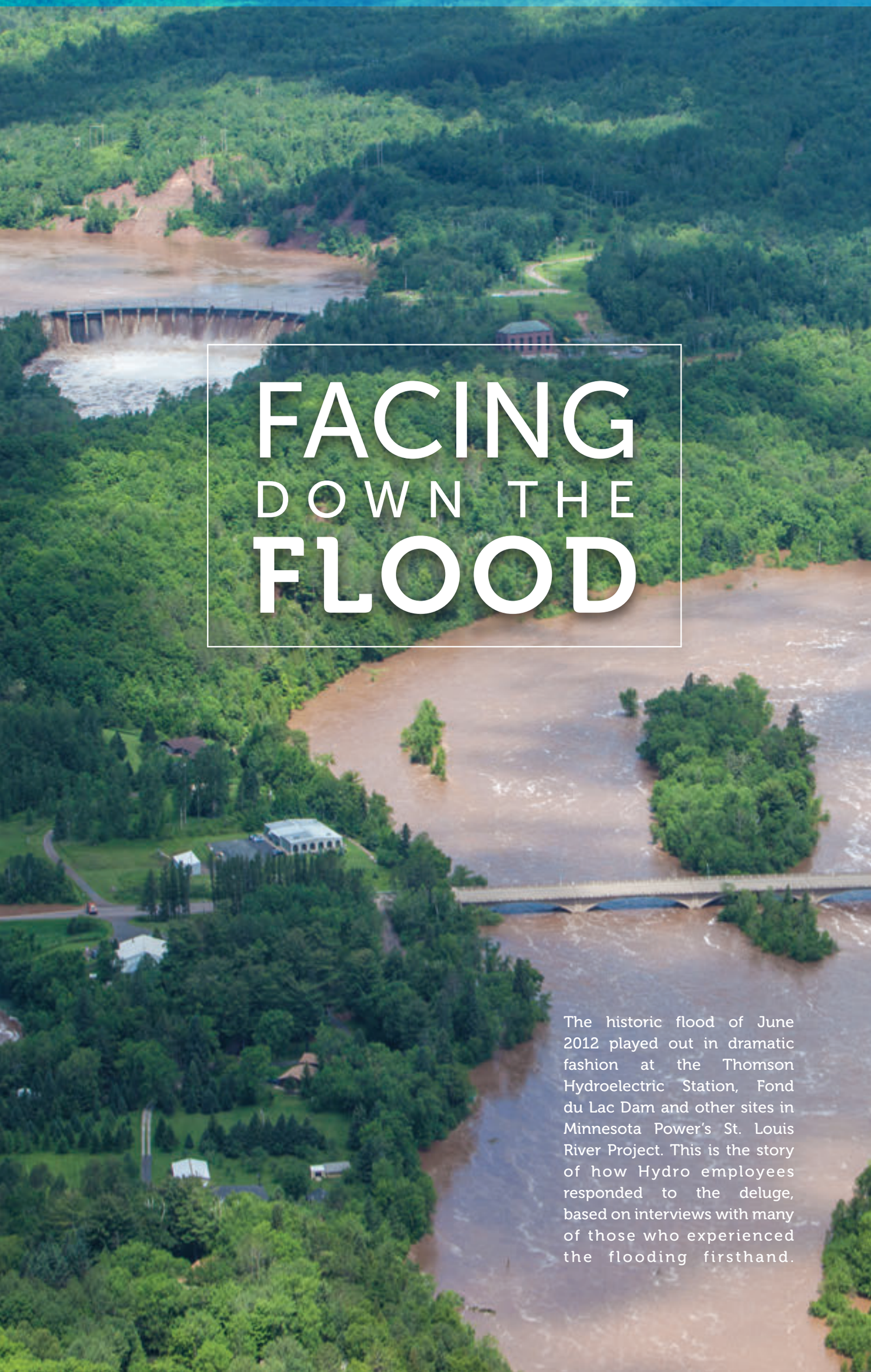


FACING DOWN THE FLOOD

The historic flood of June 2012 played out in dramatic fashion at the Thomson Hydroelectric Station, Fond du Lac Dam and other sites in Minnesota Power's St. Louis River Project. This is the story of how Hydro employees responded to the deluge, based on interviews with many of those who experienced the flooding firsthand.

Hydro confronts what they were trained to be ready for

On June 19, 2012, veteran Minnesota Power Hydro operator Brad Trevena arrived at the Thomson powerhouse about 6:20 p.m., a little earlier than normal. It had been raining for much of the day so he thought he'd get a head start on what likely would be a busy night. Weather forecasters were calling for 2-4 inches of rain—nothing he hadn't seen before in his 32 years working in Hydro.

Roy Maki got to the powerhouse a few minutes later. Maki had been training with Trevena for the past year, drawing on Trevena's experience to learn how to manage the river systems. Maki was pleased with the rain—hydro-fuel, the operators like to call it—and looking forward to taking advantage of the free fuel source.

"When I came to work, all I wanted was to have some coffee and make some money for the company," Maki said.

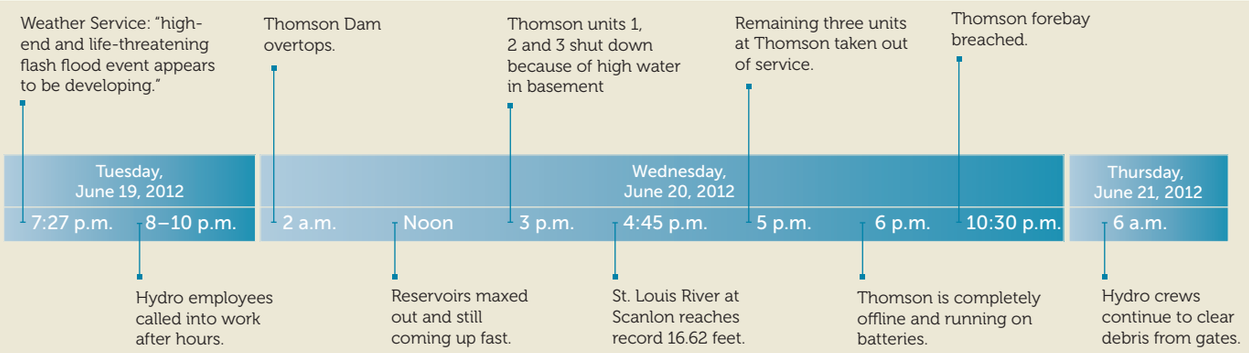
Within a few hours, Maki and Trevena were slugging down cup after cup of coffee as they watched numbers and gauges change rapidly on their computer monitors and felt the adrenalin surge in their bodies. They were in the thick of a historic work shift at Thomson.

Outside, beyond their vision, the hydro-fuel came down in torrents, filling the waterways that drain into the St. Louis River. The two operators monitored the pond levels across the system with an increasing sense of alarm. By 8 p.m. they were calling in the off-duty maintenance crew.

"I was getting excited," Trevena said. "It was everything I taught myself to be ready for." Later he would tell operations superintendent Nora Rosemore, "You're lucky you got your guy who's been here almost 32 years."

Brent Abrahamson, journeyman maintenance worker, and Craig Johnson, now a utility worker at HSC, both got called in to work. They met at the Thomson spillway, but both stayed in their own vehicles awaiting orders. "I remember there was really a lot of lightning," Abrahamson said. "Craig finally knocked on my window and said 'yeah, come on, we might as well get going now.'" There was work to be done at the spillway, but the two men were needed more urgently at Fond du Lac, according to Trevena in the Thomson control room.

This photo, taken June 21, 2012, shows Thomson Dam and a washed-out Highway 210 bridge.



Hydro operator Trevena: 'We need everybody to get in here'

"We got in Craig's truck to go to Fond du Lac," Abrahamson said. "About a mile from the station, there was a cluster of trees lying over the road. This was just after dark. We went back to Thomson to get chain saws ... we saw the pond was coming up real fast. Then we went back and cut the trees out of the way. It took us about an hour just to cut through them."

The rain was coming down in buckets, he remembered. Abrahamson said he and Johnson had to set the chain saws underneath the truck to get them started, so much rain was falling. "I remember Craig saying 'I wonder what else is going to come down that hill.' "

The Thomson control room, the brains of Minnesota Power's Hydro operations, is on the ground floor of the powerhouse. Windows in the control room look out onto the main floor where the station's six generators connect to the turbines in the basement. Behind the generators are Gothic windows overlooking the St. Louis River, but only the bottom sliver of the massive windows can be seen from the control room.

The Hydro operators face an array of computer monitors where they can view measurements and monitor water flows. Many of the reservoir gates miles away can be controlled electronically from Thomson, but not all of them. The system relies on journeyman maintenance workers like Brent Albiston and Dennis Norberg to manually open and close some gates as needs dictate.

When Albiston got a phone call at his home in West Duluth summoning him to work about 10 p.m. he didn't think that much of it. "We knew the river was coming up, but we didn't know the extent of it," he said. Albiston had brought nothing with him besides his iPhone and the clothes on his back. When he got to the Fond du Lac hydro station, he received orders over his cell phone to start opening gates on the dam, to let as much water pass through them as possible.

"It was dark, it was raining and it was lightning," he remembered. "After being there about an hour or so, you kind of got an impression, 'oh man, something's coming.'" When he checked the area weather radar on his cell phone, all he saw was a big red blob.

Earlier in the day, Rosemore had spoken with the operators on duty about Island Lake Reservoir being full and the forecast for rain. At home Tuesday evening, she grew more concerned about reservoir pond levels and was calling Trevena and Maki in 20-minute intervals to get readings so she could do some calculations. About 9 p.m., she realized, "I need to stop bugging them and get the numbers myself."

Lead electrician Kent Vandermeiden had worked his normal 7 a.m. to 5 p.m. shift on June 19, but at midnight

Nora Rosemore

Brad Trevena

Kent Vandermeiden

Brent Abrahamson

he got a call from Trevena, who said "we need everybody to get in here." He immediately found trouble navigating his pickup through rising waters in Superior.

"I called Rocky Hayes (another Hydro electrician) and threw my chain saw in the back of my truck," Vandermeiden recalled. "Rocky said Highway 210 was blocked off. I told him to meet me at Knife Falls. Problem was, we didn't have any equipment or tools. I didn't even have my work boots. Water was already going around the south end of the dam. We called Thomson and said 'we gotta start opening gates now.'"

Next: Inside the bubble and outside the dams

Roy Maki monitors flow levels from the control room at Thomson on a much quieter night several months later.

Outside ‘the bubble’: Pick up your feet and you get washed away

Rampaging flood waters surged through the St. Louis River system late on June 19, 2012, cutting off a portion of Highway 210 between Jay Cooke Road and the Thomson driveway and leaving it impassable by vehicle. Mudslides in the area would ultimately shut down nearby Jay Cooke State Park for the summer.

Floodwaters stranded the vehicles of five MP employees in the Thomson parking lot, leaving them useless until roads were repaired nearly two months later. Several other company vehicles were also left high and dry by the flooding.

By the time Nora Rosemore arrived at the powerhouse about 11 p.m. a mudslide had already blocked part of the parking lot. She parked, and stepped into muck reaching past her ankles. She would spend the next 36 hours in those muddy socks, recalling later that she would have happily given $100 for a pair of dry socks.

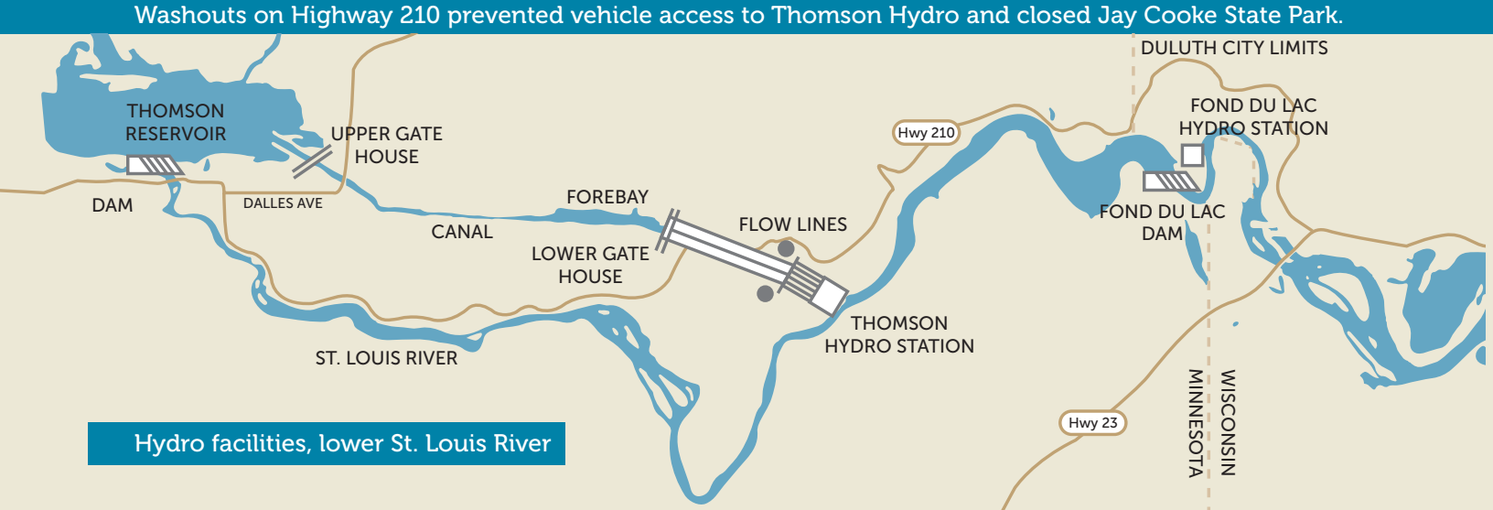
While Brad Trevena and Roy Maki managed the river flows, Rosemore took responsibility for the reservoirs. In the control room with no direct window to the outside, it felt like they were working in a bubble, Rosemore said. The bubble extended only as far as the information that appeared on their computers and cell-phone conversations with their colleagues in the field. The three pooled the information that was coming at them fast and furious, corrected each other’s conclusions when necessary, confirmed each other’s observations and kept the conversation rolling to reach the best decisions they could.

“It could have been so easy to freak out and nobody did,” Rosemore said.

Late that night, Brent Abrahamson and Craig Johnson labored for about an hour to chain saw a path through downed trees from the Thomson Powerhouse to Fond du Lac Dam, where they found Brent Albiston at work. Assisted by Dennis Norberg, they opened gates on the dam.

Lifting the heavy steel gates involves entering what’s called a “car house” that moves on tracks atop the dam. The car house contains motorized chains to lift gates so more water can pass through the dam.

Washouts on Highway 210 prevented vehicle access to Thomson Hydro and closed Jay Cooke State Park.



Hydro facilities, lower St. Louis River

‘If we hadn’t had hand railings we wouldn’t have made it’

Soon Abrahamson and Johnson were summoned to the Thomson spillway. They found the southbound lane on 210 washed out. They drove down County 1, which turns into Dalles Avenue, but the road was closed. Dalles Avenue had turned into a lake. The two men proceeded to the Thomson spillway and opened one gate wide.

“We had just sent Albiston a bunch of water, and we knew he was down there by himself (at Fond du Lac),” Johnson said. “We knew it was hard at Fond du Lac to do that gate opening by yourself.” The two were about halfway back to Fond du Lac to help Albiston when Rosemore told them somebody else would help him. She told them to stay on the spillway and open more gates.

“The one thing that kind of freaked me out was when we were walking across the dam,” Abrahamson said. “If we hadn’t had hand railings we wouldn’t have made it. On the spillway there were hand railings. We sort of shuffled our way along. If you’d have picked your feet up, it would have washed you away.”

As they walked back to their company dump truck parked on the spillway driveway, they saw the ground eroding under the truck’s wheels.

“If we didn’t move the dump truck, it would get swept off the dam,” Johnson said. Through all the rushing water, it was difficult to see the ground under the truck, and hard to find a clear path as they slowly drove away. All of a sudden, the right front tire found a hole.

“We thought we were goners,” Abrahamson said. Another 15 minutes, we’d have lost her.” Eventually they got the truck away from the rushing river. Abrahamson had left his own car, a 1995 white Eagle Talon, at the highest point he could find, but it ended up being stranded for many weeks. He later saw his car on Minneapolis KARE 11 news, videotaped from a helicopter.

Once they’d opened all the big and small gates at Thomson Dam, Abrahamson and Johnson turned their attention to the sluice gates, which are located “in a little house” down inside the dam.

“The stairway going down was under water,” Johnson said. “When we opened the door to go in, we could see the equipment inside was under water, too. Craig did the splits while he was trying to go down the stairs. It was dangerous, yeah. The electric cabinets weren’t under-water, but they were close.” After communicating with the Thomson powerhouse, the two men decided to forget about the sluice gates.

When they came up out of the stairway to the sluice gates, the water was still moving up toward the top of the dam. Although they’d opened every gate they could, now the issue was trash and debris piling against the gate openings and blocking the flow of water.

As 6 a.m. Wednesday approached, Rosemore prepared to call the operators scheduled for the next shift to tell them they wouldn’t be able to make it to Thomson because the roads were blocked by mudslides. But operator Mike Chambers was already hiking down the saturated hill behind the powerhouse.

Mike Chambers

Craig Johnson

“I was never so glad to see another person,” Rosemore said. “Because if he could get in, we could get out. And having a fresh set of brains was such a relief.”

Chambers’ arrival also meant Trevena and Maki could get some rest. Wednesday morning, after the intensity of the night, “my head and my hands wouldn’t move together any more,” Maki said. He and Trevena tried to get some sleep in Thomson’s upstairs conference room, but their minds kept racing. Sleep proved impossible.

Next: A long night at Fond du Lac Dam

Photo of Highway 210 bridge over the St. Louis River, taken by Dennis O’Hara on June 21, 2012.

Manhandling Fond du Lac flood gates with no way in or out

Sorting through overnight emails and text messages early on June 20, 2012, Frank Muhvich learned that Brent Albiston had spent the night alone at Fond du Lac without food or water and somehow managed to singlehandedly open 12 gates on the dam.

Muhvich, Hydro maintenance superintendent who resigned from Minnesota Power this spring, filled a pack with dry clothing, food and water and headed toward Fond du Lac to relieve Albiston.

Albiston, a Hydro maintenance journeyman, has worked at MP for 11 years, first as a temp, then at Taconite Harbor and Hibbard before moving to Hydro about seven years ago. A Marine Corps veteran, Albiston has the size and strength to open a dozen gates at Fond du Lac by himself. His work that night was illuminated by lightning and punctuated by the sounds of exploding electrical equipment and trees sliding down nearby hillsides.

"I spent time in Desert Storm and Somalia," Albiston said of his night alone in the flood, "and I never seen nothing like that." aThrough the driving rain, he would trudge back and forth between his truck and the dam, calling the powerhouse for updates and instructions.

"I'd call the control room and they'd say to open up another gate," he said. "Then I was informed there was no way in or out of Fond du Lac. So I just kept opening gates."

Albiston had a flashlight and cell phone with him, but little else. During a normal rain event, the car house might be moved between two or three gates that needed opening. Usually it took three men to do the job, two inside the house lifting the chains, and another outside the car, dragging the 480-volt cable along the track. The chains inside the car that hoist the gates are too big to put both hands around.

The sights Albiston saw from his outpost that night were unbelievable. At one point, in the dim light, he saw a 12-foot piece of cable whipping in circles like a giant weed eater. Later, Albiston realized that the ground had been washed away and the wire had pulled out of an underground conduit and was whipping around.

Hungry, tired and thirsty, Albiston got the last gate open about 6:30 a.m. Wednesday. By that time, he'd been quenching his thirst by drinking rainwater pouring off the roof of the car house. And even though he'd quit smoking a few months before, there were moments when he craved nicotine.

"After all the gates were opened, I had to get lots of logs to pass through the gates," Albiston recalled. "It was kind of a hopeless cause. Oh man, the trees!"

Left: Brent Albiston used this car house to open 12 gates on the Fond du Lac Dam by himself.
Right: The St. Louis River at 45,000 cubic feet per second on June 21, 2012. The river peaked at 56,000 cfs.

‘The employees did fantastic. They’re just a tight-knit group.’

Normally there is a string of buoys floating on the pond above the dam. Startled by an unusual sound, Albiston turned to see the buoys shooting through one of the opened gates like a slingshot made of stretched cable.

“At some point you just gave up because there was nothing much you could do about all of it.”

About 5 a.m. Wednesday, Nora Rosemore called the home of Bonny Carlson, MP’s renewable business operations manager, to brief her on the deteriorating situation. “Nora called to say we’ve got trouble. It’s a big deal for Nora to call me at home. She filled me in on the situation and let me know I couldn’t get in due to the condition of the roads.”

“We talked about a command center,” Carlson said. “We couldn’t get people in to work. We had employees spread all around the area trying to control the water through the gates. The employees–they did fantastic. They’re just a tight-knit group. The ownership they have in these hydro facilities, they were just doing what they had to do and there was no complaining.”

Muhvich was bound for Fond du Lac in an old Toyota 4Runner. He was passing vehicles stranded on the road, some idled in water up to their hoods. The water got to be too much for his truck, and he walked the last couple of miles to the dam.

“He (Brent) was absolutely amazed I was there,” Muhvich said. “He was shocked and Brent’s hard to shock.”

The two men took pond level readings and visually inspected the Fond du Lac powerhouse and dam, looking for any signs of instability. By midafternoon, while some of their clothing hung on the gantry crane to dry, they were able to take a break.

Bonny Carlson a year later at Thomson.

Later, maintenance worker Pete Bergman managed to find a way from Wrenshall to Fond du Lac to pick up Albiston and give him a ride home. But there were so many road closures between the dam and West Duluth, that Bergman finally dropped him off somewhere in Wisconsin. At one point, Albiston said, he crawled through a culvert before he was picked up by another friend and driven to his home in Duluth.

“When I got home I was soaked, tired, muddy and hungry,” Albiston remembered. His wife, Heather, (they have two sons, Joshua and Jacob), prepared fish sticks for dinner.

Albiston was back at work the next morning at 9 a.m., after taking an hour to rent an automobile to replace the vehicle he’d stranded overlooking Fond du Lac Dam.

Next: Generators at Thomson are taken off-line and the forebay breaches

Mudslides washed out parts of the driveway to the Thomson powerhouse (left) and switch yard (right).

As water rises in the powerhouse, the forebay suddenly empties

One year ago today, when Mike Chambers and his "fresh set of brains" arrived at the Thomson powerhouse, the people already on duty looked wrung out. He suggested that Roy Maki get up and walk around.

"Roy came back to the control room and said there was water coming in," Chambers said. "It was coming in through a concrete basin in the back, and into the basement, too. It wasn't coming in fast; it was just sort of seeping in." A 19-year veteran at MP, Chambers got the siphons running in the powerhouse basement in an effort to pump out the water.

About the same time, Bonny Carlson, Chief Operating Officer Brad Oachs and others met in the General Office Building in Duluth. Also on hand was Honggang Cao, a Chicago-based inspector for the Federal Energy Regulatory Commission, who happened to be in town for his scheduled annual dam inspections of MP facilities. Oachs, Carlson and engineer Chris Rousseau then went upstairs to report the situation to ALLETE CEO Al Hodnik and senior vice presidents.

"Of course, by then it was all over the news," Carlson said. The group decided to rent a helicopter, which they used to survey the lower St. Louis River system and swamped Hydro facilities. They saw washed-out roads, overtopping on many structures, mudslides and slope failures. It was "sickening," Rousseau said. "There's just so much water and it just kept coming and coming and coming and there's nothing you can do."

Afterward, Carlson made a run to Wal-Mart to pick up pillows, air mattresses, peanut butter and jelly, toothpaste and other essentials.

"What more important thing was there for me to do," Carlson recalled later, "except to make sure our employees had food and transportation and the stuff they needed?"

After noon on Wednesday, the St. Louis River was still rising, water was coming up in the powerhouse basement and Chambers said "I knew we were losing." By that time, flood water was about knee deep in the basement. Chambers recommended that three Thomson units should be shut down to avoid severely damaging them. These units were shut down, and the penstock valves were closed to get the generating units to stop spinning.

As the hours passed and the flood waters rose higher in the powerhouse basement, the other three generating units had to be shut down. All electricity coming into the station was lost. The hydro control systems can only run for a limited amount of time on battery power. By 7 p.m. Wednesday, the water was still creeping up the stairs to the main floor of the powerhouse.

Kent Vandermeiden said at one point it was thought the station could be re-energized, so he switched on an alternate transformer, but that didn't work. When he called System Operations, he was asked an immediate question: what happened? Thomson switched back to battery power, and contractors from Hunt Electric were summoned to work out what they needed to isolate and temporarily

It took months to clean up the mud and debris left by flood waters that swamped the basement of the Thomson powerhouse.

Chris Rousseau gestures toward the empty forebay in this December 13, 2012 photo.

Powerhouse running on batteries, employees on adrenaline

feed electricity to critical power panels from generators. By 2 a.m. they got the diesel generators running to charge three battery banks needed to keep the control, communication and substation relay protection systems operating through the night.

Engineer Andy Remus made it to the Thomson powerhouse after stopping by the Scanlon and Knife Falls stations, where many MP employees were working to deal with the rising water. By this time there was no direct route by road to the powerhouse, so he navigated back roads up above the station and parked near the surge tanks, on the hill above the powerhouse. As he slipped and slid down the hill, he didn't know the powerhouse basement was flooded.

"They energized the backup transformer – a transformer had blown in the basement – while I was coming down the hill," Remus said. "At that point I realized whatever was going on was already in process."

In the powerhouse they discussed shedding non-critical station service electric load. The backup batteries could only do so much, and Remus said they didn't want to lose the control, computer screens and network systems the operators were relying on. "We started looking at how we keep everything running," Remus remembered. "The operators were stressed. They were taxed."

The huge amount of water flowing through the system was pushing everyone in Hydro to their limits.

Dave Aspie

Dave Aspie, dam safety engineer, had been receiving regular updates from the Thomson operators since late the night before. He and other MP personnel had been out all day inspecting the system. He felt reasonably comfortable the dams were handling the high flows. But late Wednesday evening, as the forebay filled to overtopping, there was growing concern about the forebay embankment and its fuseplug.

The forebay is the wide spot in the end of the power canal at the top of the hill from which water is drawn into the flow lines and penstocks to feed the powerhouse below. The forebay covers about 40 acres and holds about 100,000,000 gallons.

The fuseplug is an emergency spillway built into the canal wall that has a concrete sill and walls filled with soil. The soil is supposed to erode to open up the spillway and release water from the canal in a controlled manner.

Aspie called Rousseau to meet him at Thomson to see what they could do to help. Rousseau, on his way home from inspecting other parts of the system, was the first to arrive.

"It was just pitch, pitch black. You couldn't see anything," Rousseau said. He stopped at the lower gate house on the forebay; water was flowing over the concrete wall of the gate house.

Rousseau called Tom Donofrio, director of Engineering Services and Minnesota Renewable Operations, to update him, when "the water all of a sudden stopped flowing over the structure. … Water was pouring over the concrete wall, then it stopped. You knew something bad just happened. You knew water was going somewhere else and then it went down and down and down and down and then it was gone."

Rousseau could hear parts of the hillsides giving way and trees snapping. Within minutes, the forebay was drained. "It sounded like a freight train going through the woods," Rousseau said. By the time Aspie arrived, the earthen embankment had given way about a mile from the fuseplug. The forebay was empty.

Chambers, Carlson and others hiked up the hill from the powerhouse in the dark to try to make sense of what was happening. The hillside was so muddy and slippery that Chambers assisted Carlson by letting her lean on a shovel they used as a walking stick. Chambers brought the shovel because he thought maybe he could use it to breach the fuseplug.

"He would plant the shovel in the ground and hoist us both up," Carlson recalled. "There were deer standing on the hillside just looking at us. I had on mud boots, but they didn't do much good. When we got up to the forebay, Chris said it was too late."

The hydro system had experienced more water than it had seen in 100 years – what would happen next? It wasn't until daylight that they'd be able to see how water from the forebay cut a gouge through Jay Cooke State Park and Highway 210.

Next: Zero Injury put into practice

Debris moves down the river, Thomson 'hanging by a thread'

Maintenance crews scrambled from dam to dam during the flood event and for days later, using pike poles to help push heavy tree trunks and branches through gates and out of the way.

The physical demands of the job were intense. Kyle Smith, a summer intern for Minnesota Power who runs marathons, said, "a lot of time the feeling in my arms is what I would feel in my legs (after a marathon). ... my arms are saying 'we need rest, we need rest, we need rest.' "

Others in Hydro had nicknamed Smith "Rain Man" because of all the rain the area received since he began his internship in late May. The moniker seemed especially appropriate as the flood played out in June and he worked alongside the rest of the maintenance crews to keep the gates free of the trees and other debris sliding into the river.

Three generators ran all night Wednesday to provide minimal power to the Thomson station. As Andy Remus put it – "we kept everything hanging by a thread."

When Kent Vandermeiden reported to work the next morning, he brought along his four-wheeler, and with Rocky Hayes's help they brushed out a trail at the Thomson Schoolhouse logging road. It was later used to pull a trailer hauling 500-pound transformers and other electrical equipment down the hill to the powerhouse. The road was later deemed unsafe and couldn't be used.

Temporary transformers were wired in and a miniature distribution system was cobbled together, Remus said. At one point a transformer caught fire, and the station was back on battery power. By Saturday night, Remus said, temporary feeds to the station were energized to provide lights, air conditioning and a refrigerator in the powerhouse. The operators used a small gas-powered generator in the shop to provide power for the all-important coffee pot.

With no way to get vehicles in and out of the powerhouse after the flood, moving people up and down that hill was another difficulty. Within a few days of the flood, J.F. Brennan employees built and placed a giant wooden stairway down the hill so employees could get to the powerhouse. Sometime in midsummer, someone wrote on one of the 214 steps near the top, "Help Me, I'm Tired."

That stairway provided the only access to the powerhouse until Aug. 16, when repairs to Highway 210 and the Thomson driveway permitted, at last, a way for people to drive to the station.

Carlson said she, Chris Rousseau, Tom Donofrio and MP Chief

Hydro maintenance personnel spent weeks clearing debris from dams, like these trees at Fond du Lac.

Flood may be a once-in-a-lifetime experience

Operating Officer Brad Oachs attended a public meeting for nearby residents a week or two after the flood and they heard from a lady who'd lost many possessions to the flood waters.

"She told us 'I just want to thank you for keeping the power on, or I would have lost everything,'" Carlson said. She was asked if she ever worried about any of the dams giving way.

"You have to worry about it," she said. "But if Dave (Aspie) is not worried and he feels they're strong and are going to hold up, it gives you confidence."

Dam safety engineer Dave Aspie said the experience made him confident that the company's hydro operations could handle another 100-year flood.

"I don't want to deal with it, but we would know how to handle the water," he said.

From field crews to senior management, a lot of people did a lot of good work in a short amount of time – and the response didn't end when the rain stopped, Aspie said.

Months later, as reviews, assessments and plans for Thomson's return to generation were completed or getting underway, there was some time for reflection. For many of those who were there, those days and nights last June were unlike anything they'd experienced before.

For Smith, the 25-year-old intern, it may well be something he'll never see repeated.

"As bad as it was, it was a great experience," he said. "I survived it. I got to live through something nobody else lived through."

This stairway was the only powerhouse access for weeks after the flood.

Good decisions kept everyone safe

On July 10, 2012, MP Hydro workers gathered at the Cloquet Service Center to discuss the events that had engulfed them just a couple weeks before. A timeline of those events was hashed out – a timeline modified for use with this series of articles.

Much discussion that day focused on June 20 from about 5 p.m. – when water was coming up so fast in the Thomson Powerhouse basement that it was no longer safe to go down there – to about 10:30 that night, when the forebay breached.

"We wanted to do a lot of things," said Generation Operations Superintendent Nora Rosemore, recalling the critical time at Thomson when water was rising fast at the powerhouse. "But there was too much water in the basement and we couldn't do many of them. It went from 'going in the basement with boots on,' to somebody saying 'I can go down there in hip waders.' Things were popping, and pretty soon nobody was going in the basement."

After hours of discussion, the post-flood meeting ended on the important topic of safety.

"The safety lesson for all of us was that people were using their heads, even in an emergency," said Tom Donofrio, who had been named director of Engineering Services and Minnesota renewable operations just four months earlier. He said he felt "like a nervous parent" at Thomson Hydro the night of June 20, watching Minnesota Power facilities and people put to the ultimate test.

"You made great choices," he told the hydro team. "We might risk losing something in a facility, but we can't get hurt trying to protect facilities."

The subject of safety often rose to the surface when Minnesota Power employees were interviewed for this series of articles.

Chris Rousseau pointed to the company's commitment to safety, and how employees were able to make good decisions based on their training. "I really think that's how we got through without anyone getting hurt."

Roy Maki: "I learned a lot that night ... We all kind of came together and did what we needed to do."

Brent Albiston said safety "was something that had to be done. Common sense is your safety."

Brad Trevena: "Those two nights were like a trial by fire and we didn't get burned. The most amazing part was nobody got hurt."

Bonny Carlson: "We totally got lucky nobody got hurt or killed. ... all of our people have authority on a safety issue and if there's a problem, they act. Safety is first and environmental is second. Safety is first; you don't have to worry about generation. It's safety first.

Kent Vandermeiden: "We did risky things, like driving our own vehicles through the flooding, but we did them safely. I'm proud of these people in Hydro. We talk about at-risk behavior, and it shows. Because of the training our people have, it was done safely. I don't attribute it to luck. We knew what to do to not get electrocuted. Everything had come together to create this safety culture."

"Facing Down the Flood" was written by Steve Kinney and Karen Kiekow and designed by Tricia Pilon and Stacie Whaley.

Thank you

Corporate Communications thanks Minnesota Power's Hydro employees for their assistance in assembling "Facing Down the Flood." Employees who worked during last year's historic flood crisis include:

Brent Abrahamson
Brent Albiston
Robin Anderson
Pete Bergman
Bonny Carlson
Pam Carlson
Mike Chambers
Rick DeFeyter (now retired)
Jan Grover
Rocky Hayes
Stacy Hedin
Neal Howard
Craig Johnson (now working in C&M)
Mick Knaffla
Roy Maki
Frank Muhvich (resigned from MP)
Dennis Norberg
Dale Overfors (retired)
Nora Rosemore
Don Salmonson (retired)
Eric Senarighi
Kyle Smith (2012 summer intern)
Russ Stahlbusch (now working in C&M)
Brad Trevena
Kent Vandermeiden
Ken Winger
Chris Youngren

minnesota power

AN ALLETE COMPANY

Printed on NewPage Futura 100# Text