

Alternatives to Golf Course Developments in an Environmentally Sensitive Market

by Tyler Grooms

Author

Tyler Grooms, a 2010 Cornell Program in Real Estate (PRE) graduate with an emphasis in sustainable development, graduated from Chapman University with bachelor degrees in Economics and Business Administration. After graduation, Tyler completed a master degree in Finance from San Diego State University. Between his first and second year in the PRE, Tyler interned at Los Arboles Management, gaining exposure to their wide array of assets including luxury hotels, commercial, retail, agriculture, raw land, and non-traditional assets. Tyler worked on a variety of projects including regional and local market studies; real options land valuation; econometric modeling and testing as well as a proposal to develop land using development supported agriculture and conservation easements to enhance developable land value. Tyler returned full time to Los Arboles Management after graduation focusing primarily on land development, acquisition, and management as well as agriculture and hotel asset management.



Introduction

Developers usually seek to maximize their land's value. Amenities are often used to accomplish this purpose. One of the most popular amenities of the past half century has been the golf course and the integrated golf course development. Today, however, U.S. golf course developments are overbuilt and represent, to some, a tired model for development-supported amenities. Furthermore, trends in sustainability have led to the creation of denser and less impactful developments, in contrast to the typical sprawling and ecologically impactful golf developments. These trends have forced developers to consider alternative amenities for driving land values and sales pace. Amenities, such as open space preserves, organic farms, urban parks and community centers, create unique centerpieces for new developments and in many cases represent a better value proposal than traditional golf developments. However, in markets where golf courses are not overbuilt and strong demand exists, unique implementations can both satiate golf demand and provide an environmentally functional purpose for the development to placate shareholders and stakeholders alike.

Golf Courses: Past and Present

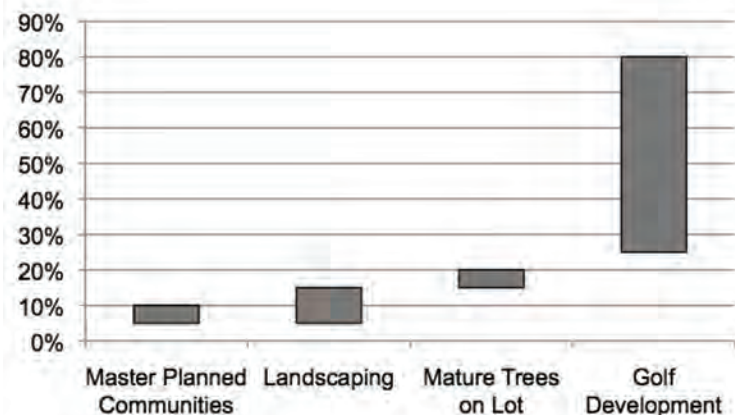
Golf course developments began in the United States in the early 1950s. During that era, demand for golf courses and housing was high. As golf's popularity grew, developers saw golf courses in developments as high value-add amenities. Through the 1980s, about 35% of all golf developments in the United States were part of a residential development.

Properties in golf course communities commanded price premiums ranging from 25-80%. However, golf courses came at a cost. Developers were spending nearly \$4 million on improvements and dedicating about 150 to 250 acres of land.¹

The golf community development model started to see a slowdown in the 1990s. By that time, so many communities had golf

figure 1

Premiums on Land Sales. While golf courses often cost more than other amenities, their returns are consistently much higher



¹ Mulvihill, David. *Golf Course Development in Residential Communities*, ULI. 2001, pp. 1-35. Improvement costs and course sizes vary.

courses that stand alone courses began to go bankrupt. Upscale golf communities were beginning to compete based on the merit of other amenities, because most communities also had golf courses.²

Furthermore, community stakeholders began to see golf courses as a threat to the community at large. Environmentalists complained about the impact of non-native species and the impacts of synthetic fertilizers on ground water. Planners and neighbors equated private golf course developments with gated, ritzy communities where residents took advantage of community-provided services such as schools and public safety services, but blocked off community access to its neighborhood. Avid golf players disliked the clubs because membership fees could be prohibitively expensive or course use could be limited to community residents.

While the market permitted some level of golf community exclusivity, during the 2001 recession, market demand for golf developments shrank precipitously. A variety of factors contributed to this. First, the growth of the golf market abruptly slowed while supply of golf developments continued. Today, the golf market continues to shrink. From 2000 to 2005, the number of golf players decreased from 30 million to 26 million. During that same period, the number of avid golfers³ fell from 6.9 million to 4.6 million.⁴ This marks a stark contrast to the growth seen in the latter half of the 20th century when the number of players increased by 33%.

In the 1950s, golf facilities were in short supply. However, by 2000, the number of golf facilities had grown from 5,000 to 15,000, with an average of 500 facilities opening per year in the 1990s. Since 2000, the number of course openings has fallen dramatically, with only 248 opening in 2009.⁵

More bad news for the golf development community came through a survey prepared by market research firm Robert Charles Lesser & Co.⁶ That survey indicated that less than 40% of the people who live in golf communities ever play golf. Rather, most residents enjoy the golf course for the open space it provides.

The Green Movement

For a variety of reasons, environmental sensitivity has become a social issue gaining popularity in the market. While many industries have been quick to recognize this trend (for example, consumer goods manufacturers), real estate has, for the most part, lagged other industries.

The real estate industry does not lack innovation, as the United States Green Building



figure 2

Golf course developments drive value by enhancing the open space of individual homes



figure 3

The popularity of golf has waned recently which, combined the velocity of supply in the 1990s of golf courses, has resulted in an overbuilt golf market

² Ibid.

³ Avid golfers play 25 rounds or more per year.

⁴ National Golf Foundation via Vitello, P., "More Americans are Giving Up Golf." New York Times. February 21, 2008.

⁵ Ibid.

⁶ Gregg, Logan, Robert Charles Lesser & Co., Presentation to ULI, April 7, 2005.

figure 4

Clorox has entered into the sustainable chemicals market and by their own accounts represent 40% of the green chemicals market with their “green works” products



Council’s LEED program and the New Urbanism movement have proven. Real estate’s problem is in large scale execution. Complaints about the high costs of “green” products, poor performance, and questionable economic justification have deterred suppliers and developers from using green products and employing green techniques.

On the other hand, real estate consumers have demonstrated a clear demand for environmentally sensitive products. A study by the CoStar Group shows that commercial buildings with LEED certification command higher rents, experience lower vacancy rates, and sell for higher prices than conventional products.⁷ Additionally, the cost premiums associated with LEED and other types of sustainable construction and planning methods are falling according to a report by construction consulting firm Davis Langdon.⁸ Even some big players, such as Forest City Enterprises, have proven that unique, environmentally sensitive approaches to planning and construction can result in iconic communities. Examples include Stapleton near Denver, Colorado and the under-development Mesa del Sol near Albuquerque, New Mexico. While good planning and certification systems such as LEED can increase real estate values, in the future, amenities will likely play the differentiating role in new, sustainable community development.

New Amenities

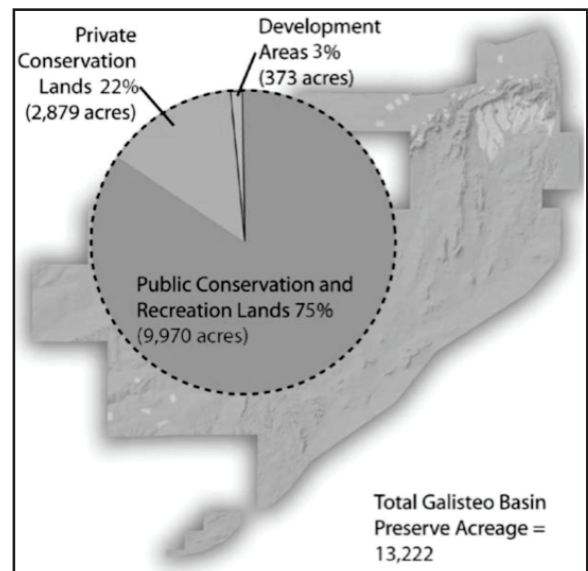
Denser, more environmentally friendly development is likely to be the trend in the coming years. Density, however, is at odds with people’s desire for open space and the quiet and privacy that comes with it. Suburbia and its products, such as the golf course development, have embodied this desire for openness over the past 50 years.⁹ However, with the slowing demand for golf courses and the contraction of suburbia (to focus on shorter commute times and walkable communities), open space will come from a new breed of amenities. These amenities will offer a wider range of activities and benefits to more people than traditional amenities and will make more efficient use of both land and financial resources.¹⁰

figure 5

Galisteo Basin Preserve land use scheme

Open Space Preserves

Galisteo Basin Preserve, Santa Fe, New Mexico



⁷ Miller, N., J. Spivey, A. Florence. “Does Green Pay Off?” *The Journal of Sustainable Real Estate*.

⁸ The report actually argues that there is no statistical premium for LEED certified buildings: “Costing Green: A Comprehensive Cost Database and Budget Methodology.” Davis Langdon, 2007.

⁹ Consider, again, the previously mentioned study by Robert Charles Lesser & Co.

¹⁰ It is important to note that golf communities are not the only popular type of amenity supported development. Ski, waterfront, and equestrian developments are just a few of the many different types. Golf courses, as previously mentioned are the most ubiquitous.

For some time, developers have recognized the consumer demand for open space. Traditionally, this demand for open space meant properties on 1/3 acre parcels with a front and back yard. The former 13,222 acre Thornton Ranch near Santa Fe, New Mexico was planned to be similarly divided albeit on a slightly larger scale. The development was divided into thousands of 4-6 acre ranchette lots with a winding road system and extensive infrastructure network.. Despite the repeated affirmations of market demand from a cadre of real estate brokers, two developers failed to gain approvals or market acceptance for the project. On several occasions, the entire property was put up for sale.



figure 6

Among the many benefits of vast open space preserves that protect undeveloped, fringe property is the lack of light pollution from neighboring cities and communities

The most recent buyer, Commonwealth Conservancy, took a different approach. Commonwealth decided that a greater benefit could be obtained by consolidating all of the small, individual parcels in this pristine and historic property into a contiguous open space, with development confined to a small corner of the property.

This approach offered several benefits. First, permanently conserving the land as open space increased the land's value. A variety of studies, including one by Geoghegan¹¹, note that permanently preserving open space is more beneficial to neighboring land than not preserving open space. With a planned trail system, a variety of housing options fronting the preserve, and a culture center to exhibit the history of the property, the value of the open space can be maximized. Second, the consolidated open space preserve could provide something that suburban back yards could not: a vast escape to immaculate wilderness. With nearly 13,000 acres of virgin, preserved land to roam, it gives residents the ability to get away from society, while being able to walk to the store from their home.

In addition to resident appeal, by donating the preserved land's development rights to a local land trust, the developer could write off the donation amount. In addition, the developer maintained profitability through the permitting process. The developer got the local planning board to approve a plan permitting it to develop the same number of units that were to be developed on the ranchette plan, but on a smaller development site. Thus, conservation did not require profitability to be sacrificed. Transfers



figure 7

Site plan for Serenbe shows organic farms as an important amenity

¹¹ Geoghegan, J., "The Value of Open Spaces in Residential Land Use." Land Use Policy. January 2002.

of development rights (or granting of additional rights in this instance), should be expected; this is especially true in jurisdictions where developing greenfield sites is discouraged. More importantly, the developer did what no other developers had done: gained entitlement for development and relatively quickly (within 2 years).

The developer also will pay less for land development infrastructure because the development area is smaller. Streets and utilities will cover fewer linear feet.

Preservation developments, though low cost, do have ongoing maintenance. Typically, the land must be monitored and damage to ecosystems repaired to ensure preservation of the land's natural state and its associated value to users. Additionally, preserved land usually does not generate revenues, like golf courses. Revenue for maintenance in these developments is usually generated by transfer fees on home sales.

Successful examples of open space preserve developments include Prairie Crossing near Chicago, The Irvine Ranch in Irvine, California, and Tejon Ranch, near Lebec, California.¹² However, consumers are wary of preservation of useless lands. Unsightly or inaccessible land deters consumers from buying "greenwashed"¹³ product. Moreover, appraisers often will not award value to homes and property near useless land. While there is no minimum size for preserved land to be successful, typically the amount of preserved land should be proportional to the size and density of the development.

Organic Farms

Serenbe, Palmetto, Georgia

Because open space preserves and golf courses can require up to 200 acres of open space to be useful, some developers cannot afford to contribute so much space for amenities. Developers may not be able to justify the nearly \$4 million needed to develop a golf course or the ongoing expense of preserved land.¹⁴

Serenbe, outside of Atlanta, Georgia illustrates the use of an open space amenity that has nearly no size requirements and minimal upfront or ongoing costs. Serenbe's organic farm is about 25 acres and was developed at an estimated cost of \$50,000. Most of this cost can be attributed to storage facilities. Development time for community farms is very short. However, if organic certification is desired development time could take up to three years. Ongoing costs are covered by the income generated from Community Supported Agriculture (CSA)¹⁵ subscriptions.

Though the financial impact of the farm is small, the impact on the culture of the community is large. Weekly farmers' markets draw both the farmers from the community farm as well as locals hawking homemade goods. Residents and non-residents mix at the unique event every Saturday, and those not able to make the event can enjoy the produce from the farm at one of the three onsite restaurants that serves fruits and vegetable picked fresh from the farm that day.

This unique culture and the active open space create land premiums of up to 200%



figure 8

The farmer's market every Saturday reinforces the farming theme within the Serenbe community, while gourmet products sold at the same farmer's market emphasize the upscale feel of the development

¹² While Tejon Ranch is still in the development phase, it has successfully gained the acceptance of environmental groups and the planning boards in both Bakersfield and Los Angeles counties. Of its 258,000 acres, over 240,000 acres will be permanently preserved.

¹³ *Greenwashing* refers to the disingenuous and usually deceptive promotion of a product as having environmentally friendly attributes.

¹⁴ KPMG "Golf Benchmark Survey," 2009.

¹⁵ Community Supported Agriculture means that subscribers receive a proportionate share of farm output for a fee.

compared to land outside of the community. Serenbe, a community of over 500 homes, is not the only successful example. Harvest, south of Raleigh, North Carolina has 15 home sites which command 150% premiums over neighboring land. Lots in Bundoran Farms outside of Charlottesville, Virginia command, on average, a 67% premium.^{16 17} Farm sizes vary drastically as well. Harvest has 50 acres of preserved farm land while Bundoran Farms has around 1,200 acres of preserved pasture and orchard land.

Increases in land value are not the only benefits. Serenbe reports a healthy sales pace even through the recession. By contrast, Harvest chose to conserve land through a conservation easement. This allowed the developer to write off the value of the land's development rights. Perhaps attributed to the onsite amenities, including the farm, the farmer's market and culture draw in hundreds of potential property buyers every week.

Urban Park

The Orange County Great Park, Irvine, California

As previously mentioned, large tracts of open space can create significant value for nearby property owners. Open space preserves are ideal for land that will be lightly used because of the massive size of the open space or because the project's development component is relatively small. Where a land use prescription calls for denser product, large open tracts of land may be too valuable to give up for open space preserves, and the expected intensive use may cripple the natural value of the land.

In the 1990s, the El Toro Naval Air Station was decommissioned. The city enlisted the local residents, through a variety of public ballot measures, to determine the land's future use. The voters required the developer to incorporate some amount of open space into its development plan. Ultimately, terms of Lennar's purchase agreement on the 4,682 acre site required it to set aside about 28% of the land as open space. This amounted to 1,347 acres, almost twice the area of New York City's Central Park. The surrounding community's density and the resulting

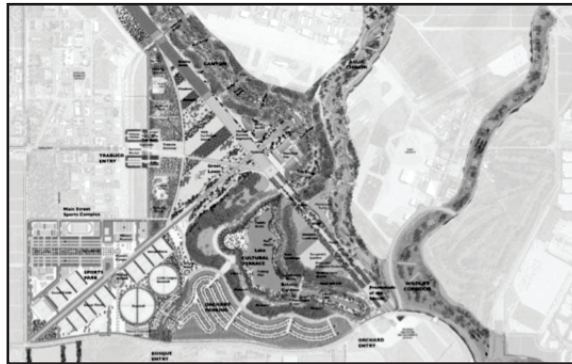


figure 9

The Orange County Great Park will encompass nearly 1,400 acres at a cost of approximately \$1.4 billion



figure 10

Small green networks create a feeling of openness without giving up excessive developable land

¹⁶ Own research: assessor data and broker interviews.

¹⁷ Bundoran Farms is not certified organic.

figure 11

Small greenways portray a feeling of openness



intensity of the open space's use would, in effect, cancel the benefits of the preserve's open space. Consequently, the parties decided that the preserve would include two major components: a large, structured park system to handle the intensity of human uses and a wildlife preserve to connect a national forest to a state park.

The Great Park's original plans included agricultural preserves, sports fields, man-made lakes and a golf course, among other amenities. Recently, due to the housing market's collapse, Lennar approached the Orange County City Council to propose removing the golf course from the plan. To justify this, Lennar cited poor performance of four existing golf courses near the site. Lennar offered an additional 131 acres of park land and money to offset any greens fees foregone by the city. In exchange, Lennar could eliminate the 45-hole golf course¹⁸ from its development plans and could add additional density to certain approved development areas.¹⁹

Development costs for the park are expected to total \$1.4 billion, or approximately \$1.0 million per acre.²⁰ Development, including decommissioning (which started in the late 1990s), is expected to take more than 30 years.²¹

While the land value increases created by this project are difficult to estimate, successful iconic projects such as Central Park in New York, Golden Gate Park in San Francisco, Balboa Park in San Diego, and Millennium Park in Chicago prove that urban parks raise surrounding land values. A study by Economic Research Associates estimated that, by 2020, the Great Park would facilitate a \$23.9²² billion increase in the gross regional product.

While larger parks receive more publicity, pocket parks constitute important components of new developments and, often, are more appropriate for smaller developments. For example, small parks were effectively used in Northpark in Irvine, California. In that development, small pocket parks were centrally located within the community to create the feel of open space, without dedicating hundreds or thousands of acres. A well thought-out system of pocket parks can promote a feeling of openness that cannot be achieved in typical suburban models with larger centralized parks. Green connections create a feeling of continuous green space. Northpark's development plan shows tree-lined streets connecting green space to green space and allowing residents to walk from park to park without being overburdened by development or density.

Additionally, while green spaces generally do not have to be contiguous, pathways as wide as a few feet can provide users with a sense of seclusion and can turn smaller open spaces into a larger network of green space. Land requirements are not substantial, but planning expertise is required. Costs for development of pocket parks range from about \$200,000 to \$500,000 per acre, less than the development costs for a typical large park. Maintenance costs range from 5 to 10 percent of the total annual cost.²³

Urban parks and green networks create residents who are more willing to walk within their community. This enhances environmental sustainability. Similarly, specifying native plants improves sustainability by minimizing park maintenance through reduced fertilizer and water use.

¹⁸ An 18-hole course already existed on the base, but was closed in 2006 in anticipation of redevelopment. Original plans called for 27 holes to be built to complement the existing 18 holes. The existing 18-hole course is still closed and not scheduled to reopen.

¹⁹ E-mail correspondence with Sam Allevato, Public Information Officer OC Great Park Design Studio.

²⁰ Rombouts, C., "A Laboratory of Sustainability." *Sustainable Land Development Today*. July 8, 2009.

²¹ Agran, L., "Grand Plans for the Great Park." *American City and County*. June 1, 2009.

²² *Ibid.*

²³ City of Brentwood Parks Report: http://www.ci.brentwood.ca.us/boards/planning/planpastagendas/plan_agenda_2007/packet_20070918/pcagenda_2007_09_18_7.cfm

Community Center

Baxter Village, Fort Mill, South Carolina

Open space does not necessarily have to include open green space. Baxter Village, while providing green space, provides an additional complementary amenity in a walkable retail community center. This center provides necessities such as a grocery store, hair salon, and medical center, among other services.

Different from the community strip shopping center included in many communities, the community center at Baxter Village promotes a pedestrian focused, main street feel to its retail and health facilities. The center is within walking distance to most of the community. Naturally, the community has an extensive sidewalk and path network to connect homes to downtown. The net result is less dependence on cars, and, perhaps, improved health for the residents.

In addition to retail and medical services, the community center provides a civic meeting place. Lushly landscaped settings and open spaces provide places to play with the dog and socialize with neighbors. The additional costs for the development's community center are offset by additional cash flow from the retail component. In other words, by placing the retail space within walking distance and creating a pedestrian-friendly environment, developers can leverage the social appeal of retail and add a cash-flowing component to their project.

Community centers are usually a product of community planning using new urbanism. Walkable neighborhoods are a necessity for the activation of retail components (similar to Baxter Village) and create a strong argument for reducing onsite parking requirements for retail space. ULI suggests up to 5 spaces per 1,000 square feet of retail space.²⁴ However, some projects that focus on walkability and connections to the surrounding neighborhoods have been able to obtain approvals with fewer parking spots. For example, The Shoppes at Wilton Manors in Wilton Manors, Florida was able to obtain approvals using a parking strategy that focused on walkable connections to the surrounding neighborhoods. This created a savings of \$1.9 million by eliminating 390 spaces. The additional space generated by eliminating parking spots increased revenue by permitting the developer to build additional retail space.²⁵

Focusing on walkable retail community centers relies on the approval of a legitimate pedestrian-friendly plan. Poor connections, a focus on external users, large parking facilities, or a sprawling plan will be unlikely to persuade authorities to sanction reduced parking; the environmental benefits from reduced use of cars and increased pedestrian activity would be lost.



figure 12

The community center at Baxter Village was relatively little additional cost and allowed for a retail component that used less parking, saving the developer money

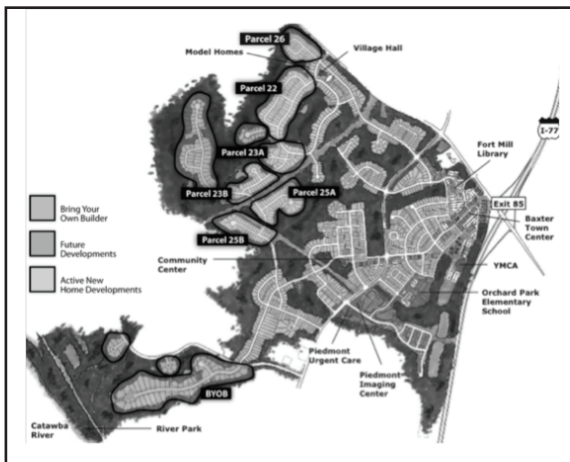


figure 13

The community center is walkable from most of the community through a network of trails and sidewalks

²⁴ *Dimensions of Parking*, Fifth Edition. ULI. 2009.

²⁵ "Parking Spaces / Community Places," Environmental Protection Agency. January, 2006.

Golf Courses: Future

“In my opinion, many of the standards by which we construct and maintain our courses have become, quite simply, unsustainable.”

-Jim Hyler, President, US Golf Association²⁶

There are markets where golf demand is robust. Though, these markets are mostly international. For example, the island of Hainan in China is currently a hot spot for golf resort development. There, developers are focused on delivering world class golf amenities to sell luxury homes. While still technically illegal to develop a golf course in China,²⁷ Hainan alone is expected to be fully built-out with 100 to 300 golf courses. A major developer on the island, the Mission Hills Group, is familiar with golf course success and China’s voracious demand for golf. The Mission Hills Group is the owner of the largest golf complex in the world. This development, which is located in the Guangdong province, is 1.5 times the size of Manhattan and consists of twenty-two 18-hole golf courses.²⁸

While the environmental impact of a development is often an afterthought, a joint presentation by Greg Martin and Todd Schroeder²⁹ demonstrates that it need not be. Golf courses, if constructed and designed properly, can serve as problem solving tools for a host of environmental concerns. These issues can include complex stormwater and flood control systems, degraded landscapes, and water scarcity. While aggressively expanding golf developments in China, biodiversity and wildlife habitats can be used to harmonize developments with the existing environment.

Golf developments are becoming increasingly dependent on the approval of a variety of stakeholders. Many of these stakeholders are not golfers. Greg Lyman, the head of the Environmental Institute for Golf notes, “The more that non-golfers understand that golf is environmentally responsible and is being managed for the long-term, the brighter its future will be.”³⁰ Creative environmental solutions require a two-fold value proposition. Developers can reap increased land values and significant time and cost savings by preemptively appealing to stakeholders.

The following sections provide a sample of creative applications of golf courses to solve environmental site constraints and potential stakeholder concerns.

Storm Water and Flood Control: Arlington Lakes Golf Club, Arlington Heights, Illinois

As exemplified by Arlington Lakes Golf Club, developing golf courses for functional purposes other than increased land values and recreation is not a new concept. Originally farm land at the start of World War II, the site was converted into an Army base which housed German prisoners and a Nike missile battery. After the World War II, the site was transferred to the Army Reserves and National Guard with a plan to transform the land into a golf course.

In 1971 and 1972, heavy rains caused flooding in the immediately surrounding neighborhoods, damaging 90 of the 400 homes. Local engineers determined that a golf course could serve as a community amenity and a flood control mechanism on about ninety acres of the military installation. After years of political debates between military officials,

²⁶ Paul, John, “Is Brown the New Green?” *The Wall Street Journal*, May 8, 2010.

²⁷ Golf was seen as an upper-class leisure sport, not congruent with communist ideals: Washburn, D. “China’s Golf Obsession.” *Foreign Policy Magazine*. February 24, 2010.

²⁸ Interestingly, greens fees are down and courses can often fill only a few tee times daily in Hainan. Developers recognize the benefits of building courses to increase the lot values of the surrounding developments. *Ibid*.

²⁹ “Creating Sustainable Golf Course Developments: Golf as a Solution?” presented at ASLA Annual Meeting & Expo, 2009.

³⁰ Paul, John, “Is Brown the New Green?” *The Wall Street Journal*, May 8, 2010.

congressional representatives, local residents, and politicians, \$2.5 million was raised to develop the public course. The course opened in 1979.

Flood control mechanisms were seamlessly integrated into the design of the course. The system of lakes constituted the most obvious flood control mechanism. It threads through the site and acts as water control basin. The systems of lakes serve as a central component of the Arlington Heights Park District's flood control plan. In support of the lakes system, softball diamonds, a driving range, sled hills, tennis courts, and an ice skating rink act as detention and retention basins in very wet conditions.³¹ The lakes, while serving a functional purpose for flood control, also add to the identity of the golf course. Despite being smaller than most courses,³² the lakes make the golf course noteworthy for its abundance of water features.

Degraded Landscape: The Quarry, San Antonio, Texas

Originally a limestone quarry located on the fringes of San Antonio, one hundred years of suburban growth encircled the open pit quarry. The site's remaining concrete manufacturing facility had reached the end of its useful life. Rising land values also drove the decision to redevelop the site. However, the void left from the quarry created significant problems to a traditional development. Filling the quarry would be too expensive and posed many of the problems associated with land fill developments, such as shifting soils and compaction problems. Leaving the pit vacant would be a hazard that would require constant monitoring. It would also be an inefficient use of relatively flat land. Instead, developers proposed a Keith Foster designed golf course, which would wind through the open pit taking advantage of rock croppings and natural ponds that had formed from rainfall collecting on the rock surface. Homes on the brim of the quarry would benefit from longer views of the unique open space and a sense of privacy that can be lost with some golf course fronting homes.

While the front nine holes are arranged in a traditional links-style format, the course is known for its back nine holes which wind through the quarry. In 1998 and 1999, Golf Digest ranked the course a top 10 public course.

Biodiversity and Wildlife Habitats: Twin Bridges, Danville, Indiana

In 1993, when Waste Management proposed to expand its landfill operations in Danville, Indiana, it proposed expanding the recreation facilities to enhance public support for the landfill expansion.

Included in the 275 acre recreation expansion area was the public 18-hole Twin Bridges Golf Course. This course was designed to take advantage of the shifting terrain of the landfill and to serve as the centerpiece of a wildlife habitat remediation project that extended through the rest of the 937 acre landfill. Goals of the wildlife habitat included increasing the diversity and number of birds and mammals on site as well as restoring natural habitats through the use of indigenous plant species and wetlands creation.

The plan for expansion of the landfill was approved in 1995. The Wildlife Habitat Council certified the golf course for its preservation and remediation efforts and recognized it as an Audubon Society Signature course, only one of 27 in existence at the time.

Water Conservation: Chambers Bay, University Place, Washington

For over 200 years, the Chambers Creek Property was used for industrial purposes including a paper mill, multiple lumber companies, a wastewater treatment plant and a quarry. Today, all 920 acres are being converted to public uses, including the 250 acre Robert Trent Jones, Jr.³³ public golf course on the site of the quarry and gravel pit. While the gross size of the links-style course is in line with average U.S. courses, the 85 acres of turfed area is about 25 to 45% less than a typical course. The remaining buffer zones and other

³¹ Arlington Heights Park District Website: <http://www.ahpd.org/AboutUs/History.htm>.

³² The golf course only occupies 90 acres.

³³ Robert Trent Jones, Jr. is the son of famed course designer and Cornell alumnus Robert Trent Jones.

unplayable areas were cleared of non-native vegetation and reseeded with local flora to minimize maintenance, including a reduction in fertilizer and water use. The playable areas use the deep-rooted fine fescue, whose roots descend down to 12 inches, about 10 inches deeper than typical rye or Kentucky bluegrass, to absorb more water and resist drought.³⁴

The environmental design of the course provides an additional benefit. The public walkway, which winds through the course, enables non-golfers to enjoy the landscape and provides golfers with ad hoc galleries to cheer shots.

The resulting course garnered multiple awards including #1 Best New Golf Course by Golf Magazine. It also attracted the 2010 U.S. Amateur competition. While the course is public, it has no housing threaded through the course. These water conservation tactics can be applied to private course designs.

Conclusion

Developers usually try to maximize the value of their land and have long recognized amenities as good value drivers. The golf course development has been the most popular development-supported amenity during the past half century. Though, with the diminishing popularity of golf in the United States and the overabundance of courses, developers are looking for other amenities to differentiate their product and add value. In addition to diminishing demand, sustainability also impacts the decisions of many developers and consumers. New developments are focusing on a denser and less impactful style of development. This combination of trends has refocused developers on implementing alternative amenities such as open space preserves, organic farms, urban parks and community centers. These new amenities create unique centerpieces for new developments and, in many cases, represent a better value proposal than traditional golf developments through cost savings, higher revenues, or both. While golf demand is down in the United States, high demand abroad is leading to a clash between environmentalists and developers. Creative solutions for golf course implementation can ameliorate animosity with environmentalists and provide an invaluable tool for remediating onsite environmental issues, such as stormwater issues, flood control issues, and degraded landscapes.

³⁴ Paul, John, "Is Brown the New Green?" *The Wall Street Journal*, May 8, 2010.

