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The Big Reed Fire

Reed Incident at Lake Constance

Wildfires are a rarity in most parts of Germany throughout the year. This is mainly due to the fact that the vegetation is mostly green with dry woods or dry grasslands being the exception, not the rule. In addition, the weather is usually too wet and too cold to sustain a fire. That's not to say that there aren't any fires. A number of fires tend to keep the German Fire Departments busy, but these are usually small ones, which are quickly extinguished. These usually occur during the summer season, from the end of April through August.

Germany, as a whole, does not support special wildfire fire departments with trained wildland firefighters. This is especially true in the Lake Constance Area where wildfires are fought by volunteer firefighters. These fires are almost exclusively human in origin, and are usually accidental in nature, the result of inconsiderate motorists who throw their cigarettes out of their cars, or from careless picnickers who ignored posted warnings against unauthorized campfires. Occasionally, though, there is the intentional fire.

Such was the case, when an arsonist left an incendiary device in the Big Reed Conservation Area on "Mettnau" peninsula near Radolfzell/Lake Constance (Baden-Wuerttemberg/Southern Germany). Though a fire like the Mettnau Incident might be considered a small wildfire in the United States, in Constance County it was one of the big blazes.

Location

Lake Constance ("Bodensee") is located in southern Germany and serves as the border between Germany, Switzerland, and Austria. The town of Radolfzell (nearly 28,000 inhabitants) is located at the beginning of the Mettnau peninsula which is located on the westside of the Bodensee between the "Zeller See" and the "Gnadensee". Mettnau is a famous Conservation Area with several bird colonies with thousands of rare water birds. The peninsula is nearly 1.5 kilometers (one mile) long with a maximum width of 500 meters, and, with the exception of the wildlife, is uninhabited.

There is an Information Center of the "Naturschutzbund Deutschland" (German Nature Conservation Group), located on the peninsula and approximately 500 meters from the Center, along a causeway, is an observation tower. From the tower, there is only a single, small path leading into the reed area.

Fire Alarm

The first call reporting a fire came from personnel of a German Border Control unit, radio call "Pfaender 530," at 11:38 p.m. on March 11, 1996. The radio call was received by the County Dispatch Center of Constance in Radolfzell. (This is a full service dispatch center which handles all Fire and Rescue Departments as well as the Ambulance Departments and all Disaster Units in Constance County.) The patrol reported a big fire in the Mettnau area. Soon after that the Center received another eight telephone-calls from people living near the lake. Flames were visible around the western shore of Lake Constance as well as from neighboring Switzerland. At 11:39 p.m. the Dispatch Center sent out an alarm, activating the Radolfzell Volunteer Fire Department (R.V.E.D.), radio call: "Florian Radolfzell". (It should be noted that though it is a volunteer fire department, the R.V.E.D. is a Base Fire Department (Stuetzpunkt-Feuerwehr) with six District Fire Stations and 243 volunteer firefighters. The Department is organized into four parts: two Divisions, one Oil Disaster Unit and one Haz-Mat Unit. In 1997 the R.V.F.D. participated in over 200 Fire and Rescue Operations).

Within minutes, Fire Chief Helmut Richter, a TLF 16 (Tanker-Pumper with 2,500 liters of water), an LF 16 (Engine with 1,200 liters of water), an ELW (Command Car) and an MTW (Personnel Carrier) along with 35 firefighters were in route to the fire.

County Fire Chief Rolf-Juergen Stoffel as well as the Chief Press and Information Officer (County Fire Federation of Konstanz), Wolfgang Jendsch, were also notified and immediately traveled to the scene of the blaze.

Operations

All fire units stopped at the end of the street near the Mettnau Information Center, as it was not possible to drive on the small causeway to the observation tower. From there, the firefighters had to take their personal equipment (only tools and lamps) and hike the rest of the way to the fire. Just getting to the fire was a chore. There are no lights along the trail since this is a wildlife conservation area, so the firefighters had to rely on their hand lamps to find their way along an unfamiliar path to the end of the peninsula. The reeds beside the path (which up ahead were burning furiously) were between two and three meters high (six to nine feet) making it impossible to see anything on the right or left side. Battling the blaze at midnight was treacherous enough, but the weather conditions and location of the fire also made it a dangerous site. It was bitterly cold with the temperature near freezing (between one and three degree Celsius (33 to 35 degrees F.) with heavy, gusty winds. The tall reeds also made it a blind fire area.

As it turned out, the tanker-pumper and the engine could not be used since there was no solid road access to the fire and the distance was deemed too long to lay out hose. The alternative would be to pack in fire pumps and use the lake. This being late winter and the temperature being near freezing meant that the water in Lake Constance was still frozen, so as it turned out, the lake could not be used as a source of water. So, neither foam nor water could be used to fight the fire. The fire front was from 100 to 400 meters long at any given time, and with the heavy, gusty winds frequently changing directions, by the time firefighters reached the fire, they saw flames reaching up between eight and ten meters (25 to 35 feet). The heavy winds fanned the flames causing them to spread very quickly. They also caused flare ups in areas thought to be under control. In addition, the erratic nature of the winds, in such a relatively small area, meant that there was no time to construct fire lines. An air attack that night was quickly ruled out. There are two water buckets (each 5,000 liters) stationed in Boeblingen 150 km (95 miles) from Lake Constance, but there was no time to get a military helicopter that night. Between one and one and a half hours are needed in order to activate a helicopter for air operations. But with the gusty winds, the fire was spreading too quickly to wait. The fire needed to be attacked right away.

The firefighters could only use their “fire swatters” (Feuerpatschen), which is a special wildfire tool in Germany used in a swabbing motion. It is like a broom with a long stick, not with broom hairs but with many flexible metal stripes. The volunteers literally beat the fire out. There were 15-20 swatters in use that night, and though the swatters are not standard issue equipment on the fire engines, every fire station has some on hand just in case. It should be noted that the Radolfzell volunteers, like most German firefighters, don't have special wildfire equipment like backpack pumps, backpack hose carriers, Pulaskis, McLeods or even sharp-ened shovels!

The heat generated by the fire was enormous, despite the temperature being bitterly cold. This plus the sheer physical exertion of beating out the fire, required that the firefighters had to be rotated frequently just to cool off.

It took the 35 firefighters nearly two and a half hours before the fire was finally contained and controlled. In the end, several thousands square meters of reedland burned. The Police Department, during their investigation, found evidence of an incendiary device, confirming that it was an arson fire.

Fire Equipment

German Fire Brigades are not normally equipped with special wildland firefighting gear. They use standard fire engines like “Tankloeschfahrzeug” (TLF) with 2,500-liter water tanks (ca. 700 gal), “Loeschgruppenfahrzeug” (LF) with 1,600-liter water tanks (ca. 450 gal) or “Tragkraftspritzenfahrzeuge” (TSF) without any water. All of which could not be put to use due to the location of this fire. The only hand tool specifically designed for wildland firefighter's use is the fire swatter. If the fire had been in a

more accessible area, C-hoses, with quick attack hoses, attached to high-pressure pumps would have been used. This is the same equipment used in normal street fire operations.

In 1993 firefighters in Baden-Wuerttemberg (Federal state of Germany) were issued brand-new protective clothes. They received red jackets made out of three layered Nomex, under which they wear a jacket made out of Gore-Tex. Trousers are also made out of Nomex. Only months before the Mettnau Reed Incident, most Radolfzell firefighters were provided with new, similar protective clothes made out of Nomex. These protective clothes are good for short term exposures to temperatures of maximum 300 degrees Celsius. The fire line intensities were so high, that some clothes made out of "Nomex" actually contracted, damaging all three layers, making them unfit for further use. Some old trousers, made out of cotton, and even leather boots got brand holes. A post-fire fact-finding committee determined that firefighters were exposed to temperatures that ranged between 350 and 400 degrees Celsius. This was evidenced by the damage done to clothing. In spite of these "casualties," the new clothes did their job and protected the firefighters. Remarkably, only four firefighters received minor bum injuries.

This fire was a good demonstration, making it clear, that optimal personal protection is invaluable and indispensable for firefighters work, and like most wildland fires, the Big Reed area suffered no long term damage.

The Author

Wolfgang Jendsch is a Special Editor and Author for Fire and Rescue Service, which is well known in Germany and Europe. He works for the German Fire Magazine and Rescue Magazine; as well as working as the Chief Press and Information Officer of the County Fire Association of Konstanz (Kreisfeuerwehrverband Konstanz) and the County Fire and Rescue Documentation Unit.

Wolfgang Jendsch has written several special books about fire and rescue services and fire apparatus. He is also News Editor and German Correspondent for the Wildfire.

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