

**THE INFLUENCE OF THE MARINERS LANDING GOLF COURSE  
ON REAL ESTATE VALUES:  
AN APPLICATION OF EXISTING RESEARCH**



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## DISCLAIMER

### **Forward-Looking Statements Disclaimer/Risk and Uncertainties:**

Some of the statements in this report that are not historical facts are “forward-looking statements.”

Such forward-looking statements are associated with certain risks and uncertainties which could cause actual outcomes to differ from those predicted in this report.

*“Golfers Get in Final Round at Mariners Landing”*

*“Golf Course at Mariners Landing Permanently Closed”*

*“Mariners Landing Golf Course Closes, Residents Concerned for What is Next”*

Do the above HYPOTHETICAL headlines signal economic prosperity or economic strain and hardship?

This project reviewed studies published in scientific blind-reviewed journals in the U.S. since 2005 and found that on average, if a residential property is within proximity to a golf course with buffer zones, this proximity induces a 17 percent real estate price premium.

A golf course is a valued amenity by both players and non-players because the research reviewed here finds that this real estate premium is driven by four factors:

- Convenience for those who desire to play;
- The prestige and perception of affluence associated with residing near a golf course;
- The aesthetic value of the green and plush open space; and
- The passive recreational benefits associated with the trails/paths on the peripheral of the course.

In the assessment of the Institute for Service Research (ISR), this 17 percent average premium found in the collection of existing studies is likely much higher in Mariners Landing for three reasons:

- 1) The research reviewed indicates that this real estate price premium is typically higher for vacant lots than developed ones: vacant lot premiums range from 39-85 percent in existing studies; Mariners Landing currently has approximately 210 vacant lots.
- 2) The research reviewed shows that the golf course-induced real estate premium is higher for courses that integrate the golf concept into the community as opposed to a portioned-off stand-alone course. Mariners Landing is perhaps the quintessential example of the integration of the golf concept in the community (For instance, Mariners Landing demonstrates this integration through sectional names such as the Sixth Fairway).
- 3) Areas of Mariners Landing, such as Monacan Shores, would likely lose their views in the absence of the golf course because nothing below the 800' contour can be cut around

the lake without engaging in a laborious and expensive permitting process which may or may not be approved; the golf course is exempt.

In addition, existing research shows that the above described price premium can be reduced for a struggling course with accumulating deferred maintenance, particularly so if there is a rumor of potential course closure. Because the tax assessment values have dropped significantly in recent years, in the evaluation of ISR, much of the golf-induced real estate premium that once existed in Mariners Landing is not currently present due to large amounts of deferred maintenance and suspected rumors of course closure. Consequently, in the judgment of ISR, such premiums could be reflected in future valuations should deferred maintenance be performed on the course and the original standards of play and customer experience be resurrected. Moreover, performing deferred maintenance enhances the aesthetic value of the course for both golfers and non-golfers.

Using the above described body of research as the basis of evaluation, in the judgment of ISR, it seems plausible that real estate values could fall an additional 20-30 percent with a golf course closure; conversely, values could increase 20-30 percent by bringing the course back to its original aesthetics and intended standards of play. While these estimated ranges are for the community as a whole, it is prudent to note that such golf course-induced premiums are more pronounced for vacant lots in comparison to built lots. It is also important to note that such predictions assume that no significant changes will occur in the local and/or national economy.

Founded upon the aforementioned research, this report goes on to contend that the best and highest use of the golf course at Mariners Landing is, in fact, a golf course, but one that is well-maintained and up-to-date on deferred maintenance.

## PURPOSE OF THIS REPORT

The purpose of this report is to synthesize existing peer-reviewed research regarding the effects of golf course proximity on real estate values and appropriately apply such research to the context of Mariners Landing at Smith Mountain Lake. This review will aid in determining the highest and best use of the current golf course.

This study is charged with identifying the plausible and conceptual economic impacts resulting from the closure of a golf course as well as the plausible impacts of returning the course to its original aesthetics and intended standards of play. This work was commissioned by Waller Perrow, President of Perrow Management headquartered in Moneta, Virginia.

To achieve these objectives, the next section of this report briefly discusses the golf industry supply versus demand correction that has occurred in the United States over the past decade. Second, research regarding golf course-induced real estate premiums is synthesized. Third, this real estate premium research is applied to the context of Mariners Landing. Next, the highest and best use of the current Mariners Landing golf course is addressed. Finally, this report ends with some concluding remarks and suggestions moving forward.

{Supply / demand correction section begins on next page}

## GOLF INDUSTRY SUPPLY / DEMAND CORRECTION

In 1987 the National Golf Foundation commissioned consulting firm McKinsey Company to develop a strategic plan for the growth of the game of golf in the U.S. That project yielded a call-to-action termed “A Course a Day” that was featured on public service announcements during the PGA tour.<sup>1</sup> As seen in Table 1, from 1990 – 2000 “A Course a Day” was nearly achieved: During that decade, a new golf course opened in the U.S. every 1.18 days.

Table 1:  
Golf Courses (HEQ) in the United States<sup>2</sup>

1970	1980	1990	2000	2003	2016
7,516	9,582	11,178	14,268	14,827	13,927

A confluence of factors in recent years has caused demand for the game to decrease and has consequently yielded a supply versus demand imbalance. Some of the key factors contributing to decreased play of the game include:

- High cost to play relative to other outdoor recreation options due to escalating construction and maintenance costs of golf courses.
- A trend that increased the level of challenge of many courses which left some players to feel frustrated and/or embarrassed.
- A sociocultural trend in the U.S. that focused upon more family-centric activities that can be enjoyed as a family unit.
- Deferred maintenance on courses due to lower volumes of play and, consequently, less revenue.<sup>3</sup>

As a result of the above conditions, there is now a supply correction transpiring. For instance, as seen in Table 1, there were about 900 fewer courses in 2016 compared to 2003. Using a slightly different timespan window, a June 2019 NPR story reported that “An estimated 800 golf courses have closed in the last decade.”<sup>4</sup>

This supply correction has negatively impacted real estate prices in a number of communities. As explained in the next section of this report, golf course proximity has typically fueled a *real estate price premium* in communities where residential units are adjacent or close to courses.

## THE EFFECTS OF GOLF COURSE PROXIMITY ON REAL ESTATE VALUES

The notion of residential proximity to a golf course spawning a real estate price premium has been studied in the U.S. by a number of researchers. Table 2 summarizes peer-reviewed studies published in scholarly journals since 2005.<sup>5</sup>

Table 2: Peer-Reviewed Research Examining the Effects of Golf Courses with Buffer Zones on Property Values in the U.S. (Studies published since 2005)			
Author(s) and Publication Date	Location	Study's Sample	Premium
Bark et al., 2011 <sup>6</sup>	Tucson, AZ	Adjacent homes: 133	12.7%
		Not adjacent but within 1,056 ft: 200	1.8%
Heinrich and Kashian, 2010 <sup>7</sup>	Muskego, WI	Adjacent: 17	2%
		Within 500 ft: 61	2%
Stetler, Venn, and Calkin, 2010 <sup>8</sup>	Northwest Montana	Frontage sales: 531	19.6%
Wyman and Sperry, 2010 <sup>9</sup>	Lake Keowee, SC	Vacant lots: Prime frontage: 32	85%
		Vacant lots: Ordinary frontage: 47	42%
Asabere and Huffman, 2009 <sup>10</sup>	Mount Laurel, NJ	Vacant lots: Frontage: 27	7.9%
Shultz and Schmitz, 2009 <sup>11</sup>	Omaha, NE	3 municipal courses (frontage lots): 221	9%
		10 public courses (frontage lots): 759	15%
		5 private equity frontage lots): 60	5%
		2 private non-eq. (frontage lots): 284	28%
Nicholls and Crompton, 2007 <sup>12</sup>	College Station, TX	Vacant lots: Frontage: 21	26%
Netusil, 2005 <sup>13</sup>	Portland, OR	Frontage: 111	7.3%
		200 – 1320 ft: 1,117	3.3%
		1320 – 2640 ft: 2,956	1%
<b>AVERAGE PREMIUM: 17%</b>			

As can be seen in Table 2, the average real estate golf course premium with buffer zones among available peer-reviewed studies across the past 15 years in the U.S. is 17 percent.

While Table 2 demonstrates that the average real estate golf course premium with buffer zones among available peer-reviewed studies across the past 15 years in the U.S. is 17 percent, the Table also shows that such premiums vary widely among the studies. Therefore, the following question surfaces:

➤ **What is a reasonable estimate of potential golf-course induced real estate value premiums at Mariners Landing?**

In the assessment of ISR, this question can be addressed by considering a 2019 published study conducted by highly cited researchers Drs. John Crompton and Sarah Nichols.<sup>14</sup> Crompton and Nichols systematically analyzed existing research on the topic of golf course real estate premiums and offered a series of observations. These observations include the following which are germane to Mariners Landing:

### Real Estate – Golf Course Linkage as a Driver of Higher Premiums:

Crompton and Nichols (2019, p. 3):

“It seems likely that small premiums would be associated with long-established core courses constructed by municipalities or private clubs to provide opportunities for golfers to play without regard for their impact on real estate. In contrast, premiums for courses in golf communities intentionally threaded around real estate and designed to appeal to large numbers of non-golfers by creating green viewsapes are likely to have relatively high premiums.”

It is evident that Mariners Landing falls into the latter category described above and, therefore, has potential for a golf course real estate premium above the 17 percent premium average across existing studies. For example, the sectional association names in Mariners Landing aid in illustrating the real estate – golf course linkage:

- The Pointe
- Mariners Village
- Monacan Shores\*
- First Fairway
- Sixth Fairway
- Eighth Fairway
- Tenth Fairway
- Sixteenth Fairway
- The Cove
- West Cove
- Sections 1&2
- East & West Retreat\*

[\*on-property but not part of Mariners Landing POA]

## Vacant Lot Premiums are Typically Higher than Developed Lot Premiums

As previously stated, the average golf course real estate premium with buffer zones across peer-reviewed studies published in the U.S. since 2005 is 17 percent. Interestingly, however, as noted by Crompton and Nicholls (2019, p.2):

In those existing studies...

**“Vacant lot premium percentages ranged from 39 percent to 85 percent and were much higher than those of developed lots.”**

The cause of these higher rates is because golf premiums are more likely to be a function of lot location than built housing value. That is, the cost of building a given house in a golf community is likely to be approximately the same regardless of where it is located. Therefore, when premiums are expressed as a percentage, there often can be a substantial difference between those of undeveloped lots and those of built-out developments. An illustrative case is presented in Figure 1.

Figure 1:

### An Illustrative Example of Price Premium Differentials

	Lot cost	House cost	Total cost
Prime Lot	\$100,000	\$200,000	\$300,000
Interior Lot	\$50,000	\$200,000	\$250,000
<hr/>			
Prime Lot	\$100,000	\$400,000	\$500,000
Interior Lot	\$50,000	\$400,000	\$450,000

In this illustration, the premium for the vacant lot in comparison to an interior lot is 100 percent ( $\$100\text{K} / \$50\text{K}$ ), but the premium when the lot is developed is 17 percent ( $\$300\text{K} / \$250\text{K}$ ). In such scenarios, as the house cost increases, the premium percentage inversely decreases. Consequently, if the house cost becomes  $\$400\text{K}$ , then the premium for the prime frontage developed property decreases to 10 percent ( $\$500\text{K} / \$450\text{K}$ ).<sup>15</sup>

In summary, in the context of Mariners Landing, there are still approximately 210 undeveloped residential lots. Therefore, in the assessment of ISR, the average golf course real estate premium of 17 percent across the existing pool of studies has the potential to be much higher in Mariners Landing.

## 800-Foot Contour Buffer Zone Surrounding Smith Mountain Lake

The presence of the golf course significantly enhances lake views in parts of Mariners Landing; for example, at Monacan Shores. In fact, certain areas of Mariners Landing, such as Monacan Shores, would likely lose their views in the absence of the golf course because nothing below the 800' contour can be cut around the lake without engaging in a permitting process which may or may not be approved (along with expensive remediation if approved). The golf course is exempt from this process. More information can be found here:

<http://www.smithmtn.com/ShorelineMgmt/FAQs.aspx>

Because water views are known to bolster real estate values, the fact that the presence of the golf course facilitates the water views in sections of Mariners Landing significantly contributes to the golf course-induced real estate value premiums in the community.

{Highest and best use section begin on next page}

## IDENTIFYING HIGHEST AND BEST USE

In the assessment of ISR, the highest and best use of the Mariners Landing golf course is to remain a golf course. The judgment of highest and best use pertains to not just property owners within Mariners Landing but also to Bedford County on a global-level. The logic supporting this determination was presented in this report and is summarized in the following points.

- 1) While participation in golf has declined in recent years, it is prudent to note that the real estate premium associated with golf course proximity is not solely driven by residents' desire for convenient access to play. In addition, the real estate premium is a result of A) golf signaling affluence / prestige; B) the aesthetic of the green and plush open space; and C) the passive recreational benefits associated with the trails/paths on the peripheral of the course.<sup>16</sup>
- 2) In the estimation of ISR, a potential golf-induced real estate premium at Mariners Landing is more robust than the 17 percent average found across the studies described earlier in this report. The premium (or premium potential) is likely stronger at Mariners Landing due to the design of the community around the golfing concept; and because premiums are typically larger on lots as opposed to residential structures. Moreover, the premium is higher in Mariners Landing because the course facilitates water views in certain sections of the community.
- 3) Around the U.S., when a course closes there is often negative publicity and legal action. Such circumstances are particularly prevalent if homeowners paid a real estate premium due to the course. The below quote from a 2019 *Wall Street Journal* article echoes this point:

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*When Mitch Steller first moved into his house on a lush 117-acre golf course in Southern California, "this was like the Garden of Eden, having a golf course in my backyard," he said. Today, his Poway, Calif., home overlooks dry, dead grass in place of a once-verdant fairway. The golf club closed in 2017. "The fairways are brown, the greens are gone, the buildings are being vandalized," says Mr. Steller, a 70-year-old maritime-management consultant.<sup>17</sup>*

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Moreover, the closing of a community amenity (regardless of the percentage of the residents who actually golf) does not signal economic growth or prosperity. On the contrary, such a closing signals hardship and economic strain.

4) Like with supply versus demand corrections in any industry, the weak/vulnerable players are most prone to perish, and the strong/differentiated players survive (and even prosper). Mariners Landing Golf Course was designed by one of the most highly respected golf course architects in the history of the sport - Robert Trent Jones, Sr. The 7,155-yard par 72 course is aesthetically pleasing and challenging with a 74.2 course rating.

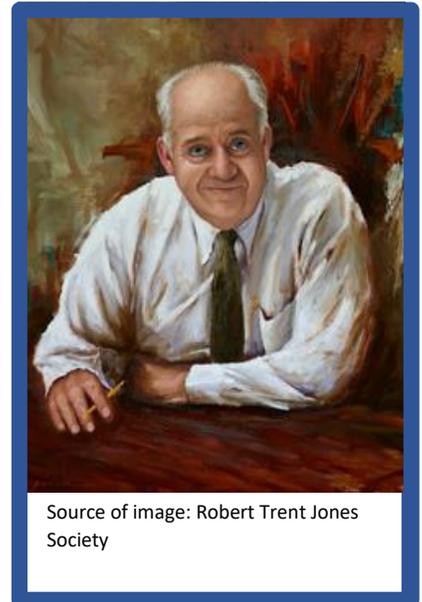
Robert Trent Jones' career spanned nearly 70 years during which he built or rebuilt some 400 courses in 45 states in the U. S. and 35 countries worldwide, with more than three dozen of them having played host to national or international championships.

He was well known for challenging and aesthetically pleasing courses.

Born in 1906 in England, Jones designed his first course in 1930 after graduating from Cornell University where he was able to design a major that became the foundation of his career as a golf course architect. He is credited with being the first college educated golf course architect in history.<sup>18</sup>

It is clear that a Robert Trent Jones Sr. golf course has a certain panache that sets it apart. It is also clear that Mariners Landing is a golf course-centered residential community, built on the shores of one of Virginia's largest fresh water lakes, with an outstanding reputation for outdoor recreation both on and off the water. The unique combination of open water and mountain vistas (this combination is rare in the Mid-Atlantic Region), coupled with a Robert Trent design, can be the ingredients for future success. Particularly given the fact, that golfers have 800 fewer course options in the U.S. than they did a decade ago.<sup>19</sup>

When current online reviews of the Mariners Landing course are reviewed, the general sentiment is that it is a well-designed course that is in need of a considerable amount of maintenance that has been deferred through recent years. Once such maintenance is performed, course play will likely increase through time as the word is spread.



5) In order to be competitive in attracting both workforce-aged people and retirees to relocate to Bedford County, a certain basket of amenities induces such success. The members of this research team (bios later in report) have completed numerous studies in the area and are familiar with the economic-dynamics of the region.<sup>20</sup> In the assessment of ISR, the golf course would not, for example, be better purposed as another type of outdoor recreation because recreational offerings are already abundant in the area. The golf course parcel would not have any higher and better use as residential lots, because the community already has ample lots. Moreover, there are a number of shovel-ready commercially zoned building sites already on the Bedford County side of Smith Mountain Lake that can be better positioned as retail, office, or healthcare-focused sites than the current golf course location.

On the other hand, a Robert Trent Jones golf course with both water and mountain views is a key component in the basket of amenities needed to be competitive in attracting the targeted demographics in their relocation decisions. As stated earlier in this report, the course is an amenity for both players and non-players as golf courses signal a certain level of prestige and, if properly maintained, is visually appealing. Moreover, the Mariners Landing golf course has a walking path system that helps foster outdoor recreation among both golfers and non-golf players.

{Concluding remarks begin on next page}

## CONCLUDING REMARKS

Because a golf course-induced real estate value premium can be significantly reduced with the accumulation of deferred maintenance or merely with the rumor that a course could close, it is thought by ISR that golf course-induced premiums in the community are already significantly diminished. According to rough estimates provided by Perrow Management, the pre-recession tax assessed value of the properties within the community tallied to about \$200M and today they sum to roughly \$114M.

**Using the research described in this report as the basis of evaluation, in the judgment of ISR, it seems plausible that real estate values could fall an additional 20-30 percent with a golf course closure; conversely, values could increase 20-30 percent by bringing the course back to its original aesthetics and intended standards of play. While these estimated ranges are for the community as a whole, it is prudent to note that such golf course-induced premiums are more pronounced for vacant lots in comparison to built lots. It is also important to note that such predictions assume that no significant changes will occur in the local and/or national economy.**

In the assessment of ISR, the highest and best use of the golf course is to continue its existence and perform the needed deferred maintenance to bring it up to adequate playing and aesthetic standards. The potential economic impacts of closing the course could be formidable to include, for example: 1) a decreased tax-base for Bedford County; and 2) the lack of an amenity used to attract other forms of economic development (both residential and commercial). As detailed earlier in this report, a golf course is an amenity to both players and non-players and should be considered as such.

**In summary, a collaborative, inclusive, and research-driven solution is needed:**

Closing Mariners Landing Golf Course without a plan that satisfies the needs and desires of all the stakeholders would be imprudent. Research indicates that several options taken by various golf course-centered residential communities proved effective for some and warrant consideration:

- Convince all the stakeholders in the community to support the golf course operation for the greater good.
- Residents and land owners should consider the benefit that can be achieved through increased annual fees.
- New investors in the course and community could revitalize the course and stimulate residential lots sales.

- Local government, through investment in the course or purchasing it to be operated as a publicly owned and operated course, could once again make it an asset for the sale of residential lots.
- Several of these approaches would save the course as a beneficial loss leader for the sale of additional lots for development, ultimately adding to the real property tax rolls.
- Closing the golf course and converting the buildable land into residential building lots is an alternative to discuss but as detailed in this report, in the assessment of ISR, is not the best and highest use of the site for two primary reasons: a) a golf course drives a premium because it is an amenity for golfers and non-golfers alike; and b) ample residential lots already exist.
- Converting the course into a public park, thereby replacing the golf course with a passive, active or both recreation park that would maintain open space and public use is an option to consider but as detailed in this report, in the assessment of ISR, is not the best and highest use of the site for two primary reasons: a) a golf course drives a premium because it is an amenity for golfers and non-golfers alike; and b) ample outdoor recreation venues already exist.

## RESEARCHER BIOS

**Joe Elton** served for more than twenty years as director of Virginia's nationally acclaimed state parks system. He also served as Director and Deputy Director of Operations for the Department of Conservation and Recreation before retiring from government service in March of 2016. He was elected president of the Association of Southeastern State Park Directors, the National Association of State Park Directors and the America's State Park Foundation.

Joe received the distinguished service award for his career contributions to parks and recreation by the Society of Outdoor Recreation Professionals, the National Association of State Outdoor Recreation Liaison Officers and the National Association of State Park Directors. He has served on many boards and commissions, including the National Park Service Development Advisory Board and Virginia State Trails Advisory Committee.

He played a major role in the implementation of two state general obligation bond referendums totaling more than \$200 million and led the effort to acquire, plan, develop and open a dozen new Virginia State Parks.

Joe is a graduate of The Ohio State University and the Virginia Commonwealth University's Commonwealth Management Institute and Virginia Executive Institute.

**Dr. Vincent Magnini** was recently ranked as one of the top 12 most prolific hospitality researchers worldwide and holds editorial board appointments on all of the top-ranked hospitality research journals in the field. Further, he is a U.S. Fulbright Scholar. He has published six books and more than 200 articles and reports. Dr. Magnini has also been featured on National Public Radio's (NPR) *All Things Considered*, *With Good Reason*, *Pulse on the Planet* and cited in *The New York Times* and *Washington Post*.

## CORPORATE PROFILE

The Institute for Service Research (ISR) is a full-service market research and economic modeling firm headquartered in Virginia Beach. The firm is incorporated in Virginia and trademarked with the U.S. patent office.

## REFERENCES AND NOTES

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Photo on report cover provided by Waller Perrow.

<sup>1</sup> Hueber, D. and Worzala, E. (2010). “Code Blue” for U.S. Golf Course Real Estate Development: “Code Green” for Sustainable Golf Course Development. Clemson, S.C: Center for Real Estate Development.

<sup>2</sup> Crompton, J., & Nicholls, S. (2019). The Impact on Property Values of Golf Courses in the United States. *Journal of Park and Recreation Administration*. (Online first).

<sup>3</sup> For more elaboration on how these factors trigger decline, please see:  
Crompton, J., & Nicholls, S. (2019). The Impact on Property Values of Golf Courses in the United States. *Journal of Park and Recreation Administration*. (Online first).

<sup>4</sup> Petrovic, P. (2019). There Aren’t Enough Golfers to Keep All of the U.S. Courses in Business. NPR All Things Considered (June 5, 2019): <https://www.npr.org/2019/06/05/730057491/there-arent-enough-golfers-to-keep-all-of-the-u-s-courses-in-business>.

<sup>5</sup> The Institute for Service Research (ISR) made its best attempt at locating and including all peer-reviewed studies examining such premiums on courses with buffer zones in the U.S. published since 2005. No study was purposefully omitted. Moreover, ISR cannot be held responsible for the omission of any peer-reviewed studies not located.

<sup>6</sup> Bark, R. H., Osgood, D. E., Colby, B. G., & Halper, E. B. (2011). How do homebuyers value different types of green space? *Journal of Agricultural and Resource Economics*, 395-415.

<sup>7</sup> Heinrich, J., & Kashian, R. (2010). Pricing the Homebuyer's Proximity to Open Land. *The Journal of Applied Business and Economics*, 11(1), 80.

<sup>8</sup> Stetler, K. M., Venn, T. J., & Calkin, D. E. (2010). The effects of wildfire and environmental amenities on property values in northwest Montana, USA. *Ecological Economics*, 69(11), 2233-2243.

<sup>9</sup> Wyman, D., & Sperry, S. (2010). The Million Dollar View: A Study of Golf Course, Mountain, and Lake Lots. *Appraisal Journal*, 78(2).

<sup>10</sup> Asabere, P. K., & Huffman, F. E. (2009). The relative impacts of trails and greenbelts on home price. *The Journal of Real Estate Finance and Economics*, 38(4), 408-419.

<sup>11</sup> Shultz, S., & Schmitz, N. (2009). Augmenting housing sales data to improve hedonic estimates of golf course frontage. *Journal of Real Estate Research*, 31(1), 63-79.

<sup>12</sup> Nicholls, S., & Crompton, J. L. (2007). The impact of a golf course on residential property values. *Journal of Sport Management*, 21(4), 555-570.

<sup>13</sup> Netusil, N. R. (2005). The effect of environmental zoning and amenities on property values: Portland, Oregon. *Land Economics*, 81(2), 227-246.

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<sup>14</sup> This type of meta-analysis collects and compares the results recorded by the pool of existing studies on a topic:

Crompton, J., & Nicholls, S. (2019). The Impact on Property Values of Golf Courses in the United States. *Journal of Park and Recreation Administration*. (Online first).

<sup>15</sup> This case example is adapted from a similar illustration that can be found in:

Crompton, J., & Nicholls, S. (2019). The Impact on Property Values of Golf Courses in the United States. *Journal of Park and Recreation Administration*. (Online first).

<sup>16</sup> Crompton, J., & Nicholls, S. (2019). The Impact on Property Values of Golf Courses in the United States. *Journal of Park and Recreation Administration*. (Online first).

<sup>17</sup> Taylor, C. (2019). Golf-Home Owners Find Themselves in a Hole. *The Wall Street Journal* (January 10, 2019). <https://www.wsj.com/articles/golf-home-owners-find-themselves-in-a-hole-11547135191>

<sup>18</sup> Robert Trent Jones Society

<sup>19</sup> Petrovic, P. (2019). There Aren't Enough Golfers to Keep All of the U.S. Courses in Business. NPR All Things Considered (June 5, 2019): <https://www.npr.org/2019/06/05/730057491/there-arent-enough-golfers-to-keep-all-of-the-u-s-courses-in-business>.

<sup>20</sup> Recent examples of community needs assessment and economic impact projects conducted by the members of this research team that include Bedford County:

- A Needs Assessment Study of a Community Center at Smith Mountain Lake (with Chuck Wyatt)
- Virginia State Parks Economic Impact Report (conducted annually)
- The Fiscal and Economic Impacts of Virginia's Agritourism Industry
- The 5-Year Business Plan for Smith Mountain Lake State Park (with DCR working group)