PLANNING

A BETTER BLUEPRINT

AQUATIC DESIGN

STRATEGY

Designing a successful public sector waterpark requires the right mix of strategy, communication and planning.

COMMUNICATION

By Mark C. Hatchel & Austin B. Powers

Since the first waterparks appeared in the 1970s, public sector aquatic operators have looked for ways to increase usage and generate revenue by incorporating waterpark features. Some of the first public-owned waterparks were Point Mallard in Alabama and Hyland Hills Water World in Colorado, both of which have sustained long-term success.

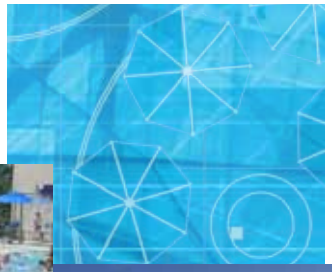
In 2018, building a new commercial waterpark in the United States is a $20 million plus investment. If a waterpark developer has funding, land and can wade through the design and permitting process, they can build their waterpark virtually any way they think will be successful.

However, this is not true for public sector waterparks where there are fixed budgets and a myriad of stakeholders that have input on the expenditure of public funds. When it comes to planning a public-sector waterpark, it's important to remember that one size does not fit all.

THE "W" WORD

In the public sector, even using the word "waterpark" can be a political issue and derail a project. Challenges to overcome can include developers who think they may want to do a commercial waterpark and object to the development of a public-sector waterpark due to perceived competition. And, small but organized and vocal user groups (seniors, swim teams and lesson providers) can often create confusion and unduly influence public decision makers (councils, park board and commissions). Typical concerns raised about waterparks on public sector projects include:

- We just need an old-fashioned pool
- We cannot afford to pay more for admission



Often, the "old fashioned" folks typically have not been to a pool since they were a child and concerns over pricing are often misplaced since most users are willing to pay a fair price for admission if it is a good value. Today, a $5 daily admission fee for a small family aquatic center (the same as a typical fast food combo meal) is not unreasonable and those truly needing a price break can gain access through day camp programs, scholarships and buying a season pass.

Keep in mind that terminology can be important when beginning the planning phase.

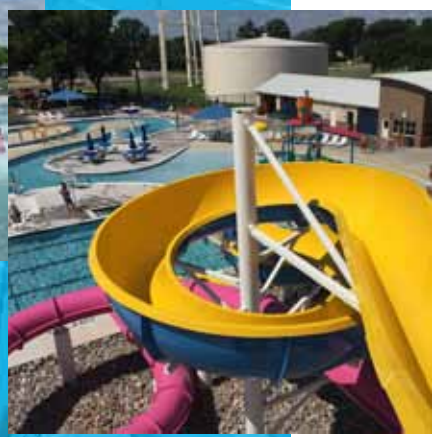
Recreation trends have changed and public sector users want more exciting aquatic facilities with slides and vertical water. Remember the film Field of Dreams where the ghosts of baseball past tell Kevin Costner, "build it and he will come?" The problem is if you build a traditional stand-alone pool today, very few people come and use it—even if it is free!

So, unless the public sector (city or county) is very entrepreneurial and wants to build a commercial style waterpark to generate revenue and tourism, it may be beneficial to not use the word "waterpark"' and call most public sector facilities a "family aquatic center".

The typical public sector family aquatic center has something for everyone including swim lessons, water aerobics, lap swimming and fun waterpark features for tots, families and teens. Who can be opposed to that?

RIGHT-SIZING PUBLIC SECTOR WATERPARKS

Whereas a waterpark (public or private) may cost $20 million plus, family aquatic center projects normally have lower project budgets ($5 million to $15 million), shorter operating seasons (70-100 days), lower gate prices ($5 to $15) and lower attendance (300-1000 per day.)



Many times, a family aquatic center must be constructed on the same site as an existing pool and the old pool sites have space limitations (1-2 acres). Commercial waterparks are typically 10-20 acres in size.

To complicate matters on public sector aquatic projects there are nearly always surrounding park improvements that cannot be removed (parking, ballfields, playgrounds and recreation centers); existing trees and vegetation that cannot be removed; and adjacent creeks and flood prone areas that cannot be built within (many old pools were built near creeks to quickly discharge backwash and drain down water.)

In summary, there is often limited budget and space for typical waterpark features such large family slides, wave pools, large parking lots, large restrooms and snack bars, gift shops or long and wide "lazy" rivers. Therefore, typical waterpark design mantra should be modified for public sector family aquatic centers.

COMPLIANCE WITH BUILDING CODES AND THE AMERICANS WITH DISABILITY ACT (ADA)

Although the Model Aquatic Health code is trying to simplify and standardize pool codes in the United States, the current trend is that municipalities are layering on more and more codes making compliance more confusing and difficult.

Waterslide structures and pool buildings have always had to be compliant with the adopted building codes. However, now many building officials are trying to apply them to the pools and play structures in pools. Pools typically are governed by the adopted health codes and pool play structures are typically governed by ASTM standards.

Restrooms, showers and emergency egress are typically governed by the facility occupancy. Therefore, to avoid overbuilding restrooms, showers and exit gates and walks it may help to set the maximum occupancy of the pool at a realistic number. A commercial waterpark with attendance of 150,000 to 250,000 has 1,500 to 2,500 daily attendance. For family aquatic centers, it is not usual to have a posted maximum in-park occupancy of 300 to 1,000 guests.

In addition, commercial and public sector aquatic facilities all must comply with the Americans with Disabilities Act (ADA). This means that all pools must have two approved means of ADA compliant ingress and egress. All pools that are deep enough must have a fixed lift chair as one of the means. Other acceptable means include ADA compliant ramps or steps with rails. A zero-depth beach is not an ADA compliant access unless it has railings. The downside of railings is that they can become a nuisance for kids to climb on and by regulation extend beyond the end of the ramp.

ADA also sets standards for pool decks in that pool decks may not have a cross slope more than 2 percent in any direction and linear walkways may not slope more than 5 percent without adding grab and guard rails. If there are any steps, there must also be a ramp that slopes no greater than 1 foot in 12 foot. Ramps must be a minimum width, have grab rails on both sides and must have landings every 30 feet. With ADA criteria in place, bridges over rivers must be ramped requiring a great deal of space and often cost $50,000 to $150,000. Therefore, one way to save costs on a family aquatic center is to minimize or not do steps, ramps and bridges.

New projects must keep building codes and the ADA in mind when designing.

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OFFICES AND SUPPORT SPACES

Although well-designed buildings are important for waterparks, the users do not go to the park for buildings but instead are there to use the pools, seating decks and attractions. In family aquatic centers, space and budget limitations and the short operating season are an important reason not to oversize the buildings. Waterpark building support spaces that are not "must haves" for family aquatic centers include a gift shop, tube and towel rental, indoor lockers, birthday party rooms, a separate first aid room and a full-service snack bar with grills, fryers and freezers. Family aquatic centers often have a much shorter length of stay (4 hours) and, therefore, a simple snack bar with drinks and pre-packaged food items may be all that is required. However, for a larger the family aquatic center, some of these waterpark features may be required, especially if the facility is a full scale public sector waterpark.

FILTRATION BUILDINGS

For maintenance and safety purposes, pool equipment should be covered and within an above ground enclosure. Depending upon the climate, it can be open-air and ventilated or totally enclosed and heated. For smaller family aquatic facilities, centralizing the pool equipment into one area is a good option for ease of maintenance access and utility connections (water, sewer, electrical.) The building should be located adjacent to the park perimeter to a driveway or parking area for ease of chemical delivery and so that chemicals do not have to be brought inside the facility.

For pools that are heated, gas is the least expensive option and additional space and ventilation requirements will be required. Note: Heating an outdoor pool facility is normally not economical but may be required for certain climates or partial

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WATERPARK DEVELOPMENT CONTINUED FROM PAGE 34

year-round usage of lap swimming facilities. Geo-thermal may be another option for year-round pool heating where it is feasible. Solar heating for seasonal public sector pools has a very long payback and is not generally economically viable.

When planning for parking, you should anticipate around 50 percent of visitors to arrive via car.

PARKING REQUIREMENTS

Most parking ordinances do not set parking quantities for waterparks or family aquatic centers. Generally, it takes one acre for 100 cars of parking. Parking space construction can cost $2,000 to $3,000 per space. So, not overbuilding the parking is important for family aquatic center development due to spatial and budget constraints. In a municipal park setting, one way to minimize the parking is to consider 10 percent drop off and 10 percent walk or bicycle. Waterpark or family aquatic center users normally come 3-4 per car. So, if you have a maximum in-park capacity of 1,000, you would need a minimum of 200-300 spaces using this thought process. Since family aquatic center parking is only a 100-day seasonal use, sharing large parking lots with nearby ballfields and recreation centers is another way to save space and costs.

RIDES AND ATTRACTIONS

In any type of waterpark or family aquatic center it is important to have pools and attractions that appeal to tots, families and teens. Tot pools and family areas should be located close to the restrooms and concessions area. The basic facilities that should be included are a zero-depth entry tot pool with spray and play features, an activity lagoon and/or a leisure river and waterslides. Lap pools, deeper water and more extreme waterslides can be located further away from the main entrance. The larger and more thrilling the waterslides are the more the facility will appeal to teens and young adults. Ample shade and a variety of seating (lounges, umbrella tables and chairs) should be provided in all areas.

POOL DECKS AND WALKWAYS

Walkways and pool decks do not have to be as large for a family aquatic center. In a commercial waterpark facility, main circulation walkways are often 20 feet wide. Circulation walkways in family aquatic centers are typically 8-10 feet wide. A good minimum clear dimension between the entry building and the pool area is 20-25 feet. Health department codes often require 6-10 feet of clear deck around all pools but don't forget to layout and include the right amount of space for pool furnishings and room to circulate around or to them.

Lounge chairs require 6-8 feet, umbrella tables and chairs require 8-10 feet and fixed shade umbrellas require 12-20 feet. Pool furnishings and shade structures should always be shown to scale on plans to avoid not having enough space.

FENCING AND GATES

Many older public pools had galvanized chain link fencing with three strands of barbed wire around the top. Today, if a public sector aquatic facility has chain link fencing, it should be a minimum of 8 feet in height with no mid rail and no barbed wire. If black or green vinyl coated chain link is used, the fence typically disappears into the park setting. For better aesthetics or to meet certain local codes, upgraded fence systems that have powder-coated steel fence posts, caps, rails, pickets and gates can be used. Manufacturers include Ameristar and Fortress fencing which are more durable and do not require repainting like the old welded, primed and painted fences. Gates can be provided with lockdown pins, deadbolt locks and push bar systems that can be available to meet emergency egress requirements when the family aquatic center is in operation.

LANDSCAPING

Existing trees and in-park landscaping can add a lot of character to family aquatic facilities. However, due to tight spaces, having existing trees overhanging or dropping debris into pools or contending with roots seeking water can be a maintenance issue for operators. This is especially true on islands in smaller leisure rivers. Mowing grass and using leaf blowers in tighter parks will put unwanted debris into the pools requiring extra cleanup by park aquatic operations staff.

Back in the 1970s and 1980s, many public pools were constructed with grass sunning spaces and did not have pool furnishings. Today, with more desire for shade and the issue of grass allergies and bug bites, grass sunning areas are not as desirable as they once were. Ground level planters can create hiding places for reptiles, insects or rodents.

So, on smaller public sector family aquatic centers having a limited number of raised planters, lots of pool furnishings and shade and well-drained/easy to wash-down slip resistant paving may be a better option. With attractive pool fencing in public park setting, just being able to see the surrounding trees and grass through the fence is often more appealing and user- and maintenance-friendly than having them close to the pool.

THEMING

Whereas theming is almost essential for a full-size waterpark, limited theming or no theming may be the best approach for a family aquatic center. High-quality theming is expensive and requires space. Low-cost theming quickly becomes dated or gets shabby and needs replacement. Additionally, theming may not be approvable due to more stringent wind storm and fire safety code requirements.

In a smaller family aquatic center, the best approach is typically to make the building match the other surrounding park structures and limit theming to signage, colors and some whimsical elements on the children's play features.

COST RECOVERY AND SUSTAINABILITY

In the public sector, recovering operating expenses by generating revenue on all types of recreational facilities is increasingly important. However, there is always a political component to fees charged. In short, you get what you pay for and the public is willing to pay for high-quality recreation facilities. Today, providing free or highly-subsidized aquatic facilities is not advisable or sustainable. In sizing a public-sector facility, it is important to know the other area providers so that you can make a realistic estimate of the attendance and revenue. Traditional pools are often subsidized $3 or $4 for every $1 in revenue. Family aquatic centers with reasonable pricing and good operations can typically recover 70 percent to 90 percent of their operating expenses. Larger family aquatic centers or public sector waterparks may be able to generate positive cash flow if there is enough attendance, populace and the right age demographics.

CONCLUSION

Public sector waterparks and family aquatic centers are now as much a part of recreation as ballfields, play grounds, recreation centers and

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trails. Having an outstanding public waterpark or family aquatic center is a source of pride and adds to the quality of life in a community. Traditionally, large metropolitan cities have had a hard time replacing old pools with waterparks and family aquatic centers. However, that trend is changing even in markets already populated with commercial waterparks and suburban family aquatic centers.

The City of Dallas, Texas is currently replacing their many outdated and under-used traditional pools with fewer family aquatic center facilities. When completed, Dallas will be the first major metropolitan city to have such a system. Getting it done required multiple plans, public education and input from the community so that decision makers would support fewer but better facilities. Some of keys to getting this monumental and highly political task accomplished in Dallas were to:

- Identify highly attended and supported pool sites
- Create a variety of pool types, sizes and price points
- Document logical service areas and avoiding overlap of services
- Set reasonable pricing and cost recovery expectations

It is important to note that seasonal outdoor recreation aquatic facilities account for over 80 percent of all public sector aquatic recreation use. Therefore, the outdoor waterpark and family aquatic center are the most highly used and economically sustainable facilities for aquatic recreation. The public planning process is an essential component of planning and designing public sector waterparks and family aquatics.

In summary, when it comes to public sector waterparks, the keys to a better blueprint come from remembering that one size doesn't have to fit all and that design requirements vary by size of facility and the needs of the community. •

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