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## Investing in Conservation

Prepared July 2020



# Executive Summary

Tethered firmly to Hoosier President Benjamin Harrison's tradition of conservation of the Grand Canyon and national parks, Indiana has an intimate history with nature, wildlife and natural resources investment.

Surrounded by natural resources and cityscape alike, increased investment in Indiana's natural resources demonstrates a powerful American theme that has deep roots in our state. That is, access to healthy natural space is valuable for everyone. In the proverbial Crossroads of America, Hoosiers have shown in their actions what researchers have shown through data: conservation powerfully and positively influences economics, community, and health in ways that cannot be ignored.

- The outdoor recreation industry generates \$1.1 billion in state and local tax revenue in Indiana<sup>1</sup> despite 55 counties being deficient in locally owned outdoor recreation acres.<sup>2</sup>
- 1 in 3 children (ages 10-17) in Indiana are overweight or obese, and Hoosier children are less likely than their peers to have neighborhood amenities like parks, walking trails, and recreation centers.<sup>3</sup>
- A recent research study showed that experiences in nature decreased the PTSD symptoms of a group of veterans and inner-city youth by 29%.<sup>4</sup>

While there have been some recent strides made in investing in conservation in Indiana, including funding for deferred maintenance and Next Level Trails, there is still a significant backlog of deferred maintenance in our state natural resource properties. With the onset of COVID-19, it is essential for Hoosiers to have access to more well-maintained public lands. As we work towards a new normal, it will be more important than ever to invest in conservation not only to help with maintenance in current parks and public lands but also acquire new public lands as more and more Hoosiers look to nature for opportunities for exercise, restoration, and social connection while social distancing.

In July of 2020, the U.S. House followed the U.S. Senate and passed the Great American Outdoors Act which will fully fund the Land and Water Conservation Fund (LWCF) and address the maintenance backlog on federal lands. Property tax caps have made many local budgets tight, so now is the time for state leaders to ensure that state and municipal land is also protected and preserved.

Looking ahead, there are potential solutions to effectively invest in this future for Hoosiers:

- **IOSA:** Indiana's Outdoor Stewardship Act (2019 House Bill 1376) would dedicate existing tax revenue generated by the sale of outdoor equipment and sporting goods to state land, water and wildlife conservation programs amounting to \$62 million annually.<sup>5</sup>
- **Real Estate Transfer Tax:** Establish a modest tax or fee collected at the time a real estate transfer takes place, and dedicate the revenue to state land, water and wildlife conservation programs. Ten states have already created a similar source of revenue.
- **RAWA:** This federal bill would provide \$1.4 billion in dedicated annual funding for proactive, collaborative efforts by the states and tribes to recover wildlife species at risk and prevent them from becoming endangered. Indiana would be estimated to receive \$16 million annually with a required state match of \$4 million.

A survey by The Nature Conservancy in Indiana, shows that 82% think that while strides have been made more action should be taken to protect our Hoosier land and water. This report will detail the research showing the different economic, community, and health benefits of investing in conservation and utilize case studies to show these benefits at work in Hoosier parks and public lands.





# Economic Benefits of Nature

The economic benefits of public lands and parks are wide from supporting key industries like outdoor recreation and tourism to helping provide communities flood protection. According to IDNR, our state parks alone in 2019 generated \$26,621,750 from cabin and camp reservations, entrance fees, and annual passes. Of that, over \$5.37 million was from out-of-state visitors. Providing residents and non-residents well-maintained public lands and parks is very important to our Hoosier economy.

## RV Industry

In Indiana, RVs have an annual economic impact of \$19.8 billion. Of that, \$575.7 million is from campgrounds and travel. The industry supports over 47,000 direct jobs statewide<sup>6</sup>, and one county earns the title of RV Capital of the World: Elkhart County. With a population of approximately 206,000 people, the county boasts 65,000 manufacturing jobs. Of those, around half are from the RV industry. Almost 90% of all RVs are made in Elkhart County.<sup>7</sup>

## Tourism

Indiana has one of the lowest state tourism budgets in the nation.<sup>8</sup> Even with a low budget, in 2017 Indiana welcomed 79 million visitors who spent \$12.2 billion. Tourism directly employs over 186,000 Hoosiers.<sup>9</sup> Many of these visitors are taking advantage of Indiana's great public lands and parks. Maintaining these opportunities for tourism will help bolster local economies.

## Flood Protection/Control

Wetlands are one type of land that provide valuable flood control that otherwise would need to be done with expensive levees.<sup>10</sup> In Indiana by the 1980s, over 4.7 million acres of wetland had been lost.<sup>11</sup> Protecting communities and businesses from flooding is vital as experts estimate almost 40% of small businesses never re-open after a flood disaster.<sup>12</sup>

## Outdoor Recreation

Nationwide, outdoor recreation industry generates \$887 billion in consumer spending.<sup>13</sup> Here in Indiana, it generates:

- \$15.7 billion in consumer spending
- \$4.3 billion in wages and salaries
- \$1.1 billion in state and local tax revenue<sup>14</sup>

It supports 143,000 direct jobs in Indiana, which is more than direct jobs from the major sector of agriculture. Hoosiers are more likely than their peers to participate in camping and wildlife viewing.<sup>15</sup>

However, Indiana only has about 4% of its land available for public outdoor recreation.<sup>16</sup> Providing space for these outdoor recreation opportunities is key to the continued growth of this industry.

## Property Tax

Over 30 different studies show that parks have a positive impact on nearby residential properties.<sup>17</sup> One study found that in Indianapolis, the Monon Trail generated \$120.4 million in additional, taxable property value. The analysis also showed being within .5 mile of the trail accounted for nearly 15% of the average sales value of the residential properties.<sup>18</sup>



# Mental Health Benefits of Nature

Mental health is not just a lack of disease or disorder, it is a state of mental well-being.<sup>19</sup> While nature is not a cure all, research has been growing significantly on the benefits of nature some of which is detailed here. But, first, what does mental health look like in Indiana?

- **4.5% of adults** report a serious form of mental illness<sup>20</sup>
- **76,000 youth** had at least one major depressive episode in the past year<sup>21</sup>
- **5-9% of children** are affected by ADHD<sup>22</sup>

Providing access to nature and investing in greening outdoor spaces can have positive impacts on Hoosiers.

## Children

An estimated 1 in 6 American children have at least one mental health disorder.<sup>23</sup> Disorders impacting children included ADHD, behavior problems, anxiety, and depression. Just over 5% of Hoosier children have ever been diagnosed with depression and 11% had an anxiety diagnosis.<sup>24</sup> Studies have shown that access to green space can help lessen stress, increase attention and memory, and help improve symptoms of ADHD.<sup>25</sup>

## Anxiety

Anxiety disorders affect 40 million Americans<sup>26</sup>, including at least 10,000 Hoosier veterans with PTSD.<sup>27</sup> What we experience in nature could provide significant symptom relief. A 2018 research study showed the awe we feel in nature reduced the study cohort's PTSD symptoms by 29% and reduced their general stress by 21%.<sup>28</sup>

## Depression

6.7% of U.S. adults had a major depressive episode in the last year.<sup>29</sup> Adults in Indiana have consistently reported higher rates of depression than the U.S. average.<sup>30</sup> Greening more spaces in communities across Indiana could help. In a recent study, researchers found a 41.5% decrease in depression among interviewees in their study cohort after a greening intervention to a vacant lot in their neighborhood.<sup>31</sup>

## Stress

73% of Americans have stress that impacts their mental health and even more, 77%, state that stress impacts their physical health.<sup>32</sup> It is estimated that stress costs employers more than \$300 billion annually due from lost productivity, absenteeism, and healthcare costs.<sup>33</sup>

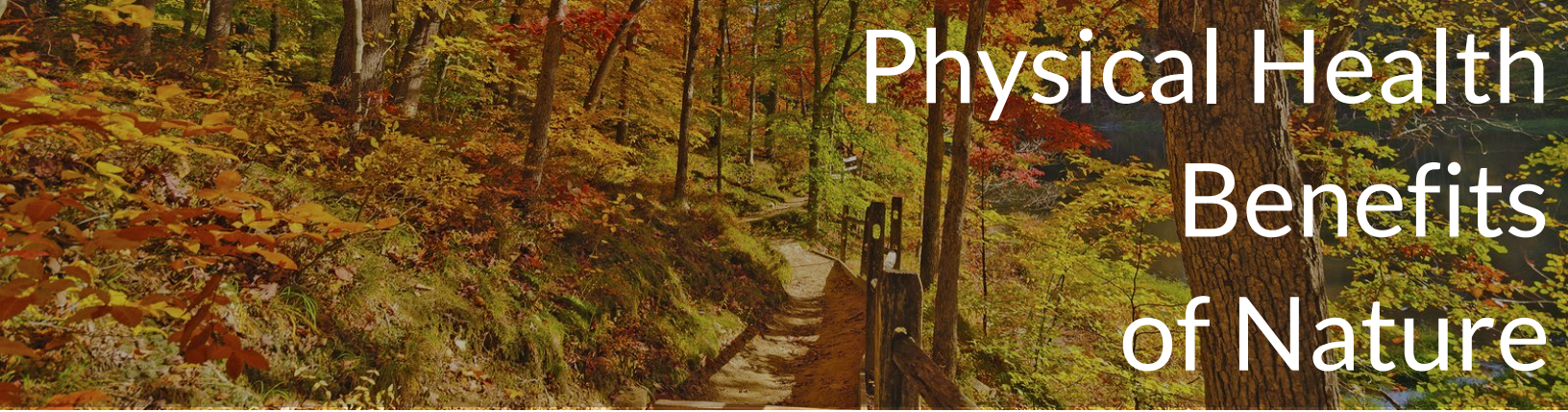
By encouraging time in nature, employers could help diminish these costs. Research has found a significant decrease in stress hormones in a person after they have been forest bathing – which is simply spending time in nature. Forest bathing can provide a:

- Drop in stress hormones in the blood
- Decrease in blood pressure
- Decrease in heart rate<sup>34</sup>

## Attention/Focus

A workplace study showed that employees change focus up to 20 times in a single hour.<sup>35</sup> Taking breaks in nature can help improve focus which, in turn, could help improve an employee's productivity and decrease their frustration as they aren't having to make up for lost time. A University of Michigan research study even found that memory performance and attentions spans improved by about 20% after people spent an hour in nature.<sup>36</sup>





# Physical Health Benefits of Nature

Indiana has higher rates than the national median for a variety of chronic diseases, with a large majority of our residents affected by one or more chronic health issues.<sup>37</sup> Physical activity is incredibly important, however just being in nature or low-level activities outdoors have proven health benefits. Unfortunately, not all Hoosiers have easy access to parks and public lands. In tackling these public health issues, it is important to offer resident access to green space and opportunities for outdoor recreation.

## Cardiovascular Issues

Heart disease cost the U.S. approximately \$219 billion annually from 2014-15.<sup>38</sup> In 2017, 14,445 Hoosiers died of heart disease.<sup>39</sup> A review of the current research has shown that spending time in green space can not only reduce risk the risk of cardiovascular disease, but it can reduce mortality rates.<sup>40</sup> A walk in a forest has been shown to lower blood pressure and decrease heart rate.

## Obesity

Indiana's obesity epidemic is still on the rise – we have the 15<sup>th</sup> highest rate of adult obesity in the nation with 34% of Hoosiers being overweight or obese.<sup>41</sup> Research has shown that being closer to nature, specifically forested land, is connected to lower BMI and increased physical activity.<sup>42</sup>

## Children

American children ages 8-12 average 4-6 hours per day of screen-time with teenagers averaging up to 9 hours per day.<sup>43</sup> 1 in 3 children (age 10-17) in Indiana are overweight or obese, and Hoosier children are less likely than their peers to have neighborhood amenities like parks, walking trails, or rec centers.<sup>44</sup> Studies suggest that children get most of their exercise in parks and playgrounds.<sup>45</sup> Ensuring access to outdoor green spaces could help move the needle on childhood obesity and give children more opportunities to put down their screens and spend time outdoors.

## Park Rx

Being in nature whether taking a walk or doing a more intense activity, can improve overall well-being. Moving physical activity outdoors increases those benefits and provides opportunities for those without gym access to exercise. Studies have shown that exposure to nature has wide ranging health benefits<sup>46</sup> including:

- Reduced stress
- Increased sense of well-being
- Decreased blood pressure
- Decreased heart rate

Park Rx allows health care providers to identify parks and trails that are tailored to the needs of their patients. Indiana Dunes National Lakeshore offers Hoosiers 5 Park Prescription Trails within the park.<sup>47</sup> Increased access to well-maintained trails and parks can serve as a health intervention tool.

## Sleep and Restoration

Nationwide, over 31% of adults don't get sufficient sleep.<sup>48</sup> Here in Indiana, 38-44.1% of adults reported short sleep duration.<sup>49</sup> With the increase of screen-time for both adults and children, sleep cycles are suffering. Time spent in nature can help reset our internal clocks. In fact, a recent study showed that exposure daytime light helped study participants fall asleep quicker and have better quality sleep.<sup>50</sup> Encouraging time outdoors during the day can help Hoosiers improve their sleep.



# Community Access to Nature

Parks and public lands have generally enjoyed bipartisan support. However, historically not all people and communities have been able to enjoy the benefits of these spaces. The benefits to a community are vast, and it is important for leaders to continue addressing park and public land equity. These protected places can help a community thrive economically, physically, mentally, and socially.

## Access

Studies have shown low-income communities and communities of color have less equitable access to parks and public lands in quality and in some cases proximity.<sup>[51](#)</sup> In Indiana, 55 counties are listed as deficient in locally owned, public outdoor recreation acres.<sup>[52](#)</sup> Increasing recreation opportunities for residents is key to taking advantage of the economic and health benefits offered by time in nature.

## Stewardship

Positive interactions with nature in childhood can lead to a dedication to the protections of natural resources through adulthood.<sup>[53](#)</sup> Interpretive naturalists can help create these positive experiences both educationally and culturally. They can help connect diverse communities with nature and increase usage. Currently, approximately 25% of our Indiana state parks do not have a full-time interpretive naturalist according to IDNR records.

## Social Connections

Accessible natural environments have been shown to promote social cohesion and interactions.<sup>[54](#)</sup> One way that nature promotes social connections is by increasing feelings of empathy and altruism. A study in Chicago public housing even showed that residents with nearby trees and green space had a stronger sense of unity with neighbors than the cohort without this same access to green space.<sup>[55](#)</sup> Providing green spaces can help build a sense of community by giving residents places to interact with nature and each other.

## 10 Minute Walk

With close to one-third of the U.S. population not having a park within 10 minutes walking distance from their home, The Trust for Public Land partnered with the National Recreation and Park Association and the Urban Land Institute to create the 10 Minute Walk movement to improve access to quality parks and green spaces in cities and towns across the country.<sup>[56](#)</sup>

Mayors from 8 Indiana cities have committed to supporting the 10 Minute Walk campaign and are using local policy changes, master planning, and increased funding efforts to increase equitable park access and quality:<sup>[57](#)</sup>

- John Hamilton, Bloomington
- Jim Brainard, Carmel
- Lloyd Winnecke, Evansville
- Thomas Henry, Fort Wayne
- Thomas McDermott, Jr, Hammond
- Joe Hogsett, Indianapolis
- Mark Krentz, La Porte
- Shane Smith, West Terre Haute

## Placemaking

Placemaking is the process of shaping public spaces in order to improve a community's social, cultural, or economic outlook.<sup>[58](#)</sup> Rural communities especially can benefit from placemaking especially regarding public spaces that offer outdoor recreation opportunities. In 2012, visitors to federal lands alone spent \$51 billion and supported 880,000 in local communities. Those rural communities with nearby recreation lands also have been able to increase their populations more than their counterparts.<sup>[59](#)</sup>

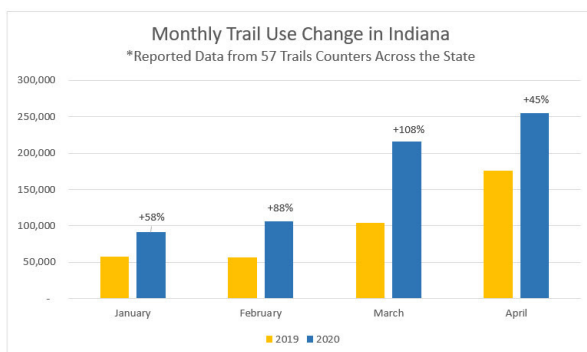


# Access to Nature & COVID-19

Accessibility to nature and outdoor recreation will be paramount as we continue to live with the COVID-19 pandemic which has impacted Hoosiers on tremendous levels. The scope of this pandemic has had major health and economic impacts and will continue to re-shape day-to-day life. Because of the needed lockdowns, isolation, and social distancing orders, many mental health professionals have sounded the alarm that a mental health crisis will follow. With many residents starting to go outdoors in larger numbers, there is an opportunity to educate residents on the many benefits of nature.

## Escaping to the Outdoors

Nature has already proven to be a huge outlet for Hoosiers to get out of their houses, get some physical activity, and enjoy the restorative qualities of green space according to state agency data. In fact, more Hoosiers than ever are hitting their local trails:



## Creating New Stewards

With the increasing pressure on parks, trails, and preserves, comes problems associated with traffic, overuse, and litter. Some places, like Fall Creek Gorge, had to close in order to assess the damage caused by this increased use.<sup>60</sup> As seen above, Hoosiers are relying heavily on the outdoors during this pandemic for physical activity and restoration. This is an opportunity to educate and create new stewards of our public lands; however, with budget cuts, this opportunity could be missed, and more lands may have to close because of over- or misuse.

## Key Highlights: Increased Pressure

The number of people utilizing parks, public lands, and waterways for outdoor recreation opportunities has increased significantly due to the COVID-19 pandemic:



250,000+  
Record number of trail users in April 2020



21.3% increase  
year over year in hunting and fishing licenses



94% increase  
in June gate admissions compared to 2019

This increased pressure on our public lands and parks comes at the same time as agency budgets are being cut and deferred maintenance projects put on hold further.

## Maintenance

Moving forward, it will be important to increase access to nature in our state and make sure the infrastructure of our public lands and parks allow Hoosiers to take advantage of this physical and mental health tool. The increased pressure on parks, public lands, and preserves will require increased maintenance.

# Case Study: Monon Trail

Photo courtesy of  
Visit Indy

As a state hit hard by deindustrialization, Indiana's leaders and residents have had to think about creative ways to repurpose space and encourage economic and health benefits for Hoosiers. The Monon Trail provides a perfect example of this type of innovative thinking. Indianapolis and its north central neighbors have been lauded for converting an abandoned railroad into a celebrated walking and biking corridor that has both increased connectivity and helped conserve a greenway.

Voted into the Rails to Trails Hall of Fame in 2009, the Monon Trail connects Indianapolis' city-center to Carmel, Westfield, and Sheridan and serves over one million trail users annually. It is an example of a trail that improves health and wellness while bringing tremendous economic benefits to the neighborhoods through which it passes.

## Economic Benefits

Key findings from a 2017 Eppley Institute of Public Lands study<sup>61</sup> show the Monon Trail has brought increased development, property values, and revenue generated in the communities near the trail have been positively impacted as well:

- 7,055 acres of land within a half-mile radius of the trail have been redeveloped for store fronts, residential areas and green space
- In the first five years within a half-mile of the trail, home sales prices jumped by 11%
- In conservation corridors adjoining the trail, property values jumped up by 26%
- Trail survey data show expected revenue generated by the trails is estimated to be \$2.7 - 5.7M annually by 2024

From 2001 to 2017, trail users increased their annual spending on trail-related expenses from \$889 to \$4107 which has helped local merchants.

The Monon Trail has also brought a unique demographic to Indianapolis. More than 65,000 people live within a half-mile of the trail in Marion County, and that number is increasing every day.

These residents are:

- 400% more ethnically diverse
- 31.9% more residentially concentrated
- 185.7% more likely to rely on a means of transportation other than driving than the rest of Marion County

In our ever-evolving economy, greenway projects and trails with an emphasis on conservation of natural areas have proven to be a stable and economically beneficial investment in the competitive community of the future.

## Health and Social Benefits

Findings from the same study show that greenways and park trails, like the Monon Trail, are healthy methods to connect people with their community and with nature:

- Two-thirds of those surveyed indicated the trail's immediate access to nature and beauty was its most important quality
- 67% of people stated they exercise more now that the trail is built than they did before
- The average person is spending around five hours a week exercising on the trail, and more patronizing restaurants, shops, and centers located off the trail
- Nearly 60% of those who went on the trail with others are there with family members
- Users rate the trail highly for its ability to traverse different neighborhoods.



**Users increased  
their trail-related  
spending by 362%**



# Case Study: Indiana Dunes State Park

Photo courtesy of  
Indiana Dunes  
State Park

Indiana Dunes State Park shatters the perception of Indiana as a largely flat, geographically plain space, and reasserts this state as a powerhouse for natural area conservation and geographic diversity. Boasting sand dunes up to 552 feet high, wetlands, and many rare and unique plants, while also being conveniently located near Chicago and the southern end of Michigan, Indiana Dunes is a place for imagination, and proof of what is possible when funding has been wisely invested in state and national park properties.

## Economic and Social Benefits

When combining Indiana Dunes National Park (formerly Indiana Dunes National Lakeshore prior to 2019) and Indiana Dunes State Park, numbers touch more than 3.58 million visitors (1.1 million for the State Park alone), according to Tourism Executive Director Lorelei Weimer. That feat places the Dunes just below Yellowstone National Park which welcomes slightly more than 4.1 million visitors annually, making the Indiana Dunes one of the most popular parks to visit in the country. A giant part of renaming the National Lakeshore is to give credence to how significant of a location it has been over the years. According to Owler, a competitive insights and research firm, last year Indiana Dunes State Park generated \$6.1M, employed 71 people and maintained 28.1K followers on Facebook and 4.4K on Twitter. The success of the Dunes cannot be overstated.

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*The Dunes welcomes slightly more than 3.58 million visitors annually, just behind Yellowstone National Park at 4.1 million.*

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The economic activity is not contained to the Dunes either. As folks are making their way to the Park, they are also spending time in Porter County.

In 2019, the visitor center drew around 180,000 people 64 countries.<sup>62</sup> In fact, Weimer says that there are so many international visitors to the county, that the visitor center invested money in mini-guides that operate in 12 different languages.

Tourism has been an economic energizer for the county<sup>63</sup>:



**6 million annual visitors**



**\$413.4 million generated**



**5,075 local jobs boosted**

Indiana has one of the lowest state tourism budgets in the nation. With this kind of return on investment, it is undeniable the successful impact increased investment would have on the local and state economy.

## Health Benefits

It only takes one visit to the Indiana Dunes State Park website to understand physical activity is a central focus for the park. The park is currently marketing a “3 Dune Challenge” where visitors are encouraged to bring friends and family and hike up each dune to set personal records and return to beat them. Families, siblings, and sports trainers have taken to Instagram recording their experiences and times with the #3duneschallenge @indianadunes. Apart from hiking there is the opportunity for biking, boating, paddling, birding and even fishing.



Photos courtesy of  
IDNR



# Case Study: Pokagon State Park

Named after Potawatomi Chiefs Leopold and Simon Pokagon, Pokagon State Park was established in 1925 through a land contribution to the DNR. The adjacent Trine Recreation Area was added in 2007. Situated in Steuben County near the Tri-State area, Pokagon and Trine are a major attraction year-around. Spanning 1,460 combined acres, complete with renowned lakes, woods and trails, Pokagon State Park and Trine State Recreation Area are great examples of environmental conservation providing economic gain.

## Area Attraction

The DNR estimates that nearly 630,000 individuals visit Pokagon State Park and Trine State Recreation Area annually, making it one of Indiana's most popular parks – and not just in the summer. The property is also a magnet for winter activities, offering a toboggan run, cross country ski rental, sledding and ice fishing. The toboggan run is a unique facility that attracts visitors from the entire Midwest. With 138 lodging rooms and conference facilities in an on-site hotel, Potawatomi Inn, plus 12 additional cabins at Trine, the area has attractions for all ages.

## Economic Impact

Pokagon State Park sits at an axis point between Indiana, Ohio and Michigan. As a result, the area attracts both in-state and out-of-state visitors at a high rate.

In 2018 the daily gate fees and annual permit sales at Pokagon totaled \$472,000. Of this total, 37% was from out-of-state users, while a particularly impressive 46% of the daily gate fees were non-resident of Indiana. These figures do not include revenue from Potawatomi Inn, located within the park, nor campground fees and other miscellaneous revenue generated by the park. The economic impact extends beyond the park itself.

Three national hotel chains are located within 2 miles of the park entrance, giving an indication of carryover economic impact to surrounding areas. Figures available from the Steuben County Tourism Bureau for 2016 indicate that yearly visitors make a great impact on the local economy:



**\$177.5 million spent**



**\$32 million in tax  
revenue generated**



**2,900 local jobs supported**

While this is not all related to Pokagon State Park, the park and Trine University are the two main attractions for the area.

## Health and Social Impact

According to the Second Century Survey of park visitors conducted by IDNR in 2017, a majority of users rate Pokagon State Park excellent for its service and good-to-excellent for its hospitality and inns. Noting community sentiment is highly important considering the average park goer reported visiting Pokagon State Park and Trine Recreational Area more than ten times a year.

Nearly 80% of people report visiting with their spouse, 52% with their friends, 41% with their children, 32% alone, and 20% with their grandchildren, demonstrating the state park and recreational area are offering family-friendly amenities year-around. With 98% of visitors saying they would recommend visiting, and 6.1 million people being reached on social media, Pokagon is steadily revolutionizing how parks can interact with its visitors.





# Case Study: Goose Pond Fish & Wildlife Area

Photo courtesy  
of IDNR

Goose Pond Fish and Wildlife Area (FWA) is an unassuming place tucked away in Greene County, it is less than two hours from Indianapolis, giving easy access to wildlife watchers, birders and hunters. The area is evidence that with appropriate investment and marketing effort, restored areas have the potential to stimulate economic growth, cultural connectivity and community bonding in the area.

As it stands today, Goose Pond is 9,018 acres of one of the largest and most successful wetland restoration areas in the United States. The wetlands include 1,400 acres of prairie and 4,000 acres of shallow water. As a result it has become the new home for migratory waterfowl such as the sandhill crane and the endangered whooping crane plus the return of countless native species.

## Community Response and Lodging

Goose Pond FWA is now recognized as a major asset to the Greene County community, especially by the town of Linton. Since becoming available to the public, new cabins at Greene-Sullivan State Forest have been constructed, and a new hotel has been built in Greene County at the new Interstate 69 exit. Other forms of lodging have included cottages and campgrounds being built within a 5-mile radius of the Goose Pond Area. In addition to increased lodging efforts, the community has invested in and supported an annual event known as Marsh Madness to celebrate the “spring migration of Sandhill Cranes and waterfowl.”<sup>64</sup>

## Public Use of Goose Pond

Goose Pond has become a regional destination for bird watching and waterfowl hunting. Those activities account for about  $\frac{3}{4}$  of the public use of the property. An estimated 12,000 wildlife watchers and 3,500 hunters visit the property each year.<sup>65</sup> The property is proof that bird watching and hunting, when well managed, are compatible activities.

According to property records, visitors have included residents from 76 counties and 34 states, with an average of 16 states represented each year. As out-of-state visitation continues to grow, the expectation for overnight stays and increased local spending continues to grow as well.

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*The property is proof that bird watching and hunting, when well managed, are compatible activities.*

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## Wildlife Response, Specifically Migratory Birds

Goose Pond Fishing and Wildlife Area has proven to be an increasingly popular destination for humans and animals alike, especially, for shorebirds, waterfowl and bird watchers. According to property manager, Travis Stoetling, “during peak migration timeframes” the area supports over 150,000 Snow Geese, more than 20,000 Sandhill Cranes and hundreds of American White Pelicans. More than 260 bird species have been documented in the area, and it is also a critical area in supporting the federally endangered Whooping Cranes. Approximately  $\frac{1}{4}$  of the Eastern Migratory Population spends time at Goose Pond every winter.

## Untapped Potential

Goose Pond has only begun to tap the enormous potential for economic gain related to their conservation efforts. The property was purchased in 2005, and restoration efforts on the wetlands were begun at that time. The visitor center was not completed and opened until 2016, and many in the state are still not aware of what they can find there. One can only imagine what the economic impact will be once the rest of the state and the Midwest discovers the natural wonders to be found there.

# Sources Cited

- <sup>1</sup> Outdoor Industry Association. (n.d.). Indiana Outdoor Recreation Economy. Retrieved July 24, 2020, from <https://outdoorindustry.org/state/indiana/>
- <sup>2</sup> Indiana Department of Natural Resources Division of Outdoor Recreation. (2019). *Indiana Statewide Comprehensive Outdoor Recreation Plan 2021-2025*.
- <sup>3</sup> Indiana Youth Institute. (2018). *The Power of Play Fighting Childhood Obesity*. July, 1–6.
- <sup>4</sup> Yasmin Anwar, M., & Anwar, Y. (2018, July 16). Nature is proving to be awesome medicine for PTSD. Retrieved July 24, 2020, from <https://news.berkeley.edu/2018/07/12/awe-nature-ptsd/>
- <sup>5</sup> Wilson, M. (2019, February 08). Bill would increase Indiana's conservation funding with sales tax revenue. Retrieved July 24, 2020, from <https://www.courierpress.com/story/news/local/2019/02/08/bill-indiana-legislature-would-increase-conservation-funding/2791358002/>
- <sup>6</sup> John Dunham & Associates. (2019). *RVs Move America: Indiana Direct Economic Impact*. RV Industry Association.
- <sup>7</sup> Briggs, J. (2020, April 05). Briggs: Elkhart gets clobbered by recessions. This time might be different. Retrieved July 24, 2020, from <https://www.indystar.com/story/opinion/columnists/james-briggs/2020/04/05/why-elkhart-indiana-might-withstand-coronavirus-recession/2943101001/>
- <sup>8</sup> Shankman, S. (2013, August 11). How 50 U.S. States' Tourism Budgets Stack Up in 2013. Retrieved July 24, 2020, from <https://skift.com/2013/07/17/most-state-tourism-boards-get-peanut-budgets-in-comparison-to-the-top-ten/>
- <sup>9</sup> Another Record Year for Indiana Tourism. (2017). Retrieved July 24, 2020, from <https://www.visitindianatourism.com/node/346>
- <sup>10</sup> Why are Wetlands Important? (2018, June 13). Retrieved July 24, 2020, from <https://www.epa.gov/wetlands/why-are-wetlands-important>
- <sup>11</sup> Indiana Department of Environmental Management. (n.d.). Wetlands: Importance of Wetlands. Retrieved July 24, 2020, from <https://www.in.gov/idem/wetlands/2335.htm>
- <sup>12</sup> The Center for Neighborhood Technology (CNT). (2013). The Prevalence and Cost of Urban Flooding: A Case Study of Cook County, IL
- <sup>13</sup> Outdoor Industry Association. (2017). National Recreation Economy. Retrieved July 24, 2020, from <https://outdoorindustry.org/advocacy/>
- <sup>14</sup> Outdoor Industry Association. (n.d.). Indiana Outdoor Recreation Economy. Retrieved July 24, 2020, from <https://outdoorindustry.org/state/indiana/>
- <sup>15</sup> Outdoor Industry Association. (2017.). Indiana Outdoor Recreation Economy Report. [https://outdoorindustry.org/wp-content/uploads/2017/07/OIA\\_RecEcoState\\_IN.pdf](https://outdoorindustry.org/wp-content/uploads/2017/07/OIA_RecEcoState_IN.pdf)
- <sup>16</sup> Indiana Department of Natural Resources Division of Outdoor Recreation. (2019). *Indiana Statewide Comprehensive Outdoor Recreation Plan 2021-2025*.
- <sup>17</sup> Harnik, P., & Welle, B. (2013). Measuring the Economic Value of a City Park System. *Trust for Public Land*. <http://www.tpl.org/publications/books-reports/ccpe-publications/measuring-the-economic-value.html>
- <sup>18</sup> Nicholls, Sarah. (2000). Measuring the impact of parks on property values: new research shows that green spaces increase the value of nearby housing. Lutzenhiser & Netusil.
- <sup>19</sup> World Health Organization. (2001). Strengthening Mental Health Promotion (Fact sheet no. 220). Geneva: World Health Organization. Retrieved from <https://apps.who.int/inf-fs/en/fact220.html>
- <sup>20</sup> Mental Health Resources in Indiana. (n.d.). Retrieved July 24, 2020, from <https://www.rtor.org/directory/mental-health-indiana/>
- <sup>21</sup> Substance Abuse and Mental Health Services Administration. Behavioral Health Barometer: Indiana, Volume 5: Indicators as measured through the 2017 National Survey on Drug Use and Health and the National Survey of Substance Abuse Treatment Services. HHS Publication No. SMA-19-Baro-17-IN. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2019.
- <sup>22</sup> Attention-Deficit/Hyperactivity Disorder (ADHD). (n.d.). Retrieved July 24, 2020, from <https://www.rileychildrens.org/health-info/attention-deficit-hyperactivity-disorder-adhd>
- <sup>23</sup> Mental Health By the Numbers. (n.d.). Retrieved July 24, 2020, from <https://www.nami.org/mhstats>
- <sup>24</sup> Indiana Youth Institute, & Silverman, T. (2019, May 16). Mental Health Archives. Retrieved July 24, 2020, from <https://www.iyi.org/tag/mental-health/>
- <sup>25</sup> McCormick, R. (2017). Does Access to Green Space Impact the Mental Well-being of Children: A Systematic Review. *Journal of Pediatric Nursing: Nursing Care of Children and Families*, 37, 3–7. <https://doi.org/10.1016/j.pedn.2017.08.027>
- <sup>26</sup> Facts & Statistics. (n.d.). Retrieved July 24, 2020, from <https://adaa.org/about-adaa/press-room/facts-statistics>
- <sup>27</sup> Indiana State Department of Health. (2014). *The implementation of a program for the specific treatment of veterans with traumatic brain injury or posttraumatic stress disorder as mandated by SEA 180*
- <sup>28</sup> Yasmin Anwar, M., & Anwar, Y. (2018, July 16). Nature is proving to be awesome medicine for PTSD. Retrieved July 24, 2020, from <https://news.berkeley.edu/2018/07/12/awe-nature-ptsd/>



## Sources Cited Continued

- <sup>29</sup>Depression. (n.d.). Retrieved July 24, 2020, from <https://www.mhanational.org/conditions/depression>
- <sup>30</sup> NorthEast Indiana Area Health Education Center & Office Of Institutional Diversity Ball State University. (2016). *Depression in Indiana Adults*.
- <sup>31</sup>South EC, Hohl BC, Kondo MC, MacDonald JM, Branas CC. Effect of Greening Vacant Land on Mental Health of Community-Dwelling Adults: A Cluster Randomized Trial. *JAMA Netw Open*. 2018;1(3):e180298. doi:10.1001/jamanetworkopen.2018.0298
- <sup>32</sup> Daily Life. (2019, December 18). Retrieved July 24, 2020, from <https://www.stress.org/daily-life>
- <sup>33</sup> Financial Costs of Job Stress. (n.d.). Retrieved July 24, 2020, from <https://www.uml.edu/research/cph-new/worker/stress-at-work/financial-costs.aspx>
- <sup>34</sup> Park, B. J., Tsunetsugu, Y., Kasetani, T., Kagawa, T., & Miyazaki, Y. (2010). The physiological effects of Shinrin-yoku (taking in the forest atmosphere or forest bathing): evidence from field experiments in 24 forests across Japan. *Environmental Health and Preventive Medicine*, 15(1), 18–26. <https://doi.org/10.1007/s12199-009-0086-9>
- <sup>35</sup> Rock, D. (2009, October 04). Easily Distracted? Retrieved July 24, 2020, from <https://www.psychologytoday.com/us/blog/your-brain-work/200910/easily-distracted>
- <sup>36</sup> Michigan News. (2008, December 16). Going outside-even in the cold-improves memory, attention. Retrieved July 24, 2020, from <https://news.umich.edu/going-outsideeven-in-the-coldimproves-memory-attention/>
- <sup>37</sup> Precision Health. (n.d.). Retrieved July 24, 2020, from <https://medicine.iu.edu/expertise/precision-health>
- <sup>38</sup> Heart Disease Facts. (2020, June 22). Retrieved July 24, 2020, from <https://www.cdc.gov/heartdisease/facts.htm>
- <sup>39</sup>Stats of the State of Indiana. (2018, April 11). Retrieved July 24, 2020, from <https://www.cdc.gov/nchs/pressroom/states/indiana/indiana.htm>
- <sup>40</sup> University of East Anglia. (2018, July 6). It's official -- spending time outside is good for you. *ScienceDaily*. Retrieved July 24, 2020 from [www.sciencedaily.com/releases/2018/07/180706102842.htm](http://www.sciencedaily.com/releases/2018/07/180706102842.htm)
- <sup>41</sup> Sheridan, J. (2019, September 12). Report: Indiana Obesity Rate Inches Up, State Ranks 15th Worst. Retrieved July 24, 2020, from <https://www.wfyi.org/news/articles/report-indiana-obesity-rate-inches-up-state-ranks-15th-worst>
- <sup>42</sup> Repke, M. A., Berry, M. S., Conway, L. G., 3rd, Metcalf, A., Hensen, R. M., & Phelan, C. (2018). How does nature exposure make people healthier?: Evidence for the role of impulsivity and expanded space perception. *PLoS one*, 13(8), e0202246. <https://doi.org/10.1371/journal.pone.0202246>
- <sup>43</sup> Aacap. (2020). Screen Time and Children. Retrieved July 24, 2020, from [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Children-And-Watching-TV-054.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Children-And-Watching-TV-054.aspx)
- <sup>44</sup>Indiana Youth Institute. (2018). *The Power of Play Fighting Childhood Obesity*. July, 1–6.
- <sup>45</sup>Cooper, M., & Murphey, B. A. D. (2014). *Neighborhood Characteristics and Children's Physical Activity*. <https://www.childtrends.org/wp-content/uploads/2015/08/2014-54NeighborhoodExercise.pdf>
- <sup>46</sup>Robbins, J. (2020, January 9). Ecopsychology: How Immersion in Nature Benefits Your Health. Retrieved July 24, 2020, from <https://e360.yale.edu/features/ecopsychology-how-immersion-in-nature-benefits-your-health>
- <sup>47</sup>Park Prescription Program. (n.d.). Retrieved July 24, 2020, from <https://www.nps.gov/indu/planyourvisit/parkrx.htm>
- <sup>48</sup>FastStats - Sleep Health. (2018, August 31). Retrieved July 24, 2020, from <https://www.cdc.gov/nchs/fastats/sleep-health.htm>
- <sup>49</sup>CDC - Data and Statistics - Sleep and Sleep Disorders. (2017, May 02). Retrieved July 24, 2020, from [https://www.cdc.gov/sleep/data\\_statistics.html](https://www.cdc.gov/sleep/data_statistics.html)
- <sup>50</sup>Kennedy, M. (2017, May 18). Morning daylight exposure tied to a good night's sleep. Retrieved July 24, 2020, from <https://www.reuters.com/article/us-health-sleep-daylight/morning-daylight-exposure-tied-to-a-good-nights-sleep-idUSKCN18E23E>
- <sup>51</sup> Matt Eldridge, Kimberly Burrowes, P. S. (2019). *Investing in Equitable Urban Park Systems*. Urban Institute.
- <sup>52</sup>Indiana Department of Natural Resources Division of Outdoor Recreation. (2019). *Indiana Statewide Comprehensive Outdoor Recreation Plan 2021-2025*.
- <sup>53</sup> University of British Columbia Okanagan campus. (2017, March 17). Children who play outside more likely to protect nature as adults. *ScienceDaily*. Retrieved July 24, 2020 from [www.sciencedaily.com/releases/2017/03/170317102447.htm](http://www.sciencedaily.com/releases/2017/03/170317102447.htm)
- <sup>54</sup> Weinstein, N., Balmford, A., DeHaan, C. R., Gladwell, V., Bradbury, R. B., & Amano, T. (2015). Seeing Community for the Trees: The Links among Contact with Natural Environments, Community Cohesion, and Crime. *BioScience*, 65(12), 1141–1153. <https://doi.org/10.1093/biosci/biv151>
- <sup>55</sup> Kuo, F. E., Sullivan, W. C., Coley, R. L., & Brunson, L. (1998). Fertile ground for community: Inner-city neighborhood common spaces. *American Journal of Community Psychology*, 26(6), 823–851. <https://doi.org/10.1023/A:1022294028903>
- <sup>56</sup>The Trust for Public Land, “10 Minute Walk,” available at <https://www.tpl.org/10minutewalk> (last accessed July 2020)

## Sources Cited Continued

<sup>57</sup>10 Minute walk. (n.d.). Retrieved July 24, 2020, from <https://10minutewalk.org/#Mayors>

<sup>58</sup>What is Placemaking? (n.d.). Retrieved July 24, 2020, from <https://www.pps.org/article/what-is-placemaking>

<sup>59</sup>Heinrich, M. (2018). Investing in Rural America: Bringing Progress and Economic Opportunity to Rural Communities. *Joint Economic Committee Democrats, June*.  
<https://doi.org/10.1017/CBO9781107415324.004>

<sup>60</sup>Bangert, D. (2020, July 13). Beloved 'Potholes' closed as Nature Conservancy fears for trashed preserve in Warren County. Retrieved July 24, 2020, from <https://www.jconline.com/story/news/2020/07/13/beloved-potholes-closed-nature-conservancy-fears-trashed-preserve-indiana/5426489002/>

<sup>61</sup>Wolter, S., Elliott, L., Ramos, W., Smiley, A., Suhaibani, S. (2018). Summary report: 2017 Indiana trails study. Bloomington, IN. Eppley Institute for Parks and Public Lands, Indiana University.

<sup>62</sup>Kehoe, J., & Ladzinski, P. (2020, July 22). This national park draws huge crowds. The pandemic makes that burden worse. Retrieved July 24, 2020, from <https://www.nationalgeographic.com/travel/2020/07/indiana-dunes-national-park-first-year-open-coronavirus-crowds/>

<sup>63</sup>Certec, Inc. (2016, December). *Economic Impact of Porter County's Tourism and Travel Industry - 2013 and 2015*.

<sup>64</sup>Marsh Madness. (2020, February 16). Retrieved July 24, 2020, from <https://friendsofgoosepond.org/marsh-madness/>

<sup>65</sup>Goose Pond Fish & Wildlife Area. (n.d.). Retrieved July 25, 2020, from <https://www.in.gov/dnr/fishwild/3094.htm>