

# NATURE

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## WATER SUPPLY IN GREAT BRITAIN

LAST summer, the Government issued a White Paper on water policy in Great Britain, which was dealt with, in connexion with related current discussions, in *Nature* of August 5, 1944, p. 159. Since then, there have been frequent references to the subject in Parliament and elsewhere, showing that public opinion was alive to the many vital issues involved. Recently a committee of the Institution of Civil Engineers has produced a valuable "Report on the Government White Paper on a National Policy", and now the Government itself has brought before the House of Commons a Water Bill, where it was subjected to vigorous discussion.

The Bill follows closely the lines of policy indicated in the White Paper, though certain outstanding features are naturally clarified in some degree. On the administrative side, the major features are the vesting of all powers in the Minister of Health, including those which relate to surface waters as well as to underground supplies; coupled with a somewhat hesitating curtailment of the supposed right of the individual to do what he pleases with any underground water he can get. Regarding surface supplies, the intention, no doubt, is to accelerate and cheapen procedure by the substitution of local inquiry under more ordered regulations for the more costly and less fettered proceedings of parliamentary committees. Whether this aim will be accomplished may be in some doubt, in view of the fact that various bodies are given the right to object to the Minister's decision concerning the acquisition of lands and water-rights by water-undertakers, until those decisions have been ratified by Parliament.

A fundamental feature of the Bill is the important position of the Central Advisory Water Committee. The Committee is to advise the Minister (or any other Minister concerned) regarding the conservation and use of water; to consider the operation of enactments which may affect water resources and to make representations thereon; and to advise any Minister on questions relating to water which he may refer to it. Advisory powers could scarcely be drawn more widely. Unfortunately, however, the Bill gives not the slightest inkling of the constitution of this all-important body. The next clause states all too concisely that the Minister may, *by order*, make provision respecting its constitution and procedure. It is scarcely too much to say that on the constitution and working of this Committee the whole success or failure of the Bill will depend, and one might reasonably look for some guarantee that it will consist of men with the highest technical knowledge who will bring unfettered judgment to bear on problems referred to them. Through the work of this Committee the investigation of all problems of water supply in Great Britain should be organized, and the application of its conclusions to the conservation and development of water resources for all purposes should be ensured.

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At the next stage, regional organization for the assessment of resources and the co-ordination of local schemes is to be promoted by the establishment of joint advisory water committees, in regions where the demand is judged to be large in proportion to local resources. This proposal is clearly to be viewed in connexion with the powers to define areas within which the right to abstract underground water is prohibited except by sanction of the Minister; for promoting voluntary or compulsory amalgamations of water undertakings; and for variation of areas of supply. In this case the general constitution, powers and duties of such joint committees are defined, and while it is reasonable (as laid down) that they shall consist mainly of representatives of the water-undertakings and local authorities concerned, it is to be regretted that there is no provision for independent scientific and technical advisers.

Further power of control is provided by clauses for the compulsory purchase of land, either for water-works or for the protection of supplies, and for the enforcement of by-laws designed to protect sources against pollution by any acts of the owners or occupiers of the land from which such supplies may be derived. In practice, this last will largely concern the protection of underground supplies, and will depend for effective application on very detailed geological knowledge to define the areas which the by-laws should control.

An examination of the Bill tends to confirm some of the doubts expressed by the expert committee appointed by the Institution of Civil Engineers in its report on the White Paper. All will agree with the committee's general commendation of the White Paper (which it would doubtless extend to the Bill) as representing a valuable step in the development of official recognition of the vital public importance of water questions. At the same time one feels that the committee has been cautiously reticent in the expression of its views, some of which would probably receive more forceful expression by the members as individuals. While modestly disclaiming its right to express an opinion on policy of a controversial nature, the committee evidently is in no doubt that the control of water should be in the hands of a single central authority, with the fullest scientific and engineering knowledge at its command, with power to formulate policy in the light of such knowledge, and to guide the development of water schemes accordingly. It is in this matter of clearly defined organization and control that the proposals of the White Paper (and the Bill) fail to show complete grip of the requirements, and betray too familiar concern for the susceptibilities of existing organizations.

Beyond this central conception, the valuable comments of the Institution's committee may be reduced almost to the single word—research. It is most stimulating to have so clear an expression, from a source of such authority, of the urgent need for more data and more study. Far more extensive records of rainfall are needed for Great Britain generally, and still more intensive studies of its wide variation within small regions. The great need for river-gauging on a well-organized plan is properly stressed;

and one readily appreciates the committee's doubts whether any such scheme would be likely to develop properly under the proposed river boards. The whole fundamental question of percolation and its relation to the maintenance of underground supplies demands far more extensive investigation than it has yet received in Britain. It is not a matter for the mere application of general principles, but for close and prolonged investigation in representative areas. The importance of the general collection and tabulation of information regarding underground water is properly stressed by the committee, which also does well to direct attention to the fact that much of the most valuable information necessary for preparing maps of underground water-levels is provided by great numbers of private wells, a large proportion of which may soon be abandoned. Their investigation, especially in regard to their seasonal variation, is therefore the more urgent.

It appears likely that the committee would feel satisfied that its views regarding such matters as the assessment of compensation water and the protection of underground supplies are reasonably met by the Bill. In general, the proposals for the collection of data regarding underground sources may be adequate, though it is still far from clear that all the information is to reach a single centre for co-ordination and study. Details of new borings are to be made available to the Geological Survey (under guise of the Committee of the Privy Council for Scientific and Industrial Research), but what is to be the fate of all the information collected by the joint advisory water committees? More especially, what must impress all who have studied the Bill, is the absence of any clear provision for the investigation of surface waters and the problems associated with them, though such sources still provide much the larger part of the water supply of Great Britain. The White Paper indicated the need for extending the work of the Inland Water Survey—though it confused the issue by stating that the Survey's most vital work of river gauging should be undertaken by the river boards. In the Bill no such matter is specifically mentioned, and one is left to hope that this and many other things may be included under the Minister's general duty to promote "a national policy relating to water".

The last of the valuable proposals by the committee of the Institution of Civil Engineers is for the appointment of a research committee to co-ordinate work relating to water problems, as it may be conducted in various Government departments, in the universities or by water undertakings. Here, surely, should lie one of the most important functions of the Central Advisory Water Committee. If that committee is constituted of men of unquestioned independence, experience and knowledge, representing the various branches of administration, science and engineering involved, we shall have every reason to hope that the good intentions which undoubtedly lie behind the Bill will really be translated into practice. Here, if anywhere, we may find the 'single authority' which should be responsible for the water policy of Great Britain.