

EXHIBIT A

**PHASE I PIA-2017-00314
PIPD COMMERCIAL RECREATION FACILITIES (AKA SURF RANCH FLORIDA)
(Updated 2-17-17)**

**PHASE I PRIVATELY INITIATED AMENDMENT (PIA) APPLICATION
TO AMEND THE UNIFIED LAND DEVELOPMENT CODE (ULDC)**

Application No. PIA 2017-00314
Title: Phase 1, Initiation of Code Amendment
Request: To Amend Planned Industrial Park (PIPD) Regulations to Allow for Large Scale Commercial Recreation Facilities (aka Surf Ranch Florida)
Applicant: Urban Design Kilday Studios
Project Manager: William Cross, AICP, Principal Site Planner

APPLICATION SUMMARY:

The applicant is requesting that the Board of County Commissioners (BCC) approve a request to initiate amendments to the ULDC to enable the development of an Outdoor Entertainment venue to be known as “Surf Ranch Florida,” on an 80-acre parcel within the Palm Beach Park of Commerce Planned Industrial Park Development (PIPD). The Surf Ranch would be comprised of a man made surfing lake and support facilities intended for “*public recreational and competition purposes*”, which may include larger events requiring separate approvals for Special Events. Details can be found in the applicants attachments, or in online videos and promotional materials, such as: <http://www.kswaveco.com/>.

As outlined below under Background and Summary, amendments to PIPD regulations would be required, to allow for commercial recreational uses not originally anticipated in the district. Preliminary discussions with the applicant, identified two potential options for consideration, with the first being to allow the Outdoor Recreation use in the Heavy Industrial Pod of a PIPD, subject to Class A Conditional Use Approval, or to amend limitations on commercial acreage currently permitted within the PIPD district, as follows:

CODE SECTION*	REQUIRED	PROPOSED BY APPLICANT
Table 3.E.5.D, PIPD Land Use Mix	Maximum Commercial Pod limited to 20%, with a maximum of 15 acres.	Option 2: Amend to delete maximum 15 acre limitation.
Table 4.B.3.A, Recreation Use Matrix	Outdoor Recreation Permitted by Right in the Commercial Pod of a PIPD.	Option 1: Amend to allow Outdoor Recreation in the Heavy Industrial Pod of a PIPD subject to Class A Conditional Use Approval.
		Option 2: No change.
Art. 4.B.3.C.4, Outdoor Entertainment	Establishes definition for use, and requirements for location and setbacks.	No change.
* References to Art. 4, Use Regulations based on Use Regulations Project (URP) re-organization.		

BACKGROUND AND SUMMARY:

The PIPD is intended to encourage the expansion of PBC’s economic base through new industrial investment, and is a predominantly industrial development district, with exceptions for support uses intended to provide essential onsite services to serve the PIPD workforce, residents (where applicable) and clients. Preserving industrial lands has repeatedly been cited as crucial to ensuring that PBC can compete to attract or retain industries seeking to relocate or expand. In addition to the aforementioned limitation, this is partially accomplished by establishment of design objectives, use limitations, and maximum commercial acreage caps, among others.

The Park of Commerce is also located within the Research and Technology Overlay (RTO), and the Bioscience Research Protection Overlay (BRPO), both of which also establish protections for critical industrial, manufacturing, research and development activities from encroachment of incompatible land uses and activities.

While there are a number of industrial areas within the County, there are only two existing large PIPDs:

- the 1, 323-acre Park of Commerce located in Northwestern PBC at the intersection of the Beeline Highway (SR 710) and Pratt Whitney Road (SR 711), which is partially developed and predominantly industrial. Existing vested commercial acreage is mostly vacant and exceeds the current commercial acreage limitation; and,
- the 483-acre Vista Center PIPD, which is mostly developed with a mix of industrial, residential, recreational (including a 183-acre golf course and clubhouse) and other commercial uses.
- Note: The future Inland Logistics Center located in the Glades is anticipated to be developed as a PIPD primarily comprised of regional serving warehouse and transshipment uses.

STAFF RECOMMENDATION:

Staff generally supports initiation of a Phase 2 PIA, based on the following findings and contingent on the successful resolution of a number of concerns which require more in depth analysis and review, as follows:

EXHIBIT A

PHASE I PIA-2017-00314 PIPD COMMERCIAL RECREATION FACILITIES (AKA SURF RANCH FLORIDA) (Updated 2-17-17)

- The aforementioned PIPDs were approved prior to the establishment of the current 15-acre limit for supporting Commercial acreage, and currently include acreages in excess of the limitation.
- The existing 183-acre Vista Center golf course has not adversely impacted industrial development.
- Preliminary evaluation by Planning indicates that the proposal would not be inconsistent with the Comprehensive Plan.
- The Park of Commerce is remotely located several miles west of most population centers where affordable workforce housing and other lifestyle amenities are available, limiting potential industrial investment opportunities, as evidenced by the competition to identify a site for Scripps, which chose a more centrally located community.
- The proposed 80-acre parcel is located within the extreme NW corner of the Park of Commerce, has direct frontage and access from Pratt Whitney Road, and while potential cross access is shown on the approved Master Plan, it's highly probable that the parcel will be developed in isolation from the rest of the Park.
- The proposed use may yield job creation or other benefits that merit the reduction in available industrial lands within this area of the County. See also reference to World Surf League (WSL) investment in the parent company represented by the applicant, indicating potential for national or worldwide interconnectivity with the inland expansion of the surf industry: <http://kswaveco.com/press-releases/wsl-holdings-to-acquire-kelly-slater-wave-company>.

Additional considerations:

- Confirmation and feedback from the Business Development Board (BDB) and other similar entities, including representatives of the Park of Commerce, to ascertain the potential overall benefits to the County economic base, in lieu of potential industrial development, and verification that reduction of available Heavy Industrial land in this location will not adversely impact future efforts to attract industrial investment.
- Option 1 to allow the Outdoor Entertainment use in the Heavy Industrial pod of a PIPD may address several staff concerns with opening door to other unintended commercial uses, but would be hard to justify, and may require additional supplemental or design standards to mitigate any potential adverse impacts between uses.
- Option 2 to remove the limitation on Commercial pods and retain Permitted by Right for Outdoor Entertainment, will likely require additional Supplemental Standards to ensure that other unintended commercial uses aren't permitted. Also, staff notes that the current provision allowing for the Outdoor Entertainment use is limited by the purpose and intent of the PIPD to limit non-industrial uses to those that support the workforce, residents (if applicable) and clients of the PIPD. The proposed use would not meet this criterion, and as such staff would recommend the amendment be revised to require Class A Conditional use approval.
- Under either scenario, staff is encouraging the applicant to consider expanding the initial proposal to include potential interrelated surf industry manufacturing or distribution facilities that may be functionally integrated with the proposed Surf Ranch.
- Parking – Possible clarification of parking standards, whereas under the proposed use classification, parking is based on more typical uses such as amusement rides, or multi-participant sports type uses. However, additional information is required to clarify how the proposed "surfing lake" and ancillary uses function. Staff anticipates that the facility may be more akin to a golf course which can only accommodate a limited number of participants at any given time, with additional provisions for any "clubhouse" or related educational, training or recreational facilities. Additional parking standards may be necessary to anticipate Special Event parking.
- Environment and Health – other County agencies have indicated that there may be a need to establish standards for water quality and or other safeguards related to site layout, function or operation of mechanical equipment, among others. Note: this would likely be redressed through Conditions of Approval or other existing regulatory oversight, and may not require additional specificity in the ULDC.

County Administrator
Robert Weisman

Palm Beach County Zoning Division
2300 N. Jog Road
West Palm Beach, Florida 33411
Phone: (561) 233-5200
FAX: (561) 233-5165



ULDC PRIVATELY INITIATED AMENDMENT (PIA) APPLICATION

Privately Initiated Amendment process applicable to ULDC articles interpreted by the Executive Director of PZB or designee, pursuant to Art. 1.B.1.A, Authority.

I. APPLICANT INFORMATION

Agent*: Joni Brinkman Name of Firm: Urban Design Kilday Studios
Address: 610 Clematis Street Suite CU02 City West Palm Beach State FL Zip 33401
Phone: (561) 366-1100 Email: jbrinkman@udkstudios.com
*** If Applicable**

Applicant, if other than agent: N/A
Address: _____ City _____ State _____ Zip _____
Phone: _____ Email: _____

II. REQUEST

Please utilize "ULDC Privately Initiated Amendment Form # 80 Supplementary Table" (Attached)

III. PROPERTY LOCATION (IF APPLICABLE)

Countywide **Site Specific**

A. Control No. N/A Control Name: N/A

Application Name: N/A

B. Property Control Number (PCN): **List additional PCN's on separate sheet and attach to application.**

PCN: N/A

C. Section/Township/Range: / / Gross Acreage of Subject Property: N/A Gross Acreage of Affected Area: N/A

D. Location of Subject Property (proximity to closest major intersection or road):
N/A

E. Situs Address: N/A

JUSTIFICATION STATEMENT

**ULDC Privately Initiated Amendment (PIA)
Submittal Date: February 8, 201**



Request

Urban Planning and Design
Landscape Architecture
Communication Graphics

This Privately Initiated Amendment (PIA) is to request to amend the Palm Beach County (PBC) Unified Land Development Code (ULDC), as currently being proposed to be adopted by the PBC Board of County Commissioners (BCC) on February 23, 2017. The proposed changes are being requested in order to permit the use of Entertainment, Outdoor within a Planned Industrial Park Development (PIPD) district in the unincorporated County. Currently this use is a permitted use within a Commercial Use Zone of a PIPD.

While a PIA amendment applies County-wide and is not project specific, there is a user wishing to locate within a PIPD in the County with an Entertainment, Outdoor Use which requires a considerable amount of land area. Current conceptual designs reflect that the proposed use will occupy between 47 – 51 acres. The proposed use will consist of a concrete man-made lake approximately 13 acres in size and is proposed to be 2,000 feet in length with the majority of the lake being approximately 185 feet in width. The project, named Surf Ranch Florida, will be proposing to construct a world-class, man-made surfing lake which will provide consistent waves and a safe environment for public recreational and competition purposes.

The applicant is proposing two different paths for the staff to consider as they present the request to the Land Use Regulation Advisory Board (LDRAB) and the Palm Beach County Board of County Commission (BCC) for the initial initiation consideration. These two options are as follows.

Option 1 (Preferred)- IG – General Industrial Use Zone Option

Proposal is to allow the Entertainment, Outdoor Use within an IG Use Pod in a PIPD, as a Conditional Use Class A approval.

Per today's current ULDC -Amend 4.B.1.A.46.):

The approval process and regulations associated with the Entertainment, Outdoor use within a PIPD is currently determined by Table 3.E.1.B. PDD Recreational Use Matrix and further regulated by the supplemental regulations under 4.4.B.1.A.46. It is currently a Permitted Use within a Commercial Use Zone of a PIPD.

Per proposed Use Regulation Project Revisions- Amend 4.B.3.C.4):

The proposed use matrix changes proposed to be adopted February 23, 2017 and the use will be contained within Table 4.B.3.A. – Recreation Use Matrix. The matrix still depicts the use as Permitted within a Commercial Use Zone of a PIPD. The existing and proposed changes do not currently allow the use in an IG Use Zone within a PIPD. It is being proposed that the use be permitted via a Class A Conditional Use approval in an IG Use Zone. No changes to the proposed supplemental regulations for the use itself have been requested as part of this PIA.

610 Clematis Street
Suite CU-02
West Palm Beach, FL 33401
561.366.1100 561.366.1111 fax
www.UDKstudios.com
LCC35

The justification for the allowance of this use in an IG use zone of a PIPD is two-fold. It allows for the special circumstances that may be unique to only certain properties to be considered by the Board of County Commissioners in regard to the permissibility of the use. These could include site constraints applicable only to certain parcels. Second, while allowing the use to be considered, it also allows for the potential for other industrial uses, which could be related to the Entertainment Use, to still be proposed on the IG parcel. These uses (warehousing/manufacturing) can allow flex space in this Use Zone to facilitate the smaller users anticipated. Additionally, the other PIPD located in Palm Beach County, Vista Center, does not have any IG Use Zones that could utilize this process to allow the use, and

Option 2 – Amend Table 3.E.5.D. – PIPD Land Use Mix

The section options being requested to be considered is to continue as the Code allows today and as to be amended for the use to be Permitted in a Commercial Use Zone of a PIPD. However, the request would be to allow for the maximum acreage size of a Commercial Use Zone to exceed the 15 acres currently allowed in the ULDC. This table contained in Article 3 was not revised in the proposed changes being adopted February 23, 2017 and currently reads as follows:

Table 3.E.5.D - PIPD Land Use Mix

Pods	Minimum	Maximum
Industrial	60%	100%
Light General (1)	20%	100% 50%
Commercial	-	20% (max. 15 ac) (2)
Residential	-	20%
Recreation	.006 acre (3)	20%
[Ord. 2014-025]		
Notes:		
1. A General Industrial Pod shall only be permitted with an IND FLU designation. General Industrial Pods shall be prohibited with an EDC FLU designation. [Ord. 2014-025]		
2. The maximum commercial acreage shall not apply to an Economic Development Center (EDC).		
3. Minimum Recreation Pod requirement only applies to Residential Pods. Other residential uses such as Live/Work located in other than a Residential Pod shall still comply with Art. 5.D, Parks and Recreation – Rules and Recreational Standards. [Ord. 2014-025]		

The proposed code revision would allow the following amendment to the existing Note 2 of the chart.

Notes:

2. The maximum commercial acreage shall not apply to an Economic Development Center (EDC) or a PIPD in the BRPO Overlay.

The applicant acknowledges the fact that this request is a policy decision and that consideration may be given to increase the level of review for the approval process for this use within a Commercial Use Zone of a PIPD. However, in regard to the specifics associated with the location of the proposed use, a Development Order Amendment (DOA) would be required to change the

Use Zone designation from IG to CG, thereby assuring that the public can participate in the approval process. The justification for this amendment again is two-fold. First, there needs to be some acknowledgement that certain Entertainment, Outdoor uses require a considerable amount of land area. Amending this note would allow uses, which due to the physical requirements of the use, can locate within a Use Zone where it is actually permitted today in a PIPD. Second, by providing the limitation that the use is only allowed in the Bioscience Research Protection Overlay, it limits the existing PIPD's that would qualify to only the Palm Beach Park of Commerce. While the requested code revision would apply County-wide, the overlay limitation would confine the use to this development. There are no other existing PIPD's within the overlay and the land area available is constrained and it is unlikely that the minimum 40 acres required for a PIPD could be assembled within other areas of the overlay. While this overlay was applied to the one PIPD in 2006, it appears the remoteness of the PIPD has hindered any location of the desired bioscience industries within the park. However, as the Commercial Use Zone in PIPD's does not allow for warehouse/manufacturing, there is some negative impact to the ability to allow the flex warehouse/manufacturing potential spin off uses under this approval option.

Consistency with the Plan

Based upon input from the Palm Beach County Planning Division, the allowance for the use in the BRPO is not inconsistent with the goals and objectives of the overlay. Additionally, please see the following analysis of other plan objectives.

Objectives 1.5 Recreational & Cultural Opportunities, & 1.6 Intergovernmental Coordination. These objectives provide guidelines for those desirable programs that increase recreational and cultural opportunities, and help establish mutually beneficial partnerships with other public or private agencies involved in the delivery of similar recreational and open space services. In most cases there are no direct annual funding commitments made by the Board for these programs.

Response: The proposed amendments support Objective 1.5 in that this code revision will allow for additional recreational opportunities for not only the workforce of the PIPD, but County residential in general. This specific user is proposing a privately funded project with no funding commitments requested of the County, thereby proposing a recreational opportunity with no impact to the County budget or tax payers.

Policy 4.4.7-a: A Planned Industrial Park Development District (PIPD) is an economic activity center allowed in the Industrial and Economic Development Center future land use designations. The PIPD is intended for large Employment Centers primarily designed to accommodate and promote manufacturing, research, development, other value-added activities and support uses. Therefore, non-industrial uses such as residential, retail, office, and hotels, are expected to occur to support its major function as an Employment Center and to implement effective mobility strategies.

Response: The proposed code changes are not inconsistent with the policy to primarily design to accommodate and promote industrial uses and other value-added activities. The recreation use of Entertainment, Outdoor use is already permitted within a PIPD in the code.

Conclusion

While this is not a site-specific amendment, it may be beneficial to note that the land area currently under consideration has been available for over 10 years for development since brought into the PIPD. The narrow configuration of the parcel has inhibited the marketing of the property for larger warehouse or manufacturing/processing uses desired for the existing IG Use Zone designation on the 80+ acre parcel. Code amendments to allow for the use to be considered by the BCC will allow for a tax generating facility to be constructed on site that will focus world-wide surfing sport attention on Palm Beach County, supplementing the unique attributes of the area. The potential, with the use permitted in the IG Use Zone, still existing for spin off smaller scale industrial flex space development to occur on the parcel as well.

Urban Design Kilday Studios requests favorable review and approval of this request to amend the text of the ULDC as contained herein. The Project Managers at Urban Design Kilday Studios are Ken Tums and Joni Brinkman and can be reached at 561-366-1100. Please feel free to contact either of these project representatives with any questions or for additional information in support of this application.

ULDC PRIVATELY INITIATED AMENDMENT (PIA) FORM #80 SUPPLEMENTARY TABLE

1	Table 4.B.3.A	Entertainment, Outdoor added as A under IG in PIPD	Amendment would allow for a use already permitted in a PIPD to be proposed in an IG Use Zone in addition to the GG Use Zone. The need for the amendment is a result of the ever-evolving technology associated with recreational activities and the need for specific land area in order to support these uses.	See Justification Statement (Attachment 1) See Industry Trends (Attachments 2-4)
2.	Table 3.E.5.D. PIPD Land Use Mix	<p>Notes:</p> <p>2. The maximum commercial acreage shall not apply to an Economic Development Center (EDC) <u>or a PIPD in the BRPO Overlay.</u></p>	Amendment would allow for a use already permitted in the CG Use Zone in a PIPD, to exceed to maximum acreage limitation in the BRPO overlay.	See Justification Statement (Attachment 1) See Industry Trends (Attachments 2-4)
.				
.				
.				
Insert additional rows if needed.				

Notes:
Underlined indicates **new** text.
~~Stricken~~ indicates text to be **deleted**. ~~Stricken and italicized~~ means text to be totally or partially relocated.
 If being relocated destination is noted in bolded brackets **[Relocated to:]**.
Italicized indicates text to be relocated. Source is noted in bolded brackets **[Relocated from:]**.
 A series of four bolded ellipses indicates language omitted to save space.

The screenshot shows a video player interface with a dark background. At the top, there are navigation tabs: "VIDEOS", "ORIGINALS", "SWELLWATCH", and "TCT SERIES". To the right of these tabs are several small square icons. Below the navigation is a Mazda advertisement. The ad features the Mazda logo on the left and the text "THE FIRST-EVER MAZDA MX-5 MIATA RF DRIVING MATTERS®" on the right. Below this, there is a dark grey box with the word "TIMELESS" in white, followed by the text "Minh-Dang B., Minneapolis, MN". At the bottom of the ad is a white button that says "EXPLORE NOW". In the bottom left corner of the ad area, it says "MazdaUSA.com" and in the bottom right corner, it says "Legal".

SURFING Magazine Newsfeed

KELLY SLATER WAVE POOL ON NBC'S TODAY SHOW

May 24, 2016 By SURFING Magazine

If you thought it hadn't already, Kelly Slater's man-made creation has most certainly just leaped into the mainstream. That's right, today on NBC's Today Show, host Natalie Morales takes a trip out to Lemoore's most sacred pond for a first-hand report, as well as the first-ever broadcast piece, on the Kelly Slater Wave Company.

NBC, as you may already know, has held the broadcasting rights to the Summer Olympics since 1988. It would not come as a surprise if this was a ploy to promote both surfing's newest groundbreaking development, as well as pump some popularity into the sport before it's possible Olympic debut in 2020. And if you needed a more concrete clue, just check that logo in the corner screen. Give things away much, NBC?



Have a watch at the above piece and judge for yourself. But all conspiracy and controversy aside, it's a pretty damn unique little video that shows all new angles of this wave that Kelly has so tightly kept under wraps.



Surfers And Scientists Team Up To Create The 'Perfect Wave...



SPECIAL SERIES

science of summer waves



Surfers And Scientists Team Up To Create The 'Perfect Wave'

3:52

August 30, 2016 · 4:50 AM ET

Heard on [Morning Edition](#)

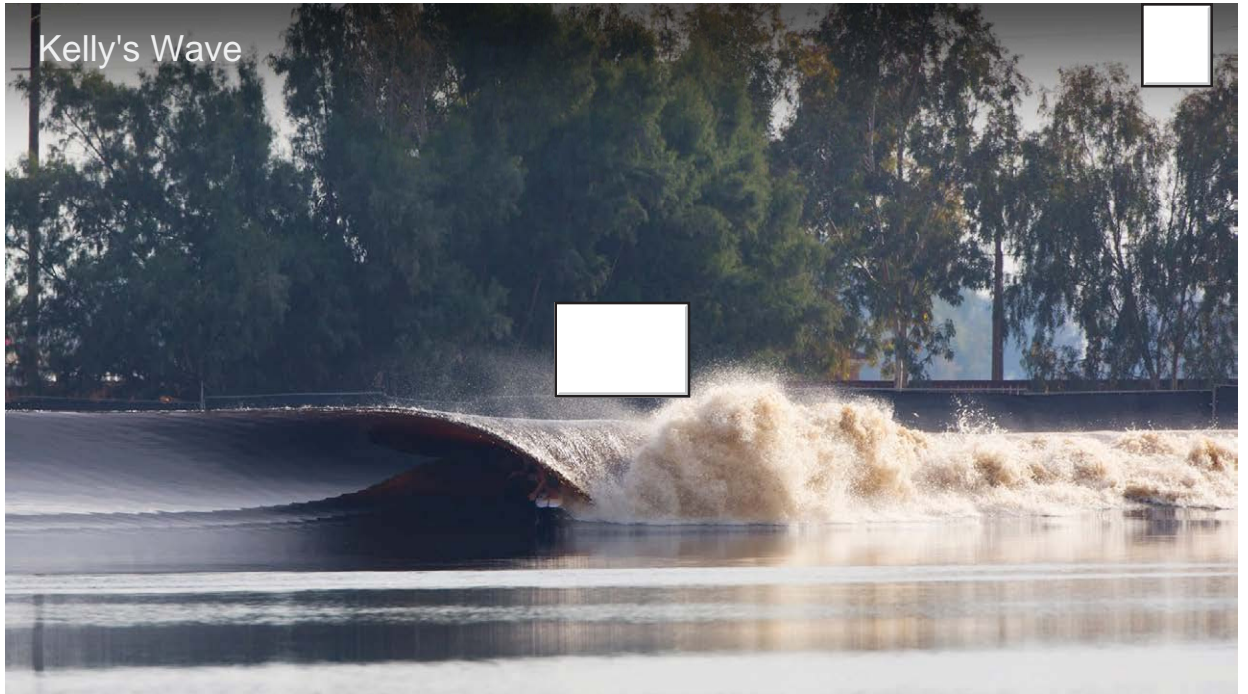


Download



JON HAMILTON

Transcript



Kelly Slater Wave Company YouTube

Forget Hawaii or Fiji. The spot that's really got surfers talking these days is a secluded pond more than 100 miles from the ocean, in California's Central Valley.

"It's just an amazing, amazing wave," says [Robert "Wingnut" Weaver](#), a longboarder from Santa Cruz, Calif., and one of just a handful of surfers who have ridden the wave. "It's mind-blowing."

But it's not natural. A machine generates these breakers in an experimental wave pool south of Fresno, in Lemoore, Calif. And, unlike natural waves, this one has an owner: the [Kelly Slater Wave Co.](#), which plans to market its wave-making technology around the world.

Slater is an 11-time world champion. In December 2015, he electrified the surfing world by releasing a [video](#) titled "Kelly's Wave." It shows him carving turns and riding in the tube of a flawless, head-high wave that lasts for more than 40 seconds.

Surfing publications immediately declared the wave a game-changer — one that could bring high-performance surfing to landlocked areas and allow surfing contests to be held in stadiums.

Artificial waves designed for surfers have been available in U.S. surf parks and resort pools since the 1960s. But most haven't been very impressive. They tend to lack the size and power of natural waves, and they don't create a hollow "barrel" that lets surfers ride completely inside the curl.

Slater's wave is different. "It's just like a normal wave," Weaver says. "You get that lift, that drop."



Surfers say the artificial wave at Kelly Slater Wave Co.'s pond has a natural feel. But the technology that creates it requires a several-minutes-long wait between swells.

Todd Glaser/Courtesy of Kelly Slater Wave Co,

The wave is created by pulling a wing-shaped device through the water, according to Slater.

"It's a freak of technology," he says in his video. But neither Slater nor the scientists who worked on the wave have been willing to discuss details of the system, which is patented.

Other pioneers in the design of artificial waves were happy to talk about the science of how they do it.

Better surfing through science

In a miniature surf pool near San Diego, an air-powered system cranks out tiny but perfect waves every 10 seconds.

"We're trying to carve water here," explains Justin Enjo, an engineer at [Wave Loch](#) and its sister company, Surf Loch. "We're trying to make water exist in the

shape of a ramp."

That means first creating waves in deeper water, then providing a reef, or carefully contoured shoreline, that causes these swells to break in just the right way.

"As they hit the reef they transform, and they get that really hollow section," Enjo explains. "In the science realm, they call them 'plunging breakers.' In surfing vernacular it's referred to 'the tube' or 'the barrel.' "

Surf Loch has yet to build a full-scale surfing wave with this technology. But the firm's founder, [Tom Lochtefeld](#), has created hundreds of less sophisticated artificial waves for clients around the world.

One such customer was a sheik in Abu Dhabi, Lochtefeld says. "The wave itself was mammoth — I mean it was a double, breaking left and right."

Even so, Lochtefeld admits, it didn't look or feel like a natural wave, because it's really hard to replicate an ocean swell in a small space.

For one thing, it takes a tremendous amount of energy. In the ocean, that energy comes from winds that may build water into a wave over 1,000 miles — long before it reaches shore.

With artificial waves, "you don't have 1,000 miles," Lochtefeld says, "So you've got to compress that to the smallest possible footprint. That takes a lot of science," he says — research capability that was out of reach just a few years ago.

Now, though, supercomputers allow Lochtefeld to predict precisely how a wave will interact with the underwater contours of a surf pool.



Justin Enjo, an engineer at Wave Loch, "carves water" with a ramp in his experimental wave-making pool near San Diego. So far, the system is able to create tiny, "perfect" surfing waves every 10 seconds.

Jon Hamilton/NPR; Courtesy of Wave Loch

One of the continuing challenges with artificial breakers is to provide a high quality wave every few seconds, Lochtefeld says.

Wave pools like Kelly Slater's that rely on a wing pulled through the water typically require surfers to wait several minutes between waves. But fewer waves mean less money for the operator.

"It's difficult to get the quality of wave a surfer would like *and* make it commercial," Lochtefeld says.

So he is focusing on a wave-generating device that uses a row of air chambers controlled by a computer. That allows him to produce a wave every eight to 10 seconds, he says.

But it also means his wave pool design has to incorporate a system to dissipate the energy from each wave. That's crucial to prevent sloshing water from distorting the shape of subsequent breakers.

Both Lochtefeld and the Kelly Slater Wave Co. are hoping to see their systems used in surfing competitions. In May, the parent company of the World Surf League, which runs surfing competitions, agreed to acquire a majority stake in Slater's company. The World Surf League is also [offering](#) two "golden tickets" that will allow a couple of lucky surfers to try Slater's artificial wave.

Artificial waves would make it easier to schedule contests, and they would ensure that each competitor faces an identical wave.

"You'll get to who can do the best turn, the highest air, because you'll have such a level playing field," Weaver says.

Still, "it'll never truly replace an open ocean competition," he adds.

For the moment, at least, the International Olympic Committee seems to agree.

The committee has added surfing to the 2020 Olympics in Japan, but the event will take place in the ocean — not in a wave pool.

Science reporters at NPR have been exploring all sorts of waves this summer — from gravitational to seismic and more. You can find all our favorites [here](#).

surf waves surfing

Get The Stories That Grabbed Us This Week

Delivered to your inbox every Sunday, these are the NPR stories that keep us scrolling.

subscribe

By subscribing, you agree to [NPR's terms of use](#) and [privacy policy](#).

More Stories From NPR



SCIENCE
When The Biggest Earthquake Ever Recorded Hit Chile, It Rocked The World



SCIENCE
Climate Change Complicates Predictions Of Damage From Big Surf

Popular on NPR.org



collected on the property, is set in a beautiful natural landscape only 10 minutes East of Austin's airport.

"As a surfer and an engineer, NLand has been a dream of mine for the past 20 years," said Doug Coors, NLand's founder. "We had our share of challenges, but they are behind us and I look forward to sharing our waves with the world."

The lagoon features waves for surfers of all levels: from head high, open face waves with a 35-second ride tailor-made for performance surfing; challenging open face waves for passionate novices; to gentle white water waves for beginners and children.

The diverse range of waves available throughout the lagoon fulfills the requirements of NLand's full spectrum of guests. And overcrowding is not an issue as the park can safely cater for 120 or more surfers at any one time, in the different skill-based surf zones.

"The launch of our second Wavegarden facility is a historical moment for our company," explained Josema Odriozola, Wavegarden's CEO. "Together, we have scaled this project up to a level never before seen."

The long anticipated opening of NLand coincides with the one-year anniversary of Surf Snowdonia, which, since its opening has produced around 195.000 waves. The accumulated length of these waves equates to a distance of 30.000 km (18.600 miles), which is three quarters the circumference of the earth.

During the warm-up period, NLand will be open Tuesday to Sunday from 11 a.m. to 8 p.m, and on Mondays from 2 p.m. to 7 p.m. For bookings & more information, go to: <http://www.nlandsurfpark.com>

Big success at world's first Wavegarden surfing contest: Red Bull Unleashed, Surf Snowdonia

The Red Bull Unleashed 2015 was the first international surf contest to be held in a Wavegarden facility, taking place at Surf Snowdonia (Dolgarrog, Wales, U.K.) on September 18-19. The event brought together some of the best surfers in the world and, thanks to our technology, all competitors surfed



the same number of identical waves, in an innovative man-on-man elimination format.

Unhindered by the different factors that affect wave quality in the ocean (wind, swell and tide), Surf Snowdonia's lagoon offered ideal conditions for the pro-surfers to fully display their talents. Contest winner Hawaiian pro surfer Albee Layer, along with the other competitors, praised not only the mechanical perfection and quality of the waves, but also the close proximity of the 2,000 vibrant spectators that cheered every manoeuvre on every wave.

Surf Snowdonia is the first commercial installation using Wavegarden's technology. It opened its doors on August 1, 2015 and is located in a lee of the beautiful Snowdonia mountains, next to the village of Dolgarrog, where a derelict aluminium factory has been transformed into one of the most innovative surfing facilities in the world.

The Wavegarden lagoon at Surf Snowdonia measures 300m x 120m and provides ocean-like waves tailored for surfers of all ability levels. Perfect waves ranging between 0.7m and 1.85m high, with a lengthy surfing experience of 16 seconds per wave, are consistently generated in a safe and natural environment.

For more information and bookings, please go to www.surfsnowdonia.co.uk

Surfing is now for everyone

For more than 20 million people, surfing has become a metaphor for living a healthy lifestyle and being in tune with nature's rhythms. Surfing is ranked in the top 20 most popular and fastest growing sports in all countries, cultures and demographics.



The 'stoke', or feeling of surfing, which has been limited to the lucky few who live near quality surf, is now accessible to everyone.

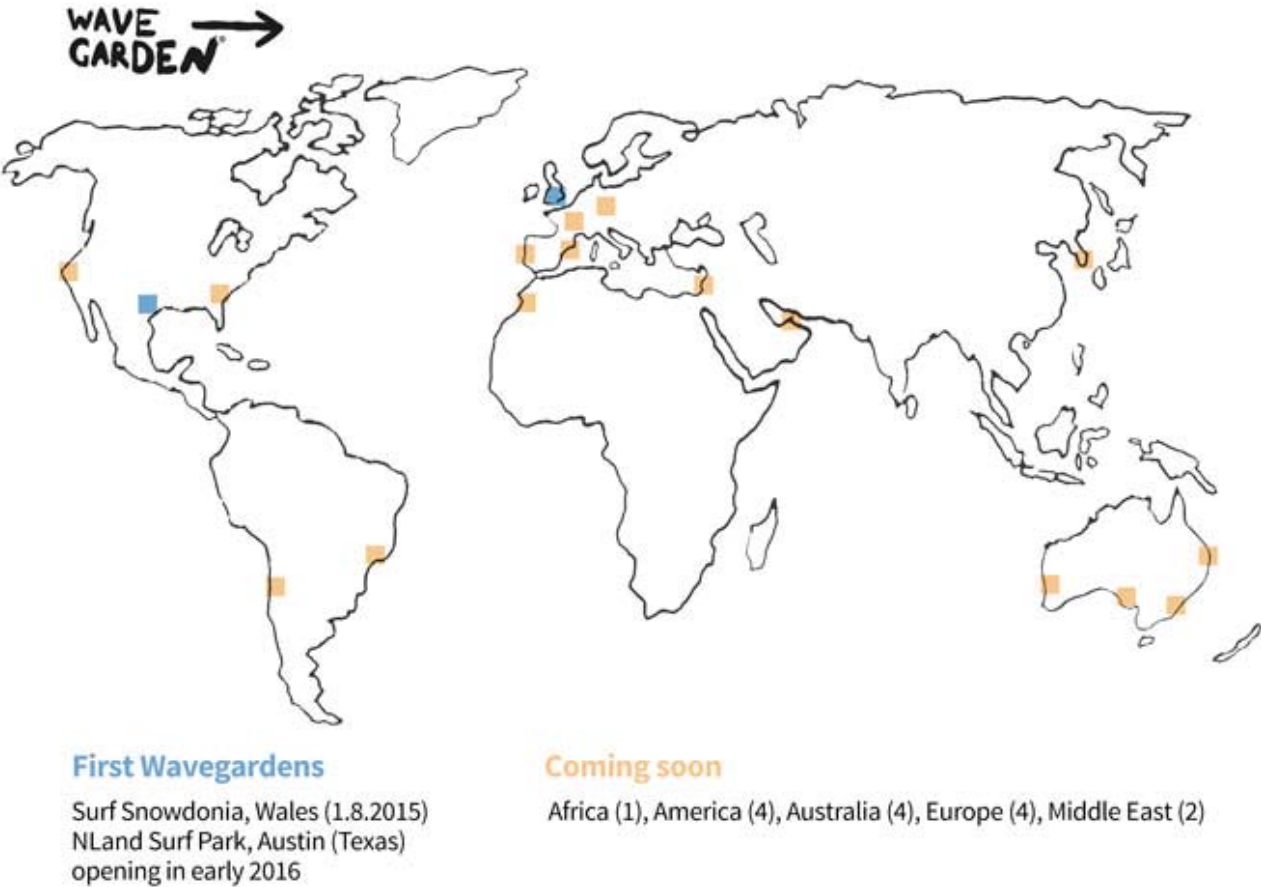
By eliminating nearly all inherent variables associated with surfing in the ocean, this revolution in wave riding can provide quality surfing waves all hours of the day and through all seasons.

Wavegarden offers a guaranteed spectacle allowing innovative and unique surf competitions, high performance training and surfing lessons in a

controlled environment.

Wavegarden is ideal as a stand-alone facility or as a central feature in large scale mixed-use developments. It is the perfect anchor attraction for resorts or leisure parks and creates a completely new and singular destination built around surfing, many other wave sports and the always alluring beach life.

Wavegarden has two facilities currently under construction that will open their doors in 2015. Six other facilities are being developed, with another twenty two projects financially committed across five continents. Discussions are in progress for many other locations.



Groundbreaking Technology

Wavegarden is a leading engineering company dedicated to the design, manufacture, installation and commissioning of wave generating systems and lagoons for surfing and other watersports.

The Wavegarden team of engineering experts specialized in mechanical and aerodynamic systems -all of them passionate surfers- has worked for nearly a decade to create an artificial surfing lagoon designed to generate consistent,

perfectly formed waves for surfers of all abilities.

Numerous models on different scales, countless real size tests and computing simulations have led to the creation of the simplest, most efficient and reliable wave generating technology possible.

Wavegarden's patented technology is based on an innovative hydrodynamic Wavefoil and a revolutionary wave lagoon design. The state of the art Wavefoil generator has been proved to be more reliable and to require significantly less energy compared to other artificial wave technologies, including those that are still in conceptual design stage.

Business Opportunities

Wave frequency, lagoon capacity and associated costs qualify Wavegarden as the first surfing installation to provide a commercial return on investment as a stand-alone facility:

- Estimated EBITDA in a complete installation is over 1.5 million euros
- Estimated IRR around 20%, depending upon location (in a complete installation, excluding land costs)

Why a WAVEGARDEN?

- Surfing is currently limited to coastal locations
- Favorable surf conditions only occur about 30-50% of the year
- Surf schools cannot cope with current demand
- Around 1 million new surfers per year guarantee a growing market
- Wavegarden provides perfect beginner and expert waves at all times
- Unlike artificial snow facilities, Wavegarden can be better than the real thing

© 2013 Wavegarden S.L. | T. +34 943 322538



CYMRAEG // ENGLISH



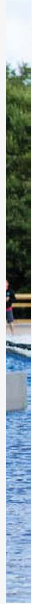
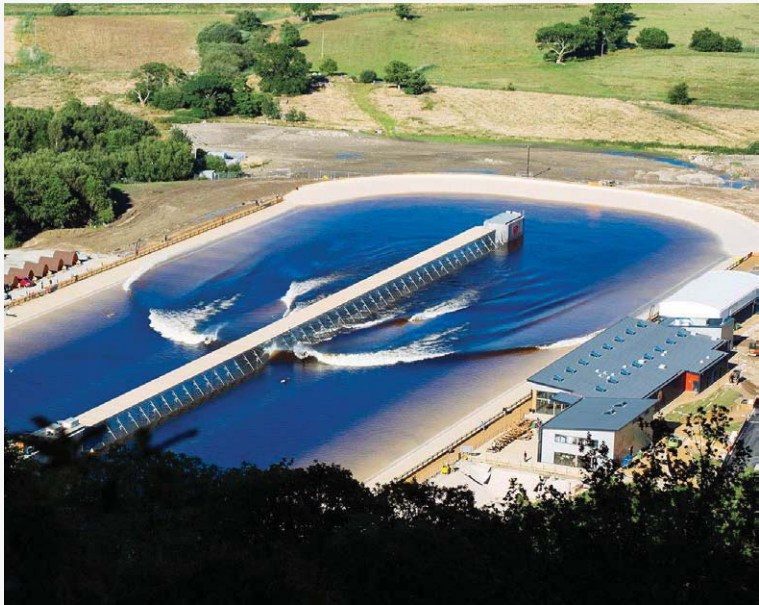
BOOK NOW

Picture this. A perfect lozenge-shaped fresh-water lagoon, roughly the size of six football pitches, set in the lush, green Conwy Valley in the lee of the Snowdonia mountains. Breathe it in. It's clean, it's fresh, it's wild and it's beautiful.

Now add something entirely unexpected. A powerful head-high wave that rises at the centre of the lagoon, peels perfectly for more than 150 metres, and dissipates softly as it hits the shore.

Welcome to the Surf Snowdonia Adventure Parc: a revolutionary world-first inland surf lagoon and the UK's most compelling outdoor adventure destination for you, your friends and the whole family to enjoy.

Our awesome 300-metre surf lagoon is the main deal, but there's loads of other stuff to try out when you visit – from adrenalin thrills & spills on our Crash and Splash lagoon to SUP safaris, kayaking and kiddies soft play. Take a look around!



A BIT OF HISTORY

Set as we are in the majestic Conwy Valley in North Wales, we're lucky enough to have made our home amongst the rivers, mountains, woodlands and wildlife of Snowdonia.

It's a place where you'll find some of Britain's most dramatic and intriguing landscapes, many of which have barely changed since the last Ice Age. Hard to see how you could be anything but uplifted and inspired by it.

We built our lagoon on a derelict industrial site which was once home to an aluminium factory. In the construction phase we removed a hundred years' worth of industrial waste and recycled thousands of tonnes of stone and metal.

Surf Snowdonia sits just a few metres away from the banks of the River Conwy and is close to a Site of Special Scientific Interest (SSSI). It's also a focal point for the village of Dolgarrog. We're proud that we have been able to completely transform the site's environmental integrity and legacy.