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EXPLORING THE FEASIBILITY OF SURF POOL ATTRACTIONS

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Recent academic research in the subject of surf tourism and economic analysis of surf breaks provides relevant data to explore the economic feasibility of wave pools dedicated to surfing, i.e., a surf pool. The data suggests that a viable market exists for surf pool development given the ability to remove variables related to surf quality and the number of waves a surfer will be able to catch. Additionally, surf pools have potential to bring significant additional value in terms of regional economic growth and increased real estate prices and the development of supporting accommodation developments such as retail, restaurant, residences, timeshares, and resorts.

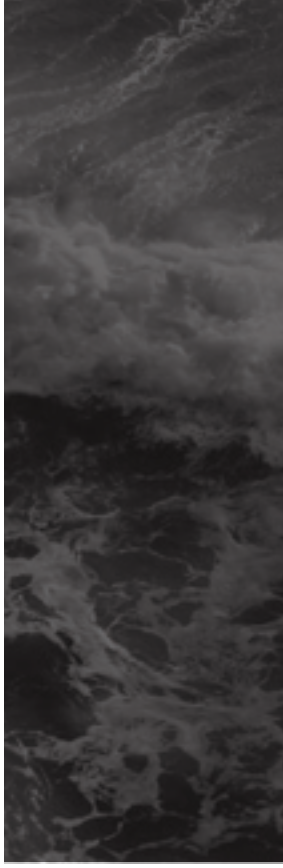
There are an estimated 3.3 million surfers in the US and 35 million surfers worldwide (O'Brien & Eddie, 2013) growing at 12 to 15 percent per year (Buckley, 2002). In the United States the average surfer is a highly educated 34 year-old male earning $75,000 a year who owns four surfboards, travels 20 miles to surf for 2.5 hours on 108 separate occasions annually and pays between $59 and $100 dollars for each surf on items including food, gas, rental equipment, lodging, and/or merchandise. US surfers inject $2-5 billion USD directly into coastal economies around the United States (Wagner, Nelson, Walker, 2011) in order to surf, more often than not, crowded low quality waves. Beyond the US, the International Surfing Association has 89 member countries and a goal to reach 100 by the end of 2015. Surfers in each of these countries contribute a significant and growing economic impact locally, as well as when they travel. These surfers, both those proximal and distant from a surf pool, represent a ready-made market as surfers will travel long distances to surf uncrowded quality waves. Surf pools will also remove the geographic barriers to entry into the sport organically increasing the user base.

SURFERS TRAVEL LONG DISTANCES FOR UNCROWDED QUALITY WAVES

Surf tourism takes place in at least 162 countries (Martin & Assenov, 2012) and incorporates all levels of luxury and service. Anecdotally, most international surf tourists are based in the US, Australia and New Zealand, Brazil, Japan, and Europe (UK, France, Spain, Portugal) though emerging markets include Russia and Central and South America. A recent study showed that 91% of surfers from a range of countries had taken an international surf trip in the past five years. Of those, 82.1% had taken more than two surf trips; almost 40% had taken more than 10 surf trips, and almost 20% had taken more than 21 surf trips in the past five years (Barbiere & Sotomayor, 2014)—this during a period of global economic recession.

The global surf industry, inclusive of surf tourism, has been estimated to be worth $130 billion annually (Eddie & O'Brien, 2013).

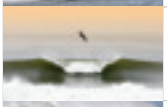
Surfers are highly motivated, mobile, and reactive travelers—they follow the surf and are willing to spend a great deal of money for the chance to ride uncrowded quality waves. Increasingly surfers are planning trips based on surf reports with very little lead time (often only days in advance) in an attempt to increase the likelihood of high quality waves. This has also led to 'extreme micro-seasonality' where surf breaks are heavily crowded during predicted periods of high quality surf. There is great value in reducing or eliminating uncertainty of conditions and crowding levels with surf pools.



EVEN WITHOUT CONTROL OVER QUALITY OR CROWDING SURF BREAKS ARE VERY VALUABLE

The most commonly sought after surfing experience is one where a surfer can cooperate, rather than compete to ride a high quantity of waves with long and relatively safe walls that allow for many turns. They prefer for this experience to take place in a setting where they can be social with one another and have the opportunity to participate in other adventure activities (Wagner, Nelson, Walker, 2011; Reynolds and Hritz, 2012). Surf tourism is a multi-billion dollar business — Australia's Gold Coast alone generates $819.9 million each year from surf tourism (AECOM, 2009). A number of studies have employed travel cost and ecosystem services methodologies to calculate the value of individual surf breaks — the following table summarizes the results.

Table 1.1 - Surfonomics Surf-Break Valuations (adapted from Thomas, 2013)

	**South Stradbroke Island**	Australia	$20.7 MILLION USD
	**Mundaka**	Spain	$4.5 MILLION USD
	**Trestles**	United States	$14.5 MILLION USD
	**Mavericks**	United States	$23.9 MILLION USD
	**Uluwatu**	Indonesia	$8.4 MILLION USD

None of these breaks are able to guarantee quality or wave count to visiting surfers, indeed all of these breaks are very crowded almost every time they break. All are subject to seasonality meaning that they are of low quality approximately 50% of the time. Presumably, a surf pools' ability to double the annual capacity of surf breaks by eliminating seasonality doubles their value. Eliminating poor quality surf days may increase the value again. Guaranteeing a set wave count further increases the value of each wave produced.

QUALITY SURF CAUSES MEASURABLE INCREASES IN REAL ESTATE VALUE

In addition to calculations on the local and regional economic impact of individual surf breaks, the hedonic price method has been used to establish that after controlling for proximity to the beach, ocean views, the specific characteristics of the homes, and neighborhood effects, a home right next to a quality surf break is valued approximately $106,000 higher than an equivalent home a mile away (Scorse, Reynolds, and Sackett, 2013). Clearly this has major implications for real estate adjacent to surf pools, suggesting that significant value can be added to residences, timeshares, and resort or hotel rooms through the addition of a quality surf pool.

SURFERS ALREADY PAY ENOUGH PER WAVE FOR SURF POOLS TO BE VIABLE

Local Surfing

Based on Wagner, Nelson, and Walker's (2011) work surfers pay $25–$100 in travel costs for a 2.5 hour surf. Assuming 20 waves are ridden during this session (one wave every 7.5 minutes over 2.5 hours) surfers are paying $1.25–$5 for each wave ridden every time they go surfing, often in crowded poor quality conditions.

International Surf Tourism

Most surf resorts charge between $120 and $600 dollars a day to provide surfers with luxurious accommodations, chef prepared meals, and daily transfers to nearby high quality surf breaks. In the swell season of a high quality surfing destination, a standard 10-day surfing vacation is considered successful, in lieu of crowding and natural surf condition variability, if surfers experience 1–2 days of very high quality conditions, 1–2 days of minimal or no surf, and 7 days of good surf. Under optimal conditions the average surfer will catch approximately 15 waves per session (one wave every ten minutes over 2.5 hours) and surf two sessions per day for a total of 30 waves per day. Assuming an average additional international travel and expenses cost of $1500, this translates to between $9 and $25 paid for each wave surfed.

THE VALUE OF RECREATIONAL CARRYING CAPACITY CONTROL

Outdoor recreation research has established that as crowding increases, visitors with lower crowding thresholds and higher daily spending patterns are displaced by more crowd-tolerant visitors with lower daily spending budgets (Navarro-Jurado, Mihaela-Damian, & Fernandez-Morales, 2013; Vaske & Shelby, 2008). As a result, surf resorts and tour operators around the world consider the ability to control access to world-class surf breaks the holy grail of the surf tourism business. Resorts that are able to offer a no crowd guarantee on high quality waves may charge accordingly. Tavarua Island Resort in Fiji earned an annual gross revenue in the realm of $17 million USD due its exclusive access rights to two renowned surf breaks—Cloudbreak and Restaurants. Similar arrangements in the Maldives have seen projected surf resort gross revenues in the $20–$35 million USD range (Ponting, 2014).

Although proven very valuable, private and/or controlled wave access is the exception rather than the norm. Many initiatives fail at the hands of competing business interests and the legal regulatory mechanisms for achieving privatization are often flimsy and difficult to enforce. Surf pools are in the coveted position of being able to control access without controversy and guarantee surfers, not only a high quantity, but also a high quality wave count.

ACADEMIC RESEARCH INTO THE SURF TOURISM MARKET AND THE ECONOMICS AND MANAGEMENT OF RECREATIONAL SURFING HAS HIGHLIGHTED SEVERAL POINTS THAT ARE IMPORTANT TO THE EMERGING SURF POOL INDUSTRY.

1. A significant market for high quality uncrowded waves already exists.

2. The ability to guarantee wave quality and a set number of waves without interference from other surfers is considered an unattainable holy grail by the multi-billion dollar surf tourism industry. With a surf pool it comes as standard.

3. Existing natural surf breaks are extremely valuable despite their recreational amenity being dependent on an enormous range of variables including the length of the surf season; the number of daylight hours available to surf; the length and characteristics of a particular break, which in turn, depends on bathymetry; primary, secondary, and often tertiary swell size, period, and direction; wind strength and direction; tidal variations; currents; swell shadowing; frequency of larger wave sets; and the number of other surfers and their compliance with established behavioral norms. Many of these variables can change in an instant, others in a matter of hours. Surf pools remove them all along with other threats to a quality surfing experience like sharks and stingers.

4. Surf breaks significantly and measurably increase associated commercial business and real estate values. This can be leveraged into increased retail and restaurant sales, and real estate gains through residences, timeshares, resorts, and hotels adjacent to a high quality surf pool.

5. Surfers already travel significant distances to surf and are already paying a per wave cost that would be viable for a high output surf pool. They are currently paying this cost without a guarantee of perfect waves or a guarantee of getting a particular number of waves without interference from others. A surf pool can deliver on both of these promises increasing their value.

6. Many surf resorts are extremely economically successful without crowd control; those that control access have shown even greater success despite lacking control over wave quality and enduring an ‘offseason’ of several months duration

If a surf pool can deliver high quality waves while eliminating the perception of crowding, and do this with an output and efficiency that allows the 'per-wave' charge to reflect existing per-wave costs for surf travellers, it seems inevitable that this installation will be successful. The built-in surfer market exists, has very favorable demographic and economic attributes, and a propensity to regularly travel, even internationally, to surf high quality uncrowded waves. The potential is even greater given the exploding learn-to-surf market, the broad market appeal of surfing, the proven increased real estate values around quality surf breaks, and the implications this has for onsite and adjacent retail, restaurants, timeshares, resorts, hotels, and residences.

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Research supported by: WAVELOCH