was maintained until 1942, when the heavy drain on man-power due to the formation of a home-defence Army, coupled with the inclusion of the Fire Service in the man-power pool for the Armed Forces, made it necessary to lower the standard. This applied particularly in respect of the owner-drivers of taxi and commercial vehicles. Inclusion of the latter with their vehicles was, in default of supply of permanent transport, necessary to ensure the mobility of pump crews billeted in the metropolitan areas.

46. *Establishment.*—The establishment under Scheme B was 1,470. It was increased to 3,000 in 1942 when Scheme C was put into force. The allocation of this personnel, which was in accordance with the direction of the Chiefs of Staffs, is shown in the Second Schedule attached. The organization provided for six divisions in Auckland, five in Wellington, and three in Christchurch and Dunedin. The units in the secondary centres where more than fifty men were involved were treated as divisions, but in the smaller centres they operated as a brigade auxiliary under the control of the regular brigade officers. Junior officers were appointed, so far as possible, in such ratio that a section officer or leading fireman would be in charge of each pump crew of four men. The senior section officers were utilized mostly in control of the discipline and training of night-duty crews. The positions of District Commander were held by Mr. L. S. Abbott in Auckland, Mr. S. M. Kinross in Wellington, Mr. K. W. Robinson in Christchurch and Mr. W. W. Callender in Dunedin. The two latter were members of the respective Fire Boards, Mr. Callender being Chairman at Dunedin. It is perhaps invidious to comment on individuals, but it must be acknowledged that very much of the success of the Service is due to the excellent work of these four officers.

47. *Uniforms.*—It was decided to equip the Service with standard fire-brigade uniforms, firstly because these were necessary for the health of the men in training (wet drills are essential), and secondly because it was recognized that, even as second-hand equipment, they would be of value to the volunteer brigades after the war. There was unfortunately considerable delay in manufacture, even the Home Guard being given priority in supplies of material. Pending their supply, the Defence Department made available the blue full-dress Army uniforms returned to store by the Territorial Forces on the outbreak of war. These were mostly of small sizes and only about 1,500 proved serviceable for our requirements. They were issued in the first instance to the E.F.S. in the principal centres, and when the Fire Service uniforms came to hand the surplus stock was handed over to the volunteer brigades for the equipment of the auxiliary personnel. By the time the E.F.S. went into reserve, only 2,600 uniforms had been received for 3,000 men, the remainder of the personnel being still equipped with the Army pattern. No overcoats were supplied, even to the mobilized personnel. When the stand-down took place, about 1,500 E.F.S. tunics and 1,000 pairs of trousers with 500 Army uniforms were fit for reissue. These were dry-cleaned and handed over to the United Fire Brigades' Association for distribution to the volunteer brigades.

48. *Training.*—Immediately on attestation, all personnel were put through a course of recruit training by the regular brigade officers or senior firemen, designed to familiarize them with equipment, working drills, and fire-service practices. They were then placed under the control of their own officers and trained in operational duties under the supervision of the brigade officers. Although the emergency personnel would be required to team in with the regular service in ordinary fire-fighting should an attack take place, the principal object of enrolling such a large reinforcement is to provide against the contingency—a 90-per-cent. probability in the case of major attack—that the ordinary water-supply reticulation will break down under high-explosive bombs or shell-fire. The training was therefore directed mainly to pumping water from static sources and relaying it overland for long distances. These are operations which are seldom or never required in peacetime fire-fighting. It is doubtful if there is any case on record in New Zealand where more than a two-pump relay has been required. A new technique therefore had to be developed, and this again varied from time to time as additional supplies of hose came to hand. Longer relays then became possible by using twin lines of hose. In the later stages we developed the "water units," referred to elsewhere, with which 400 gallons of water per minute could be pumped from static supply to a point half a mile away and delivered at high pressure. Only two pumps were used, and the complete operation took about ten minutes.

49. *Training Manual.*—It had been intended that each District Fire Controller should define the drills and training to be adopted within his own area. It was found, however, that there were such variations in brigade practice that some standardization of drills was necessary if the proposed reinforcement arrangements were to be effective. The conditions under which the E.F.S. was recruited differ considerably from those under which persons normally enter the fire service. In the latter case the recruit is immediately brought into close contact and association with the trained firemen and even during his recruit training has the opportunity of discussing training and general fire-brigade problems with the older hands. In this way he would pick up a lot of information which was not available to the E.F.S. recruit. He also gets an immediate introduction to actual fire-fighting work.

50. In an attempt to overcome these difficulties and to arouse interest in the technical side of the work, it was decided to prepare a training manual. Under the supply contract the manufacturers (the Colonial Motor Co., Ltd.) were required to provide instruction pamphlets with each pump, and following a discussion with the management the latter agreed to this information being expanded to fit in with the proposed instructional manual. This was finally developed as a booklet of eighty pages. It contained a full series of drills based on the four-man drill issued by the United Fire Brigades' Association and adapted to the trailer pump. It also included brief notes on the duties of E.F.S. personnel, the principal items of fire-brigade equipment, fire-fighting practice, and the technique of pump operation from the mains, from static supplies, and in relaying. The company published the manual and supplied each member of the E.F.S. with a copy. Acknowledgment is due for this courtesy and to the Superintendent and officers of the Wellington Fire Brigade for advice and criticism and for carrying out practical tests on the drills and to check the calculations in the tables.

51. *Training School.*—Advantage was taken of the visit to New Zealand of Mr. A. D. Wilson to arrange for a school of instruction in Wellington. The intention was that the first course given by Mr. Wilson to officers selected from both regular and emergency services should determine what adaptation of British methods was best suited to New Zealand requirements. It was also proposed that a central school should be established at Wellington to operate at intervals for the instruction of officers. These officers would then act as instructors in their own districts. The scheme fell through partly owing to the rapid improvement in the war situation, but the instructional course was of sufficient value to warrant consideration being given to the establishment of similar courses for officers in the post-war service.