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By JAY K. BRADISH

106 Departments Battle Wisconsin Tire Fire



Largest Coordinated Response in State's History

WATERTOWN FIRE DEPARTMENT

Chief Henry L. Butts

Personnel: 25 career firefighters,

25 paid-on-call firefighters

Apparatus: Four engines, one aeri-

als, one heavy rescue; two tankers,

one brush truck; two ambulances,

one boat, four command cars

Population: 30,000

Area: 101 square miles

JAY K. BRADISH/IFPA, *Firehouse*® news editor, is a former captain in the Bradford Township, PA, Fire Department. He has been a volunteer firefighter and fire photographer for more than 25 years.

On Tuesday, July 19, 2005, a fire at a tire-recycling plant in Dodge County, WI, required the resources of 920 firefighters from 106 fire departments in 10 counties. It took those crews five days to extinguish the fire. This incident would become the largest coordinated response in Wisconsin history.

Watertown Tire Recyclers LLC, located at the intersection of Provimi and Rich roads in the Town of Shield, operated on 12 acres of land. The facility contained three buildings and over one million tires stored in piles ranging in size from three to 30 feet high. Tires were also stored in box trailers. Additionally, several hundred tons of chipped rubber was stored in one large pile. The company processed whole tires by chipping them into pieces and removing the steel from them. The chipped material was sold for use as playground and track material.

The Watertown Fire Department was dispatched to a reported fire at the facility at 9:56 A.M. Engine 2, Tanker 8 and Rescue 1 (an ambulance) responded with seven firefighters under the command of Fire Chief Henry L. Butts. While responding, Butts saw a heavy black smoke column from four miles away and requested that Tanker 7 also respond. Butts arrived on scene at 10:04, and observed a 50-by-50-by-35-foot fire burning in a pile of tires that measured 75 by 250 by 35 feet. The fire was located 100 feet to the east of the tire-shredding building.

Wisconsin Department of Natural Resource (DNR) Officer Barbara Palecek was conducting an inspection of the business at the time of the fire. Butts conferred with Palecek about attacking the fire or letting it burn due to the pollution concern that

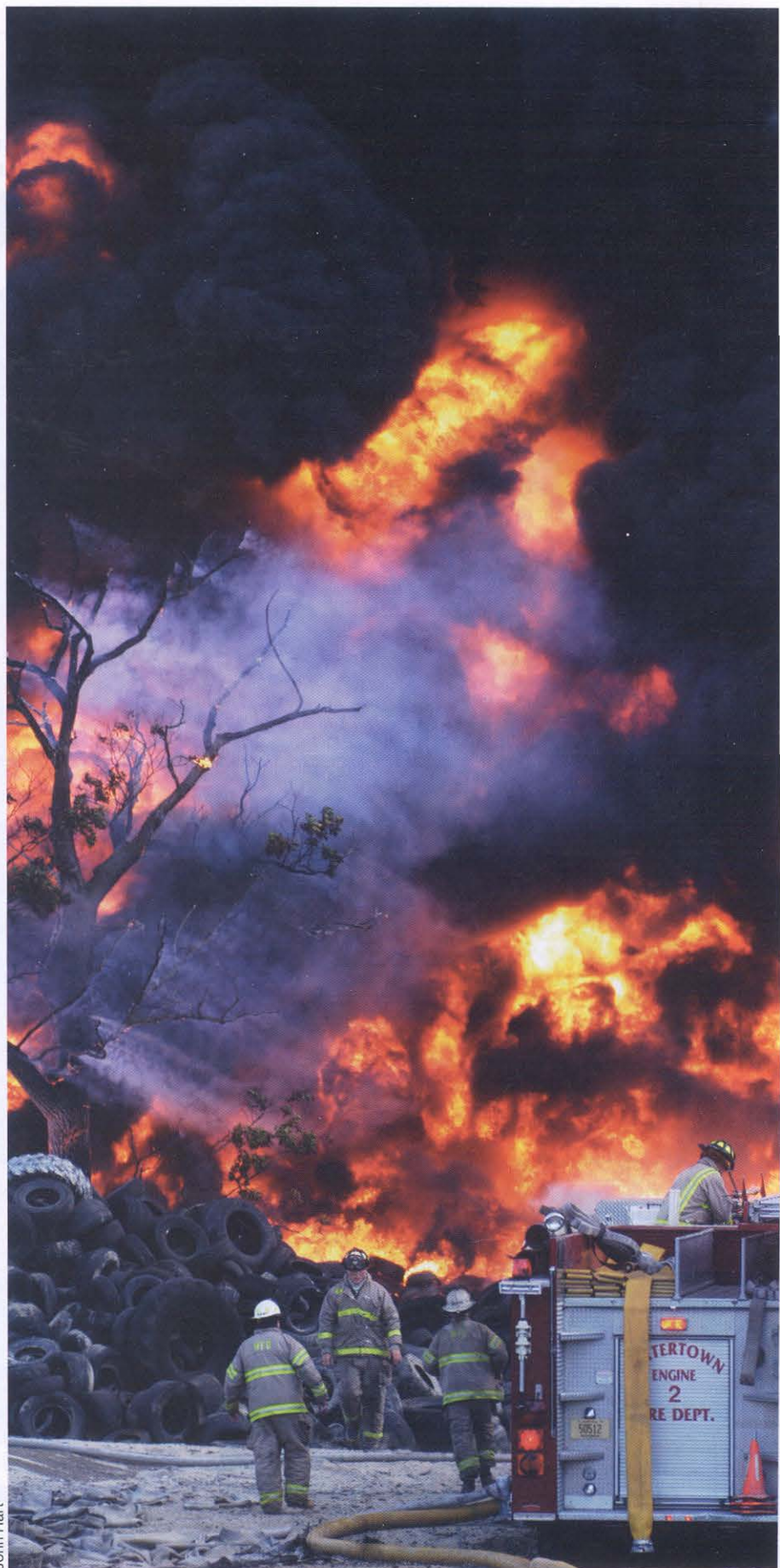
First-in Watertown Engine 2 sets up for initial master stream attack. Assistant Chief Michael Quint (left) and Chief Henry L. Butts (right) assess the situation as the initial attack begins. Firefighter Ray Tessmann (center) helps Firefighter Ken Riggs (on top of Engine 2) remove the deluge gun and ready it for attack.

Looking north from Provimi Road. A wind shift caused the fire to overrun all fire lanes. The first defensive attack was stopped and all units and personnel were relocated to the road to regroup for second defensive attack. Note that the extreme heat has melted the sides of a box trailer truck used to store whole tires.

fire suppression would create. The DNR advised Butts to attack the fire. Butts established command and requested an "all-call page" at 10 o'clock that recalled two off-duty shifts of firefighters and 25 paid-on-call firefighters. Engine 2 was assigned to operations and laid a 300-foot supply line on the driveway from Provimi Road and into a fire lane to stop the fire's progression. Tanker 8 set up at the end of the driveway and established a water supply to Engine 2. Firefighters from Engine 2 and Rescue 1 placed a 2½-inch attack line and a ground monitor into operation from Engine 2. The ground monitor was supplied by two three-inch lines.

Within minutes, the on-scene water supply was exhausted. The heat from the fire was so intense that firefighters could not get within 100 feet of the burning tires. "There were times that it would be dark as night when the smoke blocked the sun," Engine 2 Lieutenant Chad Butzine said. "We were using large amounts of water, but we weren't able to keep a continuous flow of water on it."

Butts struck seven alarms in rapid succession at 10:07. Included in this were mutual aid tankers from Clyman, Ixonia, Johnson Creek, Lake Mills, Lebanon, Lowell, Reeseville and Waterloo; engines from Clyman, Lebanon, Lowell and Reeseville; and aerial ladders from Juneau and Waterloo. The DNR declared the fire a "Hazardous Substance Incident." Four tanker fill sites were established, the closest one being 2½ miles from the scene. All of the fill sites were hydrants on the Watertown municipal water system. Four dump sites were established at the fire scene, each consisting of



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four portable tanks.

By 10:17, enough off-duty and call Watertown firefighters had responded to the fire station to bring additional apparatus to the scene. Butts requested Watertown Engine 3, Ladder 3 and Squad 1 to respond. Tanker 7 arrived on scene and a portable tank was set up to supply Tanker 8. Tanker 7 dumped its water and began tanker shuttle operations, filling at a hydrant 2½ miles away. Ladder 3 was positioned near Engine 2 and set up to help keep the fire contained to the original area. Ladder 3's ladder pipe was placed into operation, supplied by Engine 2. Engine 3 was positioned in a driveway across the street from the fire and placed its deck gun into operation to protect the home. A portable tank was set up and this engine was supplied by tanker operations.

Assistant Fire Chief William Schwenkner, who was directing Ladder 3's operations, reported to Butts that the fire was pushing toward his position. "The fire was increasing faster than we could contain it," Schwenkner said. Butts ordered the fire-

fighters to withdraw from the fire lane and reposition in a safe area.

A unified command post was established a half-mile east of the incident on Highway K. The Dodge County Emergency Government mobile command post was used as the operations center. Representatives from the Watertown Fire Department, Watertown Police Department, Wisconsin State Police, Jefferson County Sheriff's Department and Dodge County Sheriff's Department and health officials from the City of Watertown, Jefferson County and Dodge County were all present. Jennifer Warmke, deputy director of Dodge County Emergency Management coordinated the command post and acted as the public information officer. All press briefings were conducted 200 feet east of the command post so that there was no interference with operations.

The business had trailers loaded with tires surrounding the property and also in the parking area. Some were working and had to be moved so crews could advance fire lines. But this was very time consum-

ing. Some were used as storage and could not be moved without special equipment, which caused operations concerns that the fire would advance trailer by trailer across the yard. As the fire advanced toward the building, firefighters were able to move one of the trailers to block the fire from spreading to a pile of tires on the north side.

"The first plan was to contain the fire to the pile of tires and save the building," Assistant Fire Chief Ralph Wandersee said, "but because the tires were piled up to and against the building, we were not able to stop the spread into the tire-shredding building."

The steel tire-shredding building was 230 feet by 130 feet in size. Fire spread rapidly through the large volume of shredded material inside. Heavy equipment was used to move shredded material away from the west side of the building; the pile of shredded material was approximately 50 feet by 150 feet by 25 feet, and was within 10 feet of the building.

Waterloo Ladder 3 was positioned on the west side of the shredded tire pile and

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placed its ladder pipe into operation. This ladder was supplied by a five-inch line from Clyman Engine 1761, which drafted from two portable tanks located at the intersection of Rich and Provimi roads. Reeseville Engine 3361 was placed near the northwest corner of the building and deployed two 2½-inch handlines to fight the fire. This engine was supplied by a five-inch line from Lowell Engine 2861, which also drafted out of two portable tanks at the intersection of Rich and Provimi roads.

The steel siding helped keep some of the heat at bay, but made it difficult for firefighters to penetrate the interior and had to be removed on Wednesday, July 20, to allow for fire extinguishment. Throughout the first few hours of the incident, firefighters were able to enter the office area to retrieve records and personal belongings of the business and employees. As the fire spread across the pile to the south, command set up an engine to protect the farm and buildings across the road from the extreme radiant heat. "The radiant heat was much greater than I have ever experienced before," Wandersee said.

Incident commanders decided to divide the incident into 12-hour "Incident Action Periods." Watertown command officers were rotated each period so that a Watertown chief officer was always in command. Briefings were held at the beginning of each period so that the new incident commander would have full knowledge of what had occurred during the previous 12 hours. Shift rotation of personnel and equipment continued with some departments rotating only manpower, leaving their apparatus in position.

At the Wednesday afternoon command post briefing, information was received on a fire suppression agent known as F500, which is similar to "wet water." Watertown Assistant Fire Chief Michael Quint contacted a representative of the company that manufactures the agent to obtain the details on its use, environmental impact and cost. It was determined that the agent could be delivered to the incident the following day. After consulting with the command staff and the representatives of the DNR, the company was asked to ship 480 five-gallon containers of the agent to the scene. Arrangements were made with the Wisconsin State Police to escort the tractor-trailer from the Illinois-Wisconsin border to the scene. While

John Hart



Aerial view looking south shows the defensive attack with heavy streams continuing. The entire six-acre whole-tire storage area is fully involved in fire. The processing building is heavily involved in fire with a partial roof collapse.

awaiting the delivery of the suppression agent, firefighting efforts continued in an attempt to extinguish the fire with water.

On Thursday, July 21, efforts continued to contain the fire until the suppression agent arrived at 6 P.M. After a company representative was briefed on the incident, all firefighting operations were suspended while the agent was distributed next to the dump tanks. While this was being done, the company representative toured the fire scene and conducted a short class on how to mix and apply the agent. The agent was dumped into the portable tanks and then applied with conventional nozzles on handlines and master streams. At 6:30 P.M., application of the agent began and continued throughout the night.

During the late evening and early Friday morning hours, dense fog set in. Tanker operators were unable to see the edges of the highway during their two-mile drive to continue water supply operations. Watertown Assistant Fire Chief Neal Zinda asked the command post to contact the Dodge County Highway Department to supply highway cones every 150 feet so that the tanker operators could see the roadway. With the cones in place, the water shuttle operations continued throughout the night.

By Friday morning, July 22, the results could be seen and the fire was being extinguished. Wandersee obtained several backhoes from local contractors that were used to pull the piles of tires apart to allow better penetration of the extinguishing agent. On Saturday, July 23, command personnel suspended operations to determine how the fire was reacting to the

suppression agent. It was concluded that the agent was extinguishing the fire, and it was decided to continue application through the night as a safety precaution.

Quint tapped the fire out on Sunday, July 24, at 10:24 A.M., five days after the initial alarm. Firefighters operated 11 engines, eight aeriels and 107 tankers at the scene during the operation. Other equipment that responded included a heavy rescue and two ambulances. Over 10.5 million gallons of water was used to extinguish the fire, all of which was transported to the scene by the tanker shuttle operations. The water used for firefighting operations dropped the Watertown municipal water storage system by nine feet. It took 10 days to replenish the water supply. Some 2,200 gallons of F500 suppression agent was also used.

The Watertown Fire Department lost \$20,000 worth of equipment fighting the fire. One thousand feet of 1¾-inch hose, 1,000 feet of five-inch supply line and 2,000 feet of 2½-inch hose was destroyed by being punctured by the pieces of wire that had been cut out of the tires. Forty-three portable radio batteries, 12 pairs of gloves, 10 pairs of boots, several nozzles and hand tools were also destroyed. Watertown Engines 3 and 4 were stripped of equipment to make Engines 1 and 2 fully equipped to be able to respond to alarms. It took several weeks to get the other two engines back in service. Watertown Fire Department personnel spent 1,310 man hours at the scene. Watertown Tankers 7 and 8 each traveled 1,300 miles, making 325 trips hauling water to the scene. The City of Watertown's fuel truck initially re-

sponded to the scene to refuel apparatus until arrangements could be made with local fuel vendors to supply the apparatus. Vendors were scheduled to be on-scene every six hours to refuel. The City of Watertown was billed \$9,800 for fuel. The city has filed a claim for reimbursement.

"During the five days of operations, the Watertown Fire Department also responded to 35 other calls, including three working structure fires," Watertown Assistant Fire Chief Keith Becken said. "One of the fires was a three-alarm church fire. At the last house fire, three firefighters suffered heat exhaustion."

Fatigue was a serious problem during the incident. Additional personnel were not readily available for the prolonged operation. With the heat being generated by the burning rubber, firefighters needed to be rotated often with fresh crews. The preplan that was in place was overrun during the first 30 minutes of the fire. Limited access into and around the property hampered firefighters and allowed the fire to spread quickly. No residents were evacuated from the immediate area, although

it was a concern and a plan had been developed. Law enforcement was needed to control onlookers and traffic at the scene and at the fill sites.

Radio communications became a problem when the mutual aid companies began arriving. This was solved by the Dodge County Emergency Government, which obtained 40 radios from the Wisconsin Emergency Management that were all on the same channel and that were used at the incident scene. Fire officials noted that while this may not be the best way to handle communications, in this situation it worked and was proven when a severe thunderstorm rolled into southeast Wisconsin on Saturday afternoon. Command was able to communicate with all units at one time when they were ordered to suspend operations during the storm and when to restart operations.

Twice during the incident, on July 21 and July 23, severe weather passed through the area. Incident commanders were notified of the approaching weather and shut down all operations. The aerial devices were taken down and all water

flow was stopped. This let all firefighters find cover under apparatus, in ditches and elsewhere until the tornado and thunderstorm warnings were lifted. Severe thunderstorms occurred, but no tornados touched down in the area.

It was recently announced that a settlement in the amount of \$320,000 has been reached with the company to pay penalties and costs associated with the fire. This includes \$267,893 to local responders; \$31,000 to the DNR for fire response costs, and \$21,106 to the state in forfeitures and surcharges. It also calls for the business operating on the site to cease operations by 2010. It also calls for the removal of all contaminated soil remaining at the site at a cost estimated to be \$75,000. Even with the large settlement, municipalities did not recover the total amount of money spent on firefighting operations. In Wisconsin, when the state attorney general sues, all money received goes into the state education fund. Watertown received only a \$120,000 reimbursement for the \$162,000 cost of fighting the fire.

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