

Water in the Dust Bowl

Amateurs Excel in Supplying Emergency Communications During One of the Greatest Floods in the Midwest's History

BY GEORGE HART,* WINJM

MAY was a wet month in the general vicinity of the State of Kansas, and June was even more so. The ground became saturated, riverbanks filled to overflowing and some communities experienced flooding of their streets even before the big rains really came. Highway and rail traffic slowed down, almost stopped. And then came more heavy rain to produce a record flood and to cause a communications emergency in which the help of amateur radio was needed and was forthcoming. Telephone and telegraph lines fell and became broken in the raging waters, leaving some communities entirely without wire communication, others with only a few wire outlets. What lines did remain were badly overloaded. Into these overtaxed communications facilities came the extra demand for communications in the form of relief and welfare messages, official communications and thousands of "worry" and "agony" messages to and from individuals.

Into this breach stepped many emergency and traffic nets and many public-spirited individual amateurs. The Kansas Emergency Net went on a continuous operation basis. The ARRL Tenth Regional Net instituted 7-day-per-week operation, in order to take care of the great increase in traffic. The Transcontinental Relay Net operated extra sessions to help out. All over Missouri and Kansas special nets sprang up to meet the demands of the hour, sometimes working into regularly-established nets, at other times serving a temporary need for communications with certain places.

In the affected areas of Kansas and Missouri there was feverish amateur emergency activity. Some AREC organizations were activated in late June, but the real trouble started about July 10th and continued for some 10 days before the waters began to recede. The damage, especially in the Kansas City area, was tremendous —

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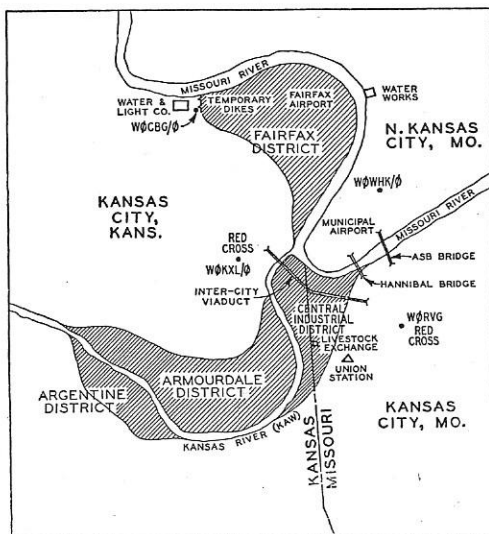
and would have been much more so but for the marvelous work of our emergency and traffic nets and our SECs, ECs and AREC members.

It is impossible, from the stack of interconnected reports we have, to establish any kind of continuity of activity over the emergency area as a whole. Rather than try to do so, since most of the work was local in nature, we shall cover the primary areas of activity one by one, then summarize later.

Lawrence

The first call for amateur assistance in Lawrence

came in late June when community officials called on the AREC to provide mobile stations for patrolling the dikes. Six mobile units made up a network on 29.4 Mc., along with the University of Kansas station W0AHW, K0NAB of the Naval Reserve, and W0SEC. Some of the units were in continuous use for periods of over 24 hours. Two weeks later, on July 10th, the Kansas (Kaw) River rose again and mobiles W0OBH and W0FON went to work. W0SEC set up his fixed station at the Chamber of Commerce, and W0AHW again went on continuous duty. W0OBH, with PA0CG assisting, flew equipment to Perry.



The greatest damage inflicted by the rampaging Kaw took place in Kansas City, where the Kaw flows into the Missouri. This map, submitted by W0KXL, shows the inundated areas and the locations of places referred to in the text.

Manhattan Area

On July 11th water from the Kansas River began to overflow into Manhattan and city officials had to leave their offices in the downtown area to establish temporary headquarters at Kansas State College. W0DEL and W0PAH installed radio equipment in the temporary headquarters to provide emergency communications for city officials. Using the facilities of the Kansas State College Amateur Radio Club, W0QQQ, this equipment operated under the call W0DEL. The transmitter operated continuously from July 11th to July 17th, using emergency power

• One hardly knows where to begin. The Midwest floods in July caused a flood of reports, each one adding something to the story, each giving a slightly different version of what actually happened. The story is complicated and incredibly long — much too long to reproduce here in any detail. The account which follows is an attempt to reduce some 25 to 30 reports to an all-inclusive narrative — an attempt we know will overlook something or somebody.

part of the time. WØDEL continued to operate from this location on a limited scale until July 20th.

WØQQQ and WØOXE also operated from the campus. The former handled some long-distance traffic on 20 and 75. WØOXE, the Naval Reserve station, was assigned the job of handling welfare messages. WØYUQ maintained contact from his home station at night. Normal communications were off in Manhattan for several days. During this time amateur radio furnished most of the help needed.

WØDEL handled almost nothing but official emergency traffic. Services performed included relay of information to KSAC, the college-owned broadcast station, which went on the air in place of flooded-out WIBW of Topeka. Typical of other traffic handled at WØDEL were calls for typhoid serum, Red Cross calls for food and clothing, weather bureau reports, river information, calls for equipment, death messages, etc. Keeping this station on the air meant using considerable manpower. WØDEL was operated at various times by WØs DEL, PAH, AMG, IYU, and YFE, in addition to necessary nonoperating personnel.

WØQQQ made its first contact on July 12th and handled a great deal of traffic, some of it on the MARS frequency of 14,255 kc. Some of the messages were of an urgent nature, such as instructions to planes dropping needed medical supplies, blankets, and radio equipment. WØQQQ operated for 84 hours, using 14 Mc. during daylight and 7 and 3.5 Mc. at night, with help from W9OOM, WØYFE, WØSQL and W9LPX/Ø.

WØOXE, operating from the Naval Reserve barracks, handled some urgent traffic concerning

gas lines, pipe-line breaks, etc., in addition to the usual welfare traffic. They operated exclusively on 75 meters and moved around the band as required. Operators included WØOXE, WØSQL and WØZGQ. This station was connected by landline teletype to WØDEL, and contact between WØDEL and WØQQQ was maintained with Signal Corps field telephones; thus good liaison was maintained and traffic moved with efficiency.

Radio contact was maintained with Topeka and Ft. Riley at all times, using mostly 75 meters and the assistance of hundreds of amateurs who helped police the bands and who helped by remaining silent. The traffic count for the three stations at Kansas State runs into four figures. Particular praise is due WØZLA who rendered remarkable liaison assistance and WØYFE, who was flooded out of his home and lost his transmitter, but nevertheless volunteered as operator at WØQQQ and WØDEL.

At Ft. Riley, WØAAE, the station of the Ft. Riley Amateur Radio Club, was completely flooded out and operations were started on July 12th from the back end of a small truck. Later the station was moved to the Signal Equipment Pool. Priority and emergency traffic from the post and the Red Cross were cleared first, after which welfare messages were handled to every state in the Union. Some 1217 service and welfare messages, 73 Red Cross messages, 27 telegrams and 122 priority and emergency messages were handled, with only two operators, WØDAF and WØPNQ.

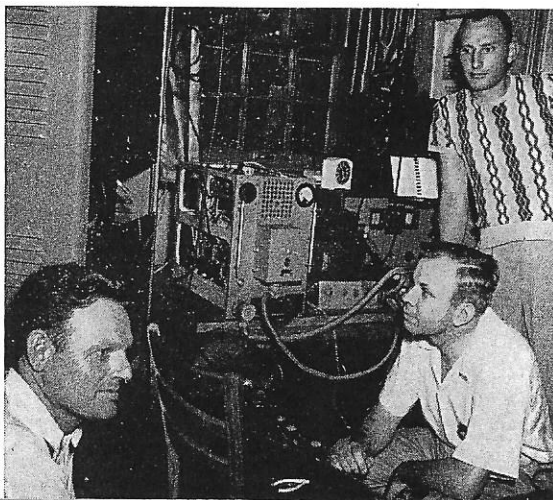
In Junction City, WØBLI handled traffic for Western Union with W9BCY/Ø mobile, and later with WØACU and WØAAE. Other in-state traffic was handled with WØCV and out-of-state traffic by the Traffic Exchange Net on 7230 kc. A few were also handled on 160.

Topeka

Emergency net drills conducted by the Kaw Valley Radio Club of Topeka, along with some experience in late June when the Kaw River got to pushing at the tops of the dikes at several places, paid off for the Topeka gang on July 10th, when the real test came. The Mayor of Topeka requested three fixed stations and several mobiles. A special meeting was called and preliminary details worked out on setting up the individual stations and staffing them for the first

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This, believe it or not, is a broadcast station in operation. KTOP in Topeka was one of three broadcast stations flooded out, but they stayed in operation by using the facilities of WØWIT, with a few slight modifications to make his 14-Mc. transmitter work on 1490 kc. This lash-up operated 18 hours per day for four days in flood service until KTOP got going again. A halfwave doublet cut to the frequency served as an antenna. Shown are (l. to r.) WØWIT, WØNCV and a KTOP engineer waiting for something to let go.

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24 hours. Besides the three fixed stations, two emergency-powered portable stations were set up in trucks for continuous duty wherever the need arose. Within 24 hours these facilities were expanded by adding three more fixed stations. Manpower became a very acute problem. Most of the boys put in from 12 to 18 hours per stretch and at one station which became isolated the boys kept the station going for 56 hours before relief arrived.

Stations were set up at National Guard headquarters, the city garage, the fair grounds, at the scene of the flood and at four separate "boat docks" created at several points throughout the city, with mobiles at the city waterworks and others scattered wherever needed and requested by the National Guard or police headquarters.

Most of the traffic handled contained requests for sand, sandbags, trucks, manpower, and boats. This traffic flowed constantly for four days intermingled with requests for food, motorboat repair parts and mercy missions concerning missing persons, pets and livestock.

Three additional stations were set up on 75 meters to handle Red Cross, National Guard and Santa Fe Railroad emergency traffic. All operations were carried out through WØCET, the control station at Police Headquarters. Operation was maintained for five full 24-hour periods, then tapered off for a day and a half before shutting down. The Mayor, National Guard and Chief of Police all voted a hearty "well done" to the members of the Kaw Valley Radio Club and others who assisted.

At Forbes Air Force Base in Topeka, WØTRK was set up and assisted materially in handling hundreds of messages for the Red Cross and city officials.

KØNRZ at the Naval Reserve Training Center maintained a continuous watch from 0800 July 11th until 2200 July 15th on the local net. On July 15th they participated in the Transcontinental Relay Net on 7042 kc.

WØKSY/Ø was set up at the Adjutant General's office in Topeka.

Salina

On July 11th, the Chief of Police of Salina contacted EC WØIYR and requested that he immediately organize the Central Kansas Emergency Net and prepare for action. WØTSR moved his equipment to the Police Station and during the afternoon all the mobile units checked in. The Chief of Police assigned a patrolman to each mobile unit to report rising water conditions. WØBGW and WØMVG went to the river gauge south of town. That evening all mobile units were kept busy moving barricades and reporting water levels to the Police Department.

At midnight, WØINW/M and WØMVG were dispatched to the northern part of the city to handle emergency evacuation calls. WØATS/M and WØISC were stationed at the Street Department. WØMUY/M was stationed in the southeast part of the city to dispatch boats, maintainers, etc., on evacuation calls. WØBGW and WØIYR

were marooned near their home locations and reported on conditions and helped relay requests for assistance. WØTSR and WØHWE manned the station located in the police building.

From midnight until 6 A.M. July 12th all units remained in service. At 6 A.M., when the Street Department building had to be evacuated, WØATS and WØISC were dispatched to the Iron Avenue Bridge to handle emergency calls from the east part of town which was then under water. Thursday afternoon WØIYR escaped the water and relieved WØINW and WØMVG. Late Friday afternoon (July 13th), WØMVG's equipment, manned by WØMUY and WØISC, was moved to radio station KSAL to provide communications with the Police Department since the landlines were heavily loaded with emergency calls. By midnight Friday evacuations were practically complete and mobiles were taken out of service. During the entire emergency, WØJAF on 75 meters and WØSTC on 160 meters handled incoming and outgoing traffic.

On July 14th, WØJFE of Abilene moved his gear to Solomon, near Salina, since they had only one shaky landline operating. Some 80 messages were handled on 160 meters. WØBBDK of Abilene moved into Chapman, which was hard hit, to handle emergency traffic until satisfactory wire communications were re-established. WØVDP was on from Abilene, and it is said that fish were swimming around in his shack. WØBGW acted as relay with the aid of WØs TSR, MVG and INW. All in all, a tremendous amount of work was put in by the Salina gang. Several of the boys operated a total of 90 hours with less than six hours of sleep.

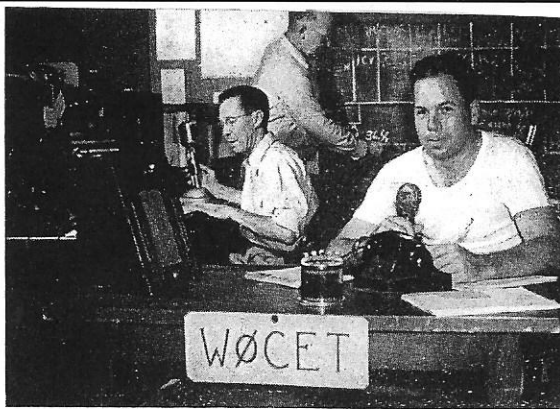
Kansas City Area

The swollen Kaw now rolled on toward its junction with the Missouri River and its grand finale in destruction. The dikes and levees in Kansas City were built five feet above the high point of the great 1903 flood and were considered safe. However, it was not until late — almost too late — that engineers discovered the Kaw was carrying 60% more water than in the 1903 flood, and hurried evacuation of low spots was ordered late on July 12th.

The Heart of America Radio Club 10-meter net, with mobiles from all the Greater Kansas City area participating, had been active on the 11th and 12th during the flooding of the Big Blue which cuts through the eastern part of Kansas City, Mo. The mobiles, teamed with Red Cross rescue units, now went into action along the Kaw, aiding and checking on the evacuation work. The Kaw broke through the Argentine dikes on the south bank shortly before midnight. A few hours later the river topped the dikes in Armourdale on the north bank. The Kansas City central industrial district was still considered to be safe, but the amazing Kaw broke through to inundate the rich industrial district, stockyards and railroad yards.

The amateur mobile units went to work under control of WØRVG, permanently set up in the

All operation on 10 meters in and around Topeka was controlled from WØCET, located in the radio room of the Topeka Police Department. This station kept order in the net so that although traffic was heavy, it was handled in an orderly manner. Shown at the controls are WØICV and WØAFN (l. to r.) while WØUPU keeps the records on the dispatch board.



Kansas City, Mo., Red Cross Building. Spotters telephoned or relayed information of marooned and stranded persons and WØRVG contacted the mobile of the nearest rescue team. Many lives were saved this way. Amateur mobiles were also rushed into the industrial district where gas and oil tanks, floating loose from their base, were striking high-voltage lines and exploding into flames. The mobile units remained there for several days providing needed communication for first-aid work, feeding of the fire fighters, etc.

The Kansas City, Mo., Municipal Airport and Kansas City, Kans., Fairfax Airport were both threatened as the Kaw poured its floodwater into the Missouri. Airline activity was shifted to Grandview Airport, 15 miles south of Kansas City, and schedules were disrupted as some airliners left their regular schedules in order to help in the flood work. Johnson County amateurs set up WØEIB/Ø on 75 meters to communicate with Grandview Airport and WØRVG. Later, when 75 proved unsatisfactory, WØEIB/Ø switched to 10 meters where WØUBR/M was already in operation. WØRCU/Ø had earlier been set up as liaison with the Army Engineers and WØKXL/Ø at the Kansas City, Kans., Red Cross Headquarters.

The Kaw's floodwaters now began to tear at the dikes in North Kansas City at the junction of the Kaw and the Missouri. WØWHK/Ø was set up and mobiles WØRDR and WØLKP were rushed in and joined there by WØYPV. WØBQU operated with a fleet of boats on rescue work. But the dikes in North Kansas City held after feverish work and the danger point shifted to the Fairfax District of Kansas City, Kans., where water seepage had developed and later broke through the flood gates. Weakened by water on both sides, the dike was broken by the river at 6 P.M. on the 14th. This precipitated the battle for the Kansas City, Kans., water and light plant in the northern corner of the Fairfax District. Mobiles WØFPH, ODU and UQV were sent into Fairfax. Later as the dramatic inch-by-inch battle between the sandbaggers and the water continued, WØs AHC and KXL moved to 29.6 Mc. for a "point-to-point" radio circuit. The threat of violent explosion should the water hit the 2000-degree-hot boilers brought hundreds of volunteer workers to the scene. WØAHC/M was relieved by other mobiles, then a portable station, WØCBG/Ø, was set up near the plant and remained there until the battle was definitely won and workers hurriedly left, since 53,000,000 gallons of gas and oil stored in the Fairfax District were putting a heavy film on the water and fumes in the air so

that a spark could set off an explosion more disastrous than the flood itself.

The river was not quite finished with its destruction and threats. The Missouri, swollen now by the Kaw, began cutting away at one end of the Truman Bridge, Kansas City's sole remaining rail bridge to the East. WØBGP/M was dispatched to provide communication for the work crews which were rushed there, and operation continued until the morning of July 18th.

Probably 45 to 50 mobiles participated in the communication of the Kansas City area, providing much-needed mobility to the flood communications system and a supplement to greatly-overloaded telephone circuits. The 10-meter net handled messages dealing with rescue work, manpower, equipment, materials, feeding and clothing of workers and flood refugees, evacuation work, and every other type of activity that could be connected with a flood. We cannot reproduce a complete list of amateurs who participated, but we think mention should be made of WØOOT who, flooded out himself, operated from five different stations during the flood period as well as conducted his own job as operator with the Missouri Highway Patrol. The 75-meter net found its chief use in handling vocal messages for the Red Cross, city and state officials, the military and direct conversations between officials and business executives, to say nothing of a large amount of inquiry and welfare traffic.

Miscellany

WØTAW and WØFRK operated in Garnett handling traffic for the Santa Fe Railroad along with Red Cross messages and death notices. Most of the traffic was handled with Ottawa. WØFRK also was instrumental in providing Osawatomie with much-needed contact with the outside world through his 75-meter mobile rig. He handled communications for the Mayor, the telephone company and the state Board of Health, returning to Garnett between times to carry on his work there. Lee put in many long hours of operating both at home and away.

Chanute stations WØIJV and WØIFR were active, the latter operating WØLYF's rig. Traffic was handled with Topeka for the Santa Fe, with flood-stricken Erie, Kans., through WØEQD of Parsons and WØFNS of Neodesha, and with the

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Kansas Net. WØVRZ was active from Pretty Prairie and WØFLZ from Osage City handled traffic for flooded Council Groves. WØHAU and WØCBK operated from Marion on 160 meters, with the aid of WØGEY and an emergency power supply dug up by WØAFX.

Other places and stations which were active include WØGCJ (Marysville Red Cross), WØJLY/Ø (Quenemo), WØSOE (Wichita Red Cross), WØs JXJ, PYS and FQE (Kansas City area), WØOTN (Paola) assisted by WØUBI and WØOCK, and hundreds of others.

Operating some 50 mobile units, the Heart of America Radio Club reports not a single breakdown during the whole disaster, which lasted better than a week. A pretty good record!

Naval Reserve stations KØNAN at Junction City, Kans., KØNRK at St. Joseph, Mo., KØNBM at Parsons, Kans., and KØNRI at Kansas City, Mo., all took an active part in the emergency work. KØNRM at Manhattan and K9NAK at Alton, Ill., both furnished equipment and facilities for use by local radio clubs and AREC operators.

Long-haul traffic nets on 40 and 80 meters were of material assistance in relaying traffic for distant places, some of it of an official nature. The Tenth Regional Net of NTS was in almost continuous operation during the period of the flood. ARRL Trunk Line J also participated, holding a special Sunday session on July 15th during which much traffic was handled direct with Kansas portable stations in the flood area. The Transcontinental Relay Net, which operates on 7042 kc. and is primarily dedicated to swift overseas and transcontinental relaying, was instrumental in handling considerable quantities of traffic with WØHOC and others in the flooded area.

WØMAE was asked to set up in the Argentine district of Kansas City, Kans., but he preferred to operate from his own home, which was on high ground. Not too much later the place he had been asked to operate from and the Santa Fe Railroad's \$50,000,000 investment in the Argentine were under water.

As WØVRF, Missouri SEC, says, to write an article adequately covering the good work of amateurs in this emergency would take most of the space in the next twelve issues of *QST*. In the above, we have only scratched the surface in an attempt to cover the salient facts without delving too deeply into details. As a result, it is inevitable that many individuals and even some groups who participated will not have been mentioned. To these we extend our apologies in advance.

No attempt at originality has been made in this factual report. We have leaned heavily on reports of ECs, SECs and SCMs, as well as individual amateurs. Particular acknowledgment is due Merton Meade, WØKXL, from whose monthly bulletin *Midwest Clix* we have borrowed freely, using his exact well-chosen words in some places.
