We estimate that Turkey Creek property premiums will produce \$42,000 in new property taxes while the Tailrace site has the potential to generate \$15,200.

Methodology:

We used a hedonic adaptation approach to assign premiums to properties surrounding the proposed whitewater park. A previous study conducted by Hui Lin in 2016 analyzed property located near parks in the Minneapolis Minnesota metropolitan area. Mr. Lin used hedonic adaptation models to calculate property values located near city parks, he established a premium index for different park types. We used premiums tied to parks with water presence (meaning water presence meaning presence of water body (e.g. river, creek, and lake) in the park). We assigned an inflated property values of 16, 7.5 & 3.5% on property located within a 0-990' radius of the whitewater park.

Source: Lin, I-Hui, "Assessing the Effect of Parks on Surrounding Property Values Using Hedonic Models and Multilevel Models" (2016).

Turkey Creek:

Figure 47. All properties within the red line boundaries were assigned a premium.



Source: Buffalo County GIS

The neighborhood within our capture parameters tend to be geared to serve interstate commerce. The table below breaks down the neighborhood by business sector which includes many hotel and restaurant options for traveling parties.

Table 70. Park Radius Property Types

Zone	Cumulative Assessments	% Neighborhood Share
% Single Family	\$ 233,945	0.6%
% Multi Family	\$ -	0.0%
% Commercial	\$ 38,023,181	99.4%
Total	\$ 38,257,126	
By Sector		
% Hotel	\$ 23,117,870	60%
% Food	\$ 2,982,715	8%
% Retail	\$ 4,631,260	12%
% Entertainment	\$ 5,943,385	16%
% Land	\$ 899,405	2%
% Other	\$ 655,065	2%
Total	\$ 38,229,700	

Source: Buffalo County GIS

Table 71. Turkey Creek Annual New Property Tax Collections

Turkey Creek	Property Premium	New Collections
< 330 ft	16.0%	\$ 12,056
330 - 660 ft	7.5%	\$ 15,370
660 - 990 ft	3.5%	\$ 15,011
		\$ 42,438

Tailrace:

The Tailrace site is expected to collect less property taxes given its positioning amongst tax exempt University of Nebraska Property. The south half of the value halo is expected to yield new property taxes from the surrounding residential dominated neighborhood. This proposed whitewater park facility may also add to the attractiveness of developing at the University Village Site.

Figure 48. 330 - 990 feet radius of the last proposed feature along the Tailrace Site



Source: Buffalo County GIS

Most properties within the radius are single and multifamily rental properties.

Table 72. Park Radius Property Types


Zone	Cumulative Radius Assessments	% Neighborhood Share
% Single Family	\$ 4,366,735	38%
% Multi Family	\$ 4,343,700	38%
% Commercial	\$ 2,790,490	24%
Totals	\$ 11,500,925	100%

Table 73. Tailrace Annual New Property Tax Collections

Tailrace	Property Premium	New Collections
< 330 ft	16.0%	\$ 4,164
330 - 660 ft	7.5%	\$ 8,682
660 - 990 ft	3.5%	\$ 2,380
		\$ 15,226

All Fiscal methodology and ending estimates were validated by Kurt Christiansen, CPA

Figure 49. Fall Symposium 2020 Poster Submission



Market Study and Economic Impact Analysis over the Proposed Kearney Whitewater Parks
Daniel Zavadil, Bree Dority, Ph.D
 University of Nebraska at Kearney, Department of Accounting, Finance, and Economics

Abstract

A whitewater park is an alteration of a streambed to produce whitewater waves and rapids. These parks are becoming a popular development option for communities that have existing natural waterways. The City of Kearney has two waterways that have the suitable hydrology requirements for an operational whitewater park—the market feasibility over these proposed projects has never been investigated which creates the need for this study. Through this research, comparable park economic impact studies and regional market sentiments were analyzed to quantify the relative economic benefits and to identify weather or not a whitewater park would be a suitable development within the City of Kearney. The hypothesis for this study is that if a whitewater park development were to be constructed, the City of Kearney would realize an increase in annual visitors, industry specific sales, property values, fiscal collections, and would lead to an increased quality of life for its citizens. To conduct this research, we divided the study into two main sections including a market study and an economic impact analysis. The market study investigates and reports playboat demographics, survey/interview data, comparable whitewater park studies, and I-80 recreational traffic. The economic impact analysis investigated economic and fiscal impacts generated by quantifying the number of annual participants, identifying relative spending amounts, and assigning spending among five different industries—these different estimates provided the information required to generate an economic impact and to calculate new tax collections (fiscal impact). By examining the above factors, the hypothesis was proven to be accurate, but the relative impacts were less than expected given conservative methodologies used.

Two river sites were investigated within the City of Kearney.

Attributes	Turkey Creek	Tailrace
Average Seasonal Water Flows	245 cfs	225 cfs
Length of Run	800'	930'
Number of Drop Features	2	4
Estimated Construction Costs	\$450K	\$1.3M

Site 1: Proposed Turkey Creek Whitewater Park (2nd Avenue & Turkey Creek)
(approval has been granted and a majority of funds have been secured)

Site 2: Proposed Tailrace Whitewater Park (University Drive & Canal Crossing through UNK)
(to longer term vision)
Conceptual designs and site study conducted by Scott Shippy with S2O Design & Engineering

Hotels:
 In 2019, Kearney had a total of 26 operational hotels generating over \$27.4M in sales revenue yielding \$1.6M in Lodging and Hotel Occupation tax collections. Half of Kearney's hotels are located within a quarter mile radius of the proposed Turkey Creek Whitewater Park which has the potential to attract additional visitors to Kearney's hotels.

Tailrace Site: (University)
 From 2010-2020, UNK and the Board of Regents approved and constructed four new campus facilities including the Village Flats Residential Hall, Discovery Hall, UNMC, and the Early Childhood Education Center costing around \$74 million. An additional \$21 million has been invested in University Village development space which is located .7 miles away from the closest whitewater feature of Tailrace.
 Beginning Fall 2021, UNK lowered the out of state tuition rate from \$455 to \$209 per credit hour. UNK has the potential to be the first and only college in the United States to have a whitewater park. Few universities have a river with the suitable hydrology for a whitewater park. This can act as a unique recruitment tool while enhancing the attractiveness of campus.

I-80:
 As of 2019, Buffalo County welcomes an average of 22,790 motor vehicles within a 24-hour basis. There has been a 22% increase in I-80 average daily traffic volume since 2009. During a 12 hour Westbound I-80 traffic count, we observed 52 vehicles carrying 68 kayak related boats and 335 RV's. I-80 is a popular route for recreational travelers plus Kearney is well positioned to be an attractive stopping point. Our analyses indicated that I-80 sees a minimum of 7,800 - 9,300 vehicles carrying kayak related boats per summer season from Labor Day to Memorial Day or a 106-day season.

Survey & Local Sentiments:
 A survey was distributed through the Kearney Area Chamber of Commerce and 140 individuals participated. 35% of respondents indicated that Turkey Creek would be the optimal site to invest in while the remaining 65% favored the Tailrace Site. Kearney residents who do paddle, participate in an average of 4.2 outings per season and indicated they will utilize the whitewater park on average of 3 times per season.
 26 participants provided feedback, 3 comments expressed concern while the remaining 23 were fully supportive.
 4,230 individuals follow the Kearney Whitewater Park Facebook page indicating significant support for the proposed whitewater park efforts.

Economic Data

Annual Economic Impact Estimates

Attributes	Turkey Creek	Tailrace
Number of New Jobs Created	13	14
New Labor Income	\$220,000	\$240,000
Visitor Estimates	7,900-11,600	12,700-16,700
Visitor Spending	\$865,000	\$983,000
Economic Impact Generated	\$116K	\$132K

Annual Fiscal Impacts

Beneficiary	Turkey Creek	Tailrace
New City & County Tax	\$65,000	\$74,000
New State Tax	\$45,000	\$74,000
New Federal Tax	\$39,000	\$50,000
Sum of New Tax Collections	\$149,000	\$198,000

Comparable Whitewater Park Economic Impacts

City/Town	Annual Users	Estimated Annual Revenue
Gallatin, CO	14,000	\$3,000,000
Saratoga, NY	25,000	\$7,000,000
Kear, OH	45,000	\$1,000,000
Streamboat Springs, CO	75,000	7,200,000