

# WORLD WATERPARK™

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**Splash Lagoon—**  
Taking Hospitality Indoors

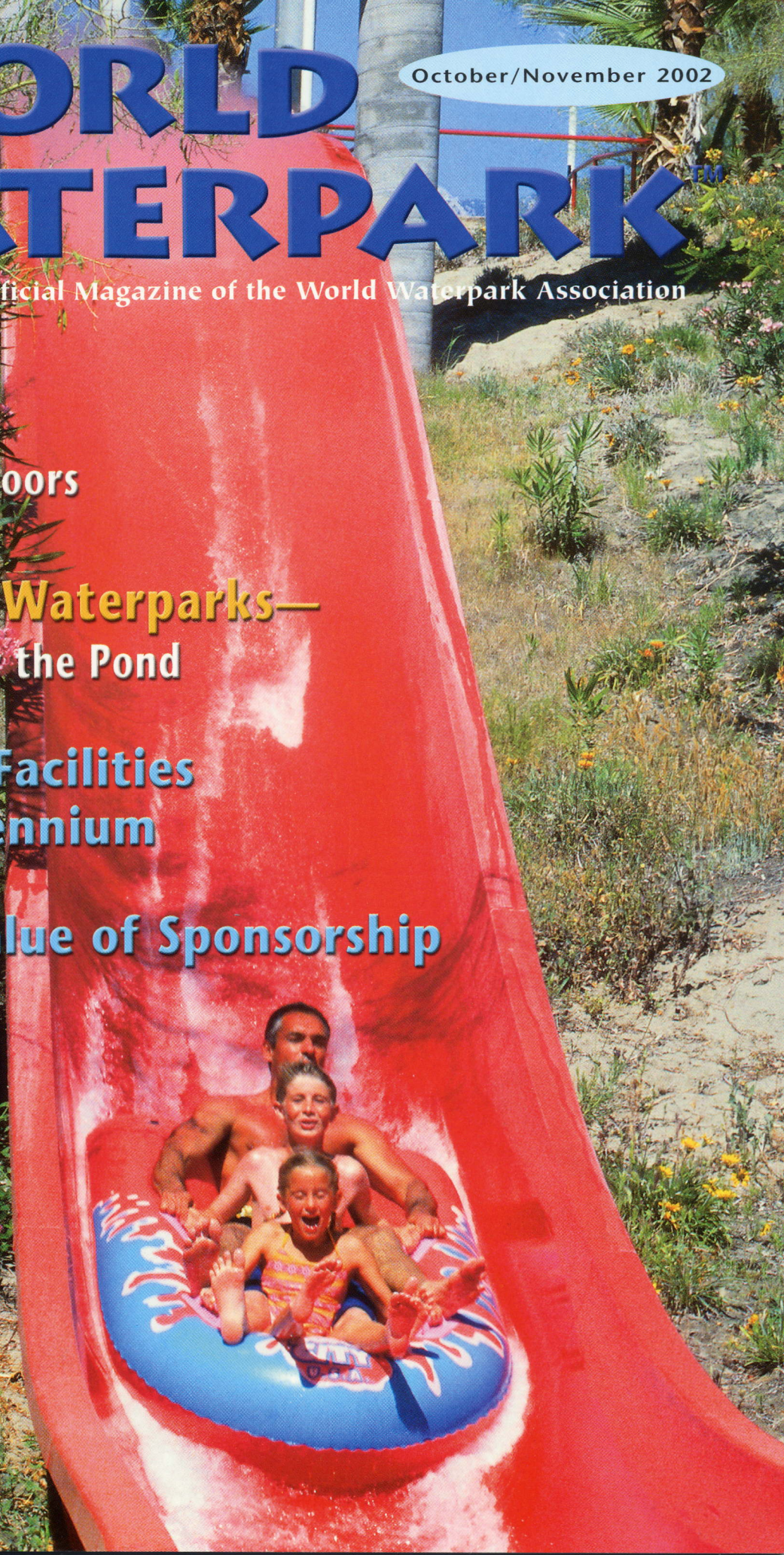
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# Making a Big Splash With Laminated Wood

The Spring and Summer of 2002 provided a challenging time for the construction of a unique building structure, Scott's Splash Lagoon in Erie, Pennsylvania. As the name indicates, Splash Lagoon is an indoor waterpark located at the Peach Street Exit of Interstate 90 in northwest Pennsylvania. The idea for this type of structure (located in a geographic area that often has been accused of exhibiting two seasons—August and Winter) is inspirational, and the owners should be commended for their vision. The open expanse of space in the 77,000 square foot facility is created by the use of only 10 interior columns, and wide-open, clear-span areas that allow the numerous pools and slides to be intermingled.



The architect, Weber Murphy Fox of Erie, selected the renewable natural resource, exposed wood, as the material to create Splash Lagoon's atmosphere. The laminated wood roof system consists of uniquely displayed heavy timber components. The roof framing plan incorporates numerous large girder beams that are 14-1/4" wide x 75-5/8" deep x 84'-5" long and weighing almost 22,000 pounds (now that's a big tree!). The large sizes of many of the members is not limited by the tree size.

Modern laminated wood technology utilizes thinner 2-inch horizontal subpieces stacked to the appropriate depth. The horizontal pieces are finger-jointed at the ends to create the long lengths. Also comprising the structural system are 12-1/4 x 12-1/4 columns and knee braces, 12-1/4" wide curved and tapered beams, 8-3/4" rafters, purlins, and a "pop-up" clerestory, which literally "raises the roof" an additional 10 feet, and is affectionately known on the site as the "hut." Housed in the "hut" are skylights, which allow natural light to permeate the area below.

The entrance is framed by a complex series of 10-1/2" members built as a truss that spans approximately 60'-0 and is 12'-0 deep. To compliment the heavy timber, a 3x6 laminated deck was utilized as the roof sheathing. Tying the laminated members together is an intricate system of galvanized and stainless connections and bolts. The most intricate of all the connections are the "Christmas Tree" column connections. These stainless base connections weigh over 1,000 pounds each and connect five individual and independent 12-1/2" members atop a 20'-0 high 36" round concrete column. In all, there is close to one-half

million board feet of lumber contained in the 333 members, 45,000 square feet of deck area, and 25 ton of steel connections and bolts.


The coordination of the laminated roof system was awarded to Seech Industries, Inc. of Pittsburgh, Pennsylvania. As the laminated package facilitator, Seech Industries, Inc. surrounded themselves with some of the best professionals in the industry. The team concept was an outright necessity to successfully complete the project.

Comprising the team were:

- Gray Engineering & Design, London, Kentucky—*Connection design and shop drawings*
  - Structural Wood Systems, Greenville, Alabama—*Laminated wood manufacturer and fabricator*
  - Pittsburgh Fabrication & Machine, Neville Island, Pennsylvania—*Connection fabricator*
  - Filler King Company, Homedale, Idaho—*Laminated deck supplier*
  - Bryan Construction, Slippery Rock, Pennsylvania—*Laminated wood erector*
  - Seech Industries, Inc., Pittsburgh, Pennsylvania—*Laminated wood project and fabrication manager*
- Close coordination and communication with Bob Banks

of Bob Banks Project Management, Inc., Mike Hammil the field superintendent, the Architect's project manager Rick Avon, and Dave Steele of Steele Structural Engineering, allowed the team to complete the work within budget and almost two weeks ahead of the anticipated schedule.

As the construction proceeds and the building begins to take form, you can almost hear the laughter and splashing of water from children and adults alike. Given the planned holiday season opening, the jobsite is alive with activity. Earthmoving equipment, concrete trucks, erection cranes and manlifts take turns completing their well coordinated tasks.

Scott's Splash Lagoon is a blend of modern technology and one of nature's most abundant resources—wood. If you are ever in the area, stop by, bring your swimming suit, and as you climb the tower to enter the maze of waterslides, do not forget to stop and look at "the trees" above. 



by Mark E. Seech, President of Seech Industries, Inc.



