

# Mark Twain Lake Lodging Facility Market & Feasibility Study

**PGAV**DESTINATIONS

**PGAV**PLANNERS

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## Abstract

The purpose of the following document is to explore the market for and financial feasibility of a potential lodging facility that would be located within one of three concession areas on the eastern side of Mark Twain Lake. This study identifies a competitive market position and the advantages of a lodging facility in this location and setting, estimates attainable average daily revenue and occupancy based on the performance of similar facilities, and estimates construction and operating costs using industry benchmarks. The study concludes that the market would support a lodging facility, given the site's unique position and setting, proximity to major metro areas, and opportunity to add an attractive option for hospitality in the vicinity of the lake that does not currently exist. A professionally-managed hotel in this location would be expected to generate positive cash flow and economic development benefits for Ralls County, but risks associated with such a venture include above-average construction costs due to the site and setting, the need to adequately market the facility for day trips, overnight trips, and events, and the need to attain occupancy targets while controlling operating costs.

## Executive Summary

### Purpose

The purpose of the following document is to explore the market for and financial feasibility of a potential lodging facility that would be located within one of three concession areas on the eastern side of Mark Twain Lake.

### Work Completed

PGAV undertook a comprehensive market and feasibility analysis to understand current visitor trends and origins, identify the most popular destinations at the lake and in similar contexts elsewhere, summarize demographic and economic indicators, determine the most appropriate site for development, develop a program that capitalizes on the market and the site's competitive advantages, determine reasonable average daily room rates and occupancy, estimate construction and operation cost for the program, and make a determination of financial feasibility based on a cash flow analysis.

### Conclusion

The study concludes that the market would support a lodging facility, given the site's unique position and setting, proximity to major metro areas, and opportunity to add an attractive option for hospitality in the vicinity of the lake that does not currently exist. A professionally-managed hotel in this location would be expected to generate positive cash flow and economic development benefits for Ralls County, but risks associated with such a venture include above-average construction costs due to the site and setting, the need to adequately market the facility for day trips, overnight trips, and events, and the need to attain occupancy targets while controlling operating costs.

Mark Twain Lake

## Table of Contents

<b>Section I: Introduction .....</b>	<b>1</b>
Introduction .....	1
Potential Concession Areas .....	2
Transportation Access .....	3
Current Visitor Trends .....	4
<b>Section II: Demographics &amp; Demand Indicators .....</b>	<b>7</b>
Economic and Demographic Summary .....	7
Travel Demand Summary .....	8
<b>Section III: Lake Activity Analysis and Existing Amenities .....</b>	<b>9</b>
Lake Activity Analysis .....	9
Most Active Areas .....	10
Most Active Months .....	11
<b>Section IV: Review of Existing Lodging Options .....</b>	<b>12</b>
Public Lodging .....	12
Private Lodging .....	13
Competitive Advantage Summary .....	15
<b>Section V: Lodge Concept .....</b>	<b>19</b>
Comparable Quality Facilities for Estimating ADR .....	24
<b>Section VI: Resort Concept Feasibility .....</b>	<b>26</b>
Occupancy & ADR Calculations .....	26
Comparison of Average Daily Rate .....	30
Estimated Construction Cost .....	31
Lease Term Recommendation .....	33
U.S. Army Corps of Engineers Building Requirements .....	33
Current Financing Market .....	33
Operating Costs .....	34
Project Impacts .....	36
Feasibility Considerations and Conclusions .....	37
<b>Section VII: Appendices .....</b>	<b>39</b>
Appendix A: Conditions and Assumptions .....	39
Appendix B: Case Studies .....	40
Appendix C: Federal Requirements for Construction on U.S. Army Corps of Engineers Property .....	44

Mark Twain Lake

## Table of Figures

Figure 1. Overview of Mark Twain Lake	1
Figure 2. Potential Concession Areas	2
Figure 3. Transportation Access to Mark Twain Lake	3
Figure 4. Lake Visits and Projected Lake Visits by Year (Placer.AI)	4
Figure 5. Mark Twain Lake Visitors by Month – 2021 (Placer.AI)	4
Figure 6. Visits by Year to USACE-Managed Recreation Areas and Mark Twain State Park (Placer.AI)	5
Figure 7. Overview of Mark Twain Lake and Visitor Analysis Area	5
Figure 8. Percent and Approximate Number of Visitors by Origin Distance (Placer.AI)	6
Figure 9. Visitor Origins of Visitors to Mark Twain Lake 2017-2022 (Placer.AI)	6
Figure 10. Population, Median Income, and Population Growth (ESRI, 2022)	7
Figure 11. Drive Time Extents (ESRI, 2022)	7
Figure 12. Travel Behavior and Spending Within Two- and Three-Hour Drive Sheds (ESRI, 2022)	8
Figure 13. Outdoor Recreation Participation in Prior Year - Three-Hour Drive Shed (ESRI, 2022)	8
Figure 14. Lake Activity Analysis Subareas	9
Figure 15. Average Daily Visitors by Subarea in 2021	10
Figure 16. Total Visitors to Lake by Month in 2021 (Placer.AI)	11
Figure 17. USACE Campground Utilization FY 2021 (Recreation.Gov)	12
Figure 18. USACE Total Reservation Nights FY 2021 (Recreation.Gov)	12
Figure 17. John F. Spalding Potential Site Considerations	21
Figure 18. John F. Spalding Potential Site Slopes	21
Figure 19. Frank Russell Potential Site Considerations	22
Figure 20. Frank Russell Potential Site Slopes	22
Figure 21. Ray Behrens Potential Site Considerations	23
Figure 22. Ray Behrens Potential Site Slopes	23
Figure 25. Honey Creek Resort Room Nights	27
Figure 26. Population Comparison for Honey Creek Resort & Mark Twain Lake Drive Sheds (ESRI, 2022)	27
Figure 27. Travel Market Demand Comparison - 3 Hour Drive Sheds (ESRI, 2022))	28
Figure 23. Estimated ADR by Month (PGAV)	29
Figure 24. Estimated Occupancy by Month (PGAV)	29
Figure 25. Comparison of Accommodations by Price (PGAV)	30
Figure 26. Site Development Estimated Costs (PGAV, RS Means)	31
Figure 27. Hotel and Associated Improvements Estimated Costs	32
Figure 28. Additional Fees, Contingencies, and Total Construction Cost Estimate	32
Figure 29. Ten Year Cash Flow Estimate	34
Figure 30. Visitor Origins to Honey Creek Resort	41
Figure 31. Visitor Origins to Big Cedar Lodge	42
Figure 32. Visitor Origins to Pere Marquette Lodge	43

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Background Image: Missouri Department of Natural Resources

Mark Twain Lake

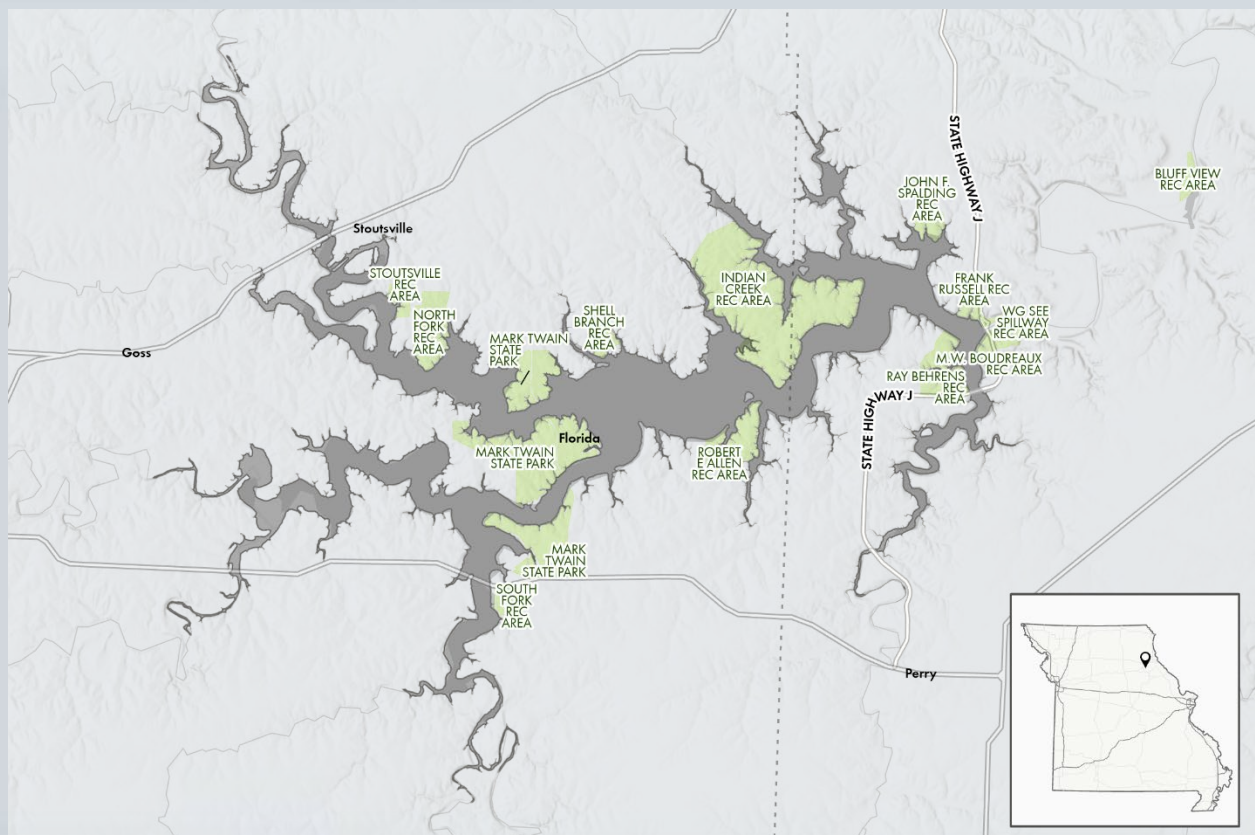
## Section I: Introduction

### Introduction

Mark Twain Lake is located in Monroe and Ralls Counties on the Salt River in northeast Missouri, about 27 miles southwest of Hannibal, 42 miles southwest of Quincy, and 122 miles northwest of St. Louis. Construction of the Clarence Cannon Dam and Mark Twain Lake Project began in 1969 and was completed in 1984.

Today, the U.S. Army Corps of Engineers manages 15 recreation areas located around the lake, and the Missouri Department of Natural Resources manages Mark Twain State Park. Publicly managed facilities include 22 boat ramps, seven campgrounds, two multi-purpose trails, picnic areas, a visitors center, equestrian trails and a corral, three swimming beaches, and firearm and archery ranges. There are also a number of privately managed facilities for visitors, including two marinas, and privately owned restaurants, bait shops, campgrounds, and vacation rentals.

Figure 1. Overview of Mark Twain Lake



Mark Twain Lake

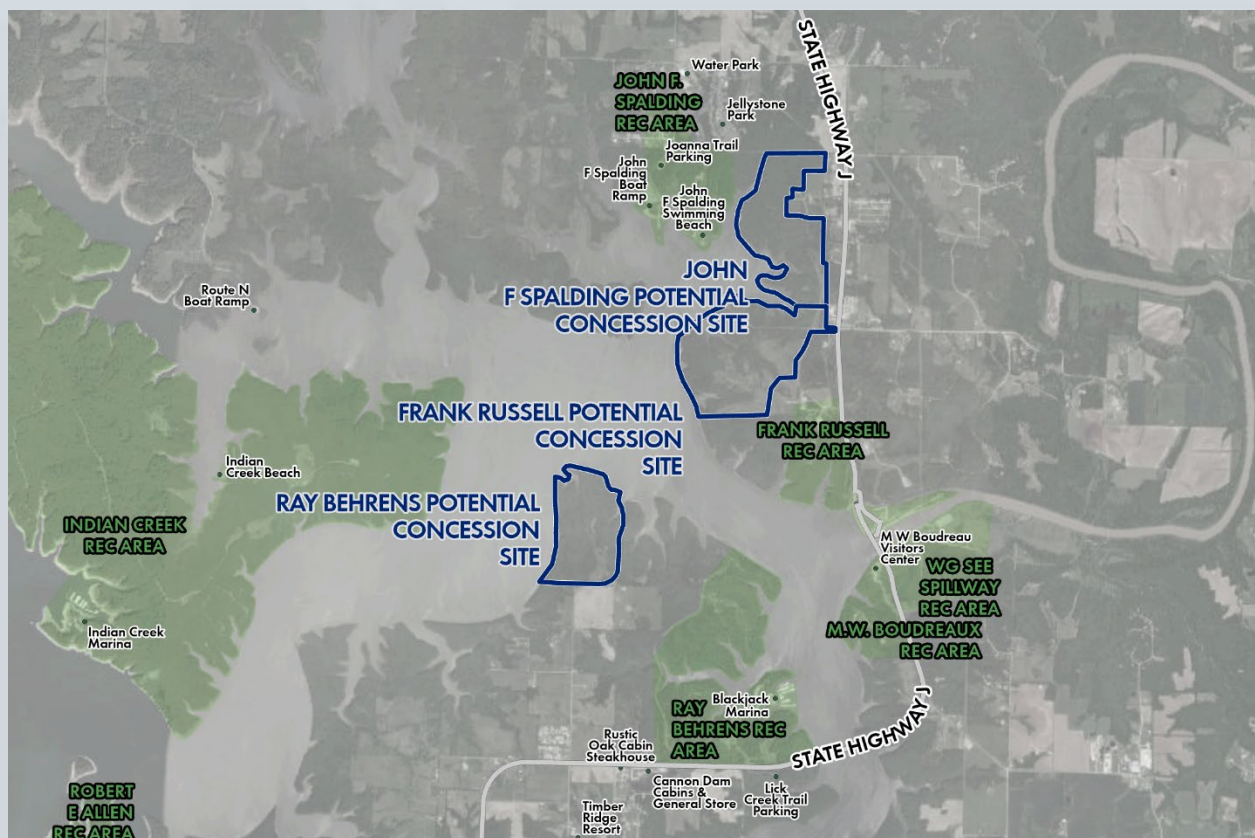


## Potential Concession Areas

This report is focused on the east side of Mark Twain Lake, where three potential concession areas are located. Any potential resort or other accommodation discussed in this report would be located in one of these concession areas.

As part of this study, PGAV analyzed and compared the three sites in terms of proximity to existing lake amenities, views and aesthetics, accessibility, utility connection, and slope suitability, in order to recommend the most suitable site for a potential lodging facility. Details of this analysis are found within the discussion of the lodge concept later in this report.

Figure 2. Potential Concession Areas



Mark Twain Lake

## Transportation Access

The three potential concession sites are primarily served by State Highway J, a north-south county road along the east side of the lake. State Highway J begins at US Highway 36, about 11 miles north of the dam, and provides the primary route between the lake and Hannibal. State Highway J ends about 7 miles south of the dam, in Perry. State Highway J and its proximity to the potential concession sites is shown on the maps on pages 1 and 2.

The most direct route from the St. Louis metro area is Highway 61 north from its junction with Interstates 70 and 64 in Wentzville, and then west via MO-19. Visitors from the west would approach the concession areas via Highway 36/State Highway J from the northwest, US Highway 24 to MO-154 from the west, or Interstate 70/US Highway 54/MO-19 from the southwest. All of these highways provide the public with safe access to the east portion of the lake and the potential concession areas.

Airport facilities are limited near Mark Twain Lake. There is a municipal airport in Monroe City, about 12 miles northwest of the concession areas, and another, non-municipal airport 7.5 miles south, outside of Perry. Hannibal Regional Airport and Quincy Regional Airport are larger airports located in Hannibal and Quincy, respectively, at a greater distance from the lake. There are no scheduled public transportation routes that service the lake. Therefore, all visitors must access the lake via private automobile.

**Figure 3. Transportation Access to Mark Twain Lake**



Mark Twain Lake

## Current Visitor Trends

### Methodology

Placer.AI was used throughout this report to estimate the number of visits to different destinations. Placer.AI uses anonymized cell phone data to measure the number of visits to a particular place. The graph below shows the number of visitors to the entirety of Mark Twain Lake, defined here as a 3,000 foot buffer around the lake shore, and shown in light green in the following map. This data screens out employees, residents, and visitors who visited for less than 30 minutes, but does not distinguish visit motivation (e.g. for maintenance, recreation, etc.). Placer.AI is a subscription-based service that PGAV uses because it is the most comprehensive, accurate, and up-to-date source of visitor information available.

This visitor data shows a pronounced increase in visits during 2020 and, to a lesser extent, in 2021, which was also seen in many of the other natural destinations analyzed for this report. Projected visits for 2022 are lower than those during the height of the Covid pandemic, but remain higher than those in the years prior to the pandemic. The reason for this is likely twofold: 1) some travelers continue to select outdoor destinations due to Covid-related concerns and 2) the pandemic led many households to camp or camp more frequently for recreation, and some of these households will continue to prefer outdoor-based recreation.

Figure 4. Lake Visits and Projected Lake Visits by Year (Placer.AI)

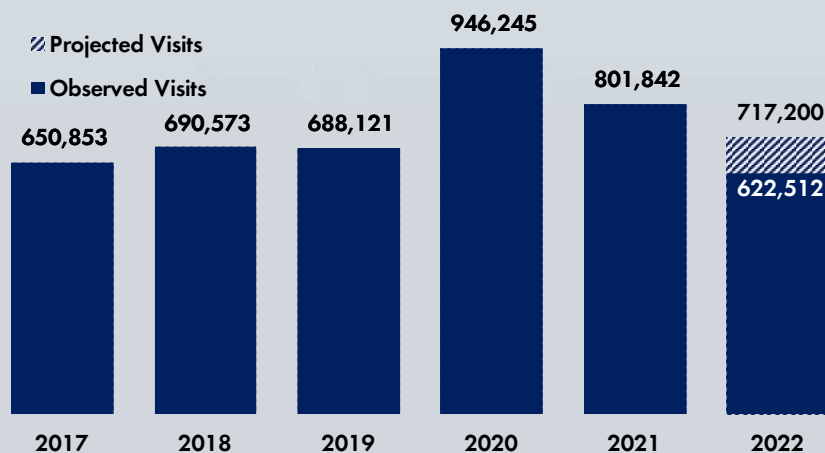
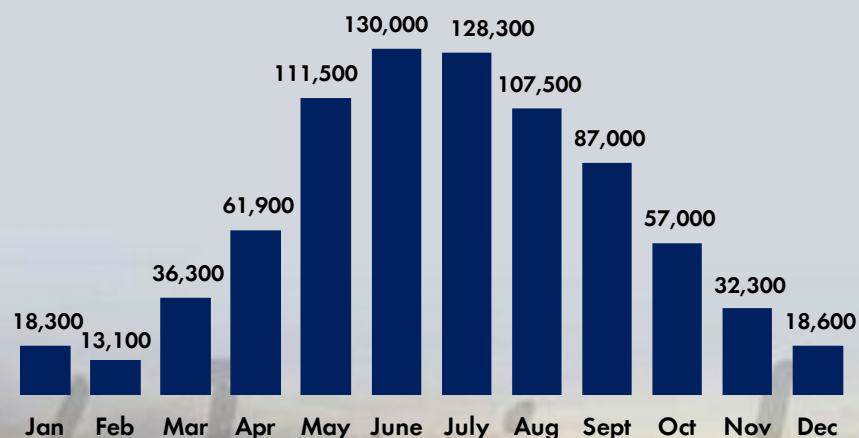
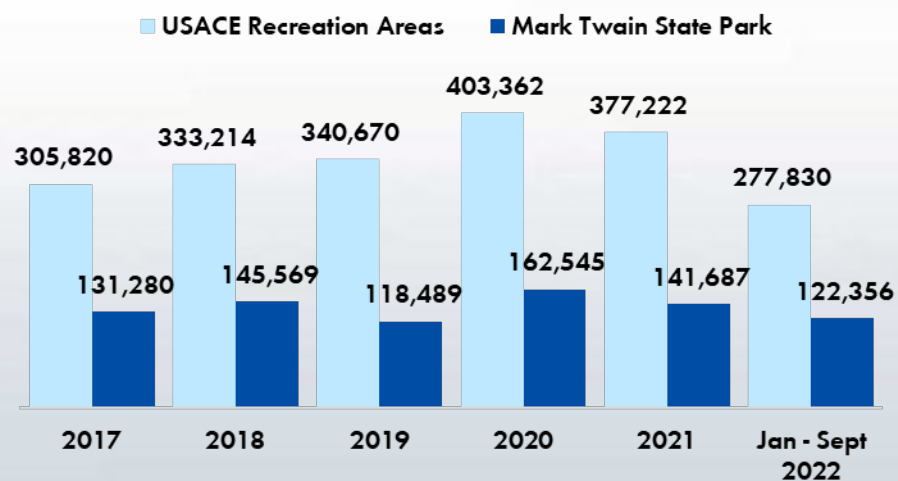


Figure 5. Mark Twain Lake Visitors by Month – 2021 (Placer.AI)

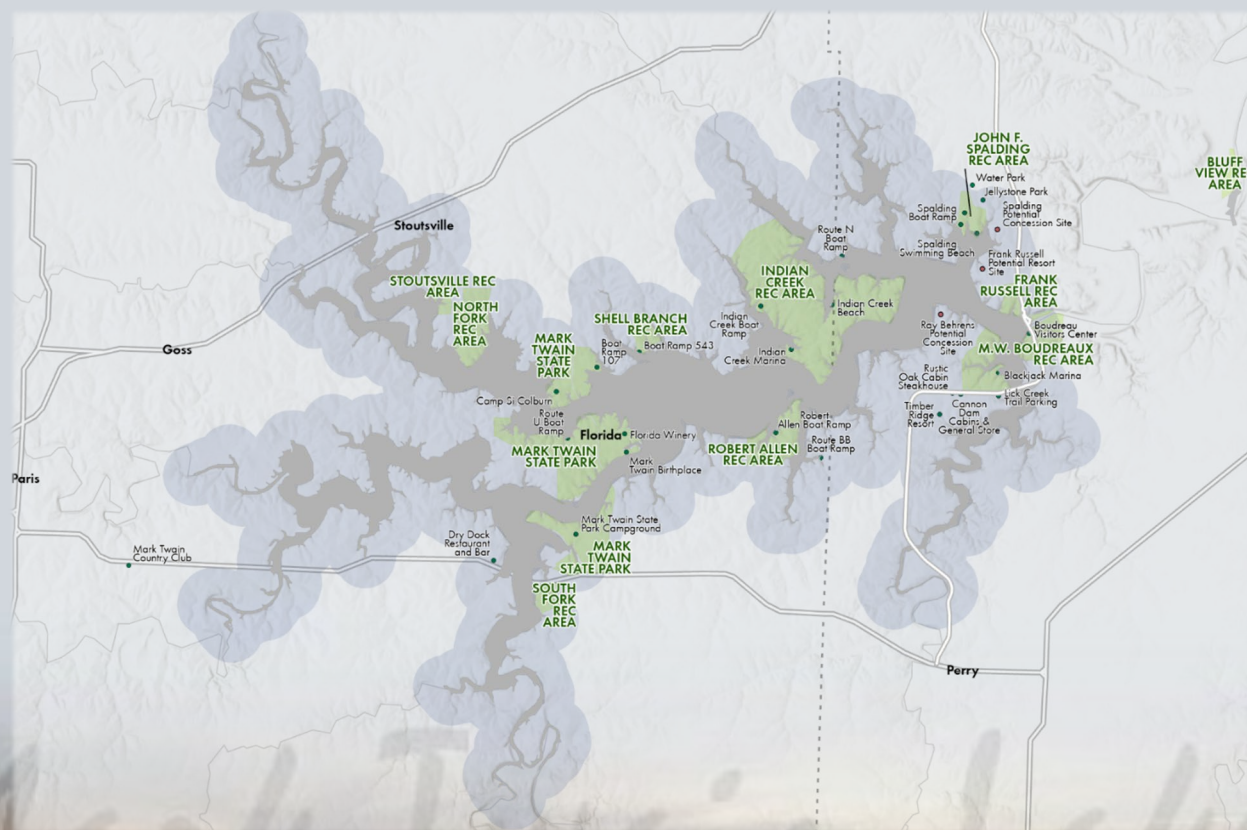




**Figure 6. Visits by Year to USACE-Managed Recreation Areas and Mark Twain State Park (Placer.AI)**



**Figure 7. Overview of Mark Twain Lake and Visitor Analysis Area**



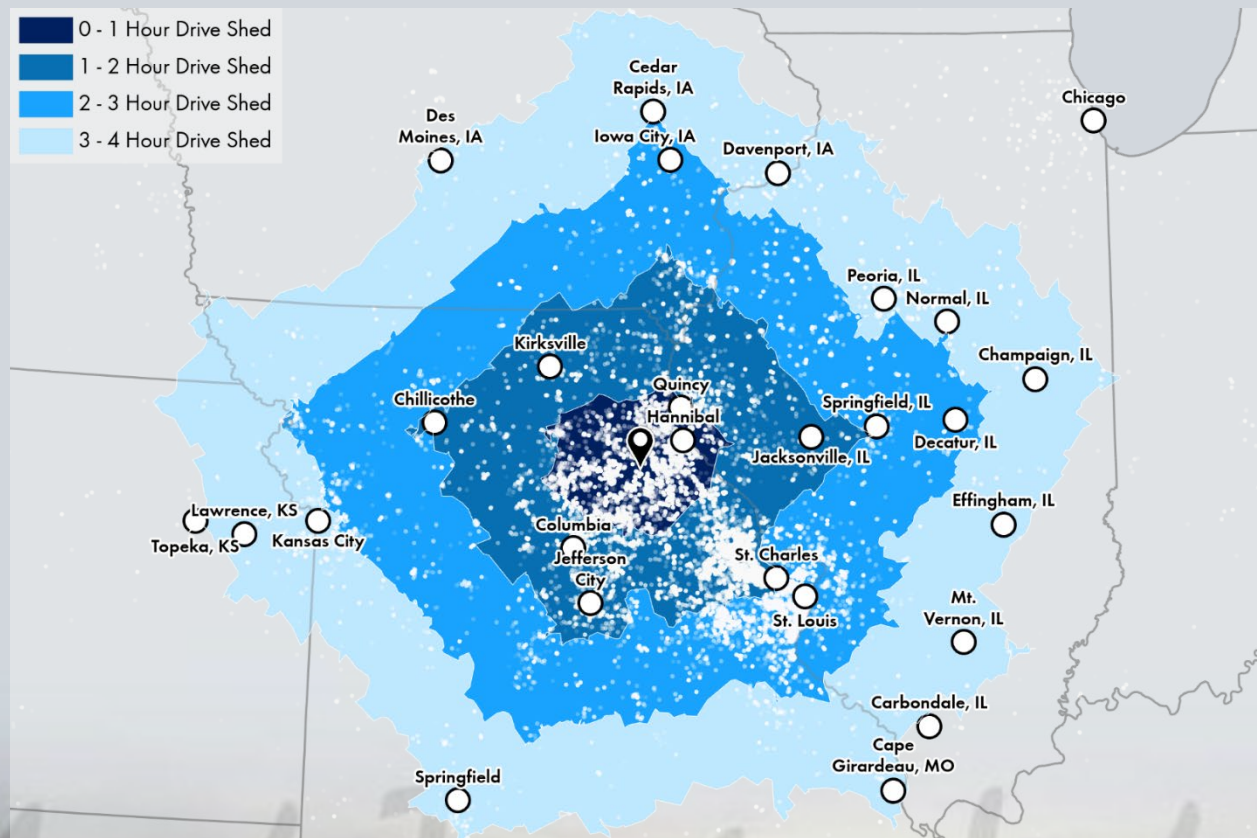
## Visitor Origins

The map below shows the origin of visitors to Mark Twain Lake between January 2017 and July 2022, as well as the extent of 1, 2, 3, and 4 hour drive sheds. Currently, Mark Twain Lake draws heavily from areas located within three hours of the lake, particularly the smaller communities within 2 hours, Hannibal, Quincy, and the St. Louis metro area, with a particular emphasis on St. Charles and the surrounding counties.

Figure 8. Percent and Approximate Number of Visitors by Origin Distance (Placer.AI)

	0-1 Hour Drive Shed	1-2 Hour Drive Shed	3-4 Hour Drive Shed	3-4 Hour Drive Shed	4 Hours or More
<b>Percent of Total Visitors (2017-2022)</b>	36%	39%	17%	4%	4%
<b>Approximate Visits in 2021</b>	415,800	344,100	170,600	32,500	45,300

Figure 9. Visitor Origins of Visitors to Mark Twain Lake 2017-2022 (Placer.AI)



## Section II: Demographics & Demand Indicators

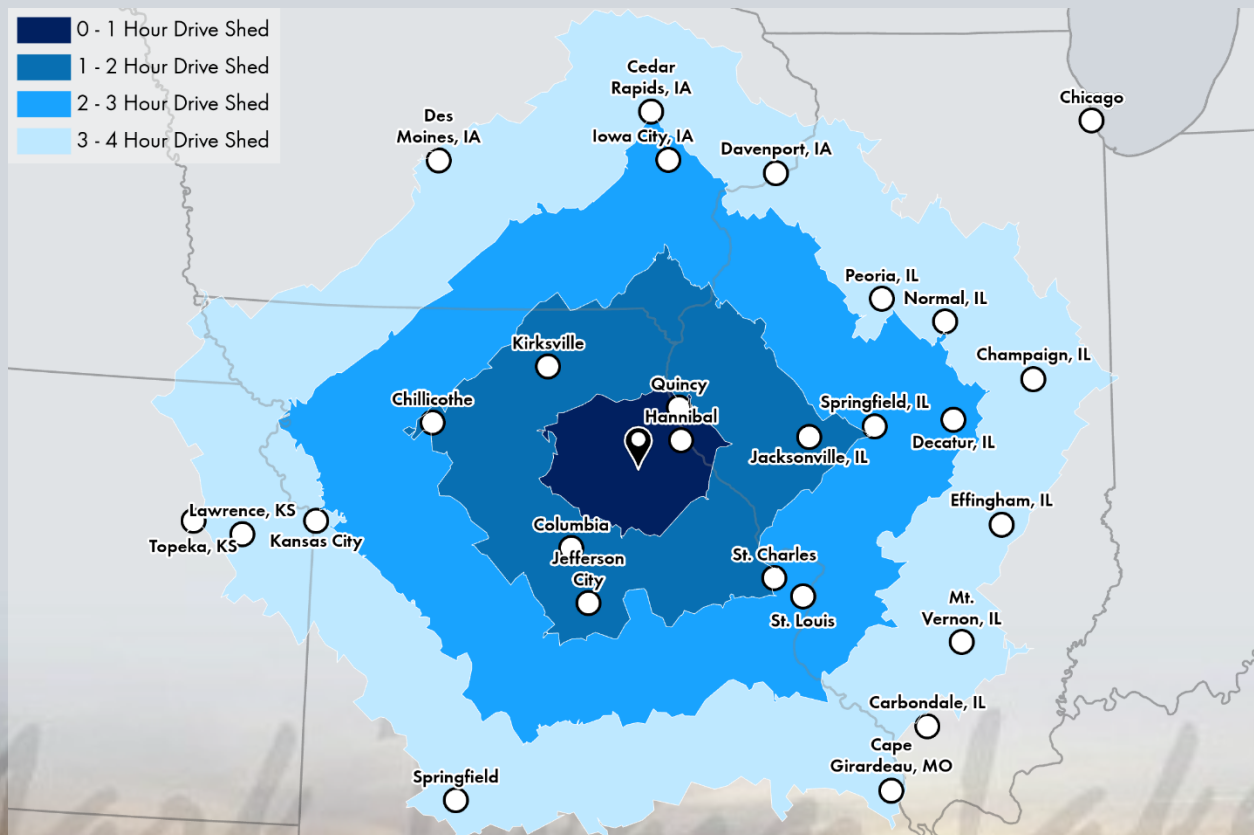
### Economic and Demographic Summary

The table below gives an overview of the population, median household income, and projected population growth by drive shed. Within one hour of the lake, there are fewer than 200,000 residents. The population jumps sharply within two hours, as the two-hour drive shed includes the northwestern portions of the St. Louis metro area, as well as the cities of Columbia and Jefferson City, Missouri. The entirety of the St. Louis metro area is located within three hours of the lake, as well as the northeastern portions of the Kansas City metro area. Median household income and projected population growth are highest within the two hour drive shed. This two- to three hour drive shed should make up the primary target market for any lodging facility developed at the lake.

Figure 10. Population, Median Income, and Population Growth (ESRI, 2022)

	Within 1 Hour	Within 2 Hours	Within 3 Hours	Within 4 Hours
<b>Total Population</b>	181,400	1,167,200	4,189,600	5,598,100
<b>Median Household Income</b>	\$54,500	\$68,100	\$66,100	\$65,100
<b>Projected Pop. Growth 2022-2027</b>	-0.2%	+0.5%	+0.2%	+0.3%

Figure 11. Drive Time Extents (ESRI, 2022)





## Travel Demand Summary

ESRI, a provider of demographic data based on the census and other surveys, creates market demand estimates for various goods and services. These are based on the demographic profile of an area, which combines income, age, household composition and other variables.

PGAV used ESRI data to estimate travel and vacation demand for the drive shed areas. The chart below shows the estimated number of drive time residents who traveled last year, including those that stayed in a hotel or motel, and a breakdown of how much was spent on traveling. The three hour drive shed has a much higher number of residents who travel regularly, stay in hotel or motel accommodations, and spend a greater amount of money on travel each year. Based on this data, PGAV finds strong support for a recreational lodging facility at Mark Twain Lake, and suggests that any marketing effort extend to communities within a three-hour drive shed, who are the target market for such a facility.

The second graph below shows the estimated number of residents of the three-hour drive shed who participated in the types of outdoor recreational activities that are offered at or near Mark Twain Lake. Swimming and hiking were the most popular, followed by fishing and non-motorized boating. These preferences can be helpful when planning facilities and programming at a lake lodging destination.

Figure 12. Travel Behavior and Spending Within Two- and Three-Hour Drive Sheds (ESRI, 2022)

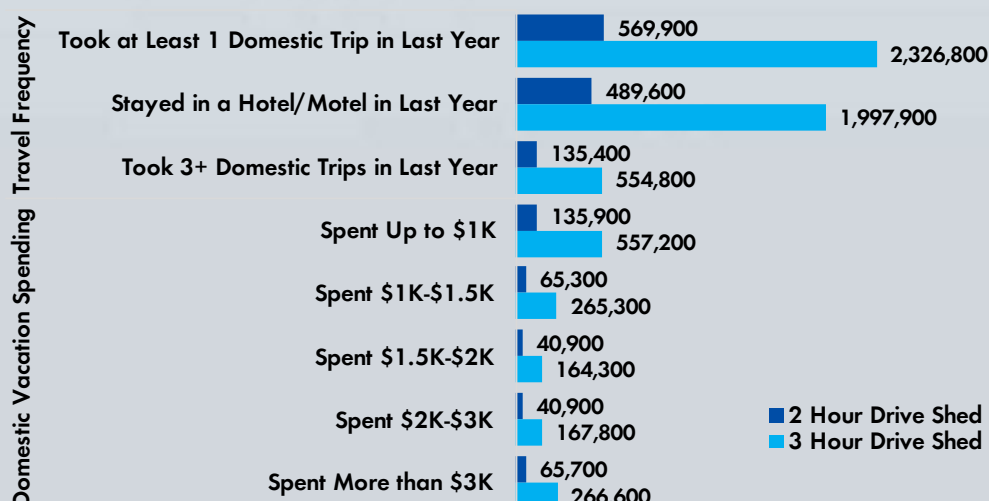


Figure 13. Outdoor Recreation Participation in Prior Year - Three-Hour Drive Shed (ESRI, 2022)



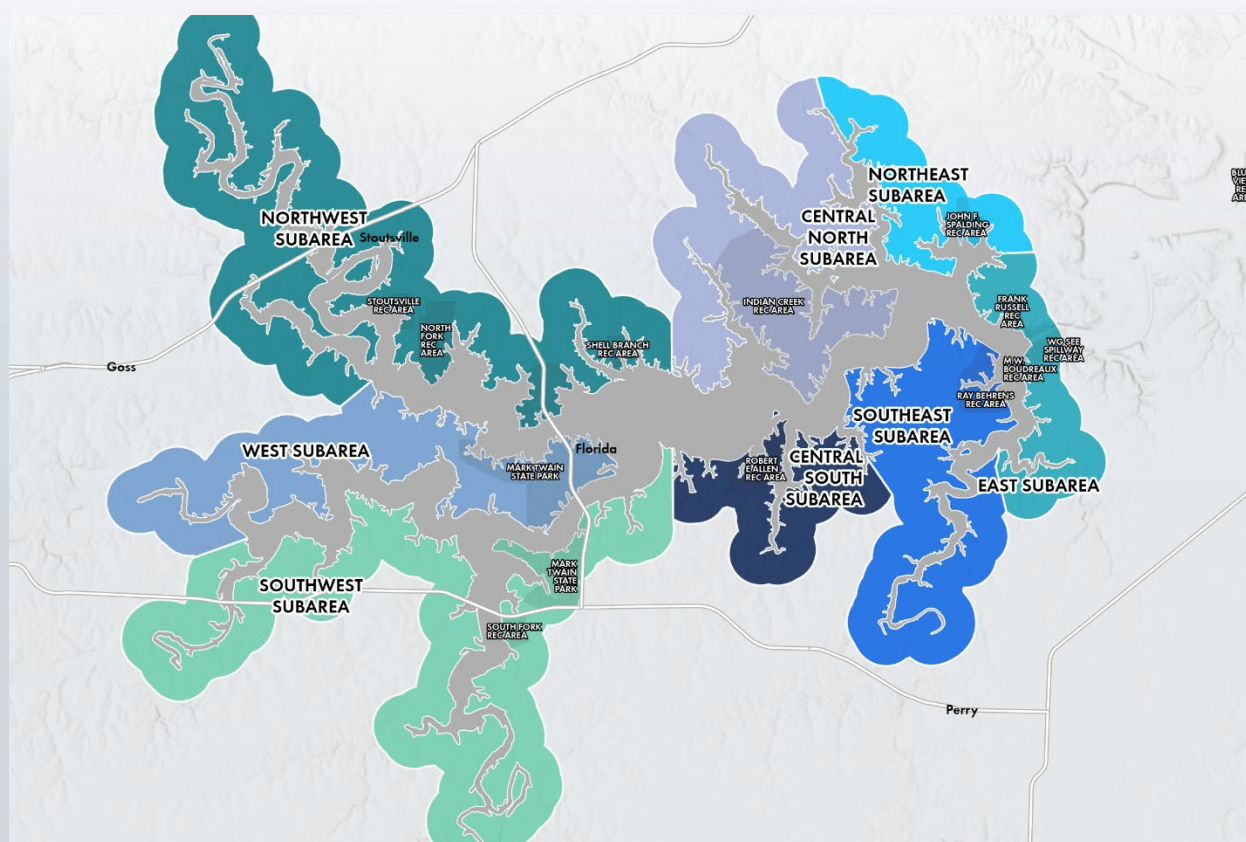
Mark Twain Lake

## Section III: Lake Activity Analysis and Existing Amenities

### Lake Activity Analysis

For the purpose of analyzing current lake activity levels, PGAV divided the lake into eight subareas. These areas are shown on the following map. Some of the destinations within each subarea are listed in the table below the map. This includes USACE-managed and non-USACE managed areas.

Figure 14. Lake Activity Analysis Subareas



Northeast Subarea	East Subarea	Southeast Subarea	Central South Subarea	Southwest Subarea	West Subarea	Northwest Subarea	Central North Subarea
John F. Spalding Recreation Area	WG See Spillway Recreation Area	Ray Behrens Recreation Area	Robert E. Allen Recreation Area	South Fork Recreation Area	Mark Twain State Park	North Fork Recreation Area	Indian Creek Recreation Area
John F. Spalding Boat Ramp	MW Boudreaux Recreation Area	Blackjack Marina	Robert E. Allen Boat Ramp	Mark Twain State Park	Central Area	Mark Twain State Park	Indian Creek Marina
John F. Spalding Swimming Beach	Mark Twain Lake Visitors Center	Rustic Oak Cabin	Route BB Boat Ramp	South Area	Route U Boat Ramp	North Area	Indian Creek Boat Ramp
Jellystone Park		Steakhouse		Mark Twain State Park	Mark Twain Birthplace	Camp Si Colborn	Indian Creek Beach
		Cannon Dam Cabins & General Store		Campground	Florida Resort & Winery	Boat Ramp 107	Route N Boat Ramp
		Timber Ridge Resort		Dry Dock Restaurant & Bar		543 Boat Ramp	

## Most Active Areas

This activity analysis showed that the Southeast subarea was the most frequently visited area, with 900 visitors on average each day in 2021, followed by the Northeast and Southwest subareas, with 645 and 630 visitors per day on average, respectively. Understanding the existing activity patterns at the lake is important to site selection. Locating in or adjacent to areas of existing activity is a strategy that can increase the viability of a potential destination.

Figure 15. Average Daily Visitors by Subarea in 2021



Mark Twain Lake

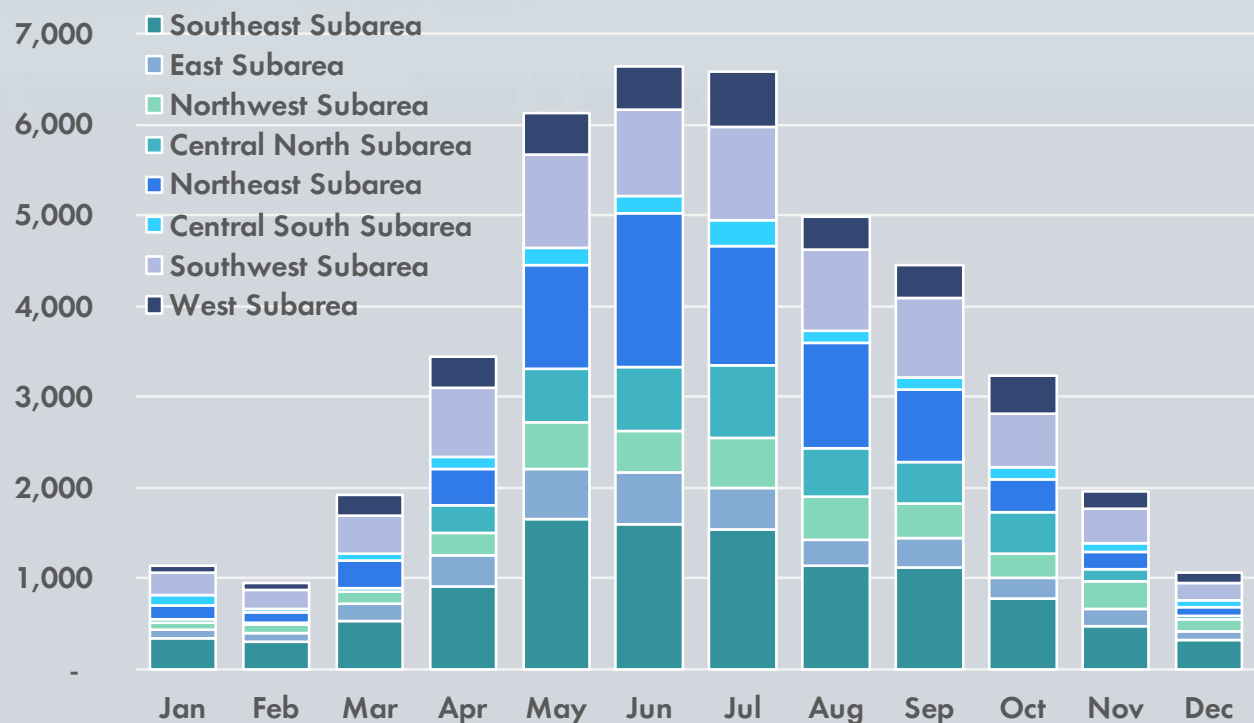


## Most Active Months

It is important to note that the number of visitors varies greatly by season. For example, the Ray Behrens area had about 300 visitors per day in February 2021, its slowest month, while it had a little over 1,650 visitors per day in May 2021, its busiest month. The graph below shows total visitors by area by month in 2021. May, June, and July are the three busiest months at the lake, with over 6,000 visitors per day to all areas combined, while December, January, and February are the slowest months.

This seasonality is characteristic of the state parks, outdoor recreation areas, and other resort facilities that PGAV analyzed. There is very high demand in the summer months, particularly in June and July, while winter months have extremely low visitor activity. A large number of resorts, campgrounds, and vacation rentals close during the winter. Attracting visitors during the colder months at a potential lodging facility will require creativity, marketing, and attractive programming.

Figure 16. Total Visitors to Lake by Month in 2021 (Placer.AI)



Mark Twain Lake

## Section IV: Review of Existing Lodging Options

### Public Lodging

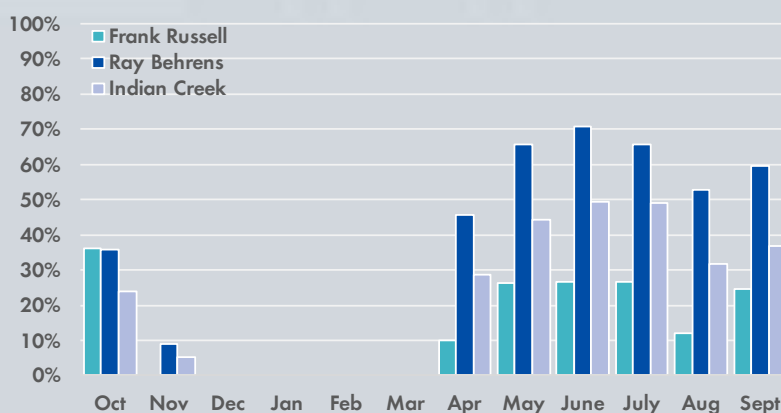
Lodging at the lake is provided by a variety of public and private entities. Public lodging is managed by the U.S. Army Corps of Engineers and the Missouri Department of Natural Resources. Private lodging is managed by a number of private operators.

Public lodging at Mark Twain Lake consists of tent and RV camping sites and a small number of cabins managed by the the Missouri Department of Natural Resources at Mark Twain Lake State Park. The majority of sites provide electricity and can accommodate RVs, boats, or trailers. There are a smaller number of “primitive” campsites without electricity and cabins.

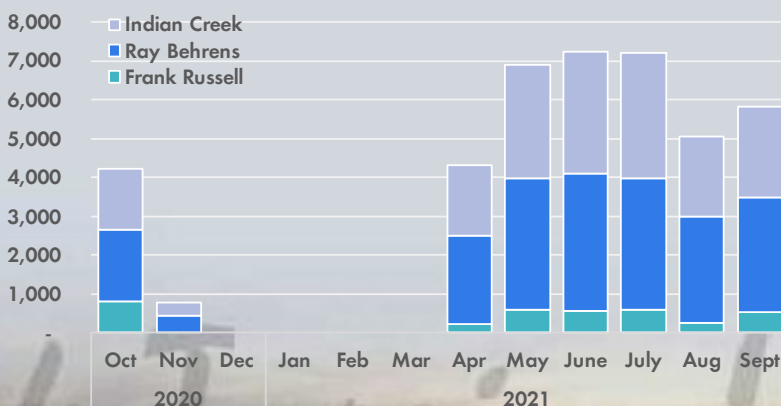
There are over 650 publicly managed camp and RV sites in the recreational areas and state park at Mark Twain Lake, with nightly prices ranging from \$10 for nonelectric tent camping sites, to \$75 for a cabin. RV sites range from \$20 per night to \$41 per night, depending on the services provided.

Recreation.Gov provides reservation data by fiscal year for USACE-managed campgrounds. The two following charts show occupancy and total reservation nights for three USACE-managed campgrounds in FY 2021. In FY 2021, these three campsites hosted a total of nearly 41,500 reservation-nights, for an average occupancy of 38% during the April-Nov operational season.

**Figure 17. USACE Campground Utilization FY 2021 (Recreation.Gov)**



**Figure 18. USACE Total Reservation Nights FY 2021 (Recreation.Gov)**



## Private Lodging

### Jellystone Park

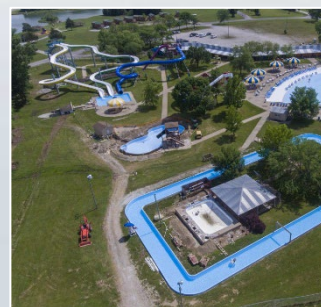
Private lodging is provided by various professional and independent operators around the lake. The largest private provider of lodging is Jellystone Park, which offers over 300 accommodations. The majority (240) of these sites are RV sites available for nightly or seasonal use. There are about 40 cabins, 12 tent sites, 10 motel rooms, and one large group lodge building. Jellystone Lodge also offers the greatest number of amenities, particularly amenities geared toward families with children. These include a water park, a swimming pool, mini golf, a jumping pillow, a restaurant, and programming that includes themed events. Lodging at Jellystone Park ranges from \$34 for a tent site to \$62-\$101 for an RV site, \$93-\$115 for a Steamboat Inn motel room, to \$116-\$192 for a cabin. The large lodge that sleeps 16 guests ranges from \$434-\$472. Prices are lower from September to May and higher from June to August.



Steamboat Inn



Cabins

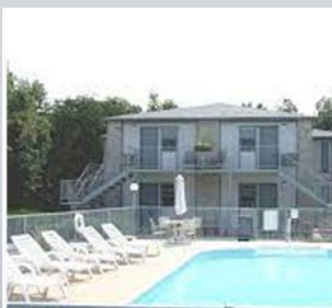


Water Park

### Independent Motels

There are a number of older, independently operated motels in the vicinity of the lake, including Kennedy's Red Barn, a four-room bed and breakfast, Timber Ridge, Cannon Dam Cabins and the Country Inn Resort. There are also a large number of RV-focused accommodations. Nightly prices for non-RV accommodations are as follows:

Bed and breakfast room (shared bathroom)	\$75 (Red Barn)
Motel room without kitchen facilities	\$53-\$71 (Timber Ridge) \$58-\$103 (Country Inn Resort)
Motel room with kitchen facilities	\$76-\$180 (Timber Ridge) \$78-\$125 (Country Inn Resort)
Standalone cabin	\$90-\$95 (Cannon Dam Cabins) \$107-\$220 (Timber Ridge)



Timber Ridge



Country Inn



Cannon Dam Cabins

Mark Twain Lake



## Short-Term Rentals

Finally, there are a small number of short-term rentals that are made available through platforms such as Airbnb, HomeAway, or VRBO. All of the available short-term rentals are for entire units. Pictures and price points are shown below.



3 Br/2 Ba Cabin  
\$130/Night



Home One Mile From  
Lake  
\$135/Night



Salty Cedar Cabins  
\$160/Night



Pine Lake Village Condos  
\$190/Night (Multiple  
Listings)



3 Br/2 Ba "Peaceful  
Retreat"  
\$190/Night



2 Bd/1 Ba at Blue  
Lagoon  
\$190/Night



Fishing & Boating Cabin  
\$230/Night



Secluded Cabin on 25  
Acres  
\$236/Night



3 Bd Stoutsville Cabin  
\$282/Night

Mark Twain Lake



## Competitive Advantage Summary

A review of the number of visitors to Mark Twain Lake showed that it attracts a large number of visitors annually. Reviewing the available lodging options in the vicinity of Mark Twain Lake showed that the lake is very well supplied with RV camp sites, but somewhat limited in terms of other private accommodations. Overall, current visitors to the lake who wish to stay in privately-provided accommodations pay between \$75 per night for a bed and breakfast room to over \$250 per night for cabin facilities. The only professionally-managed accommodation is Jellystone Park, which is the lake's most visited privately-operated destination, and is marketed towards families with children.

Based on the review of available options and the potential concession sites, PGAV identified the following competitive advantages and recommended design or programmatic elements that a potential lodging facility located in one of the concession sites would have. These are:

### Direct Lake Access and Lake Views

None of the available lodging options are able to provide the lake access and views that a facility at a USACE concession site would be able to provide. A review of the available short-term rentals shows that lake proximity and setting are major factors in terms of the marketability and price of lodging, with closer and more scenic accommodations commanding a higher nightly price. The concession site's direct lake views and access are a major selling point, and will be the facility's greatest competitive advantage.



### Harmonious Design with Natural Surroundings

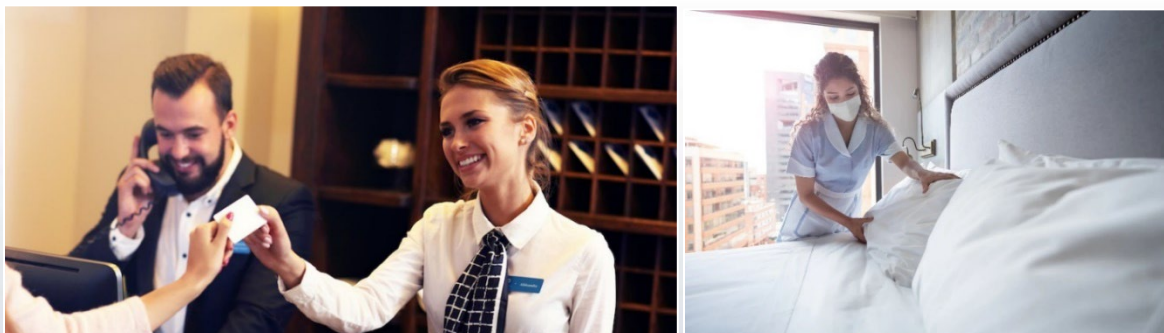
A purpose-built lodging facility would feature design that deliberately integrates it into its natural surroundings, not only mitigating its impact on the natural environment, but creating an attractive and singular scenic destination.



Mark Twain Lake

## Professional Management

Professional management provides a number of benefits to potential visitors, including ease of making reservations and quality assurance. A professionally-managed facility also has resources to market to potential customers and improve the guest experience based on feedback.



## Newer and Professionally-Maintained Facilities

Some of the privately-owned and operated existing accommodation options near the lake are housed in older buildings with dated finishes and fixtures that may be in good repair, but do not show much evidence of ongoing reinvestment. This keeps prices more affordable, but may not appeal to all potential visitors. A professionally-managed facility, on the other hand, sets aside funding for ongoing capital improvements, maintenance, and replacing worn building components.



## Space and Resources for Planning and Hosting Formal Events

There are a few accommodations within proximity to the lake that can also host large get-togethers, but none with larger indoor spaces that are able to be configured to host more professional or formal events. A professionally-managed facility also has the staff resources to partner with local organizations to negotiate group rates for retreats, conferences, and other events.



Mark Twain Lake



## On-Site Amenities

A handful of accommodations, most notably Jellystone Park, offer on-site amenities, for example pools and other recreational amenities, and prepared food and other convenience items. Having on-site amenities increases the quality of the guest experience.



## Proximity to Other Lake Amenities

The John F. Spalding and Frank Russell concession sites offer proximity to a large number of existing lake amenities, including (depending on the site) trails, the swimming beach, boat facilities, the water park at Jellystone Park, archery facilities, the visitor's center, and other features that will provide outdoor recreation opportunities for hotel guests. Hotel staff can provide additional knowledge and recommendations to help guests take full advantage of the lake's resources.



Mark Twain Lake

## Ability to Partner with Other Ralls County Organizations

Given that Hannibal is located just 30 minutes from the east side of Mark Twain Lake, any facility located here would be able to partner with Hannibal lodging facilities and visitor services to cross-market attractions at both locations. For example, lake hotel staff can provide recommendations about spending the day in Hannibal, while Hannibal staff can suggest visiting the lake hotel restaurant for a sunset meal.



## Ability to Appeal to Visitors With and Without Children

Jellystone Park currently offers the most comprehensive array of lodging accommodations and visitor amenities, but is largely marketed toward families with children. While any lodging facility should also be family-friendly, it should also appeal to other target markets as well, including solo travelers, couples, friends, and groups planning small and large events.



Mark Twain Lake



## Section V: Lodge Concept

Based on the analysis of available facilities, the identification of competitive advantages, and the understanding of the market, PGAV recommends the following lodge concept. This lodge concept forms the basis of the feasibility analysis.

### Lodging

The lodging at the concession site may consist of a 3-star quality “lodge-style” hotel with approximately 125 guestrooms. Having more than 100 guestrooms helps to achieve economies of scale that help make the project feasible. A three-star quality level will distinguish it from the majority of available options for lodging at the lake, while remaining affordable to middle-income households. Accommodations will combine rustic raw materials in a context-sensitive way while maintaining a level of comfort for guests that makes it appropriate for a weekend getaway, friends trip, or family vacation. Some rooms should have kitchenette facilities, and there should be a small number of larger, combinable, or two-bedroom suites for larger families or groups.

There should also be twelve one- and two-bedroom detached guest cottages or cabins with kitchen facilities. To the extent possible, all rooms and outbuildings should have views of the lake. Since cabins are easier to develop in phases, if these twelve initial cabins are sufficiently successful, more can be added at a later time.

### Meeting Space

Within the main hotel building, there should be approximately 2,400 square feet of dividable space in order to accommodate meetings and small events.

### Culinary

In terms of food and beverage, the hotel facility should also have a bar and grill style restaurant facility with a view of the lake that serves hotel guests and lake visitors. A small snack and gift shop can provide ready-made food options, hot and cold beverages, ice cream, and snacks.

### Amenities

Other hotel amenities should include outdoor and indoor pools, an outdoor deck or rooftop space contiguous to the indoor meeting space or dining area that can serve as an indoor/outdoor event space, a boat dock with equipment rental, and hiking trails leading to nearby lake facilities. If possible at the chosen site, a beach or other way of getting close to/in the water should be provided.

### Target Market

The hotel will draw in diverse visitors, including families with children, couples, and groups for events, such as meetings, weddings, family reunions, and milestone occasions. The facility will appeal to visitors who prefer to enjoy a quiet natural setting more passively; for example, enjoying scenery, views, fresh air, and wildlife, while it will also provide a gateway for visitors who enjoy outdoor spaces more actively by providing on-site equipment and facilities, as well as a connection to existing lake amenities.

### Target Market Area

The main target market for overnight guests will be the three hour drive shed, which includes St. Louis and St. Charles County, which is already an origin for many lake visitors. Since the one-hour radius is not expected to grow much in the future in terms of population, there will be a need to draw upon more distant areas, especially metropolitan areas. Marketing efforts should also extend to all communities within four hours, including all of the St. Louis metro area, the Kansas City metro area, Columbia, and Jefferson City. These marketing efforts should target multiple visitor motivations: recreation, business, and event-based.

The main target market for day guests, who may choose to dine or rent equipment at the facility, will likely be closer in than overnight guests, and consist of visitors from within two hours.



## Recommended Location

Each of the three potential concession sites were analyzed in terms of five criteria: Proximity to amenities, view and aesthetics, accessibility, utility access, and slopes. The pros and cons of each of these criteria as they apply to each of the sites is listed in detail on the following pages.

Following the enumeration of the pros and cons associated with each criteria for each site, a scoring matrix was created to weigh each of the factors and determine the best site for a lodging facility. This scoring matrix is shown below. The results of this analysis indicated that the Frank Russell concession site was the best suited for accommodating a lodging facility,

	John F. Spalding Concession Site	Frank Russell Concession Site	Ray Behrens Concession Site
Amenity Proximity	• •	• • •	• •
View & Aesthetics	• •	• • •	• • •
Accessibility	• •	• • •	•
Utilities	• • •	• •	•
Slope Suitability	• •	• •	• •
Total Score	11	13	9

Mark Twain Lake

## John F. Spalding Potential Concession Site Assessment

### Amenity Proximity

#### Pros

- Close proximity to public beach area and boat ramp
- Good proximity to Jellystone water park amenity
- Existing trail system to connect to

#### Cons

- Further from passive recreational uses of archery circuit, fishing pond, and horse activities.
- Far from boat slip access
- Would need to be cognizant of locating more passive activities to southern side due to sewage treatment area, minimizing land use area.

### Views and Aesthetics

#### Pros

- Has potential adjacency to water

#### Cons

- Views would be to southwest which are nice but not the best across the lake compared to other sites.
- Consideration would need to be given to resort siting as there is sewage treatment fields to the east of the site.

### Accessibility

#### Pros

- Direct access to Hwy J
- Possible connection road to Recreation site to the west.

#### Cons

- Second furthest property from the visitor center.
- Access road would be shared by private residents and sewage treatment access

### Utilities

#### Pros

- Good utility routes to the east and running through the site to the west

#### Cons

- Appears to not have data lines directly adjacent

### Slope Suitability

#### Pros

- Good mix of ridge lines and buildable area
- Couple of manageable slopes down to water

#### Cons

- Most favorable slopes are more inland, ridges of buildable slopes close to the water are narrow

Figure 19. John F. Spalding Potential Site Considerations

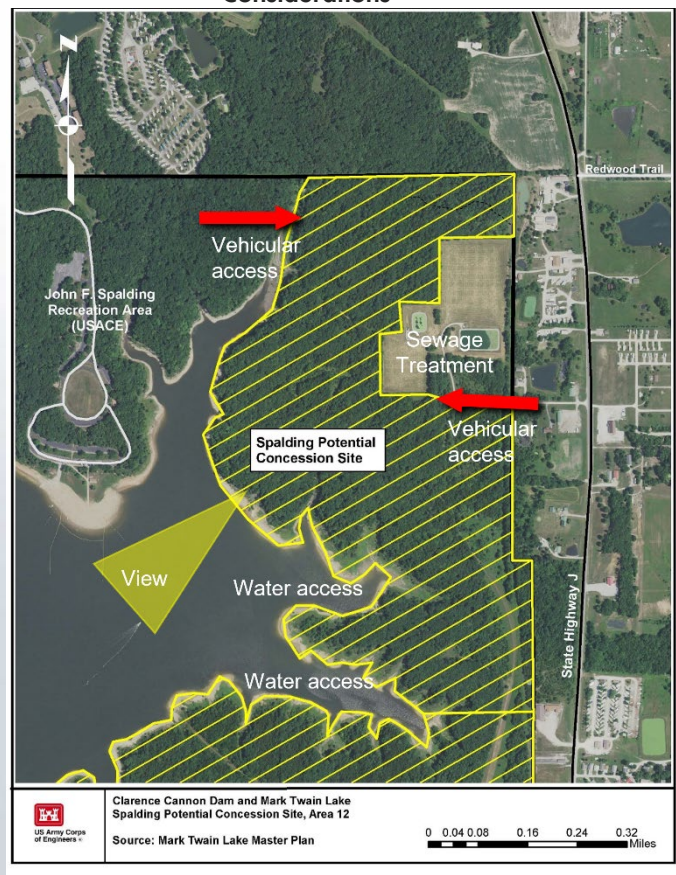
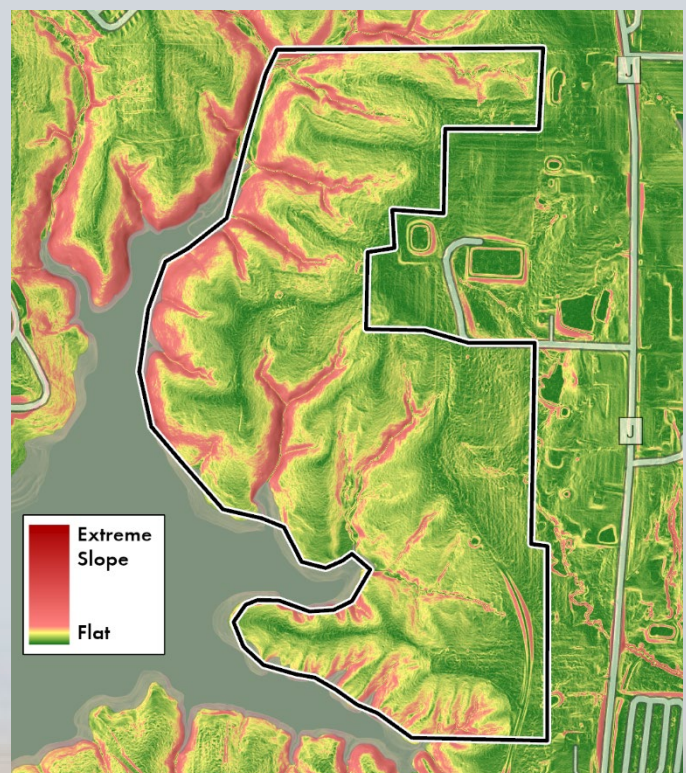


Figure 20. John F. Spalding Potential Site Slopes





## Frank Russell Potential Concession Site Assessment

### Amenity Proximity

#### Pros

- Great proximity to public existing passive recreational amenities of archery circuit, fishing pond, and equestrian activities.
- Larger area to locate additional amenities across entire site.
- Between three sites it is in middle between existing beach access and boat slip.
- RV sites are located adjacent to the property
- Existing trail system to connect to

#### Cons

- Not directly adjacent to beach access or boat slip.

### Views and Aesthetics

#### Pros

- Has potential adjacency to water.
- Has best long views across the lake to the west and southwest.
- Has 180 degree view to west.
- Higher view out over water edge

#### Cons

- None

### Accessibility

#### Pros

- Direct access to Hwy J.
- Has a dedicated private drive that only amenities currently use (No private residences off it)
- Possible secondary entrance from north.
- Closest property to Visitor Center.

#### Cons

- With higher elevation along water edge, may be more difficult getting down to water on north

### Utilities

#### Pros

- Good utility routes to the east and southeast

#### Cons

- Utilities are a little further away than other site

### Slope Suitability

#### Pros

- Larger flat zones
- Wider ridgelines out closer to the water

#### Cons

- Steeper bluffs to water
- Only manageable slope to water is to the north

Figure 21. Frank Russell Potential Site Considerations

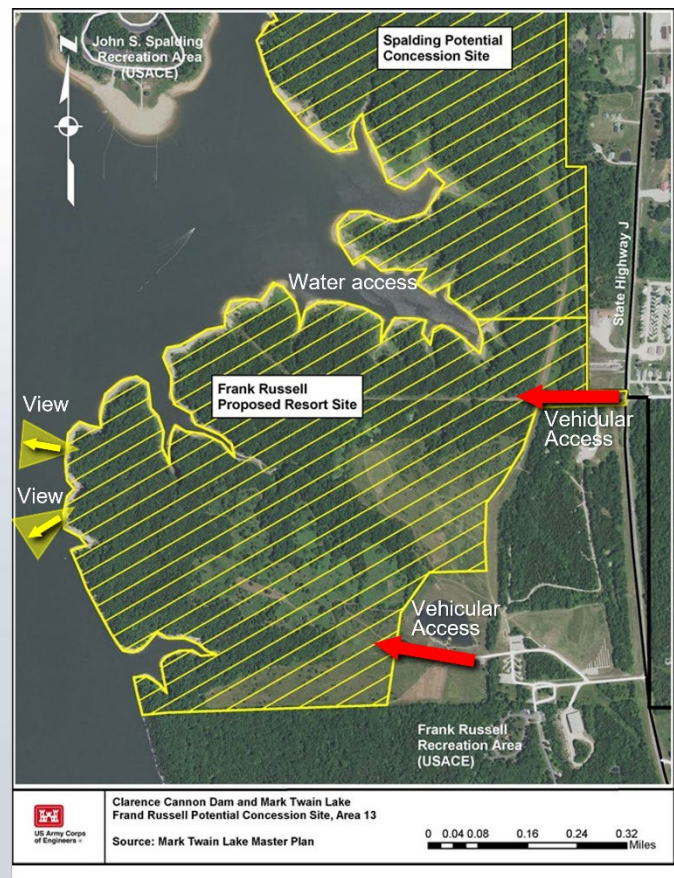
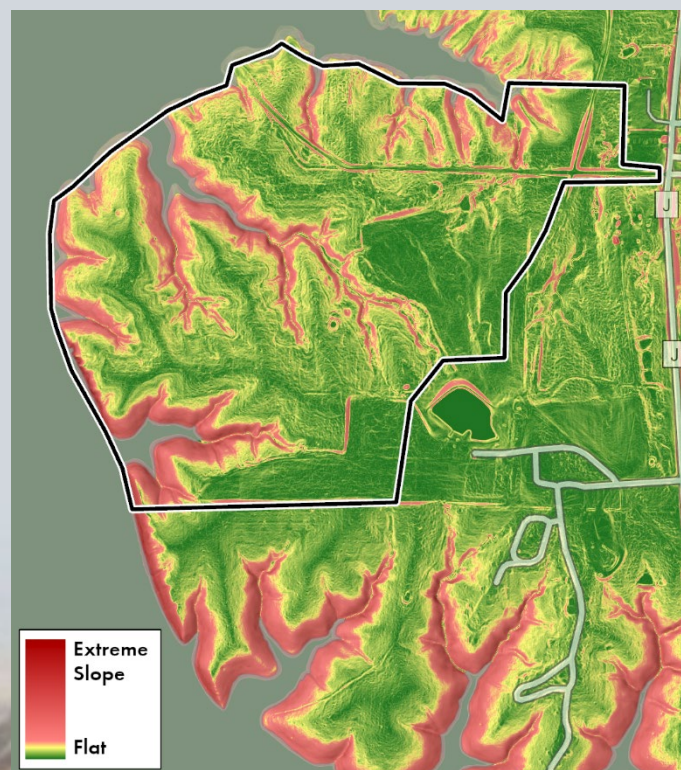


Figure 22. Frank Russell Potential Site Slopes





## Ray Behrens Potential Concession Site Assessment

### Amenity Proximity

#### Pros

- Proximity to existing boat slip and RV park.

#### Cons

- Smallest property for additional amenities.
- Further from existing passive amenities and Jellystone water park.
- Furthest from beach access.
- No existing trail system on site (But adjacent to RV recreation area trails)

### Views and Aesthetics

#### Pros

- Has potential adjacency to water.
- Has potential nice view to west.
- 180 degree view to north.

#### Cons

- Need to be cognizant of private property to south, buffering.

### Accessibility

#### Pros

- Most remote setting of three properties.

#### Cons

- Longer access road from Hwy J. along Joanna Road
- Non-dedicated access road that serves multiple private properties.
- Furthest property from the Visitor Center.

### Utilities

#### Pros

- Some electrical and data utilities to the south of the site

#### Cons

- Sewer and water proximity issues, will require some further points of connection

### Slope Suitability

#### Pros

- Wide ridge line running out toward water to north
- Some flatter areas to south

#### Cons

- Minimal manageable slopes down to water access.

Figure 23. Ray Behrens Potential Site Considerations

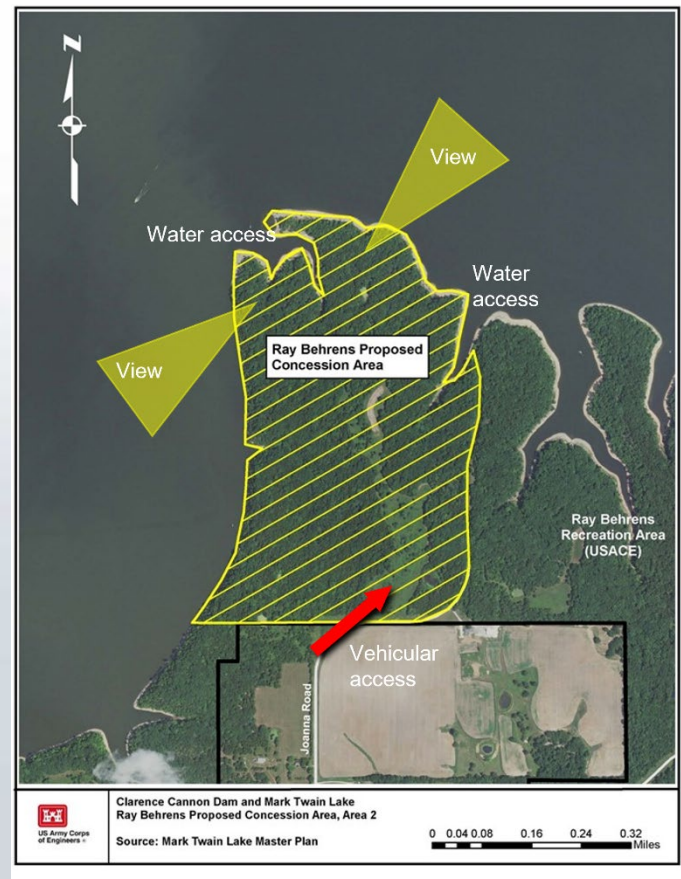
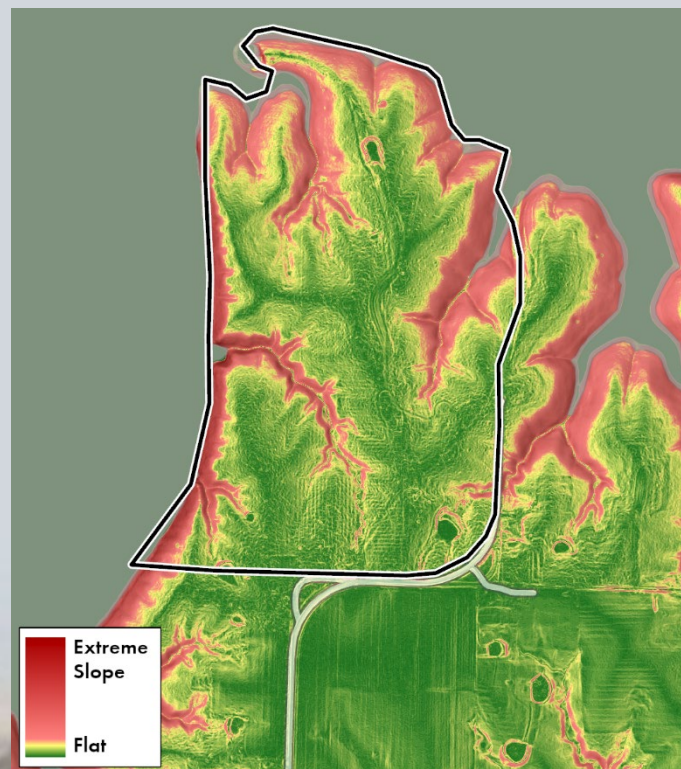


Figure 24. Ray Behrens Potential Site Slopes





## Comparable Quality Facilities for Estimating ADR

In addition to surveying existing lodging options at Mark Twain Lake, PGAV selected lodge and cabin accommodations from elsewhere in Missouri and the surrounding states to understand what a reasonable per-night room charge could be for the potential hotel facility. There are very few professionally-managed, lodging facilities located directly adjacent to lakes or with expansive lake views in the market outside of the Lake of the Ozarks and Table Rock Lake. Of these, examples such as the Lodge at the Four Seasons, Margaritaville Resort, Camden on the Lake, or Big Cedar Lodge were not considered comparable due to their large scale and volume of amenities. These examples show average nightly rates at lodging facilities that share one or several key characteristics with the contemplated program for Mark Twain Lake.

### Lodge Examples



Westgate Branson Resort (Kitchenette Room)  
\$150/Night

The Westgate Branson Resort is located near Table Rock Lake, and provides rooms with kitchenette facilities for \$150 per night. Since the lodging facility will be in more attractive surroundings, it is expected to have a higher room rate.



Honey Creek  
Est. \$160/Night

Honey Creek is located on the shore of Rathbun Lake and some rooms have lake views. The types of amenities are similar to those in consideration at Mark Twain Lake, and therefore, the price per night is expected to be similar.



Cedar Creek Hotel & Event Center  
\$160 / Night

The Cedar Creek Hotel & Event Center is located in New Haven and offers hotel rooms with event space as well as upscale guest cottages. The rate per night at Mark Twain Lake is expected to be similar.



Holiday Inn - Hannibal  
\$165 / Night

The Medical Center Holiday Inn was built in Hannibal in 2018. As a new hotel, the facility at Mark Twain Lake is expected to have a similar rate per night.

Mark Twain Lake



## Cabin Examples



Jellystone Ranger Smith Lake View Cabin  
\$173 / Night

These one-bedroom cabins have a view of the small lake on the Jellystone Park property. Subject cabins would be expected to have a higher rate per night because they will be of higher quality and have Mark Twain Lake views.



Stockton Lake - Medium Cabin  
\$200 / Night

This cabin is one of 33 cabins of varying designs and sizes located about a quarter mile from Stockton Lake. Subject cabins would be expected to have a higher rate per night because they will have lakefront views.



Mill Creek Resort 2 Bedroom Cabin  
\$203 / Night

The Mill Creek Resort is located near Table Rock Lake. Some have partial lake views. Interior accommodations are fairly basic, so for this reason, the subject cabins would be expected to have a higher rate per night.



"Rustic Log Cabin on Mark Twain Lake" - 2 Bedrooms  
\$236 / Night

This cabin is one of the most rented homes at Mark Twain Lake, with above average interior design. The subject cabins would be expected to have a comparable rate per night.



Stoutsville 3 Bedroom Cabin "Minutes from the Lake"  
\$282 / Night

This cabin has high ratings and has a well-designed rustic interior with lofted sleeping areas. Though the cabins at the lodging facility would be of comparable quality, they would likely have fewer bedrooms, and would have a lower nightly room rate.



Honey Creek Cottages  
\$295 / Night

Honey Creek features 28 cottages of varying sizes, some with lake views. The cabins at Mark Twain Lake would be similar in quality, but are likely to command a lower price per night in keeping with the price of other rental cabins in the area.

Mark Twain Lake



## Section VI: Resort Concept Feasibility

### Occupancy & ADR Calculations

#### Methodology

A lodging facility of the type described in this report would be a new and unique offering within northeast Missouri. Because of its dissimilarity from existing local facilities, calculating expected demand and a reasonable and feasible overnight room rate required review of several data sources:

Existing facilities near Mark Twain Lake: The primary draw of the privately managed motel rooms, cabins, short-term rental homes, and RV sites is their proximity of these places to Mark Twain Lake and the recreational opportunities provided there. For the most part, operating data is not publicly available for these facilities. PGAV was able to obtain limited operating data on short-term rental housing from AirDNA, which compiles listings from AirBNB, VRBO, and HomeAway. AirDNA provides understanding of occupancy and nightly accommodation charges for these rentals. This data, some of which is shown in the graph comparing room rates, shows that visitors to the lake are willing to pay at least \$120, and up to \$240 per night to stay at locations in proximity to Mark Twain Lake.

Existing facilities with a similar setting and target market: Though there is no hotel or resort directly on Mark Twain Lake, similar facilities operate successfully throughout the Midwest. Lake of the Ozarks and Table Rock Lake in Missouri are particularly popular state lake-focused destinations. PGAV collected and analyzed available data on lake-focused destinations in Missouri, Iowa, and Illinois, including details on setting, amenities, age of facility, and nightly rate. Similar to Mark Twain Lake facilities, most hotels do not offer data to the public about occupancy and other operating data. The collected data was used to benchmark assumed room rates at the contemplated lodging facility in order to understand how contemplated room rates compared to similar and competitive facilities elsewhere in the Midwest.

Detailed operating data from Honey Creek Resort: Honey Creek Resort is a resort of comparable size and setting to the contemplated lodging facility. As a publicly owned facility, data about ADR, occupancy, and other operating costs were available for fiscal years 2015-2020. Though Honey Creek Resort has struggled to meet projected revenue and occupancy since its opening in 2008, its performance data provides extensive information about lodging operations in a similar setting. The following page shows data from Honey Creek and how it was used to support performance expectations at Mark Twain Lake.



Mark Twain Lake

## Methodology (Cont.)

Honey Creek Resort features 105 lodge guest rooms and 28 luxury cottages on the shore of Rathbun Lake in Moravia, Iowa. It opened in 2008 as Iowa's first (and only) Destination State Park on state-owned land, and is overseen by the Iowa Department of Natural Resources. Delaware North operated the resort from 2016 and will terminate its operating contract in 2023.

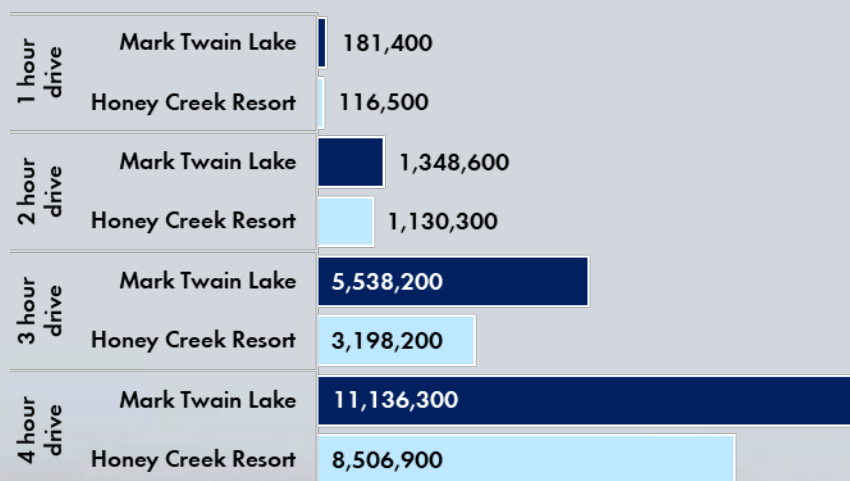
The graph below shows total room nights sold at Honey Creek Resort between FY 2015 and 2020.<sup>1</sup> The resort transferred operators in 2016 and 2020 numbers were reduced due to the COVID-19 pandemic. The years 2017-2019 are used by PGAV as "normal operating conditions."

Figure 25. Honey Creek Resort Room Nights



PGAV compared the resident population by drive time between Mark Twain Lake and Honey Creek Resort in order to understand how the size of the drive time markets compared. Within 2 hours, the two locations had very similar populations. Within 3 and 4 hours, the number of residents is significantly higher for Mark Twain Lake. This indicates that, with similarly sized facilities, Mark Twain Lake could be expected to draw in many more visitors from the surrounding areas.

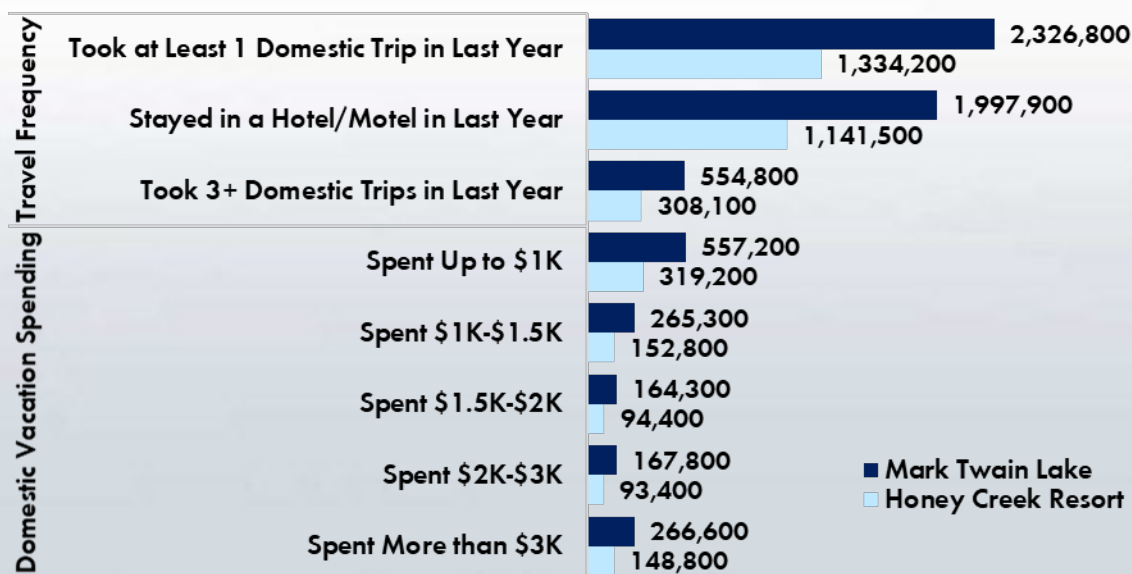
Figure 26. Population Comparison for Honey Creek Resort & Mark Twain Lake Drive Sheds (ESRI, 2022)



<sup>1</sup> Iowa Auditor of State. <http://auditor.iowa.gov/reports>

PGAV also looked at travel market demand differences between Honey Creek Resort and Mark Twain Lake. There is a marked difference in travel demand based on ESRI's market segmentation, which takes into account demographic factors such as population, income, age, and household composition.

Figure 27. Travel Market Demand Comparison - 3 Hour Drive Sheds (ESRI, 2022))



Based on both of these factors, the contemplated Mark Twain Lake lodging facility draws from a much deeper market and could be expected to perform at least as well as Honey Creek. Honey Creek Resort averaged 20,600 room-nights per year between 2017 and 2019, while Mark Twain Lake, with approximately 1.75 times the population within three hours, is expected to generate a similar additional proportion of room stays. The approximately 35,000 room-nights per year shown in the following cash flow analysis are approximately 1.69 times the number of room-night stays observed at Honey Creek Resort.

It is the opinion of PGAV that Honey Creek Resort was successful in the objective of creating a lake-based destination that drew in visitors from Iowa and the neighboring states. On a department-level basis, rooms and banquet operations were profitable. Honey Creek's difficulties in meeting other objectives, such as generating expected revenue and sufficiently covering construction and operating costs, can be explained by various factors. First, construction cost estimates were higher than projected, leading to higher debt service than anticipated. Second, the resort opened during the 2007-2009 recession. Third, operating costs as recorded in audit documents are higher than industry benchmarks, and the water park and golf course cost more to operate than they generated in revenue. Fourth, occupancy failed to exceed 55% in any of the years between 2015 and 2020, which indicates that the hotel may have been too large for the expected market. Nonetheless, occupied rooms at Honey Creek Resort had an average nightly rate of \$160 or higher, demonstrating that this is a reasonable price point for this type of lodging product.

Mark Twain Lake



## ADR & Occupancy Projections

The following page shows where reasonable rates for hotel rooms and cabins fall within the range of other similar facilities, both at Mark Twain Lake and elsewhere. PGAV Planners modeled the operating costs and expenses based on an assumed average nightly rate of \$172 for a lodge room and \$242 for a cabin, which is in line with other average and above average quality hotel facilities and rental cabins in the Midwest market

Estimated occupancy was based on occupancy throughout the year at Honey Creek resort, as well as seasonal activity patterns at Mark Twain Lake and other destinations, including comparable recreational destinations such as the Lodge at Pere Marquette and the Turkey Run Inn in Indiana, other Missouri lake facilities, and other hotel destinations operating in seasonal destinations. PGAV Planners assumes that average yearly occupancy at the lodging facility will be 68%. This is equivalent to roughly 35,000 room nights annually in the hotel rooms and cabins contemplated for this location.

Monthly fluctuations in room revenue and occupancy are given in the tables below. This analysis assumes that the busiest months at the lake facility will be May, June, and July, with visits tapering off into the fall and winter months, and very low occupancy during December, January, and February.

Figure 28. Estimated ADR by Month (PGAV)

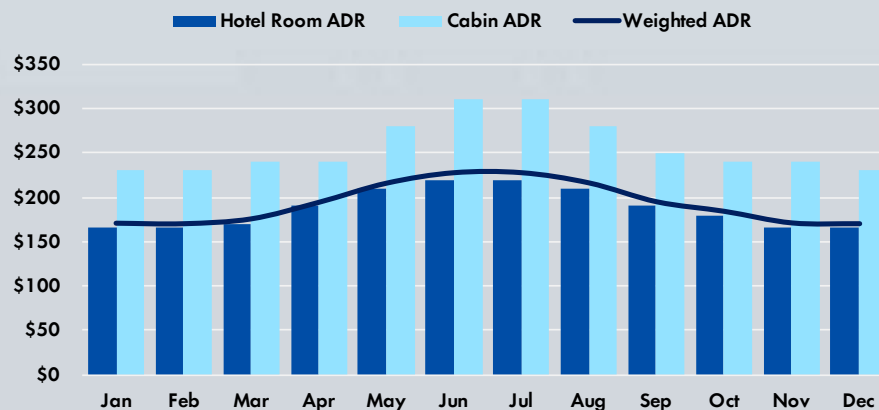
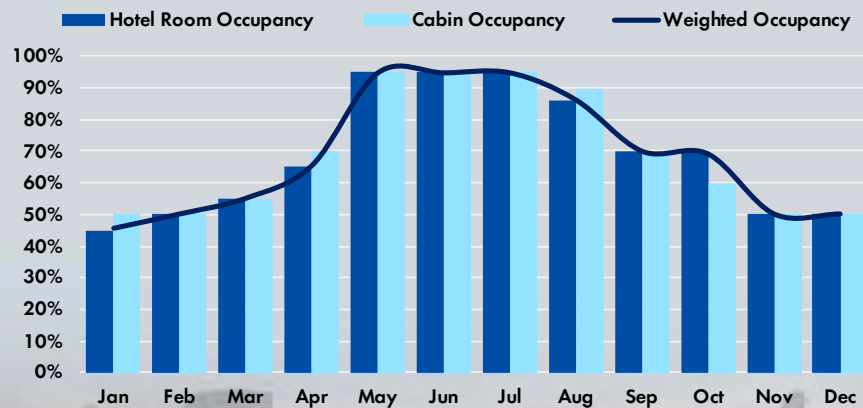


Figure 29. Estimated Occupancy by Month (PGAV)



Mark Twain Lake

## Comparison of Average Daily Rate

Figure 30. Comparison of Accommodations by Price (PGAV)



## Estimated Construction Cost

PGAV built an estimate based on theoretical programmatic pieces for the resort hotel, potential utility infrastructure and site improvements and additional amenities guest would be expecting for a 3-star hotel.

The estimate utilized historical data from PGAV's experience in the industry as well as vetting certain numbers with RS Means and consultants in the profession. Upon development of the estimate, PGAV also understands the volatility of the market conditions currently and tried to account for that in the costs as well as the difficulty and importance of doing select tree removal and sighting the hotel with minimal land and forest disturbance. This can be a cost impact which is why the estimate may appear high compared to a simple economical hotel on a flat and open site.

PGAV's estimate also carries a 20% design contingency to help cover scope adjustments moving through the design phases of the project and a 5% construction contingency to cover unforeseen circumstances that may come up in Construction of the development.

With these considerations in mind the cost estimate is considered a more conservative approach and depending on how the resort is developed it could be of lower cost. It was developed this way to also understand how a conservative approach would impact the bottom line of the economical feasibility study and potential profit.

Figure 31. Site Development Estimated Costs (PGAV, RS Means)

SITE DEVELOPMENT									
	Quantity	Unit	Unit Cost		Construction Cost		Contractor Markup		Design Contingency
<b>Site Preparation</b>									
Demolition	100,000	sf	\$ 2	\$	200,000	\$	43,100	\$	48,600
Grading/Earthwork	18,519	cy	\$ 22	\$	407,400	\$	87,900	\$	99,100
<b>Site Infrastructure</b>									
<b>Civil Infrastructure</b>									
Water	2,100	lf	\$ 200	\$	420,000	\$	90,600	\$	102,100
Sewer	3,500	lf	\$ 130	\$	455,000	\$	98,100	\$	110,600
Storm	1,800	lf	\$ 75	\$	135,000	\$	29,100	\$	32,800
<b>MEP Infrastructure</b>									
Electrical	2,500	lf	\$ 150	\$	375,000	\$	80,900	\$	91,200
Lighting	100,000	sf	\$ 1.60	\$	159,800	\$	34,500	\$	38,900
Voice/Data	2,000	lf	\$ 20	\$	40,000	\$	8,600	\$	9,700
Security	-	sf	\$ 0.35	\$	-	\$	-	\$	-
<b>Site Improvements</b>									
Paving, Broom Finish	4,000	sf	\$ 10	\$	40,000	\$	8,600	\$	9,700
Paving, Asphalt - Parl	92,000	sf	\$ 6	\$	552,000	\$	119,000	\$	134,200
Paving - Roads	38,500	sf	\$ 7	\$	269,500	\$	58,100	\$	65,500
Planting + Irrigation	60,000	sf	\$ 8	\$	480,000	\$	103,500	\$	116,700
Main Entry Sign	1	ea	\$ 60,000	\$	60,000	\$	12,900	\$	14,600
Small Signs	8	ea	\$ 3,500	\$	28,000	\$	6,000	\$	6,800
Sign Footings	8	m <sup>3</sup>	\$ 663	\$	5,300	\$	1,100	\$	1,300
<b>Total Site Preparation</b>					<b>\$ 3,627,000</b>	<b>\$</b>	<b>782,000</b>	<b>\$</b>	<b>881,800</b>
									<b>\$ 5,290,800</b>

Mark Twain Lake



Figure 32. Hotel and Associated Improvements Estimated Costs

HOTEL PROGRAM								
	Quantity	Unit	Unit Cost	Construction Cost	Contractor Markup	Design Contingency		Total
<b>1 Attractions</b>								
Outdoor pool and ar	1,600	sf	\$ 248	\$ 396,900	\$ 85,600	\$ 96,500	\$	579,000
Indoor Pool and Area	800	sf	\$ 369	\$ 295,200	\$ 63,700	\$ 71,800	\$	430,700
Boat dock / Rentals	1	ls	\$ 150,000	\$ 150,000	\$ 32,300	\$ 36,500	\$	218,800
Outdoor event space	1,000	sf	\$ 20	\$ 20,000	\$ 4,300	\$ 4,900	\$	29,200
Hiking trails	1	ls	\$ 10,000	\$ 10,000	\$ 2,200	\$ 2,400	\$	14,600
<b>2 Culinary</b>								
F&B Bar and Grill	2,500	sf	\$ 650	\$ 1,625,000	\$ 350,400	\$ 395,100	\$	2,370,500
Boat Dock Snacks	250	sf	\$ 300	\$ 75,000	\$ 16,200	\$ 18,200	\$	109,400
Kitchen equipment	1	ls	\$ 150,000	\$ 150,000	\$ 32,300	\$ 36,500	\$	218,800
<b>3 Retail</b>								
Shop	400	sf	\$ 437	\$ 174,800	\$ 37,700	\$ 42,500	\$	255,000
<b>4 Guest Support</b>								
Security building	100	sf	\$ 100	\$ 10,000	\$ 2,200	\$ 2,400	\$	14,600
<b>5 Lodging</b>								
Main Lodge	125	room	\$ 195,000	\$ 24,375,000	\$ 5,256,100	\$ 5,926,200	\$	35,557,300
Meeting rooms (3) @	2,400	sf	\$ 200	\$ 480,000	\$ 103,500	\$ 116,700	\$	700,200
Cabins	12	cabins	\$ 100,000	\$ 1,200,000	\$ 258,800	\$ 291,800	\$	1,750,600
<b>Total Hotel Program</b>				<b>\$28,961,900</b>	<b>\$ 6,245,300</b>	<b>\$ 7,041,500</b>	<b>\$</b>	<b>42,248,700</b>

Figure 33. Additional Fees, Contingencies, and Total Construction Cost Estimate

FEES & CONTINGENCY			
<b>Total Construction Cost</b>			<b>\$ 47,539,500</b>
<b>Additional Costs and Fees</b>			
Building Permits and	1	%	\$ 475,400
FF&E, Owner Purcha	1	%	\$ 475,400
A&E Fees	8	%	\$ 3,803,200
<b>Total Fees</b>			<b>\$ 4,754,000</b>
<b>Construction Contingency</b>	5	%	<b>\$ 2,614,700</b>
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>			<b>\$ 54,908,200</b>



Mark Twain Lake

## Lease Term Recommendation

Unlike a typical hotel development, a lodging facility developed on a concession site utilizes a land lease agreement, in which the U.S. Army Corps of Engineers will retain ownership of the land while a developer/resort operator may finance, build, and operate improvements made on the site subject to an agreement from such developer/operator to lease the land from the USACE. In order to create favorable financing terms and more competitive development opportunity, PGAV recommends a lease term of at least 50 years. This allows for greater investment or reinvestment over time, permits a developer to mitigate development risk more than a shorter term, and enables longer-term planning that ensures greater sustainability. By offering a longer-term lease structure, the USACE may have greater leverage when negotiating with a potential developer.

## U.S. Army Corps of Engineers Building Requirements

Appendix C contains the full text of Chapter 16 - Recreation Development Policy for Outgranted Corps Lands, the U.S. Army Corps of Engineers policy governing the use of outgrant facilities, published in 2009.

## Current Financing Market

Since 2020, the global pandemic and subsequent events have caused more fluctuations in the real estate market than usual. Supply chain issues have caused the cost of construction materials to fluctuate and generally to increase. Rising rates of inflation have encouraged the Federal Reserve to increase interest rates. Both of these factors bring additional cost and financing risk to any real estate development project.

Given the longer forward-looking horizon associated with developing a resort lodging facility at this location, it is possible that construction material cost and financing cost issues may not be as pronounced by the time the project may be underway.



Mark Twain Lake

## Operating Costs

### Cash Flow Analysis

In order to understand the financial feasibility of the contemplated hotel facility, PGAV created a ten-year cash flow analysis based on estimated ADR, occupancy, and average revenue and expenses for hotels operating in the Midwest.<sup>2</sup> This ADR and occupancy represents the weighted average daily rate of hotel rooms and cabin accommodations. This analysis assumes that the hotel attains 50% occupancy in its first year of operations and then greater occupancy ranging from 69%-71% in the following years.

Figure 34. Ten Year Cash Flow Estimate

	Year 1	Year 2	Year 3	Year 4
	2025	2026	2027	2028
<b>Assumptions</b>				
Occupancy	50%	69%	70%	71%
ADR	\$ 194	\$ 198	\$ 202	\$ 207
<b>Revenue</b>				
Rooms	\$ 4,843,125	\$ 6,831,857	\$ 7,081,993	\$ 7,361,307
Food and Beverage	\$ 2,350,235	\$ 3,311,621	\$ 3,429,974	\$ 3,561,764
Other Operated Departments & Misc Revenue	\$ 375,038	\$ 528,450	\$ 547,336	\$ 568,367
<b>Total Operating Revenue</b>	<b>\$ 7,568,398</b>	<b>\$ 10,671,929</b>	<b>\$ 11,059,303</b>	<b>\$ 11,491,437</b>
<b>Departmental Expenses</b>				
Rooms	\$ 1,225,123	\$ 1,724,580	\$ 1,784,464	\$ 1,851,214
Food and Beverage	\$ 1,775,178	\$ 2,498,881	\$ 2,585,653	\$ 2,682,371
Other Operated Departments	\$ 250,025.00	\$ 351,955.08	\$ 364,176.41	\$ 377,798.75
<b>Total Departmental Expenses</b>	<b>\$ 3,250,325</b>	<b>\$ 4,575,416</b>	<b>\$ 4,734,293</b>	<b>\$ 4,911,384</b>
<b>Total Departmental Profit</b>	<b>\$ 4,318,073</b>	<b>\$ 6,096,513</b>	<b>\$ 6,325,010</b>	<b>\$ 6,580,053</b>
<b>Undistributed Operating Expenses</b>				
Administrative and General	\$ 575,058	\$ 809,497	\$ 837,606	\$ 868,937
Information and Telecommunications Systems	\$ 100,010	\$ 140,782	\$ 145,671	\$ 151,119
Sales and Marketing	\$ 700,070	\$ 985,474	\$ 1,019,694	\$ 1,057,836
Property Operations and Maintenance	\$ 300,030	\$ 422,346	\$ 437,012	\$ 453,358
Utilities	\$ 200,020	\$ 281,564	\$ 291,341	\$ 302,239
<b>Total Undistributed Expenses</b>	<b>\$ 1,875,188</b>	<b>\$ 2,639,663</b>	<b>\$ 2,731,323</b>	<b>\$ 2,833,491</b>
<b>Gross Operating Profit</b>	<b>\$ 2,442,885</b>	<b>\$ 3,456,850</b>	<b>\$ 3,593,687</b>	<b>\$ 3,746,563</b>
<b>Management Fees</b>				
<b>Management Fees (3.5% of Room Revenue)</b>	\$ 169,509	\$ 239,115	\$ 247,870	\$ 257,646
<b>Income Before Non-Operating Income &amp; Expenses</b>	<b>\$ 2,273,376</b>	<b>\$ 3,217,735</b>	<b>\$ 3,345,817</b>	<b>\$ 3,488,917</b>
<b>Non-Operating Income and Expenses</b>				
Land Lease (4.6% of Revenue)	\$ 348,146	\$ 490,909	\$ 508,728	\$ 528,606
Property and Other Taxes	\$ 205,313	\$ 287,478	\$ 296,125	\$ 305,696
Insurance	\$ 50,005	\$ 70,391	\$ 72,835	\$ 75,560
Other	\$ 75,008	\$ 105,587	\$ 109,253	\$ 113,340
<b>Total Non-Operating Income and Expenses</b>	<b>\$ 678,471</b>	<b>\$ 954,365</b>	<b>\$ 986,941</b>	<b>\$ 1,023,202</b>
<b>EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization)</b>	<b>\$1,594,904</b>	<b>\$2,263,370</b>	<b>\$2,358,876</b>	<b>\$2,465,715</b>
<b>Debt Service</b>				
30-Year Mortgage Debt Service; 60% of Cost; 5.5% Interest Rate	\$ 2,244,692	\$ 2,244,692	\$ 2,244,692	\$ 2,244,692
<b>Cash Flow</b>	<b>\$ (649,787)</b>	<b>\$ 18,678</b>	<b>\$ 114,184</b>	<b>\$ 221,024</b>

<sup>2</sup> Source: CBRE Trends in the Hotel Industry



## Debt Service Estimates

Based on estimated revenue and expenses, the hotel is expected to generate positive earnings over its first ten years of operation. However, based on the relatively high construction costs (due to setting, quality of finish, and current costs of materials), debt service to repay construction cost also represents a large line item cost, shown in the table below. This amount will vary subject to financing terms, amount financed, final construction cost, and other factors subject to an actual development plan and agreement, however this estimate represents terms that may be used to understand the relative financial feasibility of the resort concept at Mark Twain Lake.

Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2029	2030	2031	2032	2033	2034
71%	71%	71%	71%	71%	71%
\$ 211	\$ 216	\$ 221	\$ 226	\$ 231	\$ 236
\$ 7,502,700	\$ 7,667,760	\$ 7,836,451	\$ 8,030,795	\$ 8,185,047	\$ 8,365,118
\$ 3,626,625	\$ 3,702,784	\$ 3,780,542	\$ 3,870,509	\$ 3,940,992	\$ 4,023,753
\$ 578,717	\$ 590,870	\$ 603,278	\$ 617,634	\$ 628,882	\$ 642,088
<b>\$ 11,708,042</b>	<b>\$ 11,961,413</b>	<b>\$ 12,220,271</b>	<b>\$ 12,518,938</b>	<b>\$ 12,754,921</b>	<b>\$ 13,030,959</b>
\$ 1,883,079	\$ 1,920,741	\$ 1,959,155	\$ 2,003,813	\$ 2,038,305	\$ 2,079,071
\$ 2,728,543	\$ 2,783,114	\$ 2,838,776	\$ 2,903,485	\$ 2,953,463	\$ 3,012,532
\$ 384,301.84	\$ 391,987.88	\$ 399,827.64	\$ 408,941.52	\$ 415,980.67	\$ 424,300.29
<b>\$ 4,995,924</b>	<b>\$ 5,095,842</b>	<b>\$ 5,197,759</b>	<b>\$ 5,316,240</b>	<b>\$ 5,407,749</b>	<b>\$ 5,515,904</b>
<b>\$ 6,712,118</b>	<b>\$ 6,865,571</b>	<b>\$ 7,022,511</b>	<b>\$ 7,202,698</b>	<b>\$ 7,347,172</b>	<b>\$ 7,515,056</b>
\$ 883,894	\$ 901,572	\$ 919,604	\$ 940,565	\$ 956,756	\$ 975,891
\$ 153,721	\$ 156,795	\$ 159,931	\$ 163,577	\$ 166,392	\$ 169,720
\$ 1,076,045	\$ 1,097,566	\$ 1,119,517	\$ 1,145,036	\$ 1,164,746	\$ 1,188,041
\$ 461,162	\$ 470,385	\$ 479,793	\$ 490,730	\$ 499,177	\$ 509,160
\$ 307,441	\$ 313,590	\$ 319,862	\$ 327,153	\$ 332,785	\$ 339,440
<b>\$ 2,882,264</b>	<b>\$ 2,939,909</b>	<b>\$ 2,998,707</b>	<b>\$ 3,067,061</b>	<b>\$ 3,119,855</b>	<b>\$ 3,182,252</b>
<b>\$ 3,829,854</b>	<b>\$ 3,925,662</b>	<b>\$ 4,023,804</b>	<b>\$ 4,135,637</b>	<b>\$ 4,227,317</b>	<b>\$ 4,332,804</b>
\$ 262,595	\$ 268,372	\$ 274,276	\$ 281,078	\$ 286,477	\$ 292,779
<b>\$ 3,567,259</b>	<b>\$ 3,657,290</b>	<b>\$ 3,749,528</b>	<b>\$ 3,854,559</b>	<b>\$ 3,940,841</b>	<b>\$ 4,040,024</b>
\$ 538,570	\$ 550,225	\$ 562,132	\$ 575,871	\$ 586,726	\$ 599,424
\$ 309,434	\$ 314,075	\$ 318,787	\$ 324,455	\$ 328,422	\$ 333,348
\$ 76,860	\$ 78,398	\$ 79,966	\$ 81,788	\$ 83,196	\$ 84,860
\$ 115,291	\$ 117,596.36	\$ 119,948	\$ 122,682	\$ 124,794	\$ 127,290
<b>\$ 1,040,155</b>	<b>\$ 1,060,294</b>	<b>\$ 1,080,833</b>	<b>\$ 1,104,797</b>	<b>\$ 1,123,139</b>	<b>\$ 1,144,922</b>
<b>\$2,527,105</b>	<b>\$2,596,996</b>	<b>\$2,668,696</b>	<b>\$2,749,762</b>	<b>\$2,817,702</b>	<b>\$2,895,102</b>
\$ 2,244,692	\$ 2,244,692	\$ 2,244,692	\$ 2,244,692	\$ 2,244,692	\$ 2,244,692
<b>\$ 282,413</b>	<b>\$ 352,304</b>	<b>\$ 424,004</b>	<b>\$ 505,070</b>	<b>\$ 573,010</b>	<b>\$ 650,410</b>

## Project Impacts

### Tax Revenue Impacts

The lodging facility is expected to generate positive tax impacts to Ralls County in the form of real estate tax revenue and sales tax revenue. Real estate tax revenue is estimated to exceed \$230,000 per year in the second year of operations and sales tax revenue is expected to exceed \$160,000. Together, these two taxes are expected to generate approximately \$400,000 per year in additional tax revenue at stabilized occupancy.

	Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Year 7 2031	Year 8 2032	Year 9 2033	Year 10 2034
<b>Real Estate Tax Revenue</b>										
Value of Improvements	\$ 20,590,575	\$ 27,454,100	\$ 26,595,279	\$ 26,595,279	\$ 25,763,325	\$ 25,763,325	\$ 26,278,591	\$ 26,278,591	\$ 26,804,163	\$ 26,804,163
Assessed Value	\$ 6,588,984	\$ 8,785,312	\$ 8,510,489	\$ 8,510,489	\$ 8,244,264	\$ 8,244,264	\$ 8,409,149	\$ 8,409,149	\$ 8,577,332	\$ 8,577,332
<b>Total Real Estate Tax Revenue</b>	<b>\$ 177,903</b>	<b>\$ 237,203</b>	<b>\$ 229,783</b>	<b>\$ 229,783</b>	<b>\$ 222,595</b>	<b>\$ 222,595</b>	<b>\$ 227,047</b>	<b>\$ 227,047</b>	<b>\$ 231,588</b>	<b>\$ 231,588</b>
<b>Sales Tax Revenue</b>										
Total Sales	\$ 7,568,398	\$ 10,671,929	\$ 11,059,303	\$ 11,491,437	\$ 11,708,042	\$ 11,961,413	\$ 12,220,271	\$ 12,518,938	\$ 12,754,921	\$ 13,030,959
Ralls County Sales Tax Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
<b>Total Sales Tax Revenue</b>	<b>\$ 113,526</b>	<b>\$ 160,079</b>	<b>\$ 165,890</b>	<b>\$ 172,372</b>	<b>\$ 175,621</b>	<b>\$ 179,421</b>	<b>\$ 183,304</b>	<b>\$ 187,784</b>	<b>\$ 191,324</b>	<b>\$ 195,464</b>
<b>Total Revenue to Ralls County</b>	<b>\$ 291,429</b>	<b>\$ 397,282</b>	<b>\$ 395,673</b>	<b>\$ 402,155</b>	<b>\$ 398,216</b>	<b>\$ 402,016</b>	<b>\$ 410,351</b>	<b>\$ 414,831</b>	<b>\$ 422,912</b>	<b>\$ 427,052</b>

### Impact on County Restaurants and Retailers

By filling a gap in the current market, this hotel concept is intended to draw in new visitors to Ralls County from other parts of Missouri, particularly the St. Louis, Kansas City, and Columbia metro areas, resulting in additional spending within Ralls County that wouldn't otherwise occur. This increased number of visitors is also expected to support other restaurants and retailers around the lake and in the Hannibal area based on cross-marketing efforts.

### Direct and Indirect Jobs Created

The lodging facility is also expected to create a number of temporary jobs (during the construction phase) and permanent jobs (during the operations phase). PGAV used employment multipliers published by the Economic Policy Institute in 2019 to estimate the number of direct and indirect jobs created by construction and operating expenses.

During the construction phase of the facility, which is expected to take at least 18 months, it is estimated that construction spending will generate 302 FTE jobs, 264 supplier jobs from the purchase of materials and capital services, and 335 induced jobs (jobs supported by the spending of income from direct jobs) and supplier jobs, as well as public-sector jobs supported by tax revenue, for a total of 302 direct jobs and 599 indirect jobs

At full operation, the lodging facility is expected to generate 96 FTE jobs, 53 supplier jobs, and 59 induced jobs, for a total of 96 direct and 112 indirect jobs. These are permanent jobs that will persist as long as the facility is operational.

Mark Twain Lake



# Feasibility Considerations and Conclusions

## Success Factors

Overall, PGAV expects that a hotel built on one of the concession sites within proximity to Mark Twain Lake will be financially feasible and contribute to economic development within Ralls County, based on the following success factors:

### Quality and Uniqueness of Setting

A hotel situated on the bluffs and/or shores on the eastern side of Mark Twain Lake would have extremely high quality views of the lake, surrounding natural areas, and sunset. A review of lakeside facilities in Missouri and the surrounding states found very few lakeside accommodations outside of Lake of the Ozarks and Table Rock Lake, and, in most cases, these accommodations are in a much more developed environment. Therefore, Mark Twain Lake would offer a unique and appealing experience for visitors.

### Proximity to Major Population Centers with Disposable Income and Travel Interest

Mark Twain Lake is located within 2-3 hours of the St. Louis metro area and at a little over 3 hours from the Kansas City metro area. Over one million residents live within 2 hours of the lake and over four million residents live within 3 hours of the lake. These two major metropolitan areas are large potential markets for a lodging facility at Mark Twain Lake.

### Ability to Tie Into Existing Lake and Nearby Amenities

The lake is home to a number of existing USACE facilities, two marinas, and a state park, which provide opportunities for boating, fishing, hiking, horseback riding, and archery. Hannibal provides opportunities for day trips, and the proximity of the two destinations creates opportunities for cross-marketing.

### Overall Growth in Outdoor-Related Travel

Outdoor recreation (which has always been popular in Missouri) has become more popular due to the pandemic. This is driving demand for accommodations in scenic locations, such as Mark Twain Lake.

### Current Visitors Show Willingness to Pay

There are very few high-quality lodging opportunities around the lake; however, the prices of average quality lodging facilities show that there is a market for visitors willing to pay between \$100 and \$250 a night to stay near Mark Twain Lake.



Mark Twain Lake

## Making It Work

However, even with these success factors, there are various considerations that must be taken into account in order to ensure success: Developing a facility at this location to take full advantage of the site and surroundings involves much greater upfront construction costs than a typical hotel, and therefore presents a greater amount of financial risk to the developer.

### Need for Experienced Developer

The greater development costs associated with building a context-sensitive building with minimal disturbance to the site create a larger construction cost burden, which results in a greater amount of financial risk. It is important to select a developer with experience that can successfully budget and manage the construction of the facility in order to keep yearly construction loan debt payments as low as possible.

### Need for Experienced Operator

Similarly, operating the facility will require experienced management, due to the need to provide high-quality service, operate various amenities, including those open to the general public, and manage administrative and operating costs within a hotel market that undergoes dramatic seasonal fluctuations and periods of very high demand.

### Need for Experienced Marketing Staff

Since this facility will be located in a somewhat secluded location, its marketing staff must demonstrate the ability to continually market the property to multiple metro areas and market segments for vacations, weekend getaways, events, weddings, corporate retreats, and other functions, as well as develop programming and campaigns that attract visitors in off-season times.

### Need for Local Partnerships

The ultimate goal of any accommodation built at Mark Twain Lake is to contribute to overall regional economic development and utilize natural resources to promote recreation and environmental stewardship. Any operator should be proactive in establishing local partnerships and tie-ins with the businesses around the lake and Hannibal, so that these businesses may mutually promote one another, while also mitigating negative environmental impacts and promoting USACE objectives.

## Marketing Recommendations

As stated above, marketing will be crucial for attaining sufficient occupancy, given the site's location away from major highways and population centers. Marketing materials should emphasize the uniqueness and natural beauty of the setting, the opportunity for relaxing and connecting with loved ones, access to the diverse activities and facilities available at the lake, and the facility's appropriateness for a range of formal and informal group events.

Since the lake is largely accessible by car, marketing efforts should focus on metro areas within a three to four hour drive of the lake. These include the St. Louis metro area, particularly the northwest quadrant, which has the most convenient lake access, the Columbia metro area, and the Kansas City metro area. Because higher income households tend to have higher disposable income, marketing efforts should target mid- to higher-income zip codes.

Mark Twain Lake



## Section VII: Appendices

### Appendix A: Conditions and Assumptions

#### Conditions and Assumptions

The conditions and assumptions that apply to the forward-looking projections in this document are stated throughout. A negative change in the conditions that form the basis of the assumptions used in developing the projections contained in this Report could adversely affect the estimates of the revenue available to support the project. In order to project future economic performance, certain assumptions must be made with regard to actions by private businesses and landowners, national and local economic conditions, public support, and legislative changes. The contents of this document are forward-looking and involve certain assumptions and judgments regarding uncertainties in the future.

The ability to achieve the revenue projections presented in this evaluation is contingent upon the timing and probability of a number of complex conditions being met in the future and certain assumptions holding true. PGAV makes no assertions as to the degree of impact that changes in any of these conditions would have upon the projections included herein. Any event or action that alters an assumed event, assumption, or condition used to achieve the projections contained herein shall be considered a cause to void all financial projections contained in this Report. These assumptions include such conditions as listed below.

#### Economic and Market Stability

National, regional, and local economic stability will need to prevail over the life of the project and continue to support economic activity across Ralls County and Northeast Missouri. In addition, prolonged labor strikes, pandemics, or terrorist attacks at the national, regional, or local level could adversely affect the business environment or business productivity at this location.

#### Natural Disasters

Future success of the project could be affected by fires, pandemics, floods, storms, or other “Acts of God” which could alter the ability of private development to occur at Mark Twain Lake.

Mark Twain Lake

## Appendix B: Case Studies

### Case Study Overview

PGAV collected data about visitors, amenities, and operations from various Midwest resorts in order to understand which facilities would be considered most successful and what contributed to their success.

PGAV reviewed data from over a dozen facilities in Missouri and the Midwest. Some of these facilities included Turkey Run Inn, Garland Lodge and Golf Resorts and Destination Kohler. Beyond these facilities, three destinations were given special focus: the Honey Creek Resort, Big Cedar Lodge, and Pere Marquette Lodge. More details on each of these destinations is given on the following pages. Ultimately, some of the observations used to guide the development of the Mark Twain Lake program included:

- As a new, purpose-built facility using lake-based recreation as a primary attraction, Honey Creek Resort is the most similar to what may be built at Mark Twain Lake. Honey Creek may be considered successful in drawing new visitors to the lodge and lake, but has struggled financially. Avoiding some of these issues, such as cost overruns and high administrative costs, and focusing on drawing overnight visitors from major metropolitan markets, will be key at Mark Twain Lake.
- Big Cedar Lodge, as one of the premier resort destinations in the Midwest, represents the top of the market in terms of resort amenities and sees high numbers of day and overnight visitors annually. Lessons from Big Cedar Lodge include the value of having various types of lodging options, a focus on delivering a high-quality visitor experience, and the value placed on scenic natural locations.
- Pere Marquette Lodge is one of eight lodges operated on Illinois Department of Natural Resources land. Unlike Honey Creek, the cost of repaying construction is not an issue, nor are there many amenities apart from a deck, indoor swimming pool, dining facilities, and event space. Like Big Cedar Lodge, Pere Marquette Lodge hosts many day visitors in addition to overnight visitors. Because it is within an hour of the majority of the St. Louis metro area, an overnight stay is not necessarily required to enjoy the lodge and state park amenities, but nonetheless it remains a well-regarded natural getaway.

	Mark Twain Lake Total	Honey Creek Resort	Big Cedar Lodge	Pere Marquette Lodge
Average Daily Visitors	2,675	550	3,875	315
Visitor Origins – Percent Share				
Within 1 Hour	36%	33%	11%	53%
Within 2 Hours	39%	26%	8%	29%
Within 3 Hours	17%	18%	7%	6%
Within 4 Hours	4%	10%	21%	3%
Beyond 4 Hours	4%	12%	53%	10%
Visitor Origins - Estimated Number				
Within 0-1 Hour	965	180	435	165
Within 1-2 Hours	1045	145	315	90
Within 2-3 Hours	455	100	275	20
Within 3-4 Hours	105	55	830	10
Beyond 4 Hours	105	65	2095	30
Hotel Rooms	0	131	317	72
Type of Facility	Concession Site	Concession Site	Privately Owned	Concession Site
Avg. Revenue		\$5.9 million 2010-2019	Unk.	\$3.3 million 2001-2019
Year Opened		2009	1988	1940
Population Within 3 Hours	5.5 million	3.2 million	5.7 million	3.2 million

## Honey Creek Resort

### Description

Honey Creek Resort was built on the shores of Lake Rathbun in Moravia, Iowa, in 2008. The property consists of a large lodge building with 103 guests rooms and 28 standalone guest cottages. Honey Creek Lodge offers a large assortment of visitor amenities, including a restaurant on site, banquet/event facilities, a golf course, indoor water park, and support for a wide range of lake-based recreational activities, such as boating, fishing, swimming, hiking, and hunting.

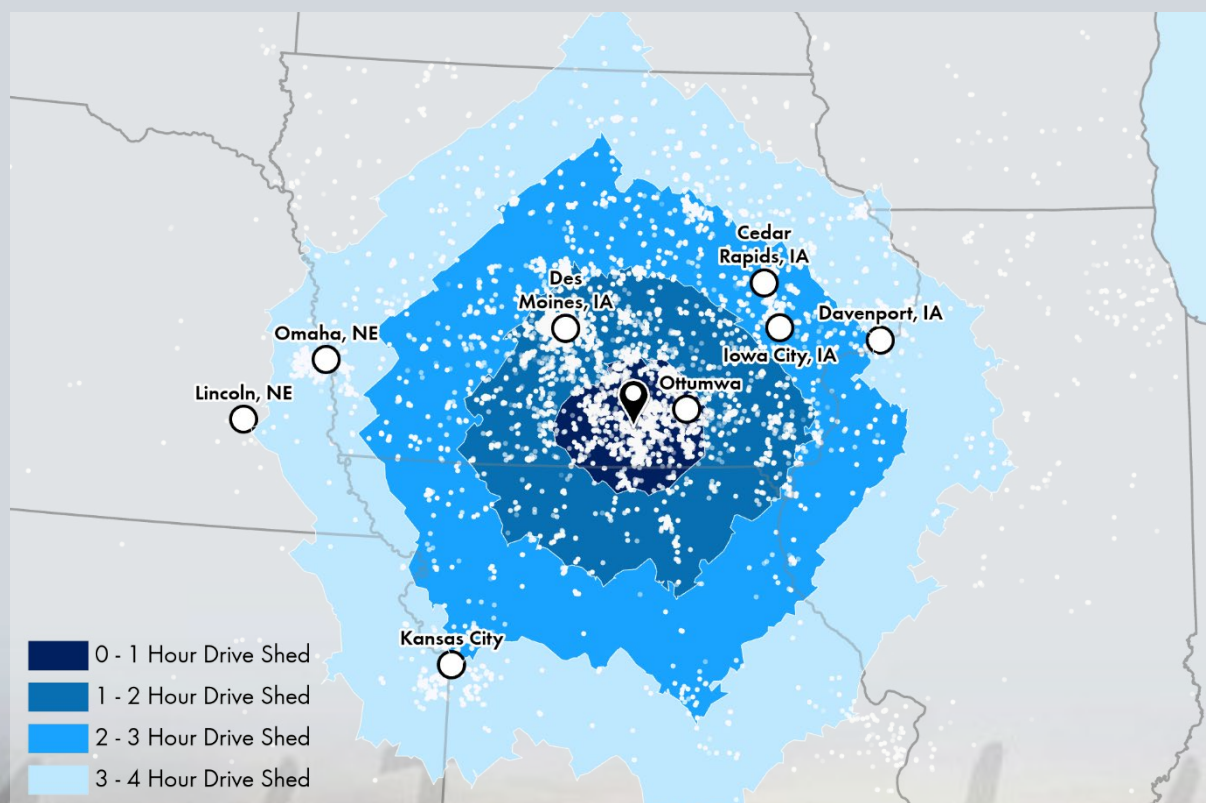
### Discussion

Honey Creek Resort was built as part of the Destination State Parks program, which sought to create a series of destinations on state-owned property. Although the resort generated thousands of new stays at Rathbun Lake, it struggled financially. Construction costs were higher than initially budgeted (\$60 million compared to \$48 million) and operating revenues were lower than anticipated, creating issues repaying the tax exempt bonds used for construction.

PGAV reviewed audits of the resort and found the operating costs were higher than average. This was in part due to the cost of operating the 18-hole golf course and indoor water park, and also above-average administration expenses.

From 2017 until 2019, the resort generated over 20,500 room-nights annually, which, although insufficient to generate the necessary revenue to consider the resort a financial success, is nonetheless a testament to the demand for lake-based recreation. With an average room rate of \$160+ from 2017-2019, the resort demonstrates that there is a market willing to pay to stay at outdoor-recreation based destinations.

Figure 35. Visitor Origins to Honey Creek Resort





## Big Cedar Lodge

### Description

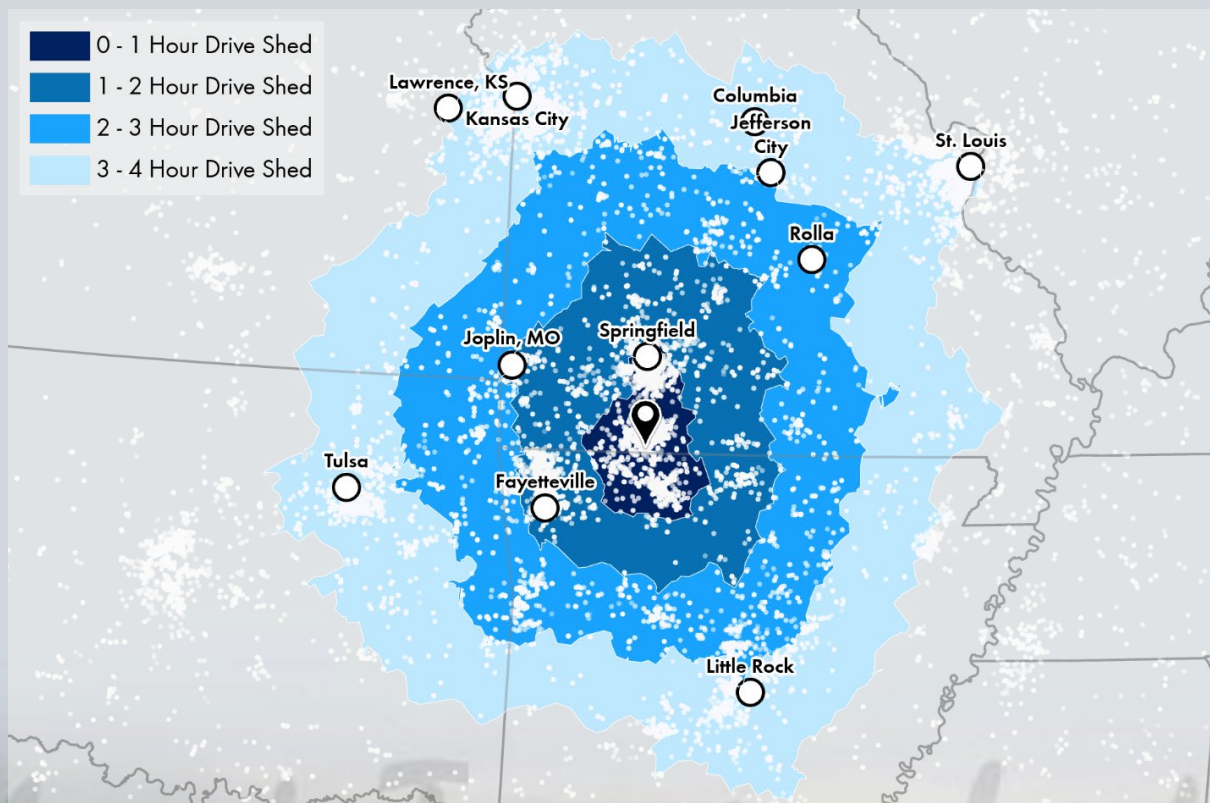
Johnny Morris, the founder of Bass Pro Shops, opened Big Cedar Lodge in 1988 overlooking Table Rock Lake in southern Missouri. The 4,600 acre resort offers 317 accommodations in three lodges, private cabins and cottages, rustic lakeside camp cabins, and exclusive luxury cottages. There is a diverse and extensive range of guest amenities and programming, including multiple restaurants, a museum, five golf courses, horseback riding, tours, and holiday events.

### Discussion

Big Cedar Lodge is considered one of the best resorts in Missouri and the Midwest, and over half of its visitors travel from more than 4 hours away to visit the property, indicating that a higher percentage of visitors come by plane than the other case study destinations. In terms of scale, complexity, and budget, Big Cedar Lodge is far beyond what would be developed at one of Mark Twain Lake's concession sites. Additionally, factors such as having multiple airports nearby, being a part of the Branson tourist ecosystem, and being associated with Bass Pro Shops are strengths that a Mark Twain concession facility would not benefit from.

However, there are still takeaways for a Mark Twain Lake development. Big Cedar Lodge shows the ability of a unique, scenic, and high-quality destination to draw in a large number of visitors from all over the U.S. Having a variety of accommodations at different price points helps to capture a larger share of the market. Big Cedar Lodge also has strong marketing and programming to bring in visitors during off-peak months. And finally, similar to a concession facility, many of the amenities at Big Cedar Lodge are open to day visitors, which provides additional revenue, as well as publicity for the resort.

Figure 36. Visitor Origins to Big Cedar Lodge



Mark Twain Lake

## Pere Marquette Lodge

### Description

The original Pere Marquette Lodge is a Civilian Conservation Corps building dating from the 1930s located about an hour north of St. Louis in Grafton, Illinois. Today, the expanded lodge has 50 rooms and 22 stone guest cabin rooms, as well as a 150-seat dining room, 2,900 square foot conference center, cocktail lounge, and indoor pool. The Lodge is located at the entrance to the 8,000 acre Pere Marquette State Park, which offers 12 miles of scenic hiking trails overlooking the Illinois River.

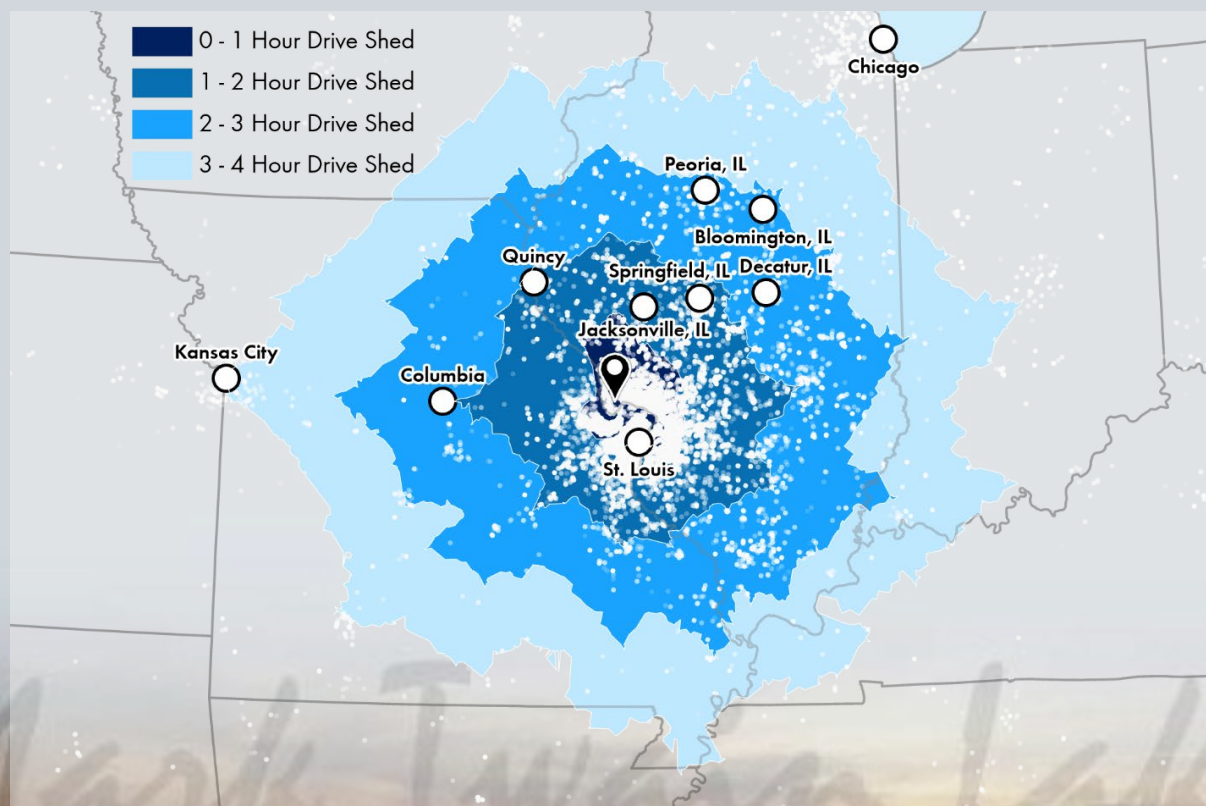
### Discussion

The Pere Marquette Lodge building and site are owned by the Illinois Department of Natural Resources and operated as one of the state's eight State Park Lodge concession facilities. The lodge is currently part of the Best Western Premier Collection portfolio, but its operation is currently up for bid for a 25-year contract beginning in 2023.

The Pere Marquette Lodge has the greatest share of visitors from within one hour compared to the other definitions. Seventy-two percent of visitors to the lodge come from the St. Louis metro area, or an average of 225 visitors daily. Of these visitors, approximately 100 stay overnight. Compared to the other lodging facilities, Pere Marquette has lower room rates, ranging from about \$90 to \$170 per night, depending on season, with an estimated average room rate of about \$130.

Because Pere Marquette is privately operated, full details on average occupancy and average daily revenue are not publicly available. However, the lodge generated average revenue of \$3.3 million each year between 2001 and 2019.

Figure 37. Visitor Origins to Pere Marquette Lodge



## Appendix C: Federal Requirements for Construction on U.S. Army Corps of Engineers Property

ER 1130-2-550

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### Chapter 16 - Recreation Development Policy for Outgranted Corps Lands

#### 16-1. Purpose.

This guidance establishes a consistent, nationwide policy that will be applied to evaluate requests for recreation development at Corps water resources development projects and was developed jointly by the Real Estate and Operations Communities of Practice. The Corps intent is to provide public outdoor recreation opportunities that support project purposes and meet the recreation demands created by the project itself while sustaining our natural resources. Depending on specific project legislation, project purposes may also include navigation, hydropower, flood control, and or water supply. Additional statutes can assign missions responsibilities such as fish and wildlife management, and endangered species.

#### 16-2. Applicability.

This policy applies to all existing recreation outgrants issued after 6 December 2005 and all new requests for recreation development by Federally recognized Indian Tribes, public (Federal, state and local), private sector and quasi-public entities and individuals at Civil Works water resources development projects. Previously approved development plans for land currently outgranted for recreation development are grandfathered under this policy. When proposed development is not specifically addressed in a previously approved development plan for an existing outgrant instrument, the proposed development will be treated as a new request; however, land availability will not have to be reevaluated. New or existing sublessees that propose recreational development outside the terms and conditions of the current outgrant instrument are considered as a new request. All new requests require a conceptual development plan in sufficient detail to evaluate the proposed recreation development.

#### 16-3. Policy.

- a. The primary rationale for any future recreation development must be dependent on the project's natural or other resources. This dependency is typically reflected in facilities that accommodate or support water-based activities, overnight use, and day use such as marinas, campgrounds, picnic areas, trails, swimming beaches, boat launching ramps, and comprehensive resort facilities. Examples that do not rely on the project's natural or other resources include theme parks or ride-type attractions, sports or concert stadiums, and stand alone facilities such as restaurants, bars, motels, hotels, non-transient trailers, and golf courses. Normally, the recreation facilities that are dependent on the project's natural or other resources and accommodate or support water-based activities, overnight use, and day are approved first as primary facilities followed by those facilities that support them. Any support facilities (e.g., playgrounds, multi-purpose sports fields, overnight facilities, restaurants, camp stores, bait shops, comfort stations, boat repair facilities) must also enhance the recreation experience, be dependent on the resource-based facilities, be secondary to the original intent of the recreation development and the land base occupied by the outgrant. The Corps will not support private exclusive use of any type of facility.



- b. Corps policy is to provide outdoor recreation opportunities to the public where there is an unfulfilled demand and a corresponding deficit of those facilities. This shortfall is fulfilled by either the Corps constructing the facilities itself or allowing Federally recognized Indian Tribes, other public (Federal, state and local), private sector, quasi-private entities or individuals to do so on project lands through an outgrant. Accordingly, outgrants that the Corps enters into should not unfairly compete with other established private or public recreational facilities. Existing outgrants with proposed facilities in development plans should be given priority to develop similar facilities within a reasonable timeframe before issuing a new outgrant for like facilities.

#### **16-4. Definitions.**

- a. Comprehensive Resort - Typically, multi-faceted developments with facilities such as marinas, lodging, conference centers, golf courses, tennis courts, restaurants, and other similar facilities.
- b. Conceptual Development Plan - Requestor's or existing lessee's plan for an area of Corps land that shows existing and or proposed facilities, services, and acreage necessary to meet the current and potential public demand and the management and development activities to be undertaken.
- c. Master Plan - A conceptual document guiding Corps responsibilities pursuant to Federal laws and regulations to manage the project lands, waters, associated resources, and preserve, conserve, develop, restore and maintain those resources. The primary goals of a Master Plan are to prescribe an overall land and water management plan, resource objectives, land use classifications, and associated design and management concepts. The plan addresses all resources including but not limited to fish and wildlife, vegetation, cultural, aesthetic, interpretive, recreational, mineral, commercial, and outgranted lands, easements and water.
- d. Outgrant - Authorizes the right to use Army-controlled real property. It is a written legal document that establishes the timeframe, consideration, conditions and restrictions on the use of Army property. For the purposes of this policy, an outgrant is typically a lease or license authorized by 16 USC 460d, 10 USC 2667 and the general administrative authority of the Secretary of the Army (reference ER 405-1-12, Chapter 8 (Real Property Management) and the forthcoming EC 405-1-80 (Management and Outgrant Programs)).
- e. Project Level Representative - Person responsible for operations at a project or area level such as lake manager, operations project manager, resource manager, etc.

Mark Twain Lake

**16-5. Evaluation Criteria.**

- a. All new requests for recreation development must be in writing and will be reviewed by a district team. At a minimum, the team will consist of a project level representative, Real Estate, Operations, and other district legal/technical elements as appropriate (Engineering, Planning, Regulatory, etc.). Final authority to approve recreation development rests with the District Commander. In the rare circumstance that exceptions to this policy may be warranted, proposals for recreational developments may be forwarded to the Director of Civil Works through the Division Commander for review on a case by case basis.
- b. Although these evaluation criteria are integral to any land availability determination, the preparation of the Report of Availability (ROA) will follow the processes established in ER 405-1-12, Chapter 8 (Real Property Management) and the forthcoming EC 405-1-80 (Management and Outgrant Programs), ER 200-2-2 (Procedures for Implementing NEPA) and ER 200-2-3 (Environmental Quality-Environmental Compliance Policies). In addition, the evaluation will be consistent with ER 1130-2-540 (Environmental Stewardship Operations and Maintenance Policies), ER 1130-2-550 (Recreation Operations and Maintenance Policies), and ER 1130-2-406 (Shoreline Management at Civil Works Projects.)
- c. The team will evaluate requests for recreation development using the following criteria:
  - (1) Consistent with project purposes
  - (2) Reasonable connection to the project's natural and other resources
  - (3) Consistent with land use classifications and resource management objectives in the Project Master Plan (or supplement thereto)
  - (4) In the public interest
  - (5) Justified by public demand (market study- See Appendix C)
  - (6) Economically viable (feasibility study- See Appendix D)
  - (7) Meets the recreation demands created by the project itself while balancing natural resources requirements
- d. Routine, minor expansions/requests of previously approved facilities within the lease footprint such as additional campsites at an existing campground, additional marina boat slips, enlargement of a restaurant, additional picnic sites or parking spaces may warrant a streamlined evaluation in accordance with established District procedures.

**16-6. Implementation.**

This policy is effective immediately and supersedes any existing project, district, or MSC policy on evaluating proposed recreation development.

Mark Twain Lake

ER 1130-2-550

30 Mar 09

Change 5

**APPENDIX C: Market Studies****C-1. Market Study.**

- a. A market study is contingent upon developing an inventory of the supply of existing types of recreational resources within a given area. The study must also include a recreational demand analysis that provides an indication of what people do, feel and want concerning recreational facilities (e.g., public demand). By comparing the inventory and the demand analysis it is possible to determine the types and amount of additional recreational facilities that are needed now or in the future. At a minimum, proposed recreation development by Federally recognized Indian Tribes, public (Federal, state and local), private sector and quasi-public entities and individuals will demonstrate a demand for the type of facilities proposed and a current or near future need for the type of facility being proposed.
- b. Proposed demand studies shall contain data on the regional population and future projections, demographic characteristics and an inventory of similar types of recreational facilities (e.g., campgrounds, picnic areas, marinas, etc.) and their resources (e.g., 125 camping spurs, 150 picnic tables, etc) within a 30-mile radius of the proposed site requested for development. The study should demonstrate that the demand analysis was done through one or a combination of methods. General categories of methods include but are not limited to, public input gathered through surveys and or workshops, using recreational standards (e.g., 1 000 camping spurs per 50,000 people), participation levels/rates (e.g., 2.4 million people participate in picnicking, which is 56 percent of the regional population), and trend analysis (e.g., extrapolating historical use statistics for those similar types of facilities over a ten to 20 year period).
- c. The availability of information described above for use in the study will vary from region to region. Federally recognized Indian Tribes, public (Federal, state and local), private sector and quasi-public entities and individuals should consult with State Census Bureaus, State Departments of Commerce, State and Federal Recreational Agencies, and travel bureaus for this information and to minimize study cost. Each state has a State Comprehensive Outdoor Recreation Plan that contains analysis criteria referenced above. In addition there are numerous Federal recreational studies such as the National Survey of Recreation and Environment that contain this type of information. Regional universities with outdoor recreational departments may also be a source for information and assistance.
- d. All costs associated with a market study, NEPA documents, land surveys, preparation and review of the ultimate lease by the Corps as well as any other administrative costs associated with Corps review and approval of any proposed development are the responsibility of the entity proposing the recreation development.



Mark Twain Lake



ER 1130-2-550  
30 Mar 09  
Change 5

## **APPENDIX D: Feasibility Studies**

### **D-1. Feasibility Study.**

- a. The intent in requiring a private sector or individual to provide a feasibility study is to demonstrate that the entity can make a reasonable return of profit on a yearly basis for the proposed recreational development and that such development is economically viable. Factors such as the input of capital to develop the facility(s), maintenance cost, insurance, labor, etc. should be addressed. The type and size level of the facility(s) (e.g., 250 camping spurs vs. 100 spurs, 200 marina boat slips vs. 100) should also be addressed to demonstrate a reasonable rate of profit would occur. The numbers of visitors needed and the associated fee for these services should also be addressed. Detailed charts, graphs, and projections are not required; however, enough data must be provided to demonstrate such factors have been considered and that a profit can be generated.
- b. Feasibility studies for Federally recognized Indian Tribes, public (Federal, state and local), or quasi-public entities will also be required. However the content of the analysis is limited to the types and size of the facility and evidence that yearly profits of the facility will offset or nearly offset the yearly operational cost of the proposed facility(s). Private sector or individuals working through a public entity for a development request (third party) will be required to furnish a feasibility study that complies with the requirements for a private requestor or individual as referenced above.
- c. All costs associated with a market study, NEPA documents, land surveys, preparation and review of the ultimate lease by the Corps as well as any other administrative costs associated with Corps review and approval of any proposed development are the responsibility of the entity proposing the recreation development.

Mark Twain Lake