The Drowning Machines

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Thursday, 01 May 2008 09:24

This is the season these themes will repeat themselves over and over again. The characters will be different this time around. The details will only be similar. But the settings and tragic endings will all be the same. This is the drowning season

Of all the once-a-year canoeists, distracted kayakers, restless tubers, and desperate river guides who have slipped into the jaw of one of this nation's low-head dams, Brian Santoya was perhaps the most vulnerable. He was 4 years old on that August 2006 afternoon when he fell from the park bank and into Wilmington, Illinois' Kankakee River.

The eddy and hydraulic, says Santoya family lawyer Daniel Kotin, snatched him from a few hundred feet downstream and dragged him upriver into the liquid tornado churning beneath the boil. It recirculuated him over and over again. But unlike the hundreds who have lost their lives, Brian did not.

He lost his mother instead. His mother, Delia, dove into the boil to save her child. Then he lost his 23-year-old uncle Jafet, a Marine home from Iraq, who jumped in to save them both. And finally this world lost 28-year-old Alberto Medina, a stranger to the Santoya family. Three lives. Gone in a few minutes.

It wasn't the first time somebody had drowned in the South Island Dam. The city and Wilmington Island Park District, which operated it, knew of up to 20 others who had perished there in the last two decades, says Kotin.

The most tragic aspect of this story, however, is that it's not an anomaly. The progression of its events—someone slips into the river, gets caught in the dam's hydraulic, someone else dies while trying to rescue him—is merely one anecdote in the pattern of how people die every year in these drowning machines.

Patricia Wenner is another. On Christmas Day 2006, she and her husband Craig were walking their Labrador retriever pup near Illinois' Stillwater River. The puppy ended up in the water and eventually in the Englewood low-head dam.

Patricia couldn't just stand there, watching and yelling and crying. So she jumped in. Her 50-year-old husband jumped in to save her. Both died.

Or Mark Fliege, 38, who, according to an eyewitness, was talking on his cellphone May 27, 2006, before realizing the Fox River's lazy current had seduced him past the warning buoys and into Illinois' Glen D. Palmer Dam, a low-head that had already killed 13 people in its 40 years of existence.

Fliege figured he had just enough time to slip on his lifejacket before the hydraulic swallowed him. Sperling brothers Bruce, 31, and Mark, 27, watched this before jumping in. All three drowned.

DROWNING SEASON

In the next few months, sunshine will lure thousands into backyard streams harboring low-head dams. To some, the orange buoys won't be visible, or just won't make sense. The current, they'll think, is too slow to be dangerous, the drop off too small. But when they are grabbing at air bubbles as they flail for the surface, and watching the hydrologic jaw suck them closer into its vise, they'll understand.

The survivors won't escape because somebody rescued them, or because they rescued themselves. They'll survive because they, like Brian Santoya, will give up. Their bodies will go limp from exhaustion and unconsciousness, and the dam will push them deep and spit them out. The fighters will die.

It happens every year, on rivers in almost every state. It happened in Iowa five times in 2007—twice in the same dam. In Illinois it happened six times, 13 times since 2006. At least 59 people have drowned this decade in low-head dams, says Bruce Tschantz, a retired University of Tennessee civil engineering professor, who keeps statistics on dam-related accidents.

Sooner or later, locals say, it will happen on Washington State's Wenatchee River as well. By the time the Wenatchee has tumbled down the Cascades Mountains' Ponderosa-lined east slope, through Class V Tumwater Canyon and into the Bavarian-themed town of Leavenworth, the relenting gradient has reduced the river to a Class III splishy, splashy kind of ride. For that reason and the reliable sunshine, the Wenatchee is the state's most popular commercial rafting run, averaging about 10,000 clients per year. That's not including the countless private rafters and freestyle kayakers who migrate there in May to surf the snowmelt at Rodeo Hole, Drunkards, Granny's.

In the middle of this section's 13 miles of otherwise no-worries whitewater is the Dryden Dam, a low-head that, from upstream, appears like any other: fun.

The river above it is wide and flat and uniform. It drops a few feet over a sloping slab of cement and plunges into a white, boulder-free pool of popping air bubbles.

In 1987, under a mandate by the Bonneville Power Administration to revive fish populations, the local Public Utility District equipped the 80-year-old dam with fish ladders. And to make their upstream travels even easier, PUD engineers enhanced the fish trap, unintentionally making the hydraulic even more lethal.

"At a lot of other facilities across the country, you have to force them (fish) through," says the designing PUD engineer Bill Christman. "This is a place that's very friendly for fish."

From May through August, the Dryden Dam is, as a result, a site of constant near-misses. In May and June, the survivors are guides and clients bucked out of their rafts by the Class III+ Rock and Roll rapid and paralyzed by the cold water. In July and August they are swimmers, tubers, and once-a-year rafters in K-Mart coffins, searching for reprieve from the high-desert sun.

"I would have thought anything on a river that gets run as much as this would have been removed a while ago," says Brian Behle, a leader in the effort to transform the Dryden Dam into a whitewater playpark. "I think it is just luck nobody has died yet."

In May 2006, the PUD publicly recognized the "liability" of the dam and acknowledged a need to "move ahead."

"The easiest thing to do would be to do nothing," Christman told the Wenatchee World newspaper. But two year later, the PUD has done nothing.

"There's two paths," PUD representative Michelle Smith explains. "They can portage or go around on the left. We are not promoting people going over it."

Most of this country's low-head dams were built between the 1890s and the 1960s. In the 1930s, Roosevelt's New Deal put thousands of unemployed men to work through these Civilian Conservation Corps projects. Most of the turn-of-the-century dams, by contrast, were built by private businesses to grind grain, generate electricity. They were, in those early years, what gave life to rural farming communities. Some historians believe low-head dams were one of the tools that accelerated the North's economy past the South's. The North, you see, had enough gradient to warrant a dam. The South didn't.

But over time, the uses for these community-builders have slowly expired. And as their purposes have dwindled, their conditions have deteriorated, their builders have died, heirs have moved on. In too many cases, the dam's existence has faded entirely from public consciousness. Some estimates count the number of U.S. low-head dams in the millions. And yet the national dam inventory includes just 76,000.

WHO'S ACCOUNTABLE?

When the Santoya family hired Daniel Kotin in 2007, his first chore was to find the responsible party. Kotin's first thought was the owner of the dam. That turned out to be the descendents of a man named Riley Osborn, who built it "a hundred years" earlier. Those long-lost relatives, it turns out, were living in Mississippi with no idea they had ever inherited a dam or that they had a great, great-grandfather named Riley.

"So they are not a part of the suit," Kotin explains. Kotin then turned his suspicion to the operator of the river, which, he quickly discovered was the State of Illinois. Kotin knew the 11th Amendment protects states with what's called "tort immunity," a statute that makes winning a suit against Illinois almost impossible. Even if Kotin were to win, the maximum award a court could grant his client is $100,000. "In order to sue the State of

Illinois, you must sue them in the Court of Claims," Kotin says. "You have no right to a trial by jury. If you win, it goes to the Illinois Claims Commissioner. I've been doing this 17 years, and I've tried one case in the Court of Claims." So Kotin settled on the city of Wilmington and the park, which maintains the dam. Kotin says the park's signs got it wrong, that Brian Santoya was downstream of the so-called danger zone.

The only way Kotin will win, says Wilmington's defense lawyer Vincent Cipolla, is if he can defeat tort immunity by proving Brian's mother and uncle drowned because of the city's "willful and wanton misconduct." Recklessness. "There's no way," Cipolla says. "The facts appear that the young boy was not being properly attended to by his mother." Cipolla has twice defended the city for drowning incidents at the dam. Both times, the city has settled—for $10,000 and $20,000, respectively. "Very minimal amount," Cipolla says.

With no one holding the dam operators responsible, no one takes responsibility. When that happens, nothing happens. The dams age and decay. Sediment stacks up behind them. And given enough neglect, dirt, and rain, they fail.

And when a dam fails, the surge of imprisoned water breaking free can be catastrophic, toppling the next dam downstream and then the next dam, like a stack of dominoes. The consequences can range from a loss of money to a loss of life, but communities that owe their existences to these dams don't see it that way. Four years ago, a flood swept through Columbus, Wisconsin, a 5,000-population bedroom community 30 minutes west of Madison, the state's capital. The worst thing the flood did, according to resident Liz Padavick, was expose the decaying condition of Columbus' prized possession: the 87-year-old, 19-foot-high Udey Dam, which backed the lazy Crawfish River into a shallow mill pond. Summer turned that little lake into a fishing hole. Winter turned it into an ice-skating rink.

"It was like Norman Rockwell," Padavick says. "It was lovely. They've caught 37-inch Northerns in that pond. Now we've lost all of that."

Wisconsin's Department of Natural Resources drained the pond until it could decide whether to remove the dam—as it has done with 75 others since the 1980s—or repair it. Draining the pond transformed Padavick's backyard into a swamp. And it transformed Padavick into "the dam lady," a community activist. Her single mission: to save the Udey Dam.

"I inherited 120 feet of mud and weeds," Padavick says. "We tell people don't even bother to come up. No one has used it in four years. We have weeds all over."

Rather than tear it down for tens of thousands, Padavick convinced her community and the Department of Natural Resources to restore it for $300,000.

"There is no doubt that people in Wisconsin treasure their lakes," says Meg Galloway, Department of Natural Resource's chief engineer for dam safety. "Many [dam-created lakes] have been integral to the communities. Some communities have to go through a mourning period to grieve their loss (of dams)."

CHAIN-LINK FENCES WILL DO NOTHING

In 1998 the river-sharing communities of Moorhead, Minnesota, and Fargo, North Dakota, were fighting about what to do with their dam. The Midtown Dam on the Red River of the North had been particularly lethal—killing at least 19 and as many as 25. In a single incident, four canoeists had drowned there. The communities knew the dam was dangerous, and they knew it was past time to do something about it. But they needed it for the water intake pipe in the pool above the dam. So they considered modifying the dam or perhaps lining the banks with chain-linked fences. That's when Luther Aadland spoke up. Rebuilding it wouldn't remove the hazard, he said, and fences would do nothing for the canoeists. Take it out, he argued. Turn the Midtown into rapids.

Aadland wasn't just hucking ideas. He was a PhD., a stream ecologist and consultant with Minnesota's Department of Natural Resources, and he was obsessed with reviving the health of his state's streams. Removing dams, he found, was the most effective way of accomplishing that.

Fargo and Moorhead agreed. In 1999, Aadland and the DNR placed the last of 3,370 tons of boulders into arch-shaped rapids, a design that removed a hazard, maintained the water intake pipe, provided a paddling destination, and is still reviving the ecology of the river. Total price: $230,000.

Since then, Aadland and Minnesota's Department of Natural Resources have removed 23 dams and converted 29 others to rapids. Eighty-seven

dams have been removed throughout the United States in the last two years, according to American Rivers.

If Minnesota is acing the dam-removal charge, Iowa is flunking it. And at least three families have paid the consequences.

Larry Goodman met his kayaking partner Steve Nourse August 10, 2002, at the Des Moines River. They had paddled many times together before, but not on this section. This section harbored three-foot-high Scot Avenue Dam. And Nourse had, Goodman later reported, talked about running it. So when they neared the dam, Goodman wasn't surprised that Nourse paddled up ahead about 50 yards or so. Nor was he surprised when his buddy, the 48-year-old father of two girls, dropped over the tiny horizon line.

Goodman never saw him again.

The death motivated Nourse's sister, Julie Mankel, to join the year-old Iowa Whitewater Coalition. Her presence gave the coalition a fire and a new charge: remove or modify the state's 150 low-head dams. Or at the very least, make them more visible. The Scot Avenue Dam was their first target. Mankel and her fellow coalition members explained the invisible and sometimes uncomprehendable dangers of a low-head dam to Des Moines city officials. And they asked the city for help.

" 'Well it's only been one death,' they said," Menkal recalls. "And I was like 'Would you really be saying that if it was your brother or sister who had died?' That really got me angry."

And so Mankel and the coalition began four years of pestering their legislature to do something about it. But the State of Iowa didn't seem to hear their pleas until July 9, 2006.

On that Sunday afternoon, Megan Pavelick, 22, and a couple of her friends rented some innertubes from Seven Oaks Recreation for a lazy float on the Des Moines River. The directions to the river confused the recent Iowa State University grad and her friends. They couldn't find the trail and when they did find one, they weren't sure if it was the same trail to which Seven Oaks Recreation had referred. But they followed it anyway. And it led them to a put-in spot above the Boone Water Works Dam, instead of the put-in spot below.

On that day, the estimated drop of the Boone Water Works Dam, according to news reports, was 18 inches. Barely visible.

"I looked up and saw these girls in tubes go over the dam. One made it and two were kind of stuck," fisherman Art Chambers told Iowa's KCCI News Channel 8. "At first, I thought they were okay, but one went under and kept on going under, you know?"

That "one" was Megan.

She was unconscious and not breathing when Chambers pulled her out of the river. He pumped her chest, tilted her head, and breathed into her lungs. Fluid leaked out of her mouth. Her lungs began contracting. But her brain had already shut off. For good. She died in a hospital a day later. Her death was the second of its kind in Iowa that year and the third in two years.

"When Megan died," says John Wenck, former vice president of the Iowa Whitewater Coalition, "we were ready."

For the first time ever, the State of Iowa made a little room in its 2007 budget for low-head dam safety. The initiative armed the state's Department of Natural Resources with $200,000 in grants for groups seeking to remove, modify, or make dams safer through warning signs and portage trails.

"We received 10 total applications (in 2007)," says Nate Hoogeveen, river programs coordinator for Iowa's Department of Natural Resources. "We were able to fund eight. We ran out of money."

And still, the Scot Avenue Dam churns on. On Independence Day, 2007, it drowned swimmer Franco Ventura. Four days later, it nearly drowned Joseph Wanek and Rachel Treptow, young rafters who had intentionally run the low-head after scouting it.

What's happening in Yorkville, Illinois, is even more frustrating. Twenty deaths and 32 years after local officials asked the state for some kind of solution to the Fox River's drowning machine, the Yorkville community has decided to retrofit the Glen D. Palmer dam with four stairsteps and a canoe bypass, instead of removing it completely, as the Illinois Department of Natural Resources had strongly urged. The project will cost $6.5

million. “It’s like putting dentures on a pit bull,” resident Chuck Roberts told the Yorkville Daily Herald.

But a sliver of hope is flashing through Wilmington.

In the same year the Santoya family filed its lawsuit, Wilmington Island Park District unloaded its dam responsibility on the city of Wilmington. And now, says Wilmington city administrator Sheryl Purrachio, the city is hoping the state of Illinois will take the drowning machine out of the city’s hands. But that is just a hope. Until then, the city has to decide what to do with the non-operational low-head that has killed at least 15 people. One option is to do nothing.

“Homeowners would lose their recreational value if we tore it out,” Purrachio says. Another option is to do what South Bend, Indiana, did to its dam in 1984: turn it into a whitewater park. “That’s exactly what we’re looking at,” the city administrator says. “It (South Bend’s East Race Dam) was constructed just like ours is.”

In the meantime, the state mandated on August 2, 2007, warning devices on any river with run-of-the-river dams. Illinois lawmakers are also talking about exclusion zones, fines for anybody within 300 feet upstream of a dam and 50 feet downstream.

IT’S A START

At Madison, Wisconsin’s Canoecopia consumer show, the Illinois Paddling Council’s booth is pinched between a shiny, red Jeep—“it could be yours”—and the $9 buffet line. Its table is cluttered with a dozen different brochures, a couple of DVDs, and no obvious product. And the two 60-year-old guys guarding the white- and blue-draped table don’t look like they’re in the business of selling fun. Tom Lindblade, 65, looks downright mad. But this booth, he says stoically, is a kid-magnet. At any given moment a child—boy or girl, 5-year-old or 11—will sneak away from his parents’ vigilant eyes to play with the centerpiece of the Council’s display. It’s no toy. It’s a model of a low-head dam, complete with flowing water from a hose, a J-shaped concrete slab, its accompanying hydraulics, downstream boulders, and, just for kicks, a waterfall. To most of the kids, this is a whitewater version of a Hot Wheels racetrack.

As Caleb Ochs, 11, sends the fluorescent orange kayak over the low-head dam, he adds his own sound effects—the sounds of splashing, crashing, and of people screaming for help, all played to his intermittent chorus of Gloria Gaynor’s “I will survive.”

Ochs realizes this display is here to, as he says, “show how you can be destroyed.” But he’s not quite sure how that destroying happens.

“Boat flipping over?” he guesses. “Not knowing how to swim? Getting stuck? The current is too fast?”

It’s a question that stumps many of the river-runners who have gathered here. Not just the kids. If Ochs wasn’t so busy playing in the water, however, the question might not have stumped him. The answer was right there, taped to the plexiglass wall on the opposite side. A photo of a low-head dam and a danger sign.

The hydraulic snags the orange kayak and flips it upside-down.

“I’ll save you!” Ochs screams to the imaginary kayaker. He reaches his hand into the tank and pulls the boat out.

If only it was that easy.

Originally Published, Paddler May-June 2008