



**WAVELOCH®**





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## **We surf**

We at Wave Loch® are passionate about our product. We love to share the stoke with our customers and our end users.

This is our commitment to you. Conceived in the shallow reef breaks off La Jolla California, Wave Loch® was founded in 1991 and is now the world leader in human generated wave technology. With over 100 patents world wide and operating installations spanning the globe, we are a technology and lifestyle company. It's Wave Loch's connection to the lifestyle that offers enduring value to your venue.

Take the time to understand our product offerings, and how our lifestyle approach can generate reward beyond a financial return. We love what we do and look forward to sharing our passion with you.



Tom Lochtefeld  
Founder and President

# innovation





# Wave Loch®, LLC

At Wave Loch® our inspiration is the ocean. Our aspiration is to share the surf stoke, the thrill of riding a board on a wave. Consider us stoke enablers...creating an authentic lifestyle expression through our technology.

Since 1991, Wave Loch® technology has defined the simulated wave experience in a controlled environment. Our products are thrilling, safe and appealing to both the participant board rider and profit driven client. Wave Loch's proprietary intellectual property and real world practical application combine into a powerful range of surfing attractions:

**The Flow Series** - Any product that utilizes sheet wave technology and allows the use of a bodyboard or a flowboard (stand-up riding).

**The Surf Series** - Any product that allows the use of a traditional surfboard with fins.

**The Wave House®** - A lifestyle venue that integrates exclusive Wave Loch® technology with elements of beach culture and multiple revenue streams.

Proven in 30 countries with over 200 installations, Wave Loch® delivers increased revenues by combining:

- Skill-based rides that provide an instant thrill;
- Multiple board sports that attract a youth demographic; and,
- An authentic lifestyle connection that creates a sense of community.

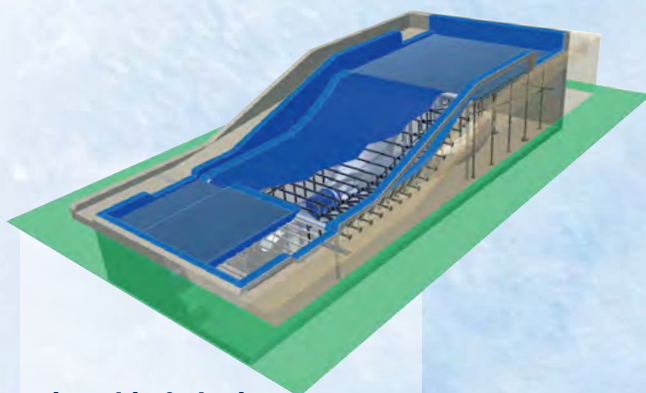
Whether you need a new attraction to augment your existing offerings, a fully integrated lifestyle entertainment concept to anchor your leisure destination, or something in between, Wave Loch® has the right solution for you..





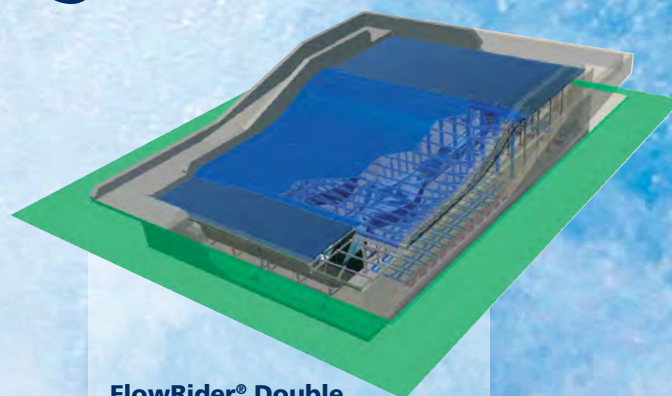
**PROVEN IN 30 COUNTRIES  
WITH OVER 200 INSTALLATIONS**





### FlowRider® Single

- Attraction footprint:  
width 6.7 m (22') x length 16.2 m (53')
- Adjacent walkways: 1 m (3'3") minimum
- System elevation:  
Grade elevation is adjustable based on site  
Assumes front nozzle deck 0 (at grade)  
Height at back deck ≈ +1.2 m (+4')  
Tank depth ≈ -1.5 m (-5')
- Capacity ≈ 240 - 160 rides per hour
- Weight ≈ 1500 kg per sq. m (300 lbs per sq/ft)
- Electrical consumption 85 kW @ 115 hp
- Electrical rating 104 kW @ 140 hp
- Tank volume ≈ 150,000 liters (40,000 US gallons)
- Riding Vehicle – Flowboards and Bodyboards



### FlowRider® Double

- Attraction footprint:  
width 12.8 m (42') x length 16.2 m (53')
- Adjacent walkways: 1 m (3'3") minimum
- System elevation:  
Grade elevation is adjustable based on site  
Assumes front nozzle deck 0 (at grade)  
Height at back deck ≈ +1.2 m (+4')  
Tank depth ≈ -1.5 m (-5')
- Capacity ≈ 480-320 rides per hour
- Weight ≈ 1500 kg per sq. m (300 lbs per sq/ft)
- Electrical consumption 170 kW @ 230 hp
- Electrical rating 208 kW @ 280 hp
- Tank volume ≈ 200,000 liters (55,000 US gallons)
- Riding Vehicle – Flowboards and Bodyboards
- Divider can be removed with ease.

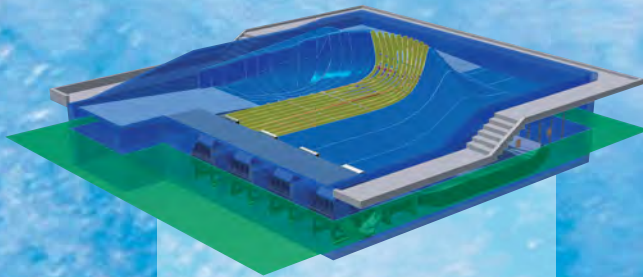
## The Flow Series

Using a thin sheet of water that flows over a stationary wave form. The resulting “wave-like” shape permits riders to surf down, carve a turn and ride up the simulated wave surface.

**FlowRider® Single** The FlowRider® allows anyone to enjoy the excitement and thrill of catching and riding a wave regardless of skill level. The wave-form is a proprietary composite membrane riding surface, similar to a trampoline, that is designed to handle any wipe-out.

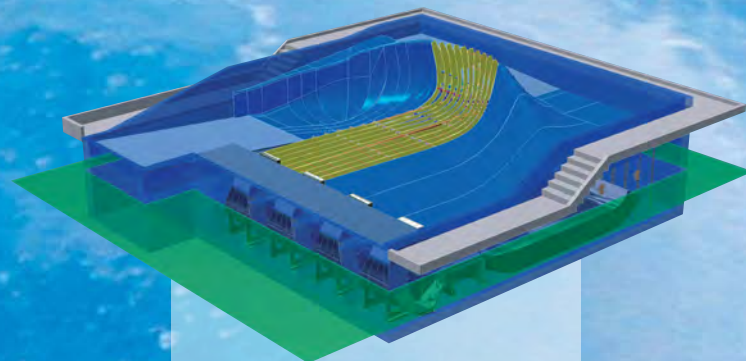
**FlowRider® Double** With an additional 10ft of width, the FlowRider® Double allows a rider to surf over a larger wave face. The FlowRider® Double can also be divided, allowing two riders at the same time.





**FlowBarrel® Five** - Available with a Wave House® license.

- Attraction footprint:  
width 13.4 m (44') x length 13.4 m (44')
- Adjacent walkways: 1 m (3'3")
- System elevation:  
Grade elevation is adjustable based on site  
Assumes front nozzle deck 0 (at grade)  
Height at back deck ≈ +2.1 m (+7')
- Tank depth ≈ -1.8 m (-6')
- Capacity ≈ 240-160 rides per hour.
- Weight ≈ 1500 kg per sq. m (300 lbs per sq/ft)
- Electrical consumption 312 kW @ 420 hp
- Electrical rating 312 kW @ 420 hp
- Tank volume ≈ 170,000 liters (45,000 US gallons)
- Riding Vehicle – Flowboards and Bodyboards



**FlowBarrel® Ten** - Available with a Wave House® license.

- Attraction footprint:  
width 16.5 m (54') x length 16.5 m (54')
- Adjacent walkways: 1 m (3'3")
- System elevation:  
Grade elevation is adjustable based on site  
Assumes front nozzle deck 0 (at grade)  
Height at back deck ≈ +3 m (+10')
- Tank depth ≈ -3 m (-10')
- Capacity ≈ 240-160 rides per hour
- Weight ≈ 1500 kg per sq. m (300 lbs per sq/ft)
- Electrical consumption 680 kW @ 860 hp
- Electrical rating 680 kW @ 860 hp
- Tank volume ≈ 454,000 liters (120,000 US gallons)
- Riding Vehicle – Flowboards and Bodyboards

$$\text{FLOWBOARDING} = (\text{SURFING} - \text{FINS}) + (\text{SNOWBOARDING} - \text{SNOW}) + (\text{WAKEBOARDING} - \text{BOAT}) + (\text{SKATEBOARDING} - \text{WHEELS}) \times 3 \times 10^5 \text{ LITERS} + \text{H}_2\text{O}$$

Looks like surfing, rides like snowboarding, with tricks of skateboarding, 'flowboarding' is a cross platform sport that appeals to all board riders.

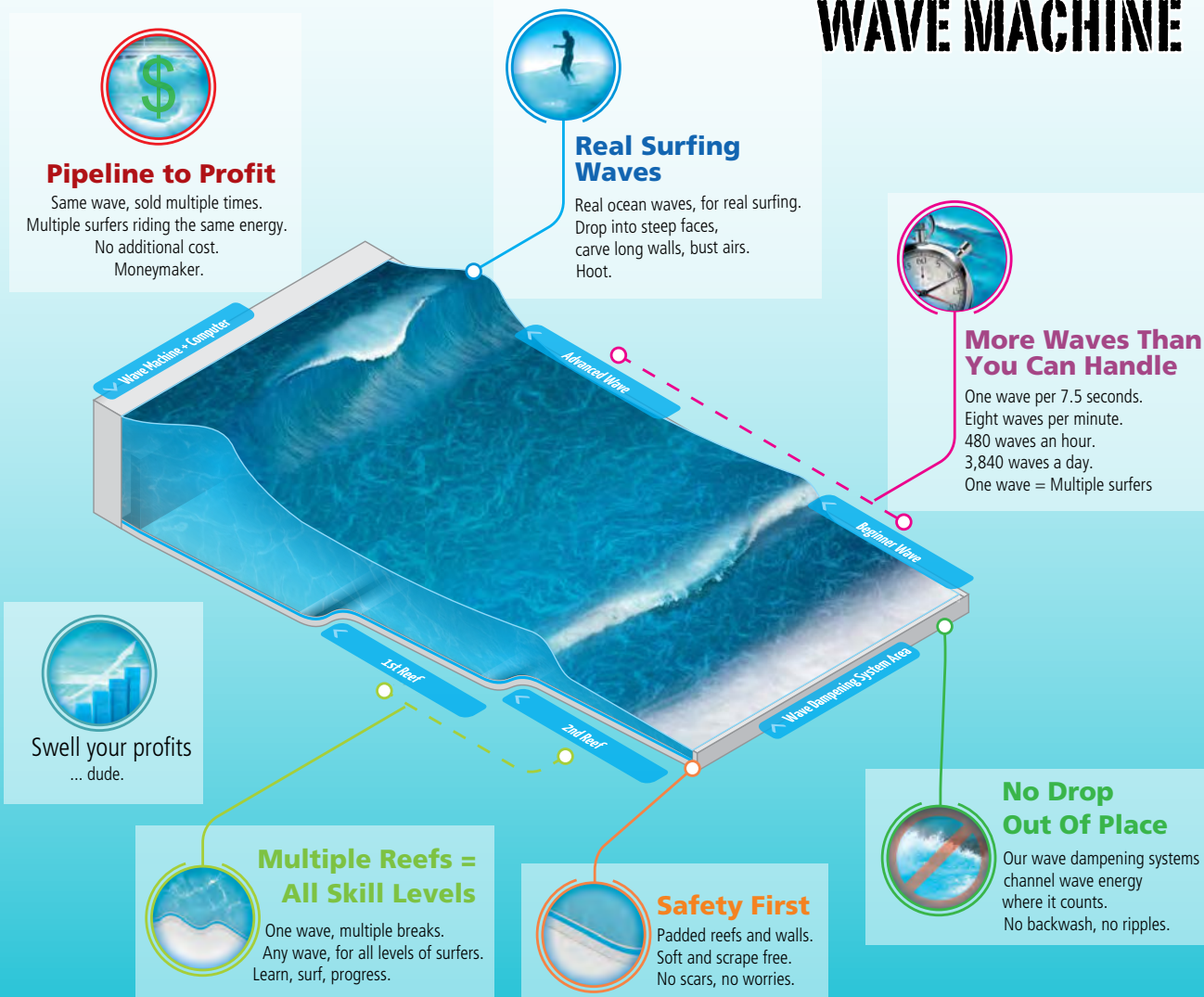
**FlowBarrel® Five** Available with a Wave House® license. The five-foot barrel wave is a smaller, friendlier version of its bigger brother. Its surface slopes up, creating a perfect five-foot barreling wave at full power.

**FlowBarrel® Ten** Available with a Wave House® license. The steep wave face generates a behemoth of a 10 foot barreling wave at full power. Lower power settings can mimic the FlowRider® and everything in-between. The FlowBarrel® is a versatile, spectacular attraction that pulls in the crowds.





## A MONEY MAKING WAVE MACHINE



# The Surf Series

Our Surf Series allows riders to experience the thrill of real surfing on a perfect wave using their own surfboard. The ultimate surfer's dream, their own wave... no hassle... perfection guaranteed... on demand.

### SurfPool™ V Series

Surf culture for all. Wave Loch's V Series is our most economical Surf Pool product. Enjoyed by multiple surfers at a time, this wave generates new and repeat business with maximum stoke.

- Wave Height: 1.5 meters (5 ft.)
- Wave Frequency/Period: 1 wave every 10 seconds
- Length of Ride: 10 seconds
- Break Direction: Left or Right
- Break Count: Depending upon available space, from 1 to 3 breaks.
- Skill Level: Beginner to Intermediate
- Pool Dimensions (minimum): 100' (30m) wide by 200' (60m) long and 9' (2.8m) max depth
- System Type: Vacuum
- Energy Source: Electric or Natural Gas

### SurfPool™ V Series

Wave Loch's VX Series has all the capability of the V Series, with the added ability to create a 2 meter high-performance wave designed for the more seasoned surfer who wants to get barreled, test new maneuvers, and fly down the line. The X-series is designed to bring competitive surfing to the masses and revolutionize how the sport of surfing evolves. The larger waves provided by the VX-Series are perfect for making the surf pool a centerpiece attraction of a resort, real estate development or sports center.

- Wave Height: 2+ meters (6.5 ft.)
- Wave Frequency/Period: 1 wave every 10 seconds
- Length of Ride: 10 seconds
- Break Direction: Left or Right
- Break Direction: Left/Right or Combo (depending upon available space)
- Break Count: Depending upon available space, from 1 to 3 breaks.
- Skill Level: Beginner to Expert
- Pool Dimensions (minimum): 162' (50m) wide by 330' (100m) long and 10' max depth
- System Type: Vacuum & Pressure System
- Energy Source: Electric or Natural Gas



# SURFING DEMOGRAPHICS



## Average surfer:

- 90% Male
- 34 years old
- Highly educated
- \$75,000 annual income
- Owns 4 surfboards

**20** to surf **2.5** hours  
miles on 108 separate occasions a year

**Pays \$59-\$100 for each session**  
(food, gas, rental, lodging, merchandise)

## Cost per wave



### Domestic:

travel cost per session: \$25-\$100  
Surfed waves assumed 20 per session  
(1 wave ever 7,5 minutes during 2,5 hours)

Price per wave

**\$1.15 - \$5.00**



### Travel:

10 day vacation surf resort \$120- \$600 per day  
Average travel cost \$1500 plane ticket  
1-2 days high quality waves, 7 days of good surf, 1-2 days minimal surf  
catches 15 waves per session (1 wave every 10 minutes over 2.5 hours)  
x 2 sessions a day, total 30 waves per day.

Price per wave

**\$9.00 - \$25.00**



**3.3**

million surfers  
in USA

+12-15 % growing each year



**35**

million surfers  
world wide



**\$2.5 Billion**

injected by surfers in US coastal economy



**162 countries**  
have surf tourism



Dominating international surf tourism:

US, Australia, New Zealand, Brasil, Japan, UK, France, Spain, Portugal

Emerging markets:

Russia, Central America, South America



**91%** have taken a surf  
trip in 5 years

Of those.



82 % more than 2 trips



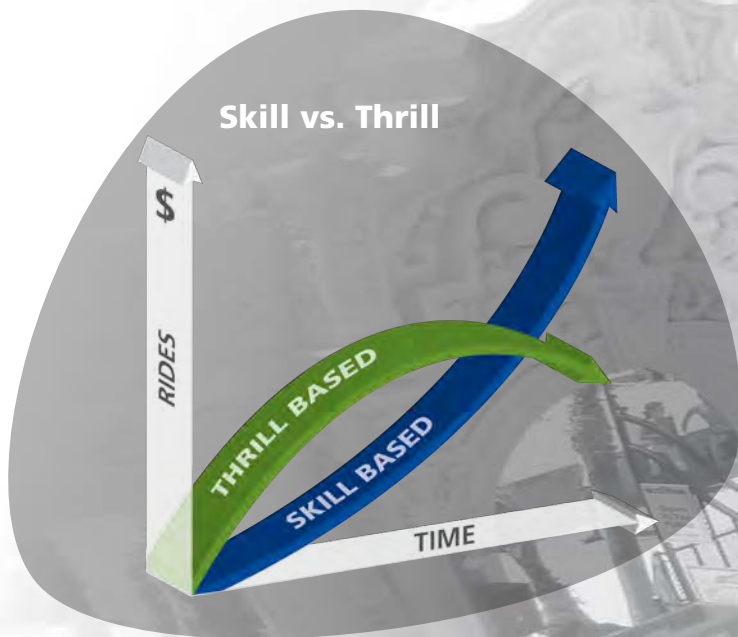
40 % more than 10 trips



20 % more than 21 trips

Integrating the Surf Series products into one venue creates a platform for surfing enthusiasts (from beginner to expert) to either learn how to surf, practice existing skills, or perfect new tricks.





## WAVE LOCH TECHNOLOGY PROVIDES THE ANTIDOTE TO THRILL FATIGUE

**BEGINNER**

**INTERMEDIATE**



# Key Concepts

## Skill vs. Thrill

Boardsports such as surfing, snowboarding, skateboarding and flowboarding are skill-based activities that challenge riders to develop new tricks to emulate their heroes. By comparison, the typical water park or theme park rides are thrill-based rides. No skill is required and no reward or accomplishment is earned. The more you ride a thrill ride the less thrilling it becomes. This is what we call thrill fatigue.

Wave Loch® technology is the antidote to thrill fatigue. The adrenaline rush of successful challenges met, inspire riders to achieve a never-ending cycle of skill based reward. Thereby increasing rider visitations and loyalty.





ADVANCED

## Lifestyle

Wave Loch® DNA is a double helix of wave calculus and wave riding passion. We surf. We live and work at the beach. We infuse our products with our passion and stay close to our roots. Our products are icons of the California beach lifestyle.

Wave Loch® attractions create an emotional connection to a multi-billion dollar board sports industry. Our wave technologies are proven in attracting the valuable youth market, families and boardsport enthusiasts.

When orchestrated correctly, the lifestyle identification inherent in Wave Loch technologies can significantly increase overall venue revenues beyond those generated directly by the waves, including sales of food and beverage, retail products, sponsorship opportunities and corporate and competitive events.





# Revenue Generation

The true economics of Wave Loch® attractions extend beyond the revenue generated directly by the ride.

Wave technologies generate revenue through paid ridership. Every wave has a maximum capacity, a maximum price per ride, and a maximum total possible revenue.

Yet the economics of a Wave Loch® product aren't limited to these simple measurements.

Skill vs. Thrill keeps riders coming back. Lifestyle integrity keeps riders on the waves and brings others to watch.

Both of these concepts create opportunities to generate additional revenue.

Each venue has a powerful set of tools available to fine-tune the revenue generating power of Wave Loch® products in a way that best suits its business.

**Food & Beverage**

**Associated Retail**

**Branded Merchandise**

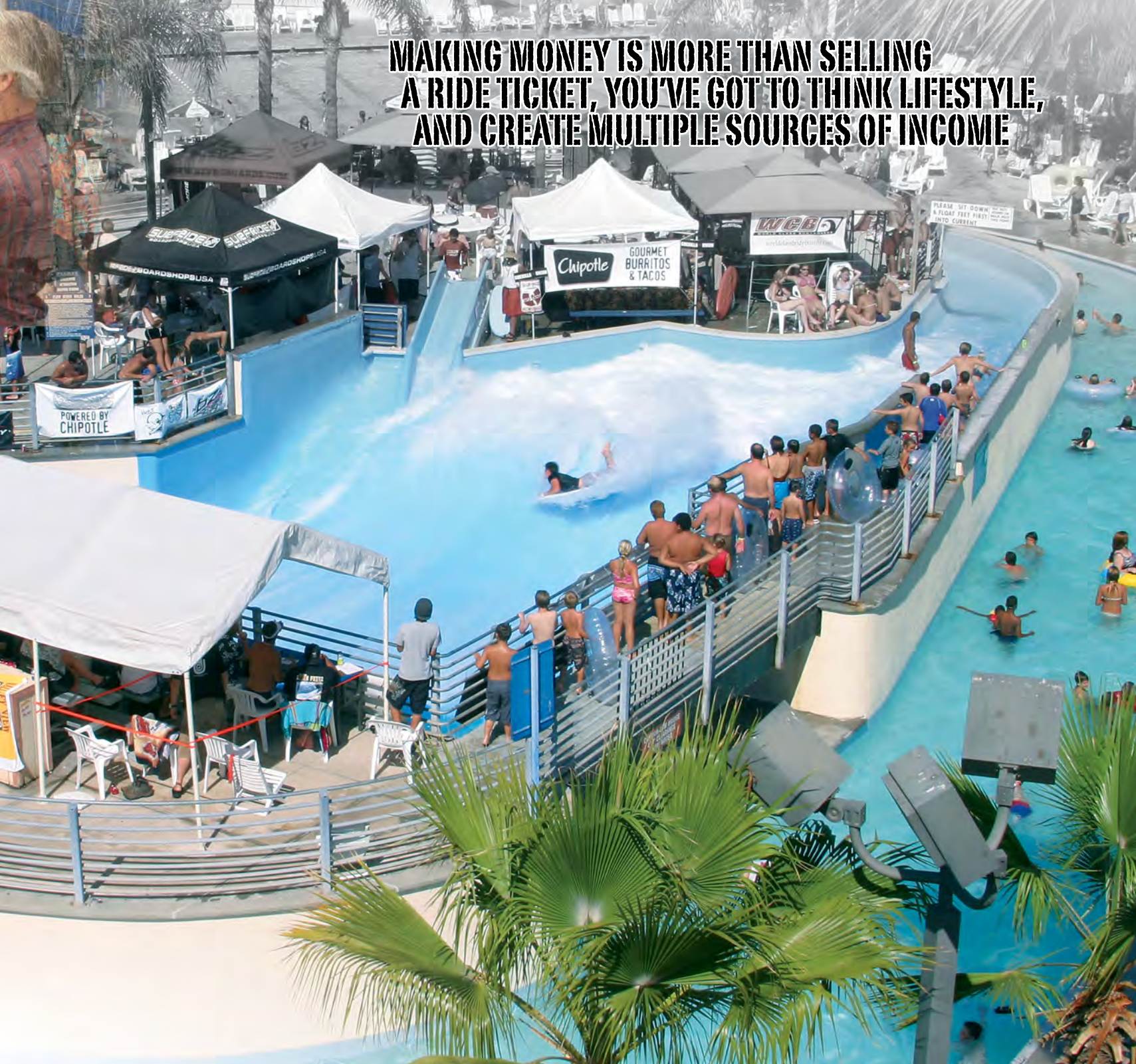
**Competitions & Special Events**

**Corporate & Group Bookings**

**Sponsorship**



# MAKING MONEY IS MORE THAN SELLING A RIDE TICKET, YOU'VE GOT TO THINK LIFESTYLE, AND CREATE MULTIPLE SOURCES OF INCOME



Integration of multiple revenue streams is the path to long-term viability and success:

- The show element of the wave offers opportunities with food and beverage service for those watching.
- The lifestyle connection of the wave creates retail and branding opportunities.
- The uniqueness of each wave and the identification with the sports of flowboarding and surfing promotes the sale of wave-branded merchandise such as boards, t-shirts or wetsuits.
- The skill component of the waves allows for the creation of competitive and special events.
- The communal nature of the wave experience is ideal for corporate and group bookings and parties.
- The strong youth demographic presents outstanding opportunities for sponsorship.



# A PLACE TO EXPERIENCE THE CALIFORNIA BEACH LIFESTYLE



CONCERTS



COMPETITION



BAR AND GRILL



WAVE HOUSE



## Powering Wave House®

### The concept

Wave House® is an entertainment venue, pioneering the fusion between surf, music and fashion with retail, food, beverage and hotel amenities. It's a place to hang out, a place to ride, a place for families, group parties and corporate events. It's a multi-faceted, revenue-generating, lifestyle venue. Wave Loch® is the exclusive supplier of surf technologies reserved solely for Wave House® Holdings LLC the managing partner of Wave House® venues.

Wave House® facilities typically fit into one of two categories:

- **Wave House® Entertainment Venues** – 1000m<sup>2</sup> to 5000m<sup>2</sup> (10,000 sq ft to 50,000 sq ft).

Comprised of: retail; bar & grill and music stage with at least one wave attraction.

- **Wave House® Destinations** – greater than 5000 m<sup>2</sup> (50,000 sq ft)  
Comprised of: multiple wave attractions; third-party retailers; restaurants; live music stages; DJ booth and video walls; hotel and residential schemes.

Initiation of a Wave House® Development is negotiated between Wave House® Holdings LLC, the land owner and a financial partner.





Wave House® is a cultural and sporting icon for active youth... it's the place to be, and be seen.

- Brands such as MTV recognize the media value of Wave House®, filming their number one show, Total Request Live which achieved their highest ratings ever.

- Wave House® is the nexus for board sports retailers to achieve an emotional connection with their end customer and sell products associated with their top athletes. Because Wave House® opens untapped inland markets, the entire action sports industry not only supports, but actively participates by leasing retail space.

- Pro surfers, skaters and snowboarders plan their travels to include Wave House® destinations on their world tours and book Wave House® venues for both private parties and to promote their latest movie and DVD releases.

### Locations include:

- **Changchung, China**
- **Chongqing, China**
- **Durban, South Africa**
- **Mallorca, Spain**
- **San Diego, California**
- **Santiago, Chile**
- **Sentosa Island, Singapore**





# WAVELOCH®

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SurfPool™, FlowRider®, and FlowBarrel® attractions comprise proprietary technologies covered by pending and registered U.S. patents. Please visit [www.waveloch.com](http://www.waveloch.com) for further information on the patent protection provided for these products. Global coverage is provided by patents and pending applications in foreign countries.

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## THE FUTURE OF NATURE®