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MINISTRY OF HEALTH

THIRD REPORT OF THE
CENTRAL ADVISORY WATER
COMMITTEE

River Boards

*Presented by the Minister of Health to Parliament
by Command of His Majesty
August 1943*

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LONDON

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CENTRAL ADVISORY WATER COMMITTEE.

Terms of reference:—

(a) to advise the Government Departments on questions relating to the conservation and allocation of water resources;

(b) to advise the Government Departments on any questions which may be referred by them to the Committee with respect to any matter arising in connection with the execution or any proposed amendment of the enactments relating to water; and

(c) to consider the operation of the enactments relating to water and to make to the Government Departments such representations with respect to matters of general concern arising in connection with the execution of those enactments, and with respect to further measures required, as the Committee think desirable.

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- Mr. J. E. James.
- *Sir David Owen.
- †Mr. B. Verity.

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- Mr. G. C. North, M.C., Ministry of Health.
- Mr. A. T. A. Dobson, C.B., C.V.O., C.B.E., Ministry of Agriculture and Fisheries.
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* Sir David Owen died on 17 May, 1941.
 † Mr. Verity resigned on 28 October, 1940.

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Note.—The following abbreviations are used in the Report:—

Act of 1876—Rivers Pollution Prevention Act, 1876.

Rivers Pollution Prevention Acts—Rivers Pollution Prevention Acts, 1876 and 1893.

Act of 1888—Local Government Act, 1888.

Act of 1923—Salmon and Freshwater Fisheries Act, 1923.

Act of 1930—Land Drainage Act, 1930.

Act of 1936—Public Health Act, 1936.

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The estimated cost of the preparation of this Report (including the expenses of the Committee and witnesses) is £340 3s. 2d. of which £120 represents the estimated cost of printing and publishing the Report.

CENTRAL ADVISORY WATER COMMITTEE

THIRD REPORT

To The Rt. Hon. ERNEST BROWN, M.C., M.P.,
Minister of Health.

The Rt. Hon. ROBERT S. HUDSON, M.P.,
Minister of Agriculture and Fisheries.

GENTLEMEN,

1. We were requested to consider, as part of our review of questions relating to the conservation and allocation of water resources, whether measures were required for the co-ordination of the various interests, and, in particular, whether it was desirable, and if so, feasible, to constitute new river authorities, which would be vested with the responsibility for all or some of the functions exercised by the existing bodies responsible for river control. We have the honour to submit to you a report of our investigation of these questions.

INTRODUCTION.

2. At the first stage of our inquiry we obtained the views of the principal Associations representing river authorities and users, and of some of the larger responsible authorities: subsequently, we spent six days in hearing oral evidence tendered on behalf of the various interests likely to be affected if the existing law were altered. Lists of the organisations from which written statements have been received, and of the witnesses examined orally, are contained in Appendix I. We wish to take the opportunity of thanking these bodies and gentlemen for the great assistance rendered to us.

We have not found it necessary to call for evidence from interested Departments of State, as the Assessors appointed by the Departments mainly concerned have taken part in our Meetings and have placed at our disposal all the information bearing on the subject that we have required.

The problem being largely administrative in character, we have also considered it unnecessary to make local surveys of any river systems. We have, however, given detailed consideration to the administrative control of a number of watershed areas, and have had evidence bearing on questions of land drainage, river pollution, fisheries and inland navigation from bodies connected with the Rivers Thames, Lee, Ouse (Yorkshire), Severn, Great Ouse, Tees, Tyne, Dee, Plym, Tamar, Towy, Teifi, Trent, Wye and Weaver.

3. It is unnecessary to enlarge upon the importance of the rivers of the country in relation to water supplies, public health, the development and prosperity of agriculture, fisheries, commerce and industry, navigation, amenities and recreation. These questions have been fully developed in the Reports of previous Commissions and Committees, notably in those of the Water Power Resources Committee, 1918-1921, and we consider that it will be sufficient for the purposes of this Report if we draw attention to the past recommendations bearing on our investigation. We think it desirable, nevertheless, for a full appreciation of the problems of river control, to recapitulate briefly the various uses made of the rivers, and to describe in some detail the constitution and functions of the various administrative bodies, and the powers conferred, by statute or otherwise, on the interests concerned.

4. It is estimated that some three-quarters of the population of England and Wales is supplied with water obtained directly from rivers, streams or

springs: in some areas, moreover, the yield from the underground resources on which the remainder of the population relies may be influenced by the flooding or artificial drainage of land draining into the underground strata, or conversely, the abstraction of water from underground may affect surface water. In addition to domestic water supplies, the rivers and streams are of vital importance for the provision of water supplies for agriculture, industry or power; to land drainage, fisheries, transport and navigation; for the disposal of sewage and industrial effluents; from the amenity point of view; and to the populations of the great towns for recreation. This list does not purport to be exhaustive, and does not place the various interests in any order of importance. It is, in fact, impossible to give an order of importance which would apply to every river. The main interest in some cases is definitely water supply, in others it may be industry, in others fisheries, and so on; in some instances there is more than one important interest. Moreover, changes in the distribution of population and in the development of industry or other causes may vary the predominating interest from time to time. We have necessarily taken full account of the special requirements of every sectional interest, but our investigation has been mainly directed into the administrative system of river control and how far it ensures that the rivers are used in the best interests of the whole community, or can be better adapted to that purpose.

PART I.

THE EXISTING INTERESTS.

Prevention of Pollution.

5. There are more than 1,600 Local Authorities, including Joint Committees, Fishery Boards and some water undertakers, with statutory powers for the prevention of river pollution. The general enactments are (a) the Rivers Pollution Prevention Acts, 1876 and 1893, directed towards the prevention of pollution in the general public interests, and (b) the Salmon and Freshwater Fisheries Act, 1923, for the protection of fisheries.

The Act of 1876 relates to all non-tidal streams (which are defined as including rivers, streams, canals, lakes and watercourses) and may be made to relate to the sea to such extent, and tidal waters to such point, as the Minister of Health may, on sanitary grounds, determine by Order. We understand that Orders have been made under this power in ten cases.

It is an offence under the Act—

(1) to put solid matter into a stream so as to cause pollution or interference with the flow;

(2) to discharge solid or liquid sewage matter into a stream; and

(3) to discharge into a stream, poisonous, noxious or polluting liquid proceeding from a factory or manufacturing process.

There are reservations where the discharge is through a channel in use in 1876 (or a channel in substitution thereof) and the best practicable means of purification are used; and with regard to water pumped from mines.

6. The responsibility for enforcing the Act of 1876 was originally placed on the Sanitary Authority—now the Borough, Urban or Rural District Council—who are empowered to institute proceedings for offences in regard to streams within or passing by or through their district, the consent of the Minister of Health being required before proceedings are taken in respect of pollution arising from the discharge of poisonous, noxious or polluting liquid from a factory or manufacturing process, or matter from mines; if the responsible Council, on the application of an interested party, do not take such

proceedings, the Minister may on complaint and after inquiry direct them to do so. The Minister before giving his consent to proceedings by a Sanitary Authority of any district which is the seat of a manufacturing industry must be satisfied that the means for rendering such liquid harmless are reasonably practicable and available under all the circumstances of the case and that no material injury will be inflicted by such proceedings on the interests of such industry.

By Section 14 of the Local Government Act, 1888, the powers of Sanitary Authorities were conferred upon County Councils, who thus exercise concurrent jurisdiction with the Local Authorities in their counties. The Minister may also by Provisional Order, on the application of one of the Councils concerned, constitute a Joint Committee or other body representing all the administrative counties through or by which a river or any specified portion or tributary passes and confer on the Committee all or a specified part of the powers of a Sanitary Authority under the Rivers Pollution Prevention Acts. We understand that four such Joint Committees have been formed, viz.:— for the West Riding of Yorkshire, the Rivers Mersey and Irwell, the River Ribble and the River Dee.

Section 56 of the Land Drainage Act, 1930, amends Section 14 of the Act of 1888, to the extent of providing that the Minister may promote a Provisional Order constituting such a Joint Committee for a Catchment Area* or combination of Catchment Areas. The Joint Committee so formed must include, so far as convenient, the members appointed by County or County Borough Councils to the interested Catchment Boards. We are informed that no Provisional Orders have so far been promoted.

By a provision of the Local Government Act, 1894 (now Section 91 of the Local Government Act, 1933), Local Authorities are empowered to form Joint Committees for any purpose in which they are jointly interested, and to delegate to those Committees any of the powers which the Councils can exercise, except those of borrowing or of making a rate. The only existing Joint Committee of this kind for the prevention of pollution is the Tame Basin Joint Committee.

7. Under Section 8 of the Salmon and Freshwater Fisheries Act, 1923, Fishery Boards† and persons certified by the Minister of Agriculture and Fisheries as having a material interest in the waters affected are empowered to institute proceedings against a person who knowingly permits to enter waters containing fish, any liquid or solid matter to such an extent as to cause the waters to be poisonous or injurious to fish or the spawning grounds, spawn or food of fish. Where, however, the act done is in exercise of a legal right or in continuation of a method used prior to the passing of the Act, a person proving that he has used the best practicable means within a reasonable cost of preventing such damage, is immune from penalty. Power is also given to proceed against a person* discharging any trade effluent into any waters containing fish by means of any work newly constructed or altered after the commencement of the Act who fails to give the prescribed notice of the proposed construction or alteration to the Board concerned, or to the Minister of Agriculture and Fisheries.

Fishery Boards may, under Section 55 of the Act of 1923, for the protection of fisheries in their districts, institute proceedings under the Rivers Pollution Prevention Acts; for that purpose they have the like powers and are subject to the same restrictions as a Sanitary Authority. For the protection of fisheries,

* See paragraphs 10 to 15 of the Report.

† Paragraphs 16 to 18 of the Report describe the constitution and functions of these Boards.

under the same Section, these Acts may be made to extend to the sea to such extent, and to tidal waters to such point, as may, after local inquiry held by two persons appointed by the Ministers of Health and Agriculture and Fisheries, be determined by Order of the former. The Order becomes provisional if there is opposition by an affected Local Authority or Joint Board. In areas of this description, the Fishery Board must obtain the consent of the Minister of Health to *all* proceedings for offences. Also, Sections 59 and 60 enable Fishery Boards to make approved byelaws regulating the discharge of specified liquid or solid matter detrimental to fish.

8. In certain cases—e.g., the Conservators of the River Thames, the Lee Conservancy Board, the West Riding of Yorkshire Rivers Board and the Lancashire Rivers Board—special powers for the prevention of pollution have been conferred upon the responsible bodies by local Acts. There are also examples of local Acts authorising water undertakers to exercise the powers of the Rivers Pollution Prevention Acts, or powers based on those Acts, for the protection of water supplies derived from the lower reaches of rivers.

9. Dock and Harbour Authorities have a general power, under the Merchant Shipping Act, 1894, to prosecute persons discharging polluting matter into the harbours or tidal waters under their control; there are examples, among others the Port of London Authority, of the undertakers having local Act powers for the prevention of pollution.

Other statutory provisions relating to pollution are contained in the Public Health Act, 1936 (Section 30 and Part XI), the Waterworks Clauses Act, 1847 (Section 61 *et seq.*), the Diseases of Animals Act, 1894 (Section 52), the Oil in Navigable Waters Act, 1922, the Gasworks Clauses Act, 1847 (Sections 21-23), the Public Health Act, 1875 (Sections 68 and 69) and the Public Health (London) Act, 1936 (Part III).

Land Drainage.

10. The Land Drainage Act, 1930, consolidated and amended the law relating to land drainage and completely reorganised the local administrative system. The Act contemplates two kinds of districts—catchment areas under the jurisdiction of Catchment Boards, and drainage districts (these are limited to the area capable of benefiting by or avoiding danger through drainage operations or, as it is usually called, the “lowland area”) under the jurisdiction of Drainage Boards. In catchment areas for which Catchment Boards have been constituted these are known as Internal Drainage Boards.

11. The Act required the Minister of Agriculture and Fisheries to set up Catchment Boards for the 47 catchment areas scheduled in the Act, and authorises him to make Orders (which are provisional in certain cases) adding other catchment areas to the scheduled areas or combining two or more areas under one Board. At the time the Catchment Board is constituted, the Minister is required to prepare a plan defining the “main river” (this may include tributaries) over which the Board has sole control.

Drainage Boards, other than Catchment Boards, may be constituted by a scheme of a Catchment Board confirmed by Order of the Minister of Agriculture and Fisheries. Where a proposed drainage district is outside a statutory catchment area, the Drainage Board may be constituted by Order of the Minister on his own initiative, or on application by the County or County Borough Council affected, or by the owners of one-tenth of the land within the proposed drainage area.

Since the Act came into operation some additional Catchment Boards have been formed and certain of the original Boards have been amalgamated. In some catchment areas, notably the Thames and Lee, schemes have been made for the abolition of Internal Drainage Boards and the transfer of their

powers to the Catchment Boards. We are informed that there are now 53 Statutory Catchment Areas and 377 Drainage Boards, of which 22 are for drainage areas outside Statutory Catchment Areas. A list of the Boards, with details of the Internal Drainage Boards within their areas, is contained in Appendix II.

12. Catchment Boards were required to submit schemes to the Minister for transferring to the Boards all powers, obligations and property of drainage authorities in relation to the drainage of the main river, and for reorganising their lowland areas, including the setting up of new Internal Drainage Boards, and the replacement of the old Commissioners of Sewers by elective Drainage Boards. They are responsible for the supervision of the Internal Drainage Boards and must commute all obligations of private owners to do work in connection with the main river. Drainage Boards may commute obligations of private owners in connection with watercourses in their area other than main rivers.

Both Catchment and Internal Drainage Boards are Drainage Boards within the meaning of the Act, and as such are empowered to carry out necessary drainage works in their areas including—

- (a) maintenance works, designed to keep the watercourses, banks, etc., in repair;
- (b) improvement of existing works, including the removal of milldams, weirs and other obstructions; and
- (c) new works, including the construction of new watercourses.

A Catchment Board may also do such works in the sea or estuary as are deemed necessary to secure an adequate outfall for the main river.

All Drainage Boards may make byelaws for securing the efficient working of the drainage system of their districts.

Subject to an appeal to the Minister a Catchment Board may carry out works if an Internal Drainage Board is in default, and may recover the expenses incurred from the persons who would have been liable if the works had been carried out by the Internal Drainage Board.

By Order of the Minister, which becomes provisional if opposed, the powers and duties of an Internal Drainage Board may be transferred to a Catchment Board on the petition of the latter.

The Minister may also, on complaint being made by a Local Authority or Internal Drainage Board that the Catchment Board have failed to exercise their duties in regard to the main river, give such directions to the Board as appear to him to be proper, and it is then the duty of the Board to comply with any directions so given. The Minister is required to furnish a report to Parliament setting out the directions and the reasons for which they were given.

The Act affords protection for Navigation Authorities and requires that due regard must be had to fishery interests.

13. The membership of Catchment Boards varies with the importance of the area, the maximum being 31, except that in two cases, viz.:—the River Ouse (Yorkshire) and Trent, two members were added to each Board to represent mining interests consequent on the passing of the Doncaster Area Drainage Act, 1933.

The constitution laid down by the Act is—

- (a) one member appointed by the Minister;
- (b) of the remainder, not less than two-thirds are appointed by the County and County Borough Councils in the area, on the basis of rateable value, with the proviso, however, that the County Borough membership must

not exceed one-half of that allocated to both; and not more than one-third are appointed by the Minister to represent the lowland areas.

In making the appointments, the County and County Borough Councils must have regard to the desirability of including as far as is practicable among the members appointed by them, persons with a practical knowledge of land drainage: County Councils are also required to ensure that their membership includes adequate representation for urban districts.

Internal Drainage Boards are elected, under rules made by the Minister, by those liable to drainage rates, i.e., the owners and occupiers of land within the drainage district.

14. The expenses of Drainage Boards are defrayed in the following manner:—

(1) Catchment Boards may precept—

(a) Internal Drainage Boards for such contribution as the Catchment Board think fair. The amount has to be settled by the Minister in the event of an appeal by an Internal Drainage Board that it is too much, or by a County Council or County Borough Council that it is too little.

(b) County Councils and County Borough Councils for the balance of the expenses, but the rate involved must not exceed 2d. in the £ on that portion of the County or County Borough within the Catchment Area, unless the majority of the County Council and County Borough Council members on the Catchment Board agree.

(2) Income may also be obtained by Catchment Boards from Exchequer grants towards improvements or new works, and from agreed contributions from any Local Authority who consider that any drainage work of the Catchment Board is desirable in the interests of public health or for the protection of a highway.

(3) The expenses of Internal and other Drainage Boards are met mainly by rates levied by the Drainage Board on the owners and occupiers of land in the drainage district.

A Catchment Board may contribute towards the expenses of an Internal Drainage Board, if it is considered that the quantity of water which the latter's district receives from land at a higher level or the time which will elapse before the district obtains any relief from works carried out by the former justifies this course. If any County or County Borough Council within the catchment area, or an Internal Drainage Board are aggrieved by the Catchment Board's decision, they may appeal to the Minister, who may make such Order as he thinks fit, but must lay a report, including his reasons for the Order, before Parliament if an Order is made.

Local Authorities may contribute if drainage works carried out by the Internal Drainage Board are considered to be desirable in the interests of public health or for the protection of a highway.

15. The Act of 1930 empowers County Borough or County Councils to exercise certain of the powers of Catchment and Internal Drainage Boards in relation to land within their areas, but not within the jurisdiction of a Catchment Board, including the powers to recover the cost incurred from persons with obligations to repair or maintain watercourses, bridges or drainage works, and to levy rates on owners and occupiers of lands which derive benefit from works carried out.

Section 62 of the Act of 1930 provides that nothing in that Act shall prejudice or affect the provisions of the Salmon and Freshwater Fisheries Act, 1923, or any rights, powers or duties conferred or imposed thereby and that in the exercise of the powers conferred by the Act of 1930 due regard shall be had to fishery interests.

Fishery Boards.

16. The principal general enactment is the Salmon and Freshwater Fisheries Act, 1923, which consolidated and amended the law in nineteen previous (and now repealed) Fishery Acts, and made provision for the formation of local administrative bodies. The Act empowers the Minister of Agriculture and Fisheries to define fishery districts and to constitute Fishery Boards who shall be responsible for the local administration. The districts are defined by Orders which become provisional if there is opposition from interested authorities, associations or persons. The area of a fishery district usually embraces the whole of the watershed area of the river or rivers concerned, and includes tidal waters. The 48 Boards set up under this procedure, or under legislation repealed by the Act of 1923, are set out in Appendix III.

17. The Boards have wide powers for the control and improvement of fisheries. They are empowered to enforce the prohibitions and restrictions on fishing imposed by the Act; to issue fishing licences; to prevent pollution; to acquire fisheries, fishing rights or establishments for the artificial propagation or rearing of fish; to make byelaws for the regulation of fishing, including the determination of the close season for the various classes of fish; to take legal proceedings in respect of offences or for the protection of fisheries; to construct and alter fish passes; to expend any moneys in their hands in the manner in which they think most conducive to the maintenance of fisheries; and generally to execute such works, do such acts and incur such expenses as they deem expedient for the maintenance, improvement or development of fisheries in their districts.

18. The Boards consist in general of—

(a) appointed members; the Act of 1923 provides for five members to be appointed by a County Council where the whole of the fishery district is within one County, or three to be appointed by each County Council in the district in other cases;

(b) representative members elected by licensed net fishermen and licensed anglers;

(c) ex-officio members; the owner or occupier of a fishery in the district which is assessed to the general rate on a gross value of £30 a year or more; or is the owner of lands in the district of an annual value of not less than £100, having a frontage to any waters over which the Fishery Board have jurisdiction, frequented by fish, of not less than one mile, and has the right to fish in the waters adjoining such frontage, and has paid licence duty for fishing within the district during the last preceding fishing season.

The constitution is subject to variation from the foregoing according to the terms of the Order constituting the Board. The expenses are met principally out of income from fishing licences and in some ten cases from contributions by the owners of fisheries assessed for the purpose. (Such Assessment is authorised in Orders for regulating fisheries by Section 38 (1) (d)). There is no power for Local Authorities to contribute towards the Boards' expenses.

Fisheries.

19. Salmon and freshwater fisheries fall, broadly speaking, into two categories, (a) rod and net fishing for salmon, migratory trout and eels and (b) rod fishing for freshwater fish, including non-migratory trout.

Salmon, migratory trout and eel fisheries, although they have suffered much from past neglect, are still of considerable economic importance, contributing as they do to the food supply; and providing direct or indirect employment for labour and contributions to Local Authorities by way of rates.

In most cases fisheries in estuarial waters are vested in the Crown while, with few exceptions, those in inland waters are privately owned. Accordingly, in estuarial waters the public has usually the right to fish subject to, taking out the appropriate licences prescribed by the local Fishery Board, if any, (which, as regards certain kinds of nets, may be restricted in number by an Order under Section 62 of the Act of 1923, the purpose being to avoid over fishing). On the other hand, the right to fish in inland waters must, generally, be acquired by purchase or lease.

There is no general public right of fishing in inland waters, such fisheries are in the hands of riparian owners or their lessees, associations of anglers and, in a few cases, of public authorities (including Fishery Boards). It is the practice of associations to acquire the fishing rights and to issue permits to fish to their members whose number may or may not be limited. Where a Fishery Board has jurisdiction, the appropriate licence must be taken out by each angler, although, in a few cases, a general licence is obtained covering any authorised fisherman in specified waters.

Nearly 400,000 licences were taken out during 1938 in England and Wales. Except in the case of salmon and migratory trout, the licence duty is usually small. Part of the revenue of some Fishery Boards is applied in re-stocking. This practice benefits the private owner, but, in the case of salmon and migratory trout, it confers an equal benefit upon the netsmen in tidal waters who reap the major portion of the harvest sown in non-tidal waters.

Inland Navigation.

20. Many of the navigable non-tidal lengths of rivers in England and Wales are controlled by Navigation Authorities who have usually been set up by local Acts, although in some cases the powers of the authority are derived from some ancient Charter or are based merely upon proprietary rights. The Authorities are of great variety—Commissions or Boards comprising representatives of Local Authorities, canal interests and barge owners, or other persons paying tolls; incorporated companies trading for profit; Railway Companies; Municipal Corporations; Land Drainage Authorities; and private persons. It is not uncommon to find two or more Navigation Authorities controlling different lengths of the same river. The Authorities have general powers to control navigation and levy tolls, and to maintain and improve the rivers for navigation purposes. Their income is derived mainly from tolls on craft using the river, and from water and other rents.

21. Prior to the passing of the Act of 1930, a number of Drainage Authorities possessed navigation powers which have in some cases subsequently passed to the Catchment Boards concerned. That Act also enables Drainage Boards, with a view to improving the drainage of their districts, to enter into agreements, with the consent of the Ministers of Agriculture and Fisheries and War Transport, for the transfer to such Boards of the whole or part of undertakings of Navigation Authorities, or for the alteration or improvement by the Boards of any works of the Authorities. The Minister of War Transport may also authorise a Drainage Board to levy navigation tolls on navigable waters which are not under the control of a Navigation Authority where he is satisfied that the cost of maintenance or works in connection with those waters has been or will be increased as a result of the use of those waters for purposes of navigation. If the powers of a Navigation Authority are not properly exercised, the Minister of Agriculture and Fisheries, after consultation with the Minister of War Transport, may, by Order, with a view to securing the better drainage of any land, revoke or vary the provisions of any local Act from which they are derived. The Order becomes provisional if opposed.

Canals.

22. We are informed that excluding the Manchester Ship Canal, there are over 900 miles of canals owned by Railway Companies, and over 1,500 miles of canals owned by 31 canal undertakings, still in active use. The average tonnage of goods and materials conveyed over these canals in the years 1935-37 was nearly 18½ million tons per annum.

23. Canal undertakers were originally incorporated by local Acts. In some cases the undertakings have been acquired by Railway Companies and in a few cases by Conservancy or Local Authorities. The undertakers' powers are specified in the local Acts, the Railway and Canal Regulation Act, 1854, and the Railway and Canal Traffic Act, 1888. The Acts sometimes include the power to impound one or more rivers in order to provide reservoirs to feed the canals, or to take water from rivers, streams and wells within a specified distance of the canals for that purpose, but do not always provide for compensation water. In many instances the waterways belonging to or used by the undertakers traverse and draw water from more than one watershed area.

A large part of the traffic over canals and inland navigations is through traffic passing over waterways owned or controlled by different undertakers. Several of the canal and inland navigation undertakings include commercial facilities such as docks, warehouses and similar works and buildings which are not part of the actual navigation.

Tidal Navigation and Dock and Harbour Authorities.

24. There are upwards of 100 local Navigation Authorities exercising jurisdiction in tidal river waters. In most cases their powers are derived, not from a general Act of Parliament, but from a local Act, or from a Provisional Order subsequently confirmed by an Act. In some cases, however, the powers of the Authority are based upon an ancient Charter or merely upon proprietary rights. Some of the Authorities have conservancy powers only, and others own piers, quays, wharves, docks, etc. The Authorities are usually *ad hoc* bodies of commissioners, conservators, trustees, etc., set up and constituted on lines prescribed in the local Acts, the most usual basis being partly election and partly nomination. Other Navigation Authorities are companies, including Railway Companies, or Local Authorities whose local Acts add navigation powers and duties to their general Act functions.

25. The powers of Navigation Authorities differ widely, but as a rule they include a power to levy dues on vessels using the waters over which the Authorities exercise jurisdiction, and the duty of preserving and improving the facilities for navigation in those waters. We are informed that the Board of Trade,* as the Central Department which by constitutional usage is charged with the duty of safeguarding the public right of navigation in tidal waters generally, always consults local Navigation Authorities on any matters affecting their interests and does not interfere with the exercise of their local jurisdiction except in cases where the interests of the public right of navigation, or the Crown's proprietary rights (where they exist) appear to be involved.

Ports.

26. Out of 171 ports in England and Wales, 7 belong to the Government, 40 are owned by railway companies, 26 are privately owned, 43 are municipally owned, and 55 are owned or controlled by Commissions or Boards of a representative character, such as the Port of London Authority and the Mersey Docks and Harbour Board, which were set up by local Acts to manage docks, harbours and tidal waters in the interests of trade. These

* Now Ministry of War Transport.

Commissions or Boards are in the nature of public trusts. They do not work for profit but carry on the undertakings solely for the benefit of trade, surplus income being utilised for reducing the rates charged on shipping and goods or for improvements for the benefit of trade.

General.

27. Details of arrangements made by Drainage Authorities with Navigation Authorities and of canals which have been abandoned are appended to the Report (Appendix IV).

Public Water Supply.

28. It is estimated that more than two-thirds of the 1,169 statutory water undertakers of England and Wales (i.e., Local Authorities, Joint Boards and Companies) derive their supplies from rivers, streams and springs, and that the quantity abstracted is more than 1,000 million gallons per day.

Most of the surface supplies are derived from the upper reaches of rivers, where there is little or no contamination by polluting discharges, but with improved methods of water purification there has been an increasing tendency in recent years for water undertakers to obtain supplies from lower down the rivers. This method of obtaining supplies is often more economical, because the heavy expense of impounding reservoirs is avoided, and there is usually less expenditure on trunk mains. The practice might therefore be expected to become more common if the pollution of rivers were reduced.

Local Authorities and Joint Boards supplying under the Act of 1936 have power (Sections 116 and 343) to abstract water from or impound rivers and streams, provided (Section 331) that all riparian owners agree. In practice, the exercise of this power is negligible. The consent of the Minister of Health is required to new proposals (Section 116) and to any loan involved (Section 310 and Local Government Act, 1933).

Where Local Authorities and Companies are empowered by local Acts to abstract water from rivers it is usual for the maximum quantity which may be abstracted to be defined in the Acts and, if streams are impounded, for the Acts to provide for compensation water: penalties are generally imposed for breaches of these statutory conditions. In these cases, new proposals for the abstraction of water can be authorised only by private Bill, or by Provisional Order, where there is agreement.

Abstraction and Conservation of Water.

29. Certain of the existing Drainage Authorities are suppliers of water for various purposes. The Kent Rivers Catchment Board, as successors to the East Kent Commissioners of Sewers, are under an obligation to maintain water in certain watercourses, so as to ensure a supply of water to Sandwich for various public purposes; the River Ancholme and Winterton Beck Catchment Board supply water for various commercial purposes; and in many cases water has to be maintained and conserved for navigation purposes, either because the Drainage Authorities are themselves Navigation Authorities, or are under obligation to supply water to adjacent Navigation Authorities.

The Boards are primarily Land Drainage Authorities, but land drainage is not merely an evacuation of water as quickly as possible. The object is rather to obtain a controlled flow so as to avoid the extremes of flood and drought. In view of the wide responsibilities of the Boards over the river basins, it may be said that one of the Board's functions is to see that there is no interference with the supply of water in the river for all legitimate purposes, although they are not specifically charged with this duty.

A distinction has to be drawn between the supply of water for riparian and non-riparian uses. Many Catchment Boards are, it is understood, in the habit of issuing licences to riparian owners to take water and the byelaws

of Catchment Boards sometimes include a prohibition against the taking of water except with the Board's consent; but we do not consider that the definition of "drainage" in the Act of 1930, which includes "irrigation, warping and the supply of water" gives the Boards the right to supply water from the rivers under their control for any purpose disconnected with drainage, or to prohibit riparian owners from exercising their normal rights.

Sewage Disposal.

30. If Local Authorities and Joint Sewerage Boards discharge sewage into a watercourse or river they must do so so as not to injuriously affect it (Act of 1936, Sections 30, 331 and 334, and Section 3 of the Act of 1876). If the Sewerage Authority propose to construct a sewer which crosses or interferes with any watercourse or works vested in, or under the control of, a Land Drainage Authority they must notify the Drainage Authority of the proposals, and, if that Authority object, the proposals must not be proceeded with unless the Minister of Health, after public inquiry, gives his consent (Section 15 of the Act of 1936). The Sewerage Authority must also obtain the consent of the Navigation Authority (consent is not to be unreasonably withheld) before executing any works which would interfere with any river, canal, dock, etc., so as injuriously to affect navigation thereon, or its use or access thereto, or to interfere with the improvement of the river or undertakings in question (Section 333 of the Act of 1936). An authority proposing to construct sewage works with an outfall to a river may thus have to deal with several river authorities, including the Land Drainage Authority, the Navigation Authority and the Authority responsible for the prevention of pollution. Local Authorities whose duty it is to provide for sewerage and sewage disposal under the Public Health Acts are also empowered to enforce the Rivers Pollution Prevention Acts. This situation tends to create a conflict of duty which it is desirable in the interests of the river to avoid.

Riparian Owners.

31. Every riparian owner has the common law right to the reasonable use of water for his domestic purposes or for his cattle, without regard to the effect which such use may have in case of a deficiency upon proprietors lower down the stream, but his right to use a stream for other purposes is limited by the condition that he must not interfere with the rights of other riparian owners. The quantity of surface water used by agricultural interests for purposes such as the watering of cattle and milk production and irrigation; by millowners, factories and electricity undertakings, for power, condensation and cooling; and by industry for processes such as bleaching, weaving, dyeing, paper-making and the manufacture of beet-sugar is probably even larger than the quantity distributed by statutory water undertakers for domestic and other purposes.

Although water for coolers, condensers and numerous industrial processes need not be of the same high chemical and bacteriological quality as that required for domestic purposes, water of a low standard of quality is not suitable for all industrial purposes. Water of high quality is necessary for the manufacture of food and beverages, for growing watercress, for milk production, in the treatment of textiles and in other processes.

Riparian owners also have a general right, which is freely exercised, to discharge sewage and other effluents into streams, provided that they do not thereby interfere with the rights of other riparian owners and do not contravene the provisions of the Acts of 1876 and 1923, or other general or local Acts.

Amenities and Recreation.

32. There is a growing public desire and demand for increased use of the rivers, canals and streams for bathing, boating and similar forms of recreation. The amenities which might be made publicly available, such as boating and bathing (with corresponding use of banks) have not been authorised or provided for by any Act enabling or requiring the authorities responsible for river control to provide such facilities. There are, however, some instances of Authorities with local Act powers for the control or provision of recreational facilities on the rivers they administer.

Existing examples of co-ordinated control.

33. In addition to our general review of the existing position, which we have briefly summarised in the preceding paragraphs, we have given detailed consideration to the administration of a number of the larger and more important river systems. A statement of the Authorities with functions connected with the rivers concerned is appended to the Report (Appendix V).

34. The difficulties experienced in some areas in administering the general law and in particular the law relating to the prevention of pollution, have led to the formation of *ad hoc* bodies for certain purposes, either by local Acts, or by Provisional Orders made under the powers of the Act of 1888. Details of these bodies and their functions are contained in the following paragraphs.

The Conservators of the River Thames.

35. The Board, which was constituted by local Act in 1857, and consists of 34 members appointed by Government Departments and by Local Authorities is responsible for the prevention of pollution, land drainage fisheries and navigation.

(a) *Prevention of pollution.*—The Conservators' jurisdiction extends to the main river above Teddington and to all tributaries, including artificial cuts, connecting directly or indirectly therewith. They are required to preserve the flow and purity of the water, and to remove matter liable to putrefaction from the surface of the river and of tributaries within three miles of it. The powers for prevention of pollution include the prohibition of the deposit of solids, sewage and other substances or liquids likely to cause pollution; a power to prohibit the opening of new outlets (except in connection with schemes of Local Authorities approved by the Minister of Health) and to stop up outlets causing pollution; and the power to inspect premises, plans of sewers and drains and the sanitary arrangements of vessels using the river. The consent of the Minister of Health is not required to the taking of proceedings.

(b) *Land Drainage.*—The Board have all the powers of a Catchment Board under the Act of 1930. We understand that a scheme for the extinguishment of all the Internal Drainage Boards came into operation in 1938 and that the Conservators are thus the Drainage Authority for the whole of their catchment area, but can carry out drainage works only on the "main river".

(c) *Fisheries.*—The Board are empowered to make byelaws for the protection, preservation and regulation of fisheries, the preservation of fish, and the determination of the times during which fishing shall not be practised. Their jurisdiction does not extend to the tributaries of the river or to tidal waters except to a small degree. We are informed that fishery interests are not directly represented on the Board, and that the Board do not issue licences or levy rates on owners of fisheries.

(d) *Navigation.*—The Conservators have all the powers usually conferred upon Inland Navigation Authorities, including the powers to construct works

for the improvement of the navigation, to impose tolls and other charges on commercial craft and pleasure boats, to regulate water levels and to make byelaws for the control of navigation and vessels. Their jurisdiction extends to the main river above Teddington. Three of the members are appointed by the Minister of War Transport, after consultation with persons and associations concerned in the use of the river as a place of recreation; with interests representing barge traffic; and with persons and associations concerned with boat-building and boat-letting respectively.

(e) *Abstraction of Water.*—The Metropolitan Water Board and certain other Local Authorities and water companies abstract water from the river under powers conferred by local Acts. The Conservators have power to conserve water to meet these requirements; the Acts usually provide for payment to them for the services rendered in this respect and for preserving the purity of the water. The Board thus have more or less complete control over the abstraction of water other than the small quantity to which riparian owners are entitled, although new proposals must be authorised by Parliament. It is customary for water undertakers to consult the Board before promoting legislation for fresh abstraction. The Board can also, with the agreement of the Port of London Authority, reduce the statutory minimum flow of water over Teddington weir.

The Lee Conservancy Board.

36. The Conservancy Board which was established by local Act in 1868, is responsible for the prevention of pollution, fisheries and navigation: the administrative area covers the whole of the watershed area, including tidal waters. The Board consists of 14 members appointed or elected by Local Authorities, with one member appointed by bargeowners.

(a) *Prevention of Pollution.*—The Board are responsible for the enforcement of the Act of 1876 in their area, and have, in addition, special powers for preventing the discharge of sewage into the river, including the right to stop up outlets made without authority. The local Acts also contain stringent provisions for the prevention of pollution by rubbish, trade wastes and waste from vessels. The consent of the Minister of Health is not required to the taking of proceedings.

(b) *Fisheries.*—The Board's powers consist mainly of the making and enforcement of byelaws for the protection, preservation and regulation of fisheries and the preservation of fish. The Board do not issue licences or levy rates directly on owners of fisheries.

(c) *Navigation.*—The Board have power to carry out necessary works for the improvement of the navigation and to levy tolls on commercial craft and pleasure boats.

(d) *Abstraction of Water.*—About 21 per cent. of the Metropolitan Water Board's resources is derived from the Lee. The Water Board make annual statutory payments for the maintenance of the navigation, and for protection of water services. Riparian owners above Hertford Lock are entitled to take water for any agricultural, domestic or sanitary purpose within their own household or estate. The Board are empowered to grant any water not allocated by statute to the Metropolitan Water Board, to any person on the banks of the navigation for the purposes of steam engines or factories, and water is taken for condensing purposes by several electricity undertakings and others.

(e) *Flood Prevention.*—The Board have special powers under their local Acts for the prevention of flooding and have, we are informed, carried out extensive works for this purpose.

The Conservancy Board are not responsible for the administration of the Land Drainage Act, 1930. It is understood that the possibilities of fusion were

fully explored when the Act was before Parliament, but that it was found that a proposal to have one Board would reopen difficulties as to representation, which had been settled after long disputes involving the expenditure of a large amount of public money. In all the circumstances, the Conservancy Board came to the conclusion that the best course would be a separate Catchment Board. This was established by the Act of 1930 and consists of the Conservancy Board with six additional members appointed by the Minister of Agriculture and Fisheries and the interested County Councils. We understand that the two Boards work in close co-operation with the same offices, and administrative and clerical staff, the cost of which is apportioned between the two Boards, and that meetings are usually held on the same day. The Catchment Board have, however, full control of land drainage works and of financial arrangements under the Act of 1930. It was stated that the existing arrangements are satisfactory and that neither Board would wish to see them disturbed.

The West Riding of Yorkshire Rivers Board.

37. The Board, which was constituted by Provisional Order in 1893, is empowered to enforce the Rivers Pollution Prevention Acts for all non-tidal waters in the West Riding. Some additional powers for the prevention of pollution were conferred upon the Board by Local Act in 1894. The administrative area, which corresponds with the West Riding, includes lengths of rivers draining to Lancashire while, on the other hand, some of the lengths of the rivers draining to Yorkshire are outside the Board's jurisdiction; in some instances, the river forms the boundary of the area. The Board consists of 30 members, who are appointed by the County Council and by six County Borough Councils. Expenses are defrayed by precepts on constituent Authorities in proportion to their representation, except in the case of four County Boroughs, formed since 1893, which are not directly represented, but pay part of the County Council's contribution in proportion to rateable value.

The River Dee Joint Committee.

38. The Committee was constituted by Provisional Order in 1932, and is responsible for the administration of the Rivers Pollution Prevention Acts over the non-tidal portion of the River Dee, including tributaries, the administrative area corresponding with the non-tidal portion of the catchment area. The Committee consists of 19 members appointed by the County Councils of Chester, Denbigh, Flint, Merioneth and Salop and the County Borough Council of Chester, the representation being based on the rateable value of the areas within the Committee's jurisdiction. Expenses are defrayed from precepts on constituent Authorities in proportion to representation.

The Lancashire Rivers Board.

39. By a local Act of 1938, the two joint Pollution Committees set up by Provisional Orders of the Local Government Board in 1891 for the Rivers Ribble and Mersey and Irwell were dissolved, and a new Board was constituted to administer the Act of 1876 for the whole of Lancashire (except the County Boroughs of Liverpool, Bootle and Barrow-in-Furness) and areas in Cheshire and North-West Derbyshire draining to the upper part of the River Mersey. The Board consists of 48 members elected by the three County Councils and the 15 constituent County Borough Councils, the expenses being defrayed by precepts on constituent Authorities in proportion to their representation.

The Act confers special powers on the Board for the control of the deposit of solids and the discharge of liquid trade wastes and sewage into the rivers in the area, and extends the general Act powers for the prevention of pollution; it also enables the Board to enter into agreements with Catchment and Internal Drainage Boards for co-operation in the discharge of their respective functions of inspection and administration, including payment for services rendered.

PART II.

REVIEW OF THE EVIDENCE.

Reports of Previous Commissions and Committees.

40. There is a wealth of information in the Reports of various Commissions and Committees in support of co-ordinated control of functions connected with rivers, and general agreement that the watershed area is the only suitable basis for the purpose, although there are differences of opinion as to the interests which should be included and as to the machinery best suited for the purpose, the latter consideration being largely due, no doubt, to the fact that most of the previous investigations were directed into matters affecting some particular river interest, such as the prevention of pollution, land drainage or water supply, and not into the whole range of river administration. The general conclusion reached in almost every instance was that the particular interest concerned would be best served if administrative functions were vested in one authority, which would be responsible for the whole of one or more watershed areas.

In some instances, however, the recommendations went still further. The Water Power Resources Committee, 1918-21, recommended in their Interim and Final Reports that the watershed areas of the country should be grouped into suitable areas, and that, where it was found, after local investigation, to be desirable, River Boards should be set up in substitution for the large number of Authorities then charged with river administration. Somewhat similar conclusions had been previously reached by the Duke of Richmond's Select Committee of 1877, by Lord Montagu, a member of the Royal Sanitary Commission, 1869-71, and by the Joint Select Committee of Parliament which considered the Water Supplies Protection Bill, 1910. The Joint Committee on Water Resources and Supplies stated in their Final Report of 1936, that the principal object to be attained was to co-ordinate all the interests concerned, and suggested, for this purpose, the formation of statutory local Committees representative of all water interests. The Joint Advisory Committee on River Pollution stated in their Final Report of 1937 that they were convinced that the effective administration of the River Pollution law was not likely to be secured without measures which placed that administration, together with other functions, into the hands of one body for the whole of the river.

41. A digest of the various recommendations made prior to 1920, prepared by Mr. G. P. Warner Terry, then Secretary of the British Waterworks Association, was published as an Appendix to the Second Interim Report of the Water Power Resources Committee, 1920. In view of the important bearing which these recommendations and the findings of subsequent Committees have on our investigation, the digest has been brought up-to-date and is partly reproduced in an appendix to the Report (Appendix VI).

Evidence Submitted to the Committee.

42. As was to be expected, some of the witnesses who tendered oral or written evidence to the Committee were very reluctant that there should be any interference with the work now carried out by the Bodies they represented. The fear was also expressed by several witnesses that the constitution of new River Boards might impair the efficiency of the bodies now responsible—in short, that no new Board could perform these functions more efficiently than they are performed now, and that new Bodies might, indeed, prove to be less efficient in the carrying out of certain functions.

(a) *Land Drainage.*

43. This was particularly noticeable in the evidence in regard to land drainage. The County Councils' Association, for example, submitted that while the principle of co-ordination of functions had much to commend it, difficulties might arise from the establishment of bodies representing organisations with diverse or conflicting interests, and that any existing difficulties might become accentuated if the results were unsatisfactory. They deprecated, in particular, any interference with the work of Catchment Boards, and for this reason were of opinion that land drainage and other functions, except pollution prevention, should continue to be exercised by the existing bodies, subject to the overriding authority for each river of a joint advisory committee representing all interests.

Very similar views were expressed on behalf of the Catchment Boards' Association who represented that the time was not opportune for co-ordinating all river interests, that the existing Drainage Boards should first be enabled to overtake arrears of land drainage work and that this work must not be subordinated at any time to other water interests. The fear was also expressed that drainage interests would no longer have full control of expenditure on land drainage if new Boards were constituted.

The Association of Drainage Authorities, representing Drainage Authorities other than Catchment Boards, while generally in favour of the principle of co-ordination, qualified this view by referring to the arrears of land drainage works, and suggesting that it would be undesirable to affect adversely the carrying-out of present programmes of land drainage, or to subordinate the interests of land drainage to other interests; they also suggested that, in general, the internal drainage districts should be left as they were. Any new River Boards should be required to appoint statutory Drainage Committees, with supervisory powers, whose members should have knowledge of land drainage, including the work of Internal Drainage Boards.

(b) *Navigation.*

44. The Canal Association objected to any general transference of powers and functions relating to navigation to new River Boards on the grounds that difficulties would arise from the combination of the trading and business functions of canal undertakers—who compete to a large extent with other forms of transport—with the purely administrative functions of other Authorities, and that it would be impracticable to divorce transport and trading activities from the navigation functions exercised by the undertakers. They also apprehended that navigation systems with artificial waterways might have to be placed under the control of two or more Boards, unless the existing undertakings were regrouped, which would give rise to serious problems in regard to the redistribution of capital and reallocation of capital expenditure. Other drawbacks would be the difficulties of dealing with through traffic and the transfer of property, including docks and warehouses, which are not part of the actual navigation.

The views of the Dock and Harbour Authorities' Association in regard to navigation in tidal waters were similar to those expressed by the Canal Association. The Association were opposed to any general interference with the jurisdiction of the existing responsible Authorities over tidal waters, or the separation of the responsibility for the maintenance of channels from other functions administered by Navigation Authorities.

Separate evidence on this question was given by two Inland Navigation Authorities, the Severn Commissioners and the Weaver Navigation Trustees. The former body, consisting of 30 Commissioners appointed by the Commissions of the Peace for Gloucestershire and Worcestershire, Local Authorities and land-owners, is exclusively responsible for the navigation of the River Severn—the

area of jurisdiction extending from a point above Stourport to a point near Gloucester—and claim to be consulted on all questions arising outside their area which may affect that navigation. The Commissioners, while opposed to the transfer of any of their functions to a new Board with comprehensive functions, would, it is understood, be prepared to consider taking over duties other than navigation, and were of opinion that it would be of advantage if co-ordination of the river interests in the River Severn were effected in this way.

The Weaver Navigation Trustees, who are responsible for the navigation of the river, are nominated by the Cheshire County Council, District Councils and toll-payers, the majority of the Trustees being appointed by the County Council. The Trustees were of opinion that since navigation was the preponderating interest of the river, their powers should not be transferred to a new Board. They would be willing, however, if their constitution were not materially altered, to undertake the administration of fisheries, land drainage and the prevention of pollution, and were definitely of opinion that some of these functions, e.g., land drainage, would thus be carried out more efficiently than with the present divided responsibility, that adequate representation could be afforded to interests other than navigation, and that it would be feasible by divorcing the income obtained from tolls (on which the navigation relies at present) from the revenue obtained in other ways, to ensure that the other interests were not prejudiced.

(c) *Fisheries.*

45. There was also some difference of opinion among fishery interests as to the wisdom of transferring the control of fisheries, with other functions, to a comprehensive river authority. The majority view of the National Association of Fishery Boards, expressed on behalf of the Executive Committee, was that it was desirable that new bodies should be formed, and that they should comprise as far as possible the existing bodies concerned with water resources, although it might be necessary, where practical difficulties occurred, to exclude some of the interests in particular cases. The necessity of conserving water and the importance of the biological aspect of pollution prevention were emphasised, as was the fact that these considerations could not be fully met unless the whole river were controlled by one authority. Here again, however, the witnesses emphasised strongly that in order to ensure that fishery interests were not neglected, it was essential for these interests to have adequate direct representation; it was also suggested that the constitution of the new Boards should make provision for the appointment of Committees to whom should be delegated all questions solely relating to fisheries, such as the appointment of bailiffs, the watching of the river for breaches of fishery laws, the enforcement of byelaws and the re-stocking of streams.

The River Wye Board of Conservators and the Rivers Towey and Teifi Fishery Boards who gave separate evidence, were directly opposed to these suggestions. They were strongly of opinion that there was no necessity for the formation of new Boards and that it would be very undesirable for the powers of the existing Fishery Boards to be merged with those of other Authorities. The witnesses stressed that most of the experience gained by members of the Boards on questions affecting fish life would be lost if the control of fisheries were transferred to new bodies, and that their Boards were satisfied that the work could not be more efficiently performed than now.

The Tamar and Plym Fishery Board also made separate representations to the effect that the watersheds of Dartmoor, Exmoor and Bodmin Moor, which provide valuable water resources, suffer greatly from the entire lack of co-ordination of control in matters affecting the rivers, and that there was need for a co-ordinating body representative of the whole area and of all interests, to deal with questions affecting the use of the rivers in the areas concerned.

Evidence from the point of view of anglers was given by the National Federation of Anglers directly representing some 120,000 anglers, and indirectly nearly half a million. The witnesses suggested that fisheries would benefit if River Boards were formed and were vested with comprehensive powers. It was urged, however, that anglers should be directly represented in the same way as they are now represented on Fishery Boards; and that the powers of those Boards should not be weakened, and the position of anglers should not be worsened, by any new proposals.

(d) *Prevention of Pollution.*

46. The great majority of witnesses were in favour of comprehensive control of the prevention of river pollution, and of control being exercised by one body which should be responsible for the whole of the river from the source to the sea. Several witnesses suggested that the existing powers should be amended or strengthened. References to these recommendations are made in subsequent parts of the Report.

The Central Council for Rivers Protection considered that the prevention of pollution and river administration in general would be improved by the formation of new bodies which would be responsible for land drainage, fisheries, prevention of pollution and, where practicable, navigation. It might be necessary in particular cases to retain separate Navigation Authorities; in such cases the powers for prevention of pollution should be transferred to the new Boards. They also suggested that Government grants towards the cost of sewage disposal were needed to improve the condition of streams in rural areas.

The Pure Rivers Society suggested that, as an alternative to the setting up of new River Boards, there should be a permanent National Water Council, which would co-ordinate the work of existing bodies and advise them, and that the necessary improvement of local administration could be secured by conferring additional powers for the prevention of pollution on Fishery Boards, subject to consent of the National Council before prosecution.

47. The West Riding of Yorkshire Rivers Board informed the Committee that their experience indicated that the prevention of pollution can be carried out far more efficiently and more economically by one body responsible for a watershed area than by a number of Local Authorities, and drew attention to the fact that the operations of the Board and other similar Joint Committees had not only checked the growth of pollution, but had also improved the purity of the rivers concerned.

The Rural District Councils' Association had no evidence that any substantial advantage would result from the formation of River Boards with comprehensive functions. They suggested that the demand for such Boards appeared to be based on the allegation that the existing control of river pollution is ineffective; but they doubted whether the transfer of the existing powers for this purpose to new Boards would improve the position, and suggested that the real remedy would be to strengthen the powers of the existing Authorities.

The representatives of the Executive Committee of the National Association of Fishery Boards emphasised the need for a responsible Authority which would deal with the river as a whole, leaving fishery interests, through committees, to concentrate on fishery questions. An Authority with comprehensive powers could deal more efficiently with this question than the existing Fishery Boards or responsible Local Authorities. It was suggested by witnesses that grants from the Exchequer should be made available towards the cost of sewage disposal in tidal waters, and that there would be very little improvement of estuaries, with the standard of purity thus becoming sufficient for

salmon, until grants were made. Other representatives of Fishery Boards suggested that the prevention of pollution should be a national duty.

The representatives of the Wye Board of Conservators considered that there was no need for a joint Authority for the prevention of pollution in the case of the Wye. Witnesses also said that the rivers Towey and Teifi Board had been able to deal with pollution but that the Board would not object to a central Authority for the purpose, nor to the transfer of their powers for the purpose to another Board.

The County Councils' Association represented that there was an urgent need for a substantial reduction in the number of Authorities responsible for the prevention of pollution. The witnesses suggested that the first step towards the re-organisation of rivers should be the co-ordination of pollution prevention Authorities, and that a satisfactory method would be joint Committees of County and County Borough Councils for each river.

(e) *Water Undertakers.*

48. The British Waterworks Association, while in agreement with the principle that new River Boards were desirable, represented that the existing statutory powers and duties of statutory water undertakers should not be interfered with or diminished.

(f) *Riparian Owners.*

49. The Federation of British Industries represented that if the inherent difficulties of centralisation could be overcome, a complete co-ordination of all river administration would be logical and might well be the ultimate object. It was suggested, however, that an abrupt and drastic change might lead to confusion which would be disadvantageous to all concerned, while a comprehensive Authority might fail to have adequate local knowledge or to be sufficiently in touch with local interests. Prevention of pollution, control of fisheries and land drainage might be combined as a first step, but each river should be considered on its merits, after local inquiry, and the exact area, the inclusion or exclusion of tidal waters, the functions to be performed and the powers and duties in relation thereto, should in each case be separately dealt with by Provisional Order confirmed by Parliament. Also, all river interests should have equally effective representation. These include Local Authorities, water undertakers, industrial and navigation interests, land owners, agricultural and fishery interests.

The Central Landowners' Association were opposed to the setting up of new Authorities on the grounds that if the existing Authorities were retained overlapping would ensue, that it might be difficult to find competent members and that needless expense would be incurred. They saw no objection to powers for control of the prevention of pollution, fisheries (where there are no Fishery Boards), and abstraction of water being vested in Catchment Boards.

The Land Agents' Society felt that in view of the Fourth Report of the Joint Advisory Committee on River Pollution, and as the result of the experience of its members on Catchment Boards and other river Authorities, it would be an undoubted advantage to have all the powers exercised by existing Authorities centralised under one co-ordinating body which would be responsible for the control of land drainage, fisheries, prevention of pollution, harnessing and abstraction of water, but not navigation, except in so far as it interfered with the foregoing interests. Additional functions should be dredging and general development for industrial and other purposes, erection of bridges, and matters affecting the purity or flow and ebb of rivers. They suggested that the responsible bodies should be based on Catchment Boards, which should be re-constituted to include all river interests.

(g) *Amenities.*

50. The Council for the Preservation of Rural England emphasised the serious damage to amenities from pollution, and the tendency for some Catchment Boards to pay but little regard to any consideration but questions of engineering when new drainage works were carried out. In the course of the Council's oral evidence, the opinion was expressed that a comprehensive Authority for the prevention of pollution would be much more effective than the existing arrangements, and also that the Association would support the principle of co-ordination of river interests if there were adequate representation and safeguards for all interests.

(h) *General evidence.*

51. The evidence of the Association of Municipal Corporations supported the principle of co-ordination of existing functions, and the placing of the policy for the river as a whole into the hands of one Authority. The Association suggested that the functions to be transferred should be land drainage, fisheries and prevention of pollution; in the case of smaller non-industrialised rivers, the functions of navigation might also be transferred to the new Boards, but it would be undesirable to transfer those duties in the case of the larger industrialised rivers. Each river must be considered separately on the facts of the area, and in order to maintain an efficient staff it would probably be convenient to constitute one Authority for a group of small rivers. It would be inexpedient to impose any restrictions on the rights of Local Authorities and others to promote private Bills for the abstraction of water from rivers. The question whether powers similar to those exercised by the Thames and Lee Conservancies over the abstraction of water should be conferred on the new Boards should be considered separately upon the merits of the particular river. In some cases the work carried out by Boards of Conservators might well be transferred to the new Authorities.

The Association expressed the opinion that the considerations which governed the representation and method of raising funds in respect to the existing bodies could not apply to the new Boards. They suggested that it would be necessary, instead of looking at matters as in the past from the point of view of an Authority to deal with pollution, or an Authority to deal with the conservation or removal of water, or a body to look after the interests of fisheries, that there should be a new orientation, the principle being the people in a river basin combining to do their best for all the interests concerned with the river, it being borne in mind in this connection that in these days of rapid transport the amenities afforded by a river are common to the people of towns and cities as well as to the people of the countryside.

They contemplated that the comprehensive Authority for each river basin or group of rivers would be set up by an Order framed by the Ministry of Health in concert with the Ministry of Agriculture, after public inquiry in case of objection, and that the Order would be Provisional in the event of opposition.

52. We also had the advantage of receiving written and oral evidence from three bodies with practical experience of the co-ordinated control of functions relating to rivers, namely the Conservators of the River Thames, the Lee Conservancy Board and the West Riding of Yorkshire Rivers Board.

53. The Thames Conservators, as we have indicated in paragraph 35 of the Report, are responsible for the control of land drainage, the prevention of pollution, navigation and fisheries and have, moreover, extensive control over the abstraction of water from the river and powers for making byelaws for the regulation of such matters as amenities, the use of pleasure boats, bathing, public behaviour, etc. They are thus an example of the kind of Authority

contemplated by the Final Report of the Joint Advisory Committee on River Pollution. It is true that the Board have no jurisdiction over the tidal basin of the river, which is controlled by various bodies including the Port of London Authority, who are responsible for navigation and the prevention of pollution, the London County Council who have wide powers for the prevention of flooding in the County, and the County Borough Councils and Catchment Boards responsible for flood prevention and land drainage below the County area, but it is understood that the Conservators have experienced no difficulties from this artificial division of the river and the catchment area.

We were informed that the Board's experience shows that functions of the kind for which they are responsible are capable of being performed satisfactorily by one and the same Authority, and that the combination of these functions tends to economy in expenditure on both administration and executive activities. Although there is one comprehensive Board, and the Drainage Fund is kept separate from the Conservancy Fund, the Board have final control over the expenditure incurred by the Land Drainage Committee. The control of fisheries is confined to byelaws, made after consultation with interested Associations, regulating the sizes of fish that may be taken from the river, hours of fishing and similar questions. We were informed that except in so far as fishery weirs might affect land drainage, the Board have no desire to extend their control of fisheries to the tributaries of the river. It was stated that the various Committees worked harmoniously, and that there was no evidence that any interest had suffered by the co-ordination of functions.

54. The Lee Conservancy and Catchment Boards emphasised that the past difficulties as to representation upon which we have touched in paragraph 36 would be re-opened if it was proposed that the two Boards should be amalgamated. They pressed, therefore, that the peculiar circumstances of the Lee should be recognised, and that the existing arrangements should not be disturbed. We were informed that with this reservation, they considered that there were definite advantages in vesting powers with respect to land drainage, control of abstraction of water, fisheries and prevention of pollution in one Authority, and that their experience indicated that the exercise of functions in relation to these matters by the two Boards had resulted in a substantial measure of success, particularly in regard to the improvement of the purity of the river water.

Sir Thomas Keens, whilst supporting this opinion in his oral evidence, suggested that the new River Authorities should have strong powers for the conservation of water. There was a danger now that Land Drainage Authorities might confine their attention entirely to flood prevention without making any provision for drought or for the possibility that springs might be denuded. This was particularly so in the Lee valley, where owing to building development, rainwater which would otherwise be absorbed into the ground and so replenish underground resources, is diverted into the sewers.

55. The West Riding of Yorkshire Rivers Board considered that the existing system leads to a considerable amount of overlapping in administrative services, resulting in unnecessary expenditure of time and money, and that there was a tendency for each Authority and interest to regard the question of water solely from its own point of view, with the result that the interests of various Authorities may conflict with one another. They pointed out that there was no authority, except Parliament, with power to reconcile and adjust the interests of the different Authorities and water users, and that resort could be had to Parliament only in connection with the promotion of or opposition to Bills of a local character. It was stated that the Board were not averse to their powers being merged in those of a comprehensive River Authority,

provided that the Authority was so constituted as to enable the prevention of pollution to be carried out effectively, and that sufficient funds, preferably earmarked for the purpose, would be available for that service.

The latter point was stressed by Alderman C. W. Beardsley, who also mentioned that although the Board worked in close co-operation with Fishery and Catchment Boards and with other River Authorities, there was still overlapping in respect to matters such as administration and local inspection.

56. The Mersey and Irwell and the Ribble Joint Committees were also asked to submit evidence, but preferred, in view of the pending amalgamation of the two Committees, not to accede to the request. We were informed, however, that a Joint Committee of the two Committees had considered the correspondence and had resolved that, while details had not been considered, they approved in general principle the co-ordination or amalgamation of all Authorities exercising functions relating to rivers in a watershed or combination of watersheds.

PART III.

CONCLUSIONS AND RECOMMENDATIONS.

General Considerations.

57. The general review in the preceding sections of the Report demonstrates the diversity of interests whose requirements must be considered, the interdependence of the problems which arise, the drawbacks inherent in the existing complex system of administration and the need for closer co-ordination of the administrative functions. The evidence before us indicates that there is voluntary liaison between the local bodies in some areas, but that this form of co-operation extends only to a few functions, and is not of general application even to this extent.

The defects of the system are most apparent when the mitigation of pollution is considered. The boundaries of the larger local government areas necessarily bear no relation to watershed areas. There are in consequence many separate Authorities with responsibilities in relation to the same river basin even if, which is not always the case, the County Councils exercise a general control. Moreover, the larger rivers run through several counties or may form the county boundaries, so that, even though one County Council may actively administer the powers of the Acts, there is no guarantee that the work will be effectively carried out throughout the river basin. There is thus a patchwork system of control, with several Authorities, possibly with differing ideas of the desirable standard of purity, dealing with the one river, or, what is worse, neglect arising from the fact that with so many responsible Authorities, each Authority may be inclined to leave the duty of enforcing the Acts to others. With divided responsibility, moreover, the failure of one Authority to administer the law may well nullify the work of those Authorities who take their duties more seriously. The administrative system is, of course, still further complicated in those areas where Fishery Boards have concurrent jurisdiction with Local Authorities, even though the powers of the two Codes differ in some respects and the Boards control larger areas.

The overlapping of functions, however, is not confined to this question. Fishery Boards, Drainage Boards and Inland Navigation Authorities are directly concerned that there shall be no unnecessary interference with the flow of the rivers, and are thus interested, if not to the same degree, in proposals for the abstraction of water, breaches of conditions imposed by local Acts, the adequacy of the channels, the repair of banks and locks, and the prevention of obstruction from works, siltation, or even from the growth of weeds.

Moreover, in general, certain river interests, for example amenity uses and facilities for the public, have no Authority directly concerned with their provision or preservation at all.

There has been a tendency for the responsible Authorities to consider that their requirements are paramount and to disregard or underestimate those of others. We were informed, for example, that Drainage Authorities, who rightly consider that their principal duty is to drain surplus water from the land, do not necessarily take account of the effect of drainage on the conservation of water resources, and that there is a fear in some quarters that land drainage will deplete underground water resources. Similarly, there has been considerable divergence of opinion for many years as to the weight which should be given to the requirements on the one hand of Fishery Boards, and on the other of Local Authorities and industrial establishments discharging sewage and trade wastes into rivers, especially where tidal waters are in question; and disputes as to the relative degree of importance of land drainage and of fisheries when works of improvement have been under consideration.

It is evident that there is also considerable difference of opinion between urban and rural interests, the former considering that their proportion of representation on Catchment Boards is inadequate or that they are called upon to bear a disproportionate share of the cost of needed improvements, while the latter fear that their interests in such questions as the purity of streams, the abstraction of water, or land drainage may be subordinated to the needs of urban communities. In certain instances in recent years, the conflict of opinion between urban communities requiring additional water supplies and other river users has led to contested private Bills, with the consequent expenditure of considerable sums of public money, which might have been avoided if there had been local co-ordination of the requirements of the interests concerned.

Apart from unnecessary expenditure of public money in this way and on matters such as the duplication of offices and staff, the division of control must, we consider, have a public disadvantage in that it may be necessary to consult or obtain the approval of several Authorities if new works or improvements or uses are proposed.

We are of opinion, however, that the principal defect of the existing system is not the overlapping functions, nor the possibility of conflict between interests, but the fact that no single body is charged with the duty of co-ordinating the various river interests or with the duty of ensuring that the requirements of all such interests are fully weighed when questions affecting the river are under review, with the result that the river is not used to the best advantage of all the interests concerned.

58. All river interests are concerned, to a greater or less extent, with the quantity of water available for use, as measured by level, depth or rate of flow, and with its quality. Rivers used as sources of supply for domestic, agricultural and industrial purposes and for fisheries must be protected from pollution as far as is practicable; and the water must be so conserved and its flow so regulated, that the quantity and quality do not fall below full requirements at any time. As part of the same problem, it may be necessary to protect land from flooding, to provide sufficient water in dry periods for the irrigation of agricultural land, to secure that there is sufficient water for abstraction for water supplies, and that the quantity so abstracted, or the rate at which the river is drained to the sea, will permit of a sufficient flow for fisheries and navigation, and for the dilution of sewage and industrial effluents. It is clear that, with the exception of the Thames and Lee Conservancy Boards, the existing administrative bodies have neither sufficient powers nor the necessary authority to balance the requirements of the various interests,

and thus to ensure that the resources of the watershed area are properly developed and used. It is doubtful, also, whether any of these bodies is in a position to estimate fully the available resources and the requirements of the various interests.

At the present time, there is comparatively little information on the flow and the physical and chemical characteristics of the water of most of the rivers and streams of the country. The few available data on river flow and river levels are now being collected and correlated as far as possible by the Inland Water Survey Committee, but very much more information is required. No systematic attempt has yet been made to collect data on the composition of the rivers and streams throughout the country, and few chemical, biological and hydrographical surveys have yet been made. The need for special scientific investigation of the many problems of water supply and the prevention of pollution has been stressed in many cases in the past by Royal Commissions and other Authorities.

The Department of Scientific and Industrial Research have it is true, supervised some investigations into the treatment and disposal of sewage and industrial waste matters and questions affecting the treatment of river waters to make them suitable for domestic supplies, and into the causes of siltation in the estuary of the Mersey. Their research staff has also given much advice to Local Authorities and others, including information as to the most promising methods of attacking various problems connected with water supplies, sewage, trade effluents and river pollution.

It is also fully appreciated that certain organisations have done and are doing excellent work on rivers on the basis of scientific knowledge. The River Boards set up in Yorkshire and Lancashire have all employed full-time scientific and technical staffs, and have thus been enabled to assist Local Authorities and traders in reducing river pollution. But the Local Authorities generally do not employ specialists, and few Fishery Boards can afford the services of the scientific staffs necessary to control and protect their fisheries.

With the co-ordination of the various functions in the hands of comprehensive River Boards with comprehensive functions, and the consequent pooling of the financial resources of large areas, it should be possible to obtain the benefit of the full-time services of scientific and technical staffs with appropriate training and experience, who could not only make the necessary observations on the river and tributaries and examine samples, but also advise on the application of recent developments in dealing with local problems. Separate staffs of bailiffs or inspectors to watch the rivers and tributaries for each of the interests, for example for land drainage, fisheries, and prevention of pollution, would be unnecessary. The same officers could be trained to watch the rivers for all interests, to read gauges, to collect samples for chemical and biological examinations, and to undertake other duties. In consequence, the members of the staff, technical and others, would acquire a broader outlook and would work for the benefit of all interests and not for the undue advantage of one interest to the possible detriment of others.

On occasion, the scientific and technical staffs would be in a position to undertake minor investigations of particular local, rather than of primary national importance. It would obviously not be economic for each River Authority or Board to maintain a full-time research staff of specialists in each of the several branches of science which can help to solve the difficult problems of rivers. In many instances investigations which require highly specialized research staffs, particularly those which need a team of specialists working in close co-operation, could be carried out most economically and

effectively by a central research organisation, such as that under the guidance of the Water Pollution Research Board of the Department of Scientific and Industrial Research. In some circumstances investigations of mainly local value might also be undertaken by the central research organisation.

59. We consider that there is ample evidence that the existing system of river control is generally inadequate and sometimes wasteful, inasmuch as there is considerable overlapping of functions, the framework of the system does not allow of a co-ordinated policy which will ensure that the rivers of the country are developed and used to the best advantage, and there is sometimes failure to administer the law, due partly to the unsatisfactory boundaries of the existing administrative areas and partly to the multiplicity of the Authorities concerned. We are satisfied that it is desirable that the number of Authorities should be greatly reduced, and we recommend, as a general principle, that this should be achieved by the formation of new River Boards, which would replace certain of the existing bodies and should be vested with their powers and duties.

Functions to be Transferred.

60. We have already indicated that there was a natural reluctance on the part of certain Authorities to relinquish their functions, and that fears were expressed that the transfer of powers and duties to new Boards might have the result that the work now carried out would suffer or be neglected.

We were impressed, on the other hand, by the evidence from Authorities who have had practical experience of the administration of co-ordinated control of one or of several services, and whose experience indicates that an extension of co-ordination would be desirable, that the various Committees work harmoniously, that the requirements of a particular interest are not neglected, and that co-ordination has led both to economy of administration and greater efficiency.

We suggest, also, that it cannot be disregarded that the modern local government system of this country has developed through the co-ordination of functions which are very much more varied in character than those we have reviewed. The growth of the functions of all Local Authorities during the past fifty years affords an admirable example of the improvements which can be effected by the co-ordination of public health and other local government services, and their administration by a centralised Authority with sufficient financial resources, instead of, as was formerly the case, by a number of Authorities with concurrent powers in the same areas. The functions which these Authorities administer have sometimes much less in common than those of the existing River Authorities—it would be difficult, for example, to find interests so much opposed as the gas and electricity undertakings or the water undertaking and Highway Committee of a large Municipal Corporation; or such a wide range of services, varying from public assistance, highways and education, to small holdings and Agricultural Committees as those administered by County Councils.

There is no evidence that the centralization of the local government and public health services has led to neglect of a particular service, or that sectional interests are overridden because one Authority is now responsible for what were formerly the duties of several Authorities. On the contrary, the general raising of the standard of local government which has resulted from the amalgamation of Authorities and the co-ordination of their functions is patent.

Prevention of Pollution.

61. It was suggested to us that the necessary co-ordination should be achieved by the formation of Joint Committees of Local Authorities in every watershed area to control the prevention of pollution, and that in this event

other river functions, particularly that of land drainage, could be continued in the hands of the existing bodies, with local Advisory Committees representing all interests to advise on questions of mutual interest. There is but little doubt that the prevention of river pollution would be facilitated by the constitution of statutory Joint Committees for the purpose, but the suggestion disregards the recommendations in the Fourth Report of the Joint Advisory Committee on River Pollution, and the serious difficulties which have been experienced in setting up Joint Committees for this purpose.

We consider that it would be a mistaken policy, at this late stage, to promote new legislation to compel the formation of Statutory Committees solely for the purpose of dealing with river pollution. It is very doubtful moreover, to say the least, whether Advisory Committees would be able to co-ordinate the many other questions which arise unless they had an over-riding statutory power to reconcile the claims of sectional interests and, if necessary, to decide which must prevail. We dealt in our First Report with the drawbacks of a system of regional planning of water supplies by Regional Advisory Water Committees on a purely voluntary basis, and recommended that the Committees should have statutory powers for the purpose. There is no reason to believe that similar difficulties would not have to be overcome if River Advisory Committees were set up on a voluntary basis. On the other hand, we can see no useful purpose in setting up Statutory Advisory Committees, and so adding to the many Authorities now responsible for river control when, as experience has indicated, the necessary co-ordination could be effected, possibly at less cost, and certainly with greater efficiency, by the amalgamation of the Authorities.

Fisheries.

62. It was represented that one of the chief problems of Fishery Boards is the prevention of pollution, and that if the law were effectively administered by the Local Authorities, the Boards could very well carry on their other duties under their existing constitution. A more vigorous policy of preventing river pollution would undoubtedly facilitate the work of these Boards, but we consider that the interests of the Boards in regard to such matters as the conservation and abstraction of water would still overlap the functions of other Authorities if the Boards were retained as separate entities, even if, which is most improbable, there was agreement that they should be no longer vested with powers for prevention of pollution. On the other hand, we are satisfied that, with adequate safeguards, to which we refer in a later section of the Report, there is no reason why, as a general principle, fisheries should not be looked after at least as efficiently by a River Board as they are under the present system.

Land Drainage.

63. The representations briefly referred to in Part II of the Report indicate that the principal objection of land drainage interests to the co-ordination of functions is the fear that land drainage would be subordinated to other interests, and that the great improvements of recent years in this direction might thus be nullified. This may be due, in some areas at any rate, to the possibility that the urban representation on the new Boards would outweigh the rural representation, and the apprehension that rural requirements would accordingly be neglected. We entirely agree that it would be mistaken policy to place land drainage or indeed any other interest in such a position that its requirements would be neglected or overridden by other interests, but we consider that the apprehensions are ill-founded, and we cannot agree that River Boards, composed largely of members appointed by County

Councils and County Borough Councils, who would have regard, when appointing their representatives, to the duties which the Board would carry out, would be less efficient or more likely to neglect their duties than Catchment Boards, the majority of whose members are appointed in a similar manner; nor do we anticipate that land drainage schemes now being planned and carried out by Catchment Boards would be allowed to lapse if the responsibility were transferred to River Boards constituted on these lines. The transfer of the powers and duties of Catchment Boards to the proposed Boards would, on the contrary, we believe, improve river administration by preventing overlapping of functions and consequent difficulties in regard to such questions as the conservation and abstraction of water, the inspection of rivers, the improvement of channels, the construction of works for the benefit of the rivers and the survey of water resources.

We do not recommend any general transfer of the work of the Internal Drainage Boards to the new Boards. The Act of 1930 provides machinery for the transfer of their functions to Catchment Boards, if this course is found to be necessary, and the position would be met if this machinery were made available for the new Boards.

Conservation and Abstraction of Water.

64. We agree with the majority of the witnesses that the final decision must rest with Parliament if there is disagreement between any interests when proposals involving statutory powers for the abstraction of water, with or without impounding, are under consideration, and that it would be impracticable to give general powers for River Boards to authorise or veto such proposals. Subject to these qualifications and to the preservation of the rights of riparian owners, it is considered that one of the principal duties of the new Boards should be a general responsibility for the conservation of the water resources in their areas, which could usually be achieved by the Board being appointed the single Authority for enforcing the statutory provisions relating to pollution, and for planning drainage and other works in such a way as to ensure that in all such matters the needs and requirements of all interests are adequately and suitably safeguarded in due proportion to the extent of their public value. As a corollary, Regional Advisory Water Committees considering proposals for the allocation of water resources, and water undertakers or other persons proposing to promote Bills or Provisional or other Orders authorizing the abstraction of water from a river or stream, should be required to consult the appropriate Board before schemes were prepared or legislation was promoted; the Boards should also be empowered to take proceedings for breaches of statutory provisions relating to compensation water or the abstraction of water.

The duty of conserving water must necessarily include the power to obtain reliable information as to the extent of the water resources of the areas concerned. We recommend that the Boards should be required, if called on by the Inland Water Survey Committee, to gauge the flow of the rivers and streams under their control, and to furnish information on the subject to the Inland Water Survey Committee. This Committee, which was appointed in 1935 by the Minister of Health and the Secretary of State for Scotland, collects and co-ordinates information on rainfall, surface flows and underground supplies and brings it into a form suitable for publication. The data on rainfall are obtained through the Meteorological Office of the Air Ministry and those on underground water are obtained through the Geological Survey of the Department of Scientific and Industrial Research. In present circumstances it is necessary to rely mainly on the voluntary work of numerous organisations and individuals for the basic measurements and records.

Navigation.

65. It is recommended that if new River Boards are formed for areas where Catchment Boards are now responsible for navigation, the powers and duties of the latter should be assumed by the new Board. Also that in the case of the smaller non-industrialised rivers the functions of navigation might well be transferred to the new Boards.

A general transfer of the functions exercised by inland river Navigation or Dock and Harbour Authorities to the River Boards, would cause serious difficulties. Such a transfer would necessitate a corresponding transfer of properties and liabilities, which would entail the payment of compensation, and complicated financial adjustments where river Navigation Authorities were concerned with more than one watershed area. Apart from these considerations, it may not always be wise to interfere with *ad hoc* local bodies and commercial undertakings which have gained considerable experience of the working of a specialised industry, and to burden the new Boards with the additional responsibilities of trading undertakings.

We have considered whether functions now exercised by River Navigation and Dock and Harbour Authorities, such as the dredging of channels, which sometimes overlap or clash with those of other river Authorities, should be divorced from their functions of a commercial nature and whether the new Boards should be made exclusively responsible for the former.

As far as tidal waters are concerned, we are satisfied that, with the exception of prevention of pollution, to which reference is made later, there will not necessarily be interference with the work of the new Boards if Navigation and other similar Authorities retain their present responsibilities within their existing limits of jurisdiction, and if the powers and duties of Catchment Boards in relation to tidal waters, are transferred to the new Boards.

There are, however, very exceptional cases like the Humber, where we are informed that great damage is being caused by the action of the tidal river in eroding the foreshore and otherwise, and where the interests and responsibilities of the Conservancy and the several Catchment Boards are closely interwoven. In such a case it may well be that exceptional treatment will prove necessary.

The question of inland river navigation is more debatable, and we are not convinced that it would be impracticable to confer the exclusive responsibility for the maintenance of navigable channels, with the power of levying tolls to cover the cost, on the River Boards. It is very doubtful, however, whether in all cases the difficulties due to the division of responsibility would be sufficiently serious to justify this course, or whether the advantages which would result would outweigh the disturbance that would be caused by a general curtailment of the powers of Navigation Authorities, and we recommend, therefore, that there should be no general transfer of functions relating to inland river navigation to the new Boards. These functions might, however, be added at once in suitable cases, or at a later stage if and when, in the case of each river considered separately, experience has indicated that this step would be practicable and advantageous.

66. It is considered, nevertheless, that there should be wider powers to facilitate co-operation between Land Drainage and Navigation Authorities, or the transfer of navigation undertakings to the new Boards in suitable cases. There is machinery already in the Act of 1930, but, as we have indicated, it applies only for the purpose of improving land drainage. We recommend that this restriction should be removed, and that the Act should be amended to allow River Boards and Navigation Authorities to enter into arrangements for the transfer of navigation undertakings to the Boards, and for the alteration or improvement of any works for which the latter are responsible, irrespective of whether or not those arrangements are required for the improvement of land drainage.

The transfer to the Board controlling a particular river of authority in relation to canals fed by water which would otherwise flow into that river might be considered, especially as a canal frequently carries water from a number of watersheds and finally discharges it into one into which it would not naturally flow. This authority, however, may need to be confined to those canals which are no longer functioning or which may cease to function in the future. Such canals and their towing paths are very frequently the type of watercourse and adjoining land which can be adapted very satisfactorily for amenity use by the public.

67. To sum up, we have come to the conclusion that no serious difficulties would arise if the new Boards were made solely responsible for the duties now carried out by Catchment and Fishery Boards and for the administration of the Rivers Pollution Prevention Acts, and were also given specific duty in relation to the conservation of water in their areas; and that the co-ordination of these functions under one Authority would, in the long run, be to the advantage both of the sectional interests mainly concerned and of the general community.

We also consider that there should be powers for the new Boards to apply to the Ministers of Health and Agriculture and Fisheries for an Order, which should only be made after consultation with the Ministry of War Transport or any other Department in which the powers of Central Navigation Authority are vested, for the transfer of Navigation, and Port and Harbour undertakings. The Order to be Provisional if opposed and not to have effect until it is confirmed by Parliament.

Administrative Areas.

68. There was general agreement that if new Boards were formed, the administrative area should be the watershed area in the case of the larger rivers, or, if the financial resources of the areas were not sufficient to justify this course, that two or more watershed areas should be grouped under one Board. We are satisfied that this is the right course; and indeed, that it would be useless to form new River Boards unless they were responsible for natural drainage areas and were able to employ full-time technical assistance and inspectors. The areas that we recommend for the purpose are shown in Appendix VII. The exact limits of the areas would be defined under the procedure mentioned in paragraph 70. It would be necessary to include within each area the whole network of streams and gathering grounds feeding the river in question. It will be observed that the list does not include all the rivers of England and Wales. The omissions in most cases are due to the fact that it is considered that the circumstances of the areas would not warrant the formation of Boards at the present time. If circumstances change, the omitted areas can be dealt with under the machinery for review suggested later in the report. There are, however, two important exceptions, viz., the Thames and Lee.

The evidence we have heard indicates that the existing system is working satisfactorily as far as these rivers are concerned, that there is already complete co-ordination, and that there is no reason to disturb the present arrangements.

It is true that the powers of the Thames Conservancy do not extend to tidal waters, and that they do not control fisheries in the tributaries of the river, but it would be undesirable to interfere with the powers of the Port of London Authority with regard to navigation, or with the powers of the London County Council for the prevention of flooding. This being so, the Conservancy could clearly have no responsibility for land drainage below the County area. As for fisheries, we see no reason to dissent from the Board's opinion that an extension of their area is unnecessary, except perhaps that inclusion of these tributaries would strengthen the Conservancy's power and desire to safeguard the fishery interests which are of value in those tributaries.

While there is a separate Catchment Board for the Lee, there is some danger that a proposal for the complete amalgamation of the two Boards might re-open the past difficulties as to representation. Moreover, there is so very little difference between the membership of the two Boards and liaison is already so complete that it is unlikely that much economy or improved efficiency would result from an amalgamation.

69. The conditions which would be controlled by new River Boards are rarely static, and it may be necessary to review from time to time the areas for which comprehensive control has been recommended. Machinery for this purpose is suggested in a subsequent section of the Report.

Constitution of Boards.

70. We recommend that the procedure for the creation of new areas and the setting up of the new Boards should closely follow that laid down by the Act of 1930 for the constitution of Catchment Areas and Boards.* This procedure has worked satisfactorily and will, we consider, cause the minimum of disturbance. In view, however, of the general control exercised by the Minister of Health in relation to such questions as river pollution, public water supply and sewage disposal and by the Minister of Agriculture and Fisheries in regard to land drainage and fisheries, and their separate responsibilities to Parliament for these matters, we recommend that Orders for the purpose should be made jointly by the two Ministers, who should, as is customary, consult other Ministers concerned if the Orders should deal with questions affecting other interests.

Under this procedure, the Act authorising the formation of the Boards would schedule the administrative areas, and would require the Ministers to set up Boards by joint Orders for those areas. The areas would be defined by means of maps, and the Orders would determine the representation of the Boards, and deal with other consequential matters such as the transfer of local Act powers and of properties and liabilities. We suggest, however, that in view of the wide range of interests concerned, Orders should be deposited in draft form for public inspection and copies served upon Catchment Boards, Fishery Boards, Pollution Authorities, Water Authorities and other bodies substantially interested, and a period allowed for observations and representations thereon, and that if demanded by substantial interests a local Inquiry should be held before an Order is made.

The Ministers should be empowered under the same procedure, to alter the areas of the Boards, to constitute Boards for any of the watershed areas not scheduled in the Act, and to group watershed areas if the need should arise.

Existing powers to be transferred to the new Boards.

71. It is recommended that in every case the new Board should be exclusively responsible for the administration of the Acts of 1876 and 1923 and for the duties of Catchment Boards under the Act of 1930; and that they should be vested with all the powers and duties of Fishery and Catchment Boards under other general Acts, such as the Act of 1923, and the Act of 1936.

Where any of the existing Authorities have local Act powers, or have taken over the control of navigation, those powers should be transferred to the Boards concerned.

New powers and duties.

72. A number of witnesses suggested that the scope of the existing general Acts in relation to river pollution, land drainage, fisheries, etc., should be extended if new Boards were formed. Some of the suggestions made to us are briefly reviewed in the following paragraphs.

* See paragraphs 11 to 13 of the Report.

Several witnesses suggested that the jurisdiction of the Boards for the prevention of pollution should extend to tidal waters. Mr. Howell (Association of Municipal Corporations) said that in this event each river would have to be considered separately, to ensure that any proposal for the purpose did not have the effect of crippling industry, and instanced examples of factories producing very bad effluents which had been established on estuaries, because of the cost and difficulty of purifying effluents discharged into non-tidal waters. The position he said might have to be accepted that some rivers were past redemption. Similar views were put forward by Captain Ellen (Federation of British Industries), who said that in the interests of industry tidal waters should not be brought in as a matter of course; there were areas where the establishment of an industry might depend on the right to discharge effluent into tidal waters, and where the effluent was such that it would be impracticable to comply with the standard needed for non-tidal waters.

Alderman Beardsley (West Riding of Yorkshire Rivers Board) considered that it would be advantageous if his Board had jurisdiction in such tidal waters as were determined by the Minister of Health. He did not think that there would be any interference with Dock and Harbour Authorities who might, indeed, benefit from the clean water. Mr. Kissane (Dock and Harbour Authorities Association) saw no objection from the point of view of those Authorities to the new Boards exercising the powers of Fishery Boards for prevention of pollution in tidal waters;* the Association considered, however, that the existing powers of the Minister to extend the Act of 1876 to tidal waters on sanitary grounds were sufficient for the purposes of public health. If a Harbour or Navigation Authority is already responsible for prevention of pollution in tidal waters, there should be no interference with its jurisdiction, except for special reasons.

The County Councils' and Rural District Councils' Associations represented that the consent of the Minister should no longer be required to the taking of proceedings under Part III of the Act of 1876; that proceedings should be taken either in a County Court or a Court of Summary Jurisdiction; that there should be continuing penalties for continuing offences; and that Local Authorities should have full power to enter premises and take samples. Captain Ellen, on the other hand; stressed the value to industry, as a needed safeguard, of the requirement that the consent of the Minister must be obtained.

Suggestions were also made that the Boards should have additional powers for the prevention of pollution similar to those of the Lancashire Rivers Board, or the Thames and Lee Conservancy Boards, or on the lines recommended in the Third Report of the Joint Advisory Committee on River Pollution.

Sir Thomas Keens (Lee Conservancy Board) suggested that River Boards should have powers to construct reservoirs to conserve water for the needs of local population, instead of draining all surplus water to the sea. He also emphasised very strongly that the work of the Catchment Boards must have a detrimental effect on the conservation of underground water. Similar views as to the construction of reservoirs were expressed by Major Collins (National Association of Fishery Boards) who considered that the conservation of water in this way would prevent flooding and at the same time provide water supplies for rural areas, and by Mr. Waterhouse (National Association of Fishery Boards and National Federation of Anglers) who urged that the resources of the Wye and Severn were not being used to the fullest advantage.

Mr. Scorer (County Councils Association) expressed the view that if new Boards were formed it would be necessary, in some areas, to empower them

* See paragraph 7 of the Report.

to deal with questions of sea defence. Mr. Treadgold (Association of Drainage Authorities) said that while certain coastal areas might require very special consideration, his Association considered that, in general, no scheme for the setting up of new Boards would be complete if it failed to include coastal protection.

The Association of Drainage Authorities suggested that the Boards should be given town planning powers in respect of land liable to flooding, or that alternatively the Town Planning Authorities should be required to work in conjunction with the Boards. The Thames Conservancy Board also drew attention to the need for co-operation between Authorities in this direction. We understand that this is already the practice of many Catchment Boards. The Lee Conservancy Board are represented on the more important Planning Authorities in their area.

The Council for the Preservation of Rural England represented that there should be a statutory obligation on Drainage Authorities to have regard to questions of amenity, and that they should work in conjunction with panels of experts on amenities. The Rural District Councils' Association and the Association of Drainage Authorities also drew our attention to cases of interference with rural amenities by land drainage works.

73. We consider that it would be undesirable to recommend widespread alterations of the law relating to river pollution, land drainage and fisheries at this stage. Our investigation was not directed to the question whether there should be a general revision of the relevant statutes, and some of the interests concerned did not, therefore, express any opinions on questions which concerned them. Moreover, any proposals for a general revision of the existing powers would tend to complicate unnecessarily the determination of the distinct and separate problem referred to us, and might, indeed, be premature until further experience had been gained from the work of the new Boards.

74. Subject to these reservations, our recommendations on the question of new powers are—

(a) It would be undesirable to extend the Act of 1876 generally to tidal waters. The present requirement that the Act can be so extended only on sanitary grounds or for the protection of fisheries (Section 55 of the Act of 1923) is, however, too restrictive, as there may be instances where the application of the Act to tidal waters on other grounds would be desirable and would cause no hardship to riparian owners. We recommend that the Act should be amended to enable the Minister of Health, after local Inquiry, to extend its scope to tidal waters in any case where he is satisfied that this course is desirable. To ensure that due consideration is given to any questions of navigation which may be affected, the Orders should be made only after consultation with the Minister of War Transport or any other Department in which the powers of Central Navigation Authority are vested.

(b) The question whether the consent of the Minister of Health should no longer be required to the taking of proceedings under Part III of the Act of 1876 was considered by the Joint Advisory Committee on River Pollution, who recommended in their Third Report that the requirement should be retained. The evidence we have heard does not lead us to dissent from this recommendation.

(c) In our opinion additional powers for the control of pollution should be considered in conjunction with the interests concerned, and with due regard to the views and recommendations of the Joint Advisory Committee on River Pollution in their Third Report (summarised in the 14th Annual Report of the Ministry of Health, 1932-3), after experience has been gained from the work of the new Boards.

(d) We have already recommended* that the new Boards should have a general duty to conserve water, and that this question should always be a primary factor in the consideration of the planning of new drainage works or in the preparation of programmes for the prevention of pollution.

We consider, however, that it would not be feasible to confer a general power on River Boards to construct reservoirs for the conservation of water, as, apart from the question of the considerable expense involved, the exercise of such a power might conflict with the rights of riparian owners or the statutory powers of other Authorities. We consider, therefore, that if such works are found to be required in any area, the Board concerned should promote local legislation for the purpose.

(e) We do not recommend that the new Boards should have a general responsibility for works of sea defence. In many watershed areas coastal erosion would not have an important bearing on the Boards' other functions except possibly in relation to the main river, in regard to which they would have the powers now exercisable by Catchment Boards.† Where, however, there are special local circumstances, as in some parts of the Eastern Counties, it should be open to the Boards concerned, if no other body is responsible, to execute such works as may be required to afford adequate protection for land within their jurisdiction or for works under their control.

(f) The Boards should be required to have regard to amenities when executing drainage and other works. We suggest that they should be given powers for the making of byelaws for the care and provision of amenities for the public, including the use of pleasure boats and wharves with power to licence boats, charge licence fees, and charge tolls in cases where their work for whatever purpose benefits navigation, except where the rivers are within the jurisdiction of Navigation Authorities.

(g) We recommend that Town Planning Authorities should be required to consult the Boards on any questions arising in regard to building development on lands liable to floods.

(h) The Boards should be empowered to promote legislation for any purpose germane to their proper functions and to oppose any Bill or Order promoted or applied for by others.

Finance.

75. There was a general agreement that in most cases the bulk of the revenue of the new Boards would have to be obtained by means of precepts on the County and County Borough Councils in the Boards' areas, but that other revenues derived by the existing Authorities from sources such as fishery licences, contributions from owners of fisheries (paragraph 18), penalties, Government grants for land drainage schemes, the sums obtained by Catchment Boards through precepts on Internal Drainage Boards (paragraph 14), and navigation tolls, should be added to the Boards' revenue. There was some difference of opinion, however, as to the manner in which the revenue should be raised and utilised.

76. The West Riding of Yorkshire Rivers Board suggested that the funds required for the prevention of pollution should preferably be earmarked for that purpose.

Mr. German (Catchment Boards Association), in reply to a question, thought that the objections of his Association might probably be met if it were provided that sums derived from precepts under the Act of 1930 were used solely for purposes of land drainage.

* See paragraphs 64 and 67 of the Report.

† See paragraph 12 of the Report.

Mr. Howell (Association of Municipal Corporations) said that the limit of precepts on Local Authorities under the Act of 1930 should be retained but that no such limit was necessary in regard to other functions, the cost of which would be proportionately much lower, and could be controlled by the Local Authority representatives.

The County Councils' Association suggested that the Boards' finances should be controlled by a Finance Committee, constituted on the same lines and with the same powers and duties as a County Finance Committee, and that the Boards' accounts should be subject to Government audit as is the case at present with Drainage Boards. A similar suggestion was made by the Rural District Councils' Association, who also considered that the members of the Finance Committee should be appointed by the Local Authorities on whom precepts were made. The Federation of British Industries also suggested that the accounts should be audited under Government supervision.

The Association of Drainage Authorities represented that the basis of rating for land drainage should be revised, in order to prevent the existing duplication of rates for drainage upon internal drainage districts. It was suggested that Internal Drainage Boards should defray the cost of evacuating rainfall within the boundaries of their districts, and, until main rivers become a national charge, should contribute on terms of equality with other Local Authorities towards the cost of evacuating rainfall within the catchment area, the expenses being defrayed by a drainage rate levied directly on hereditaments within the drainage areas and a direct rate on all hereditaments within the catchment area. Equalisation of the final cost of land drainage might be effected, either by removal of the limit on precepts on County and County Borough Councils, or by the imposition of this limit generally over all Authorities and hereditaments wholly within the catchment area. An Internal Drainage Board should also be empowered to precept on rating Authorities if expenditure had to be incurred for draining water coming into their area from areas outside.

The National Federation of Anglers suggested that there should be a flat rate general rod licence throughout the country, the proceeds from which should be administered by the Minister of Agriculture and Fisheries and used solely for the improvement of fisheries.

Mr. Kissane (Dock and Harbour Authorities Association) suggested that in order to ensure fair competition, the Boards should be compelled to charge tolls for any navigation facilities which they provided.

77. We recommend that the revenue of the Boards should be derived from the following sources:—(a) precepts on County and County Borough Councils, the amounts being based on the rateable values of the portions of their areas under the Boards' jurisdiction; (b) the other sources of revenue indicated in paragraph 75 of this Report which are now available for Catchment and Fishery Boards.

78. The limit on precepts laid down by the Act of 1930 should be retained, but it would be an advantage, at any event in many areas, if a definite proportion of the amount so raised, and of other revenues obtained under the Act of 1930, were placed in a separate account and earmarked for land drainage purposes, as is the case, we are informed, with the Thames Conservancy Board. It will be necessary, of course, if this recommendation is adopted, for a proportion of the administrative expenses of the Board to be charged to this account.

79. We consider that similar arrangements would be justifiable in the case of fishery revenues, and that where there are important fishery interests, a substantial part of the revenue obtained directly from owners of fisheries or

from anglers should be set aside for fishery purposes. It would be inequitable, however, to allocate the whole of the revenue so obtained exclusively to fishery work, as the interests would derive benefit from the other functions exercised by the Boards and the improved administration.

80. The effect of these recommendations would be that additional revenue would be required to meet the expenditure of the Boards on the mitigation of pollution, the conservation of water and other conservancy work, and that this revenue would have to be obtained from precepts on Local Authorities. It is impracticable to forecast accurately what amount will be needed for these purposes, as the expenditure on mitigation of pollution is now spread over many Authorities.

We agree that the accounts should be subject to Government audit.

81. For the reasons stated in paragraph 73 of the Report we have decided to make no recommendations on the suggestions of the Association of Drainage Authorities and the National Federation of Anglers (mentioned in paragraph 76) which, we suggest, should be reviewed by the Ministry of Agriculture and Fisheries, when proposals for the amendment of the Acts of 1923 and 1930 are under consideration. As a general principle, however, we consider that it is not unfair that the ratepayers in internal drainage districts, who avoid danger or who benefit from land drainage, should continue to contribute a larger share of the cost involved than the ordinary ratepayer, especially as the works are often of great benefit to agricultural land, which is de-rated and does not therefore contribute to the general rates.

The tolls to be charged for navigation facilities must clearly be a matter for the responsible Authority but, subject to this, we consider that it would be reasonable for a River Board to levy sufficient tolls, as dredging and other works will require to be carried out for the maintenance of navigation.

Representation.

82. There was considerable difference of opinion among witnesses as to the manner in which the various interests should be represented if new Boards were formed. The Association of Municipal Corporations considered that as the major portion of the revenue would be derived from precepts on County and County Boroughs, the County and County Borough Councils together should nominate at least two-thirds of the members, the proportion appointed by each Authority being based upon the rateable value of the portion of their area within the Boards' area. Evidence was given that there has always been a certain amount of discontent in County Districts at representation being through County Councils, and that it would be desirable that this grievance should be removed. It was suggested that for this purpose non-County Borough Councils and Urban and Rural District Councils should each be entitled to a representative on River Boards, elected by the votes of the particular classes of Local Authorities, this representation being regarded as part of the share allocated to County Councils.

It was suggested to us that if Boards were set up, and the sectional river interests were so merged, there would grow up a general feeling of service to the river, with the result that jealousies and differences of opinion would disappear (as has happened in the case of the big Municipal Authorities, where sections which might be expected to be actively opposed to one another work harmoniously together in the interests of the City), and that Local Authority representatives on a Board dealing with a wider area, or with wider functions, absorb the views of the Board and act in the interests of the Board rather than in the interests of their own Authority. On this assumption there would have to be representation for all interests with administrative functions, and with every interest having a voice, there would be no dissatisfaction.

The County Councils' Association suggested that County Boroughs and County Councils should appoint two-thirds of the membership, but that the existing practice under the Act of 1930, whereby the representation of the former can in no case exceed one-third of the total representation, should be continued. Mr. Howell (Association of Municipal Corporations) on the other hand said that there had been much objection to this bar, which should be removed.

Mr. Spicer (National Association of Fishery Boards) saw no objection to a preponderant majority of the new Boards being appointed by Local Authorities. The percentage of representation allotted to fishery interests need not be large; the existing percentage of one-third would be adequate. It was not so much a question of percentage, because fishery interests were well able to ensure that their requirements were met, even with a representation of one-third. The representatives should be directly appointed by licence holders. He would expect the Board to delegate certain work to Committees, including a Committee on which fishery interests would be well represented and would deal with the details of fishery work. We were informed that there would be some reserve in the attitude of fishery interests towards any proposals for co-ordination if it were proposed that the powers should be exercised by the Boards without delegation.

The late Lord Gainford (National Association of Fishery Boards) considered that an identity of fishery interests should be retained by the present Fishery Boards, with general control of such questions as the conservation of water and the prevention of pollution by the comprehensive Authority. A great number of duties, such as the watching of rivers, restocking and prosecution for offences should be devolved to fishery interests. Major Collins, Sir Cecil Newman and Mr. Wickham (all representing the National Association of Fishery Boards) supported these views.

The National Federation of Anglers were strongly of the opinion that the present direct representation of anglers on Fishery Boards should be continued. Mr. Waterhouse (National Association of Fishery Boards and National Federation of Anglers) thought that anglers would be satisfied if they had direct representation. It was not so much a question of the number of representatives, in his view, as the quality. There should be a fair representation for all interests, but industry should be represented through the Local Authority. As the bulk of the revenues would come from local rates, there would be no objection to Local Authorities having the predominant influence.

The Rural District Councils' Association suggested that the proposal to amalgamate interests would accentuate existing difficulties, as different interests predominate on different reaches of some rivers and there would be a continuous struggle between those interests in an attempt to exercise a controlling influence. On the other hand, if all interests were represented the Board would be unwieldy.

Alderman Beardsley (West Riding of Yorkshire Rivers Board) suggested that the representation should be based upon the contributions made by the various interests to the Boards' expenses. It would be undesirable to appoint representatives from interests which did not contribute directly towards the expenditure; it was to be expected that such interests would find their representations through the Local Authorities. Mr. Waterhouse was also of the opinion that representation should be confined to the interests which made direct contributions.

Mr. Kissane (Dock & Harbour Authorities Association) said that where Dock and Harbour Authorities were interested in the flow of the river for navigation purposes, they should be represented even though the Boards did not take over their functions or receive contributions from them.

The Federation of British Industries submitted that the Boards should include direct representation of all river interests, including industry, irrespective of whether or not such interests contributed directly to the expenditure. Industry had not very much to gain and might indeed have something to fear from the restrictions on their activities if new Boards were set up. There seemed to be no reason therefore why industry should pay any more towards the expenses than it would pay in any event through local rates. They did not agree that the Local Authority representatives should predominate even though the majority of the Boards' expenses would be defrayed directly from rates. It was suggested that there should be an independent chairman and a single representative from each interest concerned, with power to appoint a deputy.

The Association of Drainage Authorities suggested that a fair proportion (not less than 50 per cent.) of the representatives should be elected directly by ratepayers.

83. It is essential, in our view, that an effective majority of the members of the new Boards should directly represent the County and County Borough Councils of the area, mainly on the ground that much the greater part of the Boards' revenues will be defrayed from rates levied on their areas.

Subject to that consideration, we consider that, since one of the principal objects of setting up the new Boards will be to co-ordinate the requirements of all water interests, there should be direct representation of all interests likely to be affected by their work, whether contributing directly or indirectly to the expenses incurred. The membership should, therefore, as a general rule, comprise representatives of Local Authorities (possibly including separate representatives of non-County Boroughs and Urban and Rural District Councils, who are concerned with sewage disposal, water supply and control of pollution) water undertakers, industrial interests, agricultural interests if not otherwise adequately provided for, fishery interests, internal drainage interests, and navigation. The relative importance of these interests will vary according to the nature of the river under consideration, and the Order should in such case define the membership allotted to a particular interest in the light of local circumstances, and should provide for alteration therein as and when conditions and circumstances change and develop.

84. The Ministers should be empowered to group and regroup areas for the purpose of representation, if this course should be found to be necessary. It is, of course, desirable that the interests concerned should as far as possible appoint persons with intimate experience of the administration of land drainage, fisheries and the prevention of pollution.

Committees.

85. The fear was expressed that the amalgamation of the administrative functions connected with river control into the hands of one Authority might lead to neglect of a particular interest; it was also represented that Boards of the kind we have envisaged might be too remote from local affairs, or that their areas would be too large for them to keep in contact with local requirements, and that certain interests might accordingly be neglected. We feel that these fears are groundless, and that the Boards will realise the value of making full use of the services of persons who have gained special knowledge of their own areas, or practical experience of the functions to be transferred to the Boards.

86. No doubt it will be desirable that the Boards should be required to appoint Committees, under the Board's general control, for the detailed administration of the Board's operations.

Relations with the Central Departments.

87. We have already recommended that as the Ministers of Health and Agriculture and Fisheries have a separate responsibility to Parliament for functions with which the Boards would be vested, the Orders constituting the Boards should be made jointly by the two Ministers. Other matters concerning the work of the Boards which would fall within the jurisdiction of the two Departments, such as alterations of areas, the grouping of watershed areas, and the addition of new areas to the areas scheduled by the Act, should also be authorised jointly by the two Ministers, who would no doubt, as is customary, consult other Government Departments if their duties were affected. Subject to this, we should expect questions arising under the Acts of 1923 and 1930 to be dealt with as hitherto, primarily by the Minister of Agriculture and Fisheries, and such questions as river pollution, sewage disposal, public water supply and the audit of accounts, to be dealt with primarily by the Minister of Health, the two Ministers acting in consultation on any of these matters which are likely to be of joint interest.

88. It will be seen from our recommendations in our First Report and in this Report that a Central Advisory Water Committee with statutory functions and duties takes a very important place in our proposals both in an advisory capacity and as a general co-ordinating authority. As a corollary therefore to our recommendations, we endorse the recommendation of the Joint Committee on Water Resources and Supplies [Session 1935-6]* that Ministers should appoint a Central Advisory Water Committee with statutory authority, which would be responsible for advising them on questions of water policy, and would be freely consulted if a Bill giving effect to our recommendations is drafted or when proposals for the constitution of the Boards are under consideration. We also anticipate that, if the Boards are formed this Committee would advise the Ministers on questions of general policy as affecting the Boards. We have not attempted to define all the questions which would be referred to such a Committee, but we have in mind matters such as the co-ordination of the work of the Boards, particularly where that work affects other interests like Regional Advisory Water Committees, and the consideration of any differences which may arise between sectional interests.

Safeguards.

89. As the final stage of our investigation we have considered whether other safeguards are required to ensure that sectional interests are not neglected or treated unfairly. In general, we feel that the best safeguards are to be found in the principle that all sections of river users would be represented, and the experience gained from amalgamations of various Authorities in the past, which shows very clearly that the new Authorities invariably endeavour to administer their altered areas in the interests of all concerned.

90. We consider, nevertheless, that it would be desirable that the appropriate Minister should be authorised, on complaint by a Local Authority (including a County Council) or by interested persons (whether members of the Board or not), that a Board has failed to carry out any of its duties, to hold a public Inquiry and, if he is satisfied that the complaint is justified, to require the Board to carry out that duty. We suggest that this procedure should extend to the appointment of Committees in case of need.

91. We wish to emphasise in conclusion that it would be incorrect to assume that because we have not referred to some of the suggestions placed before us, we have ignored them, or indeed that they have not received very careful

* Paragraph 18.

consideration. It is our considered opinion that the first stage in the re-organisation of the administration of rivers is to set up the new Boards, and that the problems with which the Boards will be faced cannot be solved, and may, on the contrary, be complicated, by any attempt at this stage to make general amendments of the powers with which the existing bodies are vested. These problems are not of recent growth, and will not be solved in a short time even if new Boards are formed. We are satisfied, nevertheless, that a great step forward will have been made if administrative control is centralised in one Authority.

92. We desire to place on record that the drafting of this, our Third Report, was suspended from the Autumn of 1939, up to which time thirteen Meetings had been held, to that of 1942 in order to free both Members of the Committee and staff for work on matters of grave national urgency.

We greatly regret that during that period we lost, by death, our esteemed colleague, Sir David Owen, and we desire to take this opportunity of expressing our deep personal sorrow and our grateful appreciation of the valuable assistance which he was able to afford us.

We also wish to record our recognition of the invaluable services rendered us by another colleague, Mr. B. Verity, who resigned from the Committee in 1940 upon terminating his association with the Calico Printers' Association Ltd.

Our gratitude is due to the Assessors appointed by the interested Government Departments for their helpful assistance and advice. They have attended all our Meetings and by their expert knowledge and ripe experience have aided in the solution of many of our difficulties. We take this opportunity of thanking them.

Finally we desire to express our grateful appreciation of the knowledge, experience, skill and tact shown by our former Secretary, Mr. A. Titherley of the Ministry of Health, which he has fully placed at our disposal in the work of the Committee and of the services of his recent successor, Mr. A. L. Thompson, who has responded to every call made on him.

We have the honour to be,

Gentlemen,

Your obedient servants,

Milne, *Chairman.*

A. R. Atkey.	E. J. Clarke.
E. T. L. Baker.	A. E. Cornwall-Walker.
H. K. Beale.	Robert Doncaster.
Reginald Beddington.	Arthur Heneage.
*Wynne Cemlyn-Jones.	S. R. Hobday.
J. Chaston.	J. E. James.

A. L. Thompson, *Secretary.*

12 July, 1943.

* Signed subject to the Reservation appended.

Note of Reservation to Paragraph 83.

I am unable to sign the Report without a reservation to paragraph 83. I consider it of vital importance that the "effective majority" of representatives appointed on the proposed new Boards by the County and County

Borough Councils should be not less than two-thirds of the total membership, and that the number to be appointed severally by each of such Councils should be in proportion to the amounts of the contributions to be made by them respectively towards the expenses of the Boards, provided that the number of members to be appointed by the County Borough Councils shall not in any case exceed one half of the aggregate number of the members to be appointed by the County and County Borough Councils.

The County Councils are the principal Local Authorities representing agriculture, our greatest and most important industry. It is, therefore, of paramount importance that they have effective representation on the bodies proposed to be invested with functions, such as land drainage, upon the proper discharge of which the fertility of our land so largely depends.

(Signed) Wynne Cemlyn-Jones.

Captain R. T. Hinckes has not signed the Report. He is incapacitated by illness and was unable to be present at the Meeting of the Committee at which the terms of this Report were settled.

APPENDIX I.

(See paragraph 2)

LIST OF EVIDENCE

1. *Written and Oral Evidence.*

<i>Organisations</i>	<i>Witnesses</i>
Association of Drainage Authorities	Mr. H. Buchanan Mr. R. C. Treadgold, F.S.I., M.Inst.M. & Cy.E.
Association of Municipal Corporations	Mr. H. Darlow Mr. F. E. W. Howell
Canal Association	Lt.-Col. F. Rayner, D.S.O., T.D. Mr. C. A. Wilson
Catchment Boards' Association	Mr. H. German Mr. J. Hirst Alderman R. L. Walker Mr. T. C. Ward
Central Council for Rivers Protection	Mr. C. N. Hooper
Council for the Preservation of Rural England	Mr. G. H. Jack, M.I.C.E., F.R.I.B.A., F.S.A.
County Councils Association	Mr. E. W. Scorer Mr. H. L. Underwood, M.A., LL.B.
Dock and Harbour Authorities' Association ...	Mr. M. Kissane
Federation of British Industries	Capt. C. W. Ellen Mr. A. I. MacNaughton
Lee Conservancy Board	Sir Thomas Keens, D.L., J.P. Mr. W. L. Ives, LL.B., Barrister-at-Law
National Association of Fishery Boards	Major E. A. D. Collins, J.P. The Rt. Hon. The Lord Gainford Dr. H. C. Jonas Sir Cecil Newman, Bart. *Major F. A. Phillips, D.S.O. *Capt. T. P. P. Powell, M.B.E. Mr. J. I. Spicer, M.C., A.R.T.C. †Sir Alfred Stephens Mr. T. A. Waterhouse Mr. H. C. Wickham Mr. R. T. Wickham Mr. J. A. Williamson
National Federation of Anglers	Major P. Groves Mr. H. A. Hind Mr. T. A. Waterhouse Mr. H. W. Westlake Mr. R. G. Woodruff
Pure Rivers Society	Dr. E. C. Jee
Severn Commission	Mr. A. J. Cullis Alderman E. M. Dyer Alderman R. R. Fairbairn, J.P. Mr. R. B. Worth
Thames Conservancy Board	Capt. J. Bray Mr. G. G. Corble
Weaver Navigation	Mr. C. M. Marsh
West Riding of Yorkshire Rivers Board	Mr. H. F. Atter Alderman C. W. Beardsley Mr. J. H. Garner Alderman Col. E. York

2. *Written Evidence only**Organisation*

British Waterworks Association
Central Landowners' Association
Land Agents' Society
Rural District Councils Association.

* Gave separate evidence on behalf of the Towy and Teify Fishery Board.

† Gave separate evidence on behalf of the Wye Board of Conservators.

APPENDIX II.
(See paragraph 11)

LIST OF CATCHMENT BOARDS WITH THE NUMBER OF INTERNAL DRAINAGE BOARDS
WITHIN THEIR AREAS.

Adur Catchment Board.	1 Internal Drainage Board.
Alt Catchment Board.	No Internal Drainage Boards.
Ancholme and Winterton Beck Catchment Board.	2 Internal Drainage Boards.
Anglesey Rivers Catchment Board.	2 Internal Drainage Boards.
Arun Catchment Board.	2 Internal Drainage Boards.
Avon (Bristol) Catchment Board.	1 Internal Drainage Board.
Avon and Stour Catchment Board.	No Internal Drainage Boards.
Caernarvonshire Rivers Catchment Board.	1 Internal Drainage Board.
Cheshire Rivers Catchment Board.	No Internal Drainage Boards.
Clwyd Catchment Board.	No Internal Drainage Boards.
Conway Catchment Board.	1 Internal Drainage Board.
Crossens Catchment Board.	1 Internal Drainage Board.
Cuckmere Catchment Board.	1 Internal Drainage Board.
Dee Catchment Board.	3 Internal Drainage Boards.
Derwent Catchment Board	1 Internal Drainage Board.
Douglas Catchment Board.	3 Internal Drainage Boards.
Dysynni Catchment Board.	1 Internal Drainage Board.
East Norfolk Rivers Catchment Board (including the River Waveney).	25 Internal Drainage Boards.
East Suffolk Rivers Catchment Board (excluding the River Waveney).	11 Internal Drainage Boards.
Essex Rivers Catchment Board.	15 Internal Drainage Boards.
Hampshire Rivers Catchment Board.	No Internal Drainage Boards.
Hull Catchment Board.	5 Internal Drainage Boards.
*Kent Catchment Board.	4 Internal Drainage Boards.
Kent Rivers Catchment Board.	8 Internal Drainage Boards.
Lee Conservancy Catchment Board.	No Internal Drainage Boards.
Lune Catchment Board.	2 Internal Drainage Boards.
Merionethshire Rivers Catchment Board.	2 Internal Drainage Boards.
Mersey and Irwell Catchment Board.	No Internal Drainage Boards.
Mid-Glamorgan Rivers Catchment Board.	2 Internal Drainage Boards.
Nene Catchment Board.	21 Internal Drainage Boards.
North-East Cheshire Rivers Catchment Board.	No Internal Drainage Boards.

* River Kent, Westmorland.

LIST OF CATCHMENT BOARDS WITH THE NUMBER OF INTERNAL DRAINAGE BOARDS
WITHIN THEIR AREAS—*continued.*

North Lonsdale Rivers Catchment Board.	1 Internal Drainage Board.
North Norfolk Rivers Catchment Board.	5 Internal Drainage Boards.
Northumberland Rivers Catchment Board.	No Internal Drainage Boards.
Old Haven (Pevensey) and Bulverhythe Stream Catchment Board.	1 Internal Drainage Board.
Ouse (Great) Catchment Board.	82 Internal Drainage Boards.
Ouse (Sussex) Catchment Board.	1 Internal Drainage Board.
Ouse (Yorks) Catchment Board.	58 Internal Drainage Boards.
Roding Catchment Board.	4 Internal Drainage Boards.
Rother and Jury's Gut Catchment Board.	3 Internal Drainage Boards.
Severn Catchment Board.	8 Internal Drainage Boards.
Somerset Rivers Catchment Board.	19 Internal Drainage Boards.
South Cumberland Rivers Catchment Board.	No Internal Drainage Boards.
South Lancashire Rivers Catchment Board.	1 Internal Drainage Board.
South West Sussex Rivers Catchment Board.	1 Internal Drainage Board.
Stour (Essex and Suffolk) Catchment Board.	3 Internal Drainage Boards.
Thames (above Teddington Lock) Catchment Board	No Internal Drainage Boards.
Trent Catchment Board.	29 Internal Drainage Boards.
Waver and Wampool Catchment Board.	1 Internal Drainage Board.
Welland Catchment Board.	9 Internal Drainage Boards.
Witham and Steeping Rivers Catchment Board.	6 Internal Drainage Boards.
Wye Catchment Board.	3 Internal Drainage Boards.
Wyre Catchment Board.	1 Internal Drainage Board.

Number of Catchment Boards	...	...	...	...	...	...	...	53
Number of Internal Drainage Boards	...	...	...	...	...	...	...	350
Number of Drainage Boards outside Catchment Areas	...	...	...	...	...	...	...	22
Number of Drainage Authorities partly not wholly within one Catchment Area	...	...	...	...	...	...	...	5
Total number of Drainage Authorities, other than Catchment Boards	...	...	...	...	...	...	...	377

In addition there are numerous authorities throughout the country acting under old Awards of which no complete record is available.

APPENDIX III.

(See paragraph 16)

LIST OF FISHERY BOARDS.

Arun (not functioning)	Norfolk
Avon (Devon)	Ogmore
Avon, Brue and Parret	Ouse (Sussex)
Axe	Ouse and Cam
Camel Fishery District	Ribble
Conway	Rother
Coquet	Seiont, Gwyrfai and Llyfni
Cuckmere (not functioning)	Severn
Dart	Stour (Canterbury) (not functioning)
Dee	Suffolk and Essex
Derwent	Taff and Ely
Dovey, Mawddach and Glaslyn	Tamar and Plym
Dwyfach	Taw and Torridge
Eden	Tees
Elwy and Clwyd	Teify and Ayron
Esk (Yorks.)	Teign
Exe	Towy
Fowey	Trent
Frome	Tyne
Hampshire Rivers	Usk
Kent, Bela, Winster, Leven and Duddon	Wear
Lincolnshire Rivers	West Cumberland
Lune	Wye
Nene and Welland	Yorkshire

APPENDIX IV.

(See paragraph 27)

NAVIGATION AND OTHER POWERS TRANSFERRED TO CATCHMENT BOARDS.

I. Under Section 40 of the Land Drainage Act, 1930.

Catchment Board	Navigation Authority	Purpose of Arrangement
1. Rother & Jury's Gut	Commissioners of Rye Harbour.	Transfer of the property, lands, rights, powers, duties, liabilities and obligations of the Commissioners.
2. East Norfolk Rivers	Watney Combe Reid & Co. Ltd.	Transfer of the navigation or right of navigation of in and upon the River Waveney, etc.
3. River Medway ...	Upper Medway Navigation and Conservancy Board.	Transfer of undertaking to the Catchment Board.
4. River Welland ...	River Welland Outfall Board.	Transfer of Outfall Board in its capacity as a Navigation Authority.
5. River Dee ...	Dee Conservancy Board ...	Transfer of four sluices to the Catchment Board with certain financial provisions.
6. River Trent ...	Trent Navigation Company	Alteration or improvement of Sawley Locks and Weir and ancillary works with financial provisions.
7. River Great Ouse ...	W. P. C. Parker (Proprietor)	Transfer of Navigation or right of navigation of that part of the River Lark which lies between Long Common below Mildenhall Mill and the Town of Bury St. Edmunds.
8. River Great Ouse ...	Borough of Thetford ...	Transfer of rights, powers, etc. of part of River Little Ouse and the right to take tolls.

NAVIGATION AND OTHER POWERS TRANSFERRED TO CATCHMENT BOARDS—*continued.*

Catchment Board	Navigation Authority	Purpose of Arrangement
9. River Medway ...	Lower Medway Navigation Company.	Reconstruction and management of the Sluices at Allington.
10 Witham and Steeping Rivers.	Boston Corporation ...	Financial provisions in connection with the widening and dredging of the River Witham by the Boston Corporation.
11. River Nene ...	Borough of Wisbech ...	Transfer to the Board of the powers of the Corporation to receive tolls payable by ships navigating the River Nene between Bevis Hall and Peterborough.
12. River Dee ...	Dee Conservancy Board ...	Transfer to the Catchment Board of the undertaking of and the rights, powers, duties, liabilities, obligations and property of the Conservancy Board.
13. River Nene ...	Borough of Wisbech ...	Transfer to the Board of a portion of Corporation Quay and the rights, powers, duties, liabilities, and obligations of Council to repair and maintain same.

II. *Under Section 41 of the Land Drainage Act, 1930.*

Catchment or Drainage Board.	Nature of Act, water or rights affected.
1. East Suffolk Rivers Catchment Board.	Revocation of the Ipswich and Stowmarket Navigation Act (33 Geo. III).
2. East Suffolk Rivers Catchment Board.	Revocation of the River Blyth Navigation Act (30 Geo. II)
3. East Norfolk Rivers Catchment Board.	Extinguishment of Navigation rights over the River Waveney.
4. River Hull Catchment Board and Holderness Drainage Board.	Revocation of Lever Canal Acts (41 and 45 Geo. III).
5. River Ouse (Yorks.) Catchment Board.	Revocation of the River Derwent Act, 1702 (1 Anne).
6. Ancholme and Winterton Beck Catchment Board.	Revocation of the Caistor Canal Act, 1793 (33 Geo. III C. 114).
7. River Dee Catchment Board.	Revocation of such of the provisions of a navigation Act of 1743 as relate to the maintenance of a statutory depth of water in the River Dee.

NAVIGATION AND OTHER POWERS TRANSFERRED TO CATCHMENT BOARDS—*continued.*III. *Canals abandoned by virtue of Warrants and Orders issued under Section 45 of the Railway and Canal Traffic Act, 1888.*

Name of Canal	Reason for Application	Date of issue of	
		Warrant	Order
River Arun	Unnecessary	21.9.1896	22.4.1897
Shropshire Canal (the inclined plane between the upper and lower portions of the canal at Coalport and the lower portion of the canal between the foot of the inclined plane and the L.M.S.R. Company's Coalport Station).	..	11.4.1912	5.1912
St. Helens Canal (Ravenhead Branch)	5.8.1920	20.10.1920
Shrewsbury Canal Basin	28.7.1922	23.11.1922
North Walsham and Dilham Canal	22.9.1926	24.2.1927
Louth Canal	Derelict	6.1924	8.8.1924
Wisbech Canal	14.6.1926	None made
Thames and Severn (Upper portion)	31.1.1927	10.5.1927
Aylesham and Cottishall Navigation	20.9.1928	8.11.1928
Shrewsbury Canal (between the bottom of the Trench incline to the point where the canal meets the eastern boundary of the Parish of Wrockwardine Wood).	..	14.3.1931	8.6.1931
St. Helens Canal (Upper portion)	2.4.1931	21.5.1931
Derby Canal (Little Eaton Branch)	Unnecessary	4.7.1935	3.9.1935
Rother Navigation (Sussex)	15.4.1936	7.7.1936
Oxford Canal (Basin and Wharves at Oxford)	14.4.1937	8.6.1937
Grand Union, Regents Canal Cumberland Arm	2.5.1940	3.7.1940
Calder & Hebble Navigation Halifax Branch	2.6.1942	21.8.1942

IV. *Canals abandoned under Local Acts.*

Name of Canal	Abandoned by
Wilts and Berks Canal	Wilts and Berks Canal (Abandonment) Act, 1914.
Bradford Canal	Bradford Canal (Abandonment) Act, 1922.
Aberdare Canal	Aberdare Canal Act, 1924.
Thames and Severn (Lower portion).	Order made by the Minister on 9th June, 1933 under the Thames and Severn Canal Trust Act, 1895.
Thames and Medway (portion owned by Southern Railway).	Section 36 Southern Railway Act, 1934.
Glastonbury Navigation and Canal.	Section 43 Southern Railway Act, 1936.
Manchester and Salford Junction Canal.	Section 29, Manchester Ship Canal Act, 1936.
Birmingham Canal (Newhall Branch).	Section 28 Birmingham Corporation Act, 1936.
Grantham Canal	Section 43, London and North Eastern Railway (General Powers) Act, 1936.

APPENDIX V.

(See paragraph 33.)

STATEMENT OF AUTHORITIES WITH FUNCTIONS IN REGARD TO CERTAIN RIVERS

River	Land Drainage Authorities.	Fishery Boards.	Authorities responsible for prevention of pollution.	Inland Navigation Authorities.	Principal Canals.	Dock and Harbour Authorities.	Principal Authorities abstracting water.	Principal towns discharging sewage effluents.
DEE ...	River Dee Catchment Board. 3 Internal Drainage Boards.	Dee Board of Conservators.	5 County Councils 1 County Borough Council. 2 Urban District Councils. 8 Rural District Councils. River Dee Joint Committee. Dee Board of Conservators.	River Dee Catchment Board.	Shropshire Union	Great Western Railway Company (Saltney Wharf). London and North Eastern Railway Company (Connaught Quay). Darwen and Mostyn Iron Company, Ltd. (Mostyn Docks).	Birkenhead Corporation (River Alwen). Chester Waterworks Company. Llangollen Urban District Council. Wrexham and East Denbighshire Water Co.	Chester Corwen Llangollen Wrexham
GREAT OUSE	River Ouse Great Catchment Board. 82 Internal Drainage Boards.	Ouse and Cam Fishery Board.	11 County Councils 6 Borough Councils. 9 Urban District Councils. 20 Rural District Councils. Ouse and Cam Fishery Board.	River Great Ouse Catchment Board. King's Lynn Conservancy Board. Middle Level Navigation. River Cam Navigation. River Lark Navigation. Thetford Corporation (Brandon River).	Nil	King's Lynn Docks and Railway Company.	Bedford Corporation.	Bedford Bury St. Edmunds. Cambridge. Ely. Huntingdon.

River	Land Drainage Authorities.	Fishery Boards.	Authorities responsible for prevention of pollution.	Inland Navigation Authorities.	Principal Canals.	Dock and Harbour Authorities.	Principal Authorities abstracting water.	Principal towns discharging sewage effluents.
LEE	Lee Conservancy Catchment Board.	Lee Conservancy Board.	5 County Councils. Lee Conservancy Board.	Lee Conservancy Board.	Nil	Port of London Authority.	Metropolitan Water Board.	Cheshunt. Enfield. Edmonton. Hertford. Luton.
NENE	River Nene Catchment Board. 21 Internal Drainage Boards.	Nene and Welland Fishery Board.	6 County Councils. 1 County Borough Council. 5 Borough Councils 2 Urban District Councils. 13 Rural District Councils. Nene and Welland Fishery Board.	River Nene Catchment Board. Middle Level Navigation.	Grand Union.	Wisbech Town Council.	Kettering Corporation (gathering grounds on River Ise). Northampton Corporation.	Kettering (River Ise). Northampton. Peterborough. Wellingborough.
OUSE (YORKS)	River Ouse (Yorks) Catchment Board. 58 Internal Drainage Boards.	Yorkshire Fishery Board.	4 County Councils. 14 County Borough Councils. 8 Borough Councils 51 Urban District Councils. 50 Rural District Councils. West Riding of Yorkshire Rivers Board. Yorkshire Fishery Board.	Linton Lock Navigation Commissioners. York Corporation. River Ure Navigation. River Wharfe. Aire and Calder Navigation. River Derwent Navigation. River Aire Navigation. Hatfield Chase Corporation (River Don) (<i>Not Municipal</i>).	River Ure Navigation. Aire and Calder Navigation.	Undertakers of the Aire and Calder Navigation (Goole Docks).	Barnsley (River Don). Bradford Corporation (Rivers Aire, Wharfe, Nidd, Worth and Stone). Leeds Corporation (Ure and Wharfe Valleys). Ripon Corporation (gathering ground and tributaries of River Laver). Sheffield (Loxley River and River Ewden). York Waterworks Company.	Barnsley (River Don). Bradford (River Aire). Halifax (River Calder). Huddersfield (River Calder). Leeds (River Aire). Sheffield (River Don). Wakefield (River Calder). York.

SEVERN	River Severn Catchment Board. 8 Internal Drainage Boards.	Board of Conservators of Severn Fishery District.	11 County Councils 3 County Borough Councils. 16 Borough Councils. 7 Urban District Councils. 30 Rural District Councils. Board of Conservators of Severn Fishery District.	Severn Commission. Gloucester Harbour Trustees (for lighting and buoying the Severn Estuary). River Avon Lower Navigation. River Avon.	Gloucester and Sharpness. Worcester and Birmingham. Staffordshire and Worcestershire. Stroudwater. Lydney.	Sharpness Docks and Gloucester and Birmingham Navigation Company (Sharpness and Gloucester Docks). Great Western and London and Midland and Scottish Railway Companies (Lydney Docks). Bristol Corporation (Avonmouth Docks).	Liverpool Corporation (River Vyrnwy). Shrewsbury Corporation. Worcester Corporation. Cheltenham Corporation. Rugby Corporation (River Avon). Wolverhampton Corporation (River Worfe). Coventry Corporation (River Avon). Cheltenham and Gloucester Joint Water Board.	Welshpool. Cheltenham. Worcester. Gloucester. Warwick (River Avon). Royal Leamington Spa (River Avon). Coventry (River Avon). Rugby (River Avon). Kidderminster. Shrewsbury.
TEES	Nil	Tees Fishery Board.	4 County Councils 2 County Borough Councils. 3 Borough Councils 2 Urban District Councils. 10 Rural District Councils. Tees Fishery Board.	Tees Conservancy Commissioners.	Nil	Tees Conservancy Commissioners. London and North Eastern Railway Company (Middlesbrough Docks).	Darlington Corporation. Tees Valley Water Board.	Billingham. Darlington. Middlesbrough Stockton-on-Tees Thornaby-on-Tees.

River	Land Drainage Authorities.	Fishery Boards.	Authorities responsible for prevention of pollution.	Inland Navigation Authorities.	Principal Canals.	Dock and Harbour Authorities.	Principal Authorities abstracting water.	Principal towns discharging sewage effluents.
THAMES (above Teddington).	Thames Conservancy Board.	Thames Conservancy Board (main river only).	Thames Conservancy Board.	Thames Conservancy Board. *Godalming Navigation (River Wey). *The Guildford Corporation are empowered by their local Act of 1938 to purchase the Godalming Navigation).	Oxford. Kennet and Avon Grand Union. Woking, Aldershot and Basingstoke.	Nil	Metropolitan Water Board. Woking Water and Gas Company. West Surrey Water Company. South West Suburban Water Company. Oxford Corporation. Reading Corporation (River Kennet). Banbury Water Company (River Cherwell).	Oxford. Reading. Maidenhead. Slough. Aldershot (River Blackwater). Guildford (River Wey). Woking (River Wey). Reigate (River Mole). Kingston. Windsor.
TRENT	River Trent Catchment Board. 29 Internal Drainage Boards.	Trent Fishery Board.	7 County Councils. 7 County Borough Councils. 6 Borough Councils. 14 Urban District Councils. 27 Rural District Councils. Tame Basin Joint Committee. Trent Fishery Board.	Trent Navigation Company. Nottingham Corporation. Newark Navigation Commissioners. Humber Conservancy Board. River Idle. Sheffield and South Yorkshire Navigation. Trent Catchment Board.	Grand Union (River Soar Navigation). Trent and Mersey. Nottingham. Erewash. Foss Dyke. Chesterfield. Sheffield and South Yorkshire Navigation.	Nil	Derwent Valley Water Board (Rivers Derwent and Ashop). South Staffordshire Waterworks Company (gathering grounds in Lichfield district). Derby Corporation (collecting tunnels in Derwent Valley). Leicester Corporation (gathering grounds River Soar Valley).	Wolverhampton. Stoke-on-Trent. Stafford (River Sow). Birmingham (River Tame). Burton-on-Trent Derby. Leicester (River Soar). Nottingham. Newark. Gainsborough. Walsall. West Bromwich.

TYNE ...	Nil	Tyne Fishery Board.	3 County Councils 4 County Borough Councils. 2 Borough Councils 9 Urban District Councils. 8 Rural District Councils. Tyne Fishery Board.	Tyne Improvement Commissioners.	Nil	Tyne Improvement Commissioners. London & North Eastern Railway Company (Dunston Staiths, West Dunston Staiths). South Shields Corporation. Newcastle - upon-Tyne Corporation.	Durham Water Board (tributary Derwent watershed). Newcastle and Gateshead Water Company (River Rede and North Tyne River).	Hexham Newcastle Gateshead Wallsend Jarrow South Shields
WELLAND	River Welland Catchment Board. 9 Internal Drainage Boards.	Nene and Welland Fishery Board.	6 County Councils 1 Borough Council 3 Urban District Councils. 11 Rural District Councils. Nene and Welland Fishery Board.	Deeping Fen General Works of Drainage Trustees.	Nil	Nil.	Corby and District Water Company.	Market Harborough. Spalding Stamford
WITHAM AND STEEPING RIVERS.	Witham and Steeping Rivers Catchment Board. 6 Internal Drainage Boards.	Under jurisdiction of Lincolnshire Rivers Fishery Board.	3 County Councils 1 County Borough 2 Borough Councils 2 Urban District Councils. 11 Rural District Councils. Lincolnshire Rivers Fishery Board.	London & North Eastern Railway Company. Witham and Steeping Rivers Catchment Board. Boston Corporation.	Foss Dyke Kyme Eau Witham Navigable Drains.	Boston Corporation.	Grantham Waterworks Company. Boston.	Grantham Lincoln

River	Land Drainage Authorities.	Fishery Boards.	Authorities responsible for prevention of pollution.	Inland Navigation Authorities.	Principal Canals.	Dock and Harbour Authorities.	Principal Authorities abstracting water.	Principal towns discharging sewage effluents.
WYE ...	River Wye Catchment Board. 3 Internal Drainage Boards.	Wye Board of Conservators.	6 County Councils 3 Borough Councils 6 Urban District Councils. 18 Rural District Councils. Wye Board of Conservators.	Chepstow Urban District Council.	Nil	Nil	Birmingham Corporation (gathering grounds—River Elan and River Claerwen). Hereford Corporation. Llandrindod Wells Urban District Council (River Ithon). Monmouth Gas and Waterworks Company, Limited.	Builth Wells Hereford Leominster (River Lugg). Monmouth Ross

APPENDIX VI.
(See paragraph 41.)

Digest of Reports and Recommendations of Royal Commissions, Departmental Committees, etc., on the subject of the National Control of Water Sources, the establishment of Watershed Conservancy Authorities under a central Government authority, etc.

PART A.—Prior to 1920.

*Extracts from a paper prepared by
Mr. G. P. WARNER TERRY, O.B.E.,

Barrister-at-Law, F.A.A., formerly Secretary of the British Waterworks Association.

The Richmond Royal Commission of 1866-9.

1. The Royal Commission on Water Supply, presided over by the Duke of Richmond, which was appointed in 1866 and reported in 1869, first formulated the doctrine that local water sources should be conserved for local consumption.

4. The final recommendation of this Commission read as follows:—

“ We are of opinion:—

“ That no town or district should be allowed to appropriate a source of supply which naturally and geographically belongs to a town or district nearer to such source, unless under special circumstances which justify the appropriation.

“ That when any town or district is supplied by a line or conduit from a distance, a provision ought to be made for the supply of all places along such line.

“ That on the introduction of any provincial water bill into Parliament, attention should be drawn to the practicability of making the measure applicable to as extensive a district as possible, and not merely to the particular town ” (p. 264).

Rivers Pollution Prevention Commission, 1865-7.

13. The first report of the Rivers Pollution Prevention Commission (R. Rawlinson, J. Thornhill Harrison, and J. T. Way), appointed in 1865, recommended (in 1866) that the whole of the river Thames should be placed under the superintendence of one governing body (page 32); the second report (1867) made a similar recommendation as regards the Lee (page xxvi); and their third report (1867, dealing with the Aire and Calder) stated:—

“ In order to prevent the pollution and legally control the management of rivers, their basins or watersheds must be placed under supervision irrespective of any arbitrary divisions of County, Parish, Township, Parliamentary, Municipal or Local Government Act boundaries; or, indeed, of any artificially established division. Running waters flow on from their source to the sea, and if the upland waters are polluted by town sewage and by refuse discharged from manufactures, as in the West Riding of Yorkshire, the entire length of a river is necessarily polluted, and will require to be conserved, or protected.” (Page liii.)

Rivers Pollution Prevention Commission, 1868-74.

14. The Rawlinson Commission was revoked in 1868, and another Commission appointed (Sir W. T. Denison, Prof. E. Frankland, and J. C. Morton), who issued six reports in all from 1868 to 1874. They took up the work as it was left by the Rawlinson Commission, and their reports dealt severally with: (1) The Mersey and Ribble; (2) The A.B.C. System of Treating Sewage; (3) Woollen Manufactures; (4) Rivers of Scotland; (5) Mining Pollutions; (6) Domestic Water Supply of Great Britain. . . .

Major-General Sir William Denison, Chairman of the Rivers Pollution Prevention Commission appointed in 1868, urged the necessity to call into action an authority superior to the local municipalities, embracing in its scope the whole area of the watershed sub-divided in these bodies, and to confer upon such authority powers differing both in kind and degree from those exercised by ordinary municipalities or conservancies. He urged the creation of local river conservancy boards, thus differing from the recommendations of Dr. Frankland and Mr. Morton. Dr. Frankland and Mr. Morton resubmitted their recommendations in the third report, dated 1871,† as follows:—

“ 1. That the casting of any solid matters . . . into rivers and running waters, or the placing of solid refuse in such positions on the banks of rivers as to render

* Printed by permission of Mr. G. P. Warner Terry.

† Sir William Denison had died before the 1871 report was submitted.

it liable to be washed away by floods, be absolutely prohibited under adequate penalties. . . .

" 3. That all rivers and streams in England be placed under the superintendence of a central authority or board, to be composed of not more than three persons, who shall be duly qualified to deal with all questions connected with the pollution of water and with water supply.

" 4. That it be the duty of this board to see that all enactments relating to the use or abuse of running water be duly enforced; and that for this purpose power be given to it to inspect manufactories, reservoirs, sewerage, and other similar works; and to cause to be constructed, at the expense of the owners of the same, whether corporate or private, any necessary purifying apparatus, in case the said owners neglect or refuse to provide such apparatus for themselves.

" 6. That it be the duty of the central board to exercise a surveillance over both the quality and quantity of the water supply of towns; to carefully guard domestic supply from contamination; or, if it be already contaminated, to ascertain the source or sources of injury, and to cause the same to be removed.

" 7. That it be the duty of this central board to investigate all schemes for water supply; and also all proposals for public works connected with river conservancy, whether initiated by local authorities or by any principal conservancy board of a river basin either now in existence or to be hereafter constituted; and to report thereon to one of Your Majesty's Principal Secretaries of State."

[They further recommended prohibition of polluting discharges, etc., and powers for corporations, manufacturers and others to acquire compulsorily land and easements for the construction of works for purification and drainage.]

Royal Sanitary Commission, 1869-71.

15. . . . This Commission issued a series of valuable reports. Some of the recommendations were given effect to in the consolidating Public Health Act, 1875. The First Report is one of evidence. Volume 2 of the Second Report analyses in detail the then existing statutory powers, with an analysis of the evidence; includes a Memorandum on the duties of Medical Officers of Public Health; and an invaluable paper by the Rt. Hon. Lord Robert Montagu, M.P., one of the Commissioners, on "Watershed Boards or Conservancy Boards for River Basins."

The paper by Lord Robert Montagu, dated 28th April, 1870, discusses at the outset what was then generally regarded as a formidable obstacle, namely, the conservative rigidity of existing units of Local Government, namely, the County, the Union, the Borough, the Highway Board and the Parish:—

" In compliance with the requests of the Commission, I offer the following remarks in explanation of the motion which I placed, some time ago, on the notice paper of the Commission. The establishment of watershed boards, or conservancy boards, for the areas of river basins, arose spontaneously during the investigations of the Sewage Committee, which sat during the session of 1864. The Committee then unanimously agreed to the proposal; and the more I have thought on the subject since that day, the more certain I am that no effective sanitary measure can be carried out without establishing such a board over every watershed.

" I will briefly mention some of the grounds for advocating the institution of such boards, and the ends which they are intended to attain; I will then place before the Commission my views as to the means of constituting them, and the powers which they should exercise. . . ."

" It is clear that a county conservancy has no ground in reason for the management of a river. A county has merely a conventional boundary; the boundaries of a county were the limits of the jurisdiction of an iron-clad feudal earl in ancient days. These boundaries had their origin in a mere accident, many centuries ago; while the boundary of a watershed is as old as the flood, and consists in the nature of things"

He discusses the necessity for a "buffer" or "cushion" between the Central and Local Governments:—

" I will now show that the area of jurisdiction of such a body must be a watershed or river basin; and will then suggest how such a body may be constituted.

" *That the sanitary body must be the intermediate authority, and that its jurisdiction must extend over the entire watershed.*—To the greater portion of every county the river is the only source of water supply; it serves for drinking, for

irrigation, for carriage, for manufacturing and for culinary purposes. At one time it was, at all events, the great natural source of water supply. What has the river become?"

Lord Montagu then shows how rivers had been polluted by crude sewage and degraded to open sewers; how fisheries had suffered to the detriment both of land-owners and of the poor; and the mischiefs caused by the silting-up of solid refuse, which obstructed water carriage and was a bane to agriculture and public health. He dilates upon the necessity for arterial drainage of land, which could only be taken in hand under the superintendence of Watershed Boards over the drainage of their valleys:—

"Again it would be highly injurious to catch [i.e., impound for water supply] all the waters which fall from a watershed. The Legislature has always required that at least one-third should flow down the ordinary channel of the river; that is, of 448,000 gallons which flow off every acre of the watershed, 365,000 gallons alone (i.e., the annual supply for 50 persons) are to be used for water supply by the company. But as the water company does not care about the river, which is its rival, so no more will a town care about all the parts of the river which lie below its own situation. Only by a Watershed Board will the interests of river and water supply be properly balanced.

"Moreover, there are many other interests besides the water companies which will be busy in injuring the river, unless they are all put under a Watershed Board. For example, canal companies take the water which comes from the upland districts, and thus reduce the supply in the river. The Watershed Board must govern these interests.

"Water supply, however, must continue, although it be put in the hands of a Watershed Board. How, then, are we to provide against the reduction of streams by water supply, by canals, by drainage, by mills, etc.? We must compensate the river, or else it will lose its scouring power and be silted up. We can compensate the flow only by means of reservoirs and stored water. These reservoirs for the whole watershed must be at high levels in order to scour the river, to supply water to the towns, and for use in irrigating the land; and therefore they cannot be in the hands of any other authority but a Watershed Board."

Having discussed the "five great evils" and shown that Watershed Boards are required to deal with each of them, Lord Montagu argues that "the various interests of land and river, navigation and mills, drainage and water supply, fishing and manufactures, can be adjusted and developed only by one management over the whole river—only by having one government for the river and for the health of towns, and for those advantages of the landward parishes which are connected with the river":—

"If it be conceded that those authorities are useless which have any area of jurisdiction which is less than a river basin, so, on the other hand, an authority greater than a river basin will not be effective. The central Parliament has not sufficient local interest, because very few of its members reside in the watershed; but a watershed parliament will have the requisite interest, because all its members will reside within the watershed. . . ."

"To a Watershed Board, governing a river basin, I would leave the decision of all the matters which concern the river basin alone. Why should Parliament waste its time on local Acts? There is now a great pressure on Parliament while it attempts to legislate for localities and particular cases; and then it is sure to legislate wrong (as in the case of the utilisation of the London sewage). Even with regard to the pollution of rivers, there has been a difficulty felt in preparing a general law which shall be good for every place. For this reason an Act was passed in 1866 constituting a watershed board for the Thames basin only. If such boards were constituted for every basin, the general principles of sanitary legislation might be enacted by the central Parliament, while each board could be left to manage its own concerns. . . ."

"An objection has been raised against watershed boards on account of the size of some river basins. If every interest is to be represented, it is said the board will be unwieldy. In the Aire and Calder district, for example, there are 71 local governments alone. Why is that not an objection against the central Parliament, where all the interests of the three kingdoms are supposed to be represented? Why was not this objection found conclusive against the Act of 1866, which established a similar jurisdiction over the Thames basin, which is the largest of all? . . . Further on I will refute this objection by means of examples . . ."

Lord Montagu next refers to the River Waters Protection Bill, which he promoted in 1865; the Irish and Scotch Salmon Fishery Acts and the English Fishery Act; The Thames Conservancy Board, and other Conservancy Boards; and concludes:—

“ It seems to me then that the tendency of our legislation has been towards the creation of Watershed Boards; and it is plain that if those boards which I have mentioned have been successful, then the Watershed Boards which I now propose could well superintend the water supply of their valley, the storing of waters, the irrigation of lands, the arterial drainage, the removal of sewage to the land, provisions against floods, the navigation, and the fishing interest.”

Duke of Richmond's Select Committee of 1877.

16. The Duke of Richmond's Select Committee on Conservancy Boards, dated 1877, said:—

“ The committee find that almost all the witnesses examined by them are of opinion that in order to secure uniformity and completeness of action in dealing with each river, each catchment area should, as a general rule, be placed under a single body of Conservators, who should be responsible for maintaining the river, from its source to its outfall, in an efficient state, and in this view the Committee entirely concur.”

Royal Commission on Sewage Disposal.

17. The Royal Commission on Sewage Disposal, in their Interim Report, July, 1901, reported:—

“ Par. 31 The general protection of our rivers is a matter of such grave concern as to demand the creation of a separate Commission, or a new department of the Local Government Board, which shall be a Supreme Rivers Authority, dealing with matters relating to rivers and their purification, and which, when appeal is made to them, shall have power to take action in cases where the Local Authorities have failed to do so.”

18. The Third Report of the Royal Commission on Sewage Disposal (1903) dealt with the relations between local authorities and manufacturers in regard to the disposal of effluents, and recommended that the Local Authority should frame regulations which should be subject to confirmation by a Central Authority. Discussing the chief points of difference likely to arise between local sewer authorities and manufacturers, the Commission reported:—

“ Par. 22. We are therefore of opinion that the law should be altered so as to make it the duty of the local authority to provide such sewers as are necessary to carry trade effluents as well as domestic sewage, and that the manufacturer should be given the right, subject to the observance of certain safeguards, to discharge trade effluents into the sewers of the local authority if he wishes to do so.”

19. The Royal Commission further reported (Third Report):—

“ Par. 42. It will be seen that the balance of opinion is strongly in favour of the view that for the settlement of these questions it is necessary to constitute a Central Board possessing adequate technical knowledge such as the Supreme Rivers Authority which we recommend in our Interim Report. Some witnesses, while agreeing with this view, have expressed the opinion that the questions should, in the first instance, be referred to the Local Rivers Board, and that the Central Board should be an appellate tribunal only.

“ Only a few witnesses consider that the questions can properly be determined by the ordinary Courts.

“ Par. 44. In our opinion, a properly equipped Central Authority is essential, and we unhesitatingly recommend the creation of such an Authority.

“ In the interests of river purification as well as of the trade of the country we consider it is of the highest importance that the changes in the law which we have recommended should be made. But these changes would not in our opinion be of much use apart from the creation of a Central Authority for the determination of differences between the local authority and the manufacturer.

“ If the settlement of these differences be left to the ordinary Courts, differential treatment of manufacturers, with all the objections to it, will be certain to continue.

“ Par. 46. The officers of the Central Authority must be clothed with the necessary powers to conduct inquiries, to call witnesses, to enter premises to take samples of the trade effluent, and generally to do such acts as are necessary for the proper performance of their duties.

" Par. 48. The work of the Central Authority will be so intimately connected with the work of the Local Government Board that it will be desirable to make it a new department under the Local Government Board rather than an entirely separate department.

" Par. 70. The Central Authority should exercise a general superintendence over the whole country in regard to the prevention of pollution of water. They should direct any inquiries or investigations which they may consider desirable and generally they should stimulate and encourage Rivers Boards to an active exercise of their powers.

" Par. 71. As regards dangerous pollutions of public water supplies, it should be the duty of the Central Authority to investigate cases brought to their notice by the Rivers Boards, and in any case in which they are satisfied that the conditions are such as to render the supply dangerous to health, they should bring the facts to the notice of the Company or Local Authority which is supplying the water.

" Par. 72. We should hope that this would usually suffice and that the supplying authority would willingly take such steps as might be necessary to remove the danger.

" But it is perhaps necessary to provide for other cases, and we therefore recommend that the Central Authority should be empowered, after local inquiry, to order the purveyors of the water, or other responsible parties, to adopt such means as in the opinion of the Central Authority are reasonable and necessary for removing or diminishing the danger.

" Such orders should be enforceable by mandamus.

" Par 73. Power to enter at all times gathering grounds and waterworks and to take samples of water should be conferred on the officers of the Rivers Boards and of the Central Authority.

" Par. 74. In regard to the further questions which are referred to by the President of the Local Government Board, it appears to us that the Central Authority might, with the aid of the Rivers Boards, very properly collect such information as is available throughout the country in regard to waste of water by pumping from mines, and in regard to the abstraction of water from one district, for the supply of another district, to the detriment of the water supply of the district from which the water is taken.

" Par. 75. We entirely agree that the collection of such information should precede the consideration of the question whether legislative interference in regard to these matters is desirable."

20. The Commission thus recommended that Rivers Boards should be formed for other parts of the country similar to the three which already exist in Lancashire and Yorkshire, to inspect public water supplies and that the Central Authority should be empowered to order the purveyors of the water to adopt such means as, in the opinion of the Central Authority, were reasonable and necessary for removing and diminishing the danger.

The Fourth Report of the Sewage Disposal Committee (1904) was concerned with the pollution of tidal waters and the contamination of shell fish. Here, again, they considered that the right machinery was Rivers Boards with a Central Authority over them:—

" We entirely agree with the view which has been pressed upon us by a large number of witnesses that Rivers Boards would be the most suitable bodies in whom to vest the local control which we are now discussing. Their control over inland waters is of a similar character to the control which is required over tidal waters (estuarial and other), and it is desirable and fitting that their jurisdiction should be extended to tidal waters for public health purposes. There are indeed no other local bodies possessing the necessary qualifications and the only practical alternative to giving them jurisdiction would seem to be to place the whole control in the hands of a Central Department." (Par. 46.)

They recommended therefore:—

" that the necessary power of control over the pollution of tidal waters, and over waters, foreshores, pits, ponds, beds and layings where shell-fish are grown, fattened or stored, should be vested in the Rivers Boards, subject to appeal to a Central authority."

21. The Fifth Report of the Royal Commission on Sewage Disposal (1908) sums up their recommendations in paragraph 356:—

“ THE CENTRAL AUTHORITY.

“ 356. To secure the economical and efficient discharge of the duties of local authorities and others, in regard to pollution, and adequately to protect the public health and the amenities of rivers, the statutory provisions in regard to these matters must be of an elastic character.

“ The conditions of different cases vary to such an extent that the necessary control cannot, in our opinion, be provided by any direct enactment which could be enforced by the ordinary Courts.

“ Throughout our Reports, this fact has been fully recognised, and we have proposed, in regard to many matters, that ultimate control should be vested in an adequately equipped Central Administrative Authority, and that, as far as practicable, the local Rivers Board should, in accordance with regulations framed by the Central department, act as a first tribunal.

“ Among the more important questions which have to be dealt with under the new conditions of administration which we are contemplating are the following:—

“ (i) Disputes between local authorities and manufacturers as to the terms and conditions of which trade effluents shall be admitted into sewers.

“ (ii) The control of shell-fish layings so as to prevent the taking of shell-fish for human consumption from positions in which they are liable to risk of dangerous contamination.

“ (iii) The protection of water supplies from pollution.

“ (iv) The collection of information as to the water supplies available in various parts of the country.

“ (v) The collection of information as to the need of water in various parts of the country.

“ (vi) The settlement of standards for different reaches of water.

“ (vii) Conferring powers on local authorities, in suitable cases, to provide separate systems of sewers for surface water and to enforce the provision of separate drains.

“ (viii) The settlement of questions as to the extra amount of sewage which a local authority should be required to treat during storms.

“ There are also numerous questions in regard to the purification of polluting liquids which, in the interests of the public, have still to be worked out, and it is essential that the Central Authority should be properly equipped for undertaking such special investigations as they may from time to time find necessary, and for collecting and collating the work done by others.”

Royal Commission on Salmon Fisheries.

22. The Royal Commission on Salmon Fisheries, in their Report (1902), pages 62-3, recommended as follows:—

“ Par. 1 (a) A Central Authority—preferably for Great Britain or even the United Kingdom and in charge of all fishery matters; but if this is not practicable, such a rearrangement and strengthening of the existing machinery as will create in each Department concerned an independent and efficient branch charged with fishery matters only, including the collection of statistics and the carrying out of investigations and experiments, and capable of exercising the increased powers of control which we propose.

“ (b) Local Fishery Boards. In England and Wales we should prefer to see the administration in the hands of a powerful Watersheds Board appointed to deal, not only with salmon and fresh water fisheries, but with all questions of pollution and abstraction of water. If this is not practicable, we advise the appointment of Fishery Boards from the same constituent elements as the present Boards of Conservators, the number of members and the representation of the various interests being determined under an Order of the Board of Trade in such manner as will meet the circumstances of each case, and secure efficiency. In Scotland we do not consider it necessary to introduce large changes, but we propose to modify and simplify the election of the Boards, to provide for the amalgamation of small districts, and the formation of Boards where they do not now exist.

“ (c) Finance. In England and Wales we are of opinion that assistance must be given in the way of assessment in some form or other, either by a special rate, which would be no doubt preferable in the event of the adoption of the larger authority above-mentioned, or by contributions from the various County Councils.

In Scotland we see no reason to alter the present system. But here, and in England, Boards must have increased borrowing powers, subject to control by the Central Authority, in order that they may be able to carry out certain duties imposed upon them by our proposals. On the other hand, our understanding is that in both countries the Watersheds Board proposed by the Sewage Disposal Commission will undertake on behalf of the Local Fishery Boards all questions arising out of the pollution, and we hope the abstraction, of water.

"Par. 3. Pollution. We are satisfied that much injury is done to the fisheries by pollution of rivers, which might be prevented; and although some amendments of the law would be advisable, to which we have referred to in our Report, [that] a better administration of the law is all-important. We therefore concur in the recommendation of the Sewage Disposal Commission for the creation of a Watersheds Board under a Supreme Rivers Authority in those waters, on the understanding that the recommendations of the Sewage Commission on the methods to be adopted for the purification of rivers and estuaries will cover the requirements of the fisheries, and that provision will be made for the protection of fishery interests by the Watersheds Board."

Royal Commission on Canals and Waterways.

23. The Royal Commission on Canals and Waterways, in their Fourth and Final Report (1909), recommended the establishment of a new Central Waterway Authority (pars. 865 and 880):—

"865. The waterways might be vested in and administered by a Central Department of Government, as, with a few exceptions, they are in France, Belgium and the German States. In this case, the Central Department might be aided by local advisory boards, and, perhaps by a central advisory board, as is the practice in the case of the Prussian State railways.

"880. We have therefore come to the conclusion that English and Welsh waterways, when and in so far as they are taken over, should be placed under the direct control of a central 'Waterway Board.'"

24. This Commission did not in so many words suggest one and the same Body, as in the case of the Sewage Disposal and Salmon Fisheries Commissions, but apparently indicated it in the following paragraph:—

"894. It should be carefully considered whether the duty of collecting the information (referred to in paragraph 779) as regards the flows of rivers and streams, and as to available water supplies, in districts where there are navigable waterways, should not also be confided to the Waterway Board."

As it would be folly to have this work done by two central authorities, it is obvious that the one Central Government Authority for all water conservancy purposes would be empowered with general control, as contemplated in 1869.

Water Supplies Protection Bill, 1910.

25. This Bill, introduced by Lord Desborough, . . . proposed to restrict the powers of authorised water undertakers in the following way: (i) by preventing the acquisition of fresh supplies without specific Parliamentary authority; (ii) by rendering the undertakers liable to give compensation for injury to private supplies caused by other works; and (iii) where water is taken from one district to supply another, by conferring on the local authorities of the districts from and through which the water is taken, the right to demand a supply from the works of the undertakers on terms to be agreed or fixed by the Local Government Board.

The Bill was referred to a Joint Select Committee of both Houses of Parliament.

26. . . . On the first point the Select Committee deprecated making the Lord Chairman clause, respecting the abstraction of underground water, part of the general law of the land as proposed by the Bill, preferring that discretion and liberty of action should be reserved to Parliament in connection with each Bill presented to it.

27. On the second point as regards compensation, the Select Committee were satisfied that serious damage had in certain cases been done to private property by the pumping operations of Water Companies; but pointed out that similar injury was also caused by collieries, breweries, railway companies, and similar agencies, and expressed the opinion that any change in the law should be made of general and reciprocal application.

28. Dealing with the third point, as to the right of local authorities through whose district water is being conveyed, to take water *in transitu*, the Select Committee considered that conditions and terms should be considered when the authority to take

the water was first conferred on the original promoters, and that any local authority asking for such a distribution should be required to enter into a definite obligation to take and pay for the supply so demanded. The Committee expressed themselves as strengthened in this view by the desirability of conserving in all reasonable ways the water supply of the country. Local authorities should be encouraged, if not required, to turn all the local sources of water supply to the best account; and the Select Committee were apprehensive that this might not be done if districts were enabled to claim as a right a distribution of water *in transitu* from the mains of great undertakings.

29. The Select Committee strongly recommend—first, the establishment (within the Local Government Board or independently) of a central administrative authority; and, secondly, division of the country into watershed areas and the appointment for those areas of local representative boards, who, subject to the guidance and control of the central authority, should prosecute systematic and continuous enquiries into the water supply of their jurisdiction; take all necessary measures to husband such supplies, both surface and subsoil; secure their preservation from pollution, and advise on their allocation for sanitary, industrial, and other purposes.

Owing to the dissolution of Parliament the Bill was not further proceeded with.

30. Thus the third objective of Lord Desborough's Bill contemplated for practical administration the setting up of Watershed Authorities for the threefold purpose of preventing pollution, fostering fisheries, and conserving and controlling water supply within the particular watershed, and the supply of surplus water to outside communities where the local watershed proves to be inadequate.

Return on Water Supply, 1915.

31. The following question was addressed in the House of Commons by Mr. J. F. Remnant (member for the Holborn Division of Finsbury) on 20th February, 1911, to the President of the Local Government Board:—

Question:

What steps he proposes to take as a result of the recommendation of the Joint Select Committee on the Water Supplies (Protection) Bill, 18th July, 1910, which agreed with the recommendations of the Royal Commission on Sewage Disposal and of the Royal Commission on Water Supply of 1869, and on Metropolitan Water Supply of 1893, all of which asserted the principle that there is urgent need for a survey, at once, comprehensive and in detail, of the water supplies and water needs of the country, and for the adoption of measures for conserving the supply and disposing of it to the best advantage.

Answer:

In pursuance of an Order of the House, a return is being prepared relating to the water supply of every district in England and Wales. This will include information as to the quantities of water now being supplied in each district, and as to what further quantities could be supplied from sources at present in use, together with information as to the character and situation of these sources. I have also obtained the authority of the Treasury to the appointment of a geologist on the staff of the department. I am not without hope of introducing a Bill giving effect to the recommendations of the Select Committee on the Water Supplies (Protection) Bill, 1910, and earlier commissions.

32. This "Return as to the Water Undertakings in England and Wales" was published in 1915 (395: 1915). [It contains a preliminary memorandum outlining the history of the water supply of the country, with references to Royal Commission Reports, general legislation and some private Acts, and includes a summary of a number of recommendations which had been suggested for fresh legislation on the subject of water supply.]

The Attitude of Water Supply Undertakings.

38. The attitude hitherto taken up by large municipalities owning large reservoirs and gathering grounds is a demand for freedom of control from Government supervision. This is illustrated by the Severn Fisheries Provisional Order (1910) Confirmation Act, 1911, which reconstituted the Severn Fisheries Conservancy. Section 30 of that Act wholly exempts the reservoirs, waters, lands, and works for the time being belonging to the Liverpool Corporation forming part of their water undertaking, and the streams and waters flowing into the same, from interference by the Conservancy or Board of Agriculture and Fisheries.

39. A similar demand was put forward by the Municipal Corporations Association in opposition to the Kent and Bela Fisheries Provisional Order Bill of 1912. The proposed Fishery District included the reservoirs, filter beds, and waterworks belonging to the Corporation of Barrow-in-Furness, and the Association submitted that:—

“ In order that a water authority may discharge their responsibilities effectively, it is essential that they should have a free hand in the management of their undertaking as a waterworks undertaking simply, and that they should not be interfered with by another body constituted for an entirely different purpose, with different objects and responsible to a constituency whose interests are widely different from those of water consumers.”

40. The Housing, Town Planning, etc., Act, 1919 [now Section 78, Housing Act, 1936], provides as follows:—

14. *Power to acquire Water Rights.*—A local authority or a county council may, notwithstanding anything in section 327 or section 332 of the Public Health Act, 1875, but subject to the provisions of section 52 of that Act, be authorised to abstract water from any river, stream, or lake, or the feeders thereof, whether within or without the district of the local authority or the county, for the purpose of affording a water supply for houses provided or to be provided under a scheme made under the Housing Acts, and to do all such acts as may be necessary for affording a water supply to such houses, subject to a prior obligation of affording a sufficient supply of water to any houses or agricultural holdings or other premises that may be deprived thereof by reason of such abstraction, in like manner and subject to the like restrictions as they may be authorised to acquire land for the purposes of the scheme:

Provided that no local authority or county council shall be authorised under this section to abstract any water which any local authority, corporation, company, or person are empowered by Act of Parliament to impound, take or use for the purpose of supply within any area, or any water the abstraction of which would, in the opinion of the Local Government Board, injuriously affect the working or management of any canal or inland navigation.

Water Power Resources Committee, 1918.

41. The Interim Report of the Water Power Resources Committee, Cmd. 79, 1919 (Sir John Snell, M.Inst.C.E., Chairman), included the following paragraphs:—

20. . . . “ There is no question that a river system and its drainage area must be taken as a unit and dealt with as a whole in regard to all the water problems incidental thereto. In this connection, the Committee desires to draw attention to the recommendations of Lord Elgin’s Commission on Salmon Fisheries, 1902, which advocated, *inter alia*, the setting up of Watershed Boards under a Supreme Rivers Authority.

“ 21. The Committee wishes to draw attention to the fact that the estimates of water power dealt with in this Report have only been made possible by the voluntary work of rainfall observers in all parts of the British Isles, which has been collected and discussed by the British Rainfall Organisation during the past 58 years. If the fullest use is to be made of the water power resources of this country, it is essential that the work of observation should not only continue, but should be encouraged and developed.

“ Another branch of observation which has a vital bearing upon the question of water power resources is the gauging of the flow of rivers. Great attention has been given to this subject in Canada and the United States, but only a small amount of observation has hitherto been carried out in this country.”

Some Opinions of Experts, 1878-1908.

42. Mr. Edward Easton, in his presidential address before the Mechanical Section of the British Association at Dublin in 1878, recommended the scientific regulation of all water from the time it fell as rain until it reached the sea.

“ A new department should be created—one not only endowed with powers analogous to those of the Local Government Board, but charged with the duty of collecting and digesting for use all the facts and knowledge necessary for a due comprehension and satisfactory dealing with every river-basin or watershed area in the United Kingdom—a department which should be presided over, if not by a Cabinet Minister, at all events by a member of the Government who can be appealed to in Parliament.”

44. Mr. C. E. de Rance in 1890 suggested that riparian interests should be represented in Parliament by a responsible official of the Crown; that sites for the making of dumb wells, to divert the surface water so as to replenish the sub-surface resources, should be selected by officers of the proposed Central Authority; that members of the County Constabulary should take daily observations of the height of streams on certain selected county bridges, and that these levels should be checked by automatic recorders installed at important points. (Proceedings of Yorkshire Geological, &c., Society, Vol. xi, Part II, pp. 200-217, Halifax, 1890.)

45. At the Conference on Water Supplies and River Pollution convened by the Sanitary Institute in 1901 Mr. H. W. Russell argued that the authority charged with the prevention of river pollution should have control not only of the main stream but also of the entire basin. (Prevention of Pollution within the Thames Watershed. Proceedings p. 532.)

46. In 1902 Mr. H. T. Scoble advocated the establishment of water authorities charged with the supervision of all matters of water supply, sewage disposal and refuse destruction. (Rural Drainage and Sewage Disposal. Transactions, Surveyors' Institution, Vol. xxxv, p. 113.)

48. At a meeting of the Association of Water Engineers in 1904, Mr. R. E. Midleton urged the creation of a central authority, with local authorities in each watershed, to collect and publish meteorological and hydrological data, to enforce the laws framed for the prevention of the pollution of water, and to be responsible for the water supply and sanitation of the country.

49. Dr. H. R. Mill, the rainfall expert, in his Presidential Address to the Royal Meteorological Society in 1908, urged that the control and distribution of the rainfall was a national rather than a parochial interest

50. At a meeting of the Institute of Public Health at Exeter in August, 1902, the Earl of Iddesleigh, the Chairman, said:—

"If I were an absolute Emperor I should appoint a department of the Government to deal solely with water administration, which I should expect to prove beneficial to the community by the wise exercise of its discretionary powers, and to a greater degree by reason of the knowledge which it would slowly accumulate and place at the disposal of the country. One simply could not exaggerate the vital consequences of exact knowledge concerning water supplies either in respect of health or wealth."

G. P. WARNER TERRY.

29th September, 1919.

PART B.—1919-1937.

1. *Water Power Resources Committee, 1919-20.*

Additional members were appointed to the Water Power Resources Committee in October, 1919, to enable them to deal with the general questions covered by the enlarged terms of reference which were "to consider what steps should be taken to ensure that the water resources of the country are properly conserved and fully and systematically used for all purposes."

The Second Interim Report of the Committee, Cmd. 776, 1920 (Sir John Snell, Chairman), a majority Report, sums up their recommendations in paragraph 39:—

"(1) That there should be established by Act of Parliament a controlling Water Commission having jurisdiction over England and Wales, and upon whom should be conferred certain statutory powers and duties among the principal of which should be:—

(a) The compilation of proper records of the water resources and present and future water requirements of the country; and the collection of information on these subjects through existing Departments and other agencies as well as by their own hydrometric staff;

(b) The allocation of these water resources in the general interests of the community, and powers to re-adjust existing allocations of water where hardship or anomalies are clearly shown to exist;

(c) The adjustment of conflicting interests in connection with the use of water for a particular purpose;

(d) To assist the Government Departments concerned in the uses and control of water, the various local authorities and water supply undertakings and to afford assistance to Parliamentary Committees before whom Water or Water Power Bills may be heard;

(e) To confer with a Statutory Interdepartmental Water Committee with the view of avoiding duplication of work and delay in procedure;

(f) To group the watersheds of the country into suitable areas, and where desirable to arrange for the setting-up of Watershed Boards;

(g) To consider the development of rivers as a whole from source to mouth from the point of view of all water interests, and when necessary to initiate legislation for securing such development;

(h) To bring forward proposals for improving the law relating to surface and underground waters and their utilisation;

(i) To appoint as necessary an Advisory Committee or Committees of representatives of water undertakings and scientific institutions, consulting engineers, or other specially qualified persons for the purpose of giving advice or reporting on any matters which come within the purview of the Commissioners."

2. *Royal Commission on Land Drainage in England and Wales, 1927.*

This Royal Commission was set up in 1927 under the chairmanship of the Rt. Hon. Lord Bledisloe, K.B.E., "to enquire into the present law relating to Land Drainage in England and Wales and its administration throughout the Country, to consider and report whether any amendment of the law is needed to secure an efficient system of arterial drainage without any undue burdens being placed on any particular section of the community, and to make recommendations having regard to all the interests concerned."

The Report of the Royal Commission, published in December, 1927, reviewed the drainage law and administration and pointed out the defects in the law as at present administered. The Commission found themselves in the main in agreement with the Select Committee of the House of Lords of 1877, the two principal points emerging from their investigations as to the basis of any amendment of drainage law being

"(a) the necessity of having a supreme Authority in each Catchment Area which should be in charge of the main channel and banks of the river and work in closest collaboration with the Drainage Authorities concerned with the internal drainage of the catchment area; and

(b) the prime importance of the extension of the area of and alteration of the basis of rating for drainage purposes, in order to include a much wider area and basis of contribution than can be brought in under the old interpretation of the principle of 'benefit'."

As a consequence of this Report, the Land Drainage Act was passed in 1930, specifying Catchment Areas and providing for the constitution by Order of the Minister of Agriculture and Fisheries of Catchment Boards in respect of such areas.

3. *The Joint Advisory Committee on River Pollution.*

The Committee was set up "to consider and from time to time report on the position with regard to the pollution of rivers and streams and on any legislative, administrative or other measures which appear to be desirable for reducing such pollution."

The First Report of the Committee (the Chairman then being Sir Horace C. Monro, K.C.B.) was published in 1928. The Committee set out the then existing administrative authority for enforcing the law with regard to pollution, and attributed the existence of pollution, in spite of a wide measure of authority for prevention, partly to the fact that the jurisdiction of each authority is mainly limited to its own area, partly to the fact that many of the bodies charged with the administration of the law have a number of more pressing duties to discharge, and partly also to the fact that many of them are potential or even actual offenders. They stated that the evidence they had received showed "that for the prevention of pollution a body specially charged with the administration of the Acts and acting throughout the whole or the greater part of a river basin is far more effective than a body operating in a limited area and occupied with a large variety of other work".

The Committee therefore recommended that steps should be taken to set up an authority exercising jurisdiction over the river as a whole, including its tributaries, at least so far as non-tidal waters are concerned. They were not prepared at this stage to suggest any amendment in the law, being convinced "that no amendment would be of much value unless the administration of the law were placed in the hands of bodies representing one or more rivers, and keeping a continual supervision over them, and this can be done under the existing law".

In the preparation of their Third Report in 1931 (which, in accordance with the general measures for economy at that time, was not published) the Committee considered more generally the existing law and the case for its amendment or extension. They reached a general conclusion that the most important and immediate needs were

" (a) to secure effective administration. We believe that the admitted failure to combat river pollution adequately in the past has been due less to deficiency in the law than to failure to put it into effective operation; and that the remedy lies in securing the establishment of river joint committees, with jurisdiction over the whole of a watershed or other large area, as the normal administrative unit "

" (b) To reduce the trade effluents problem at its source " (This was fully dealt with in the Second Report of the Committee published in 1930).

In 1935 the Committee were invited to resume meetings in order to consider the position with regard to river pollution which had developed in consequence of the passing and operation of the Land Drainage Act, 1930, and in particular whether measures could be devised for dealing with the prevention of pollution of rivers without the appointment of entirely new bodies for that purpose. Their Report was published in 1937, when they stated:—

" 25. The view which has been advanced to us, and with which we entirely concur, is that the time has arrived for seriously considering not only the reduction of the number of bodies dealing with river pollution by the concentration of that function in one body for the river, but also the concentration of functions in relation to a river into one body for the whole of the river. At the present time, while there is a multiplicity of authorities with river pollution prevention powers in a river there are also numerous other river functions (for example, drainage, fisheries and navigation), sometimes overlapping and not infrequently conflicting, exercised independently by various bodies. Of these functions, those relating to drainage and fisheries are now exercised by independent bodies with jurisdiction over the whole of a river or combination of rivers "

" 27. We recommend that the question of the formation of river authorities in whom should be centralised the functions relating to river pollution prevention, land drainage, fisheries, water abstraction and, in suitable cases, navigation, should receive immediate consideration by an authoritative body, who would hear evidence and arrive at conclusions "

As the examination of this question was not within their terms of reference the Committee were unable to make any suggestions on the constitution of any river authorities which might be set up. They felt, however, " that such bodies would not allow any one interest in the river to be developed to the prejudice of any other, but charged as they would be with general responsibility for interests affecting the river, would hold the balance and come to their conclusions in the best interests of all concerned, thus securing a collective administration of the various river functions to the great advantage of the general community "

4. *Joint Select Committee on Water Resources and Supplies.*

The Committee was set up in 1935 under the chairmanship of Lord Eltisley " to consider and report on the measures for the better conservation and organisation of water resources and supplies in England and Wales ". They reported as follows:—

" 18. The Committee deem it essential that a statutory Central Advisory Water Board should be set up. The various Ministries affected and other interested bodies, such as Catchment and Fishery Boards, water undertakers, and mill and other riparian owners, should be represented on it. The Central Board should receive all Reports from the Regional Advisory Committees referred to in the next paragraph, collect and marshal all the available statistical data and information of the country's water resources and requirements. They should advise the appropriate Minister as to the initiation of any schemes or proposals that they consider necessary in the public interest, and be consulted on impending legislation. They should submit Reports to all Select Committees of Parliament considering Bills affecting water supply, and make an Annual Report to be laid before both Houses of Parliament.

19. There are nine Regional Advisory Committees at present in existence and the Committee understand that the establishment of three or four more would suffice to cover the remaining areas. These bodies should be made into statutory Committees and their duties and composition defined. At the moment, however, they are voluntary bodies and only water undertakers and the Ministry of Health are represented on them. . . . The Committee consider that the membership of these Committees should include representatives of the Catchment Boards and other interests and that they should discuss and report to the Central Advisory Water Board on any difficulties or differences and general matters concerning their Area "

Following on this Report the Central Advisory Water Committee was constituted.

APPENDIX VII

SCHEDULE OF AREAS FOR WHICH NEW BOARDS SHOULD BE FORMED

(See para. 68)

PART A. Areas for which there are Catchment Boards, or for which existing Catchment Areas might be grouped.

Area	Local Government Areas	Approx. (1937) R.V. (to nearest £100,000).	Existing Authorities	Remarks
Ouse (Yorks) ...	Most of West Riding (including all County Boroughs) most of North Riding, parts of East Riding and Derbyshire, small areas in Lancashire.	21,000,000	Catchment and Fishery Boards. A large part of the area is in the jurisdiction of West Riding of Yorkshire Rivers Board.	As to Esk see under Tees in Part B.
Hull ...	Parts of E. Riding and Hull C.B....	1,000,000	Catchment Board.	Hull C.B. the predominant authority, is also Dock Authority. There are three rural areas on the North East, South East and West of the Hull Catchment area not under any Catchment Board.
Trent ...	Parts of Counties of Derby, Leicester, Notts, Staffs, Warwick, Lindsey, Worcester, Rutland, W. Riding, Kesteven, Salop. County Boroughs of Birmingham, Nottingham, Leicester, Stoke, Derby, Smethwick, Walsall, West Bromwich, Burton, Wolverhampton (part), Dudley (part).	25,000,000	Catchment and Fishery Boards.	
Lincolnshire Rivers	Parts of Holland, Kesteven and Lindsey; small areas in Rutland, Leicester and Nottinghamshire, Lincoln County Borough.	1,300,000	Ancholme, etc. and Witham and Steeping Catchment Boards. Lincolnshire Rivers Fishery Board.	

APPENDIX VII—continued

Area	Local Government Areas	Approx. (1937) R.V. (to nearest £100,000).	Existing Authorities	Remarks
Nene and Welland	Parts of Northants, Rutland, Soke of Peterborough, Kesteven, Holland, Cambridgeshire, Leicester, Norfolk, Isle of Ely, Bedford, Northampton County Borough.	2,600,000	Nene and Welland Catchment Boards, Nene and Welland Fishery Board.	Combination of two Catchment Areas.
Ouse (Great) ...	Parts of Cambridge, Bedford, Hunts, Isle of Ely, Norfolk, W. Suffolk, Bucks, Northampton. (No County Boroughs.)	3,300,000	Catchment and Fishery Boards.	
Norfolk Rivers ...	Parts of Norfolk, small area in Suffolk; Norwich and Yarmouth County Boroughs.	2,000,000	North Norfolk and East Norfolk Rivers Catchment Boards. Norfolk Fishery Board.	Combination of two grouped Catchment Areas, or alternatively part of North Norfolk might be grouped with Great Ouse.
Suffolk Rivers ...	Parts of Suffolk (East and West); part of Essex; small area in Cambridgeshire; Ipswich County Borough.	1,400,000	East Suffolk and Stour Catchment Boards, Suffolk and Essex Fishery Boards.	Combination of two Catchment Areas.
Essex Rivers ...	Essex (major portion); Southend County Borough (part).	5,200,000	Essex Rivers Catchment Board. Suffolk and Essex Fishery Board.	Existing grouped Catchment Area, but might have Roding Catchment Area added to it.
Roding ...	Essex (part) East Ham County Borough, West Ham County Borough (part).	3,400,000	Catchment Board.	
Kent Rivers ...	Kent (excluding coastal resorts and area within Rother, Catchment Area); small parts of Sussex and Surrey, Canterbury County Borough.	7,100,000	Kent Rivers Catchment Board.	

Sussex Rivers ...	East and West Sussex (parts); Kent (part); small parts of Surrey and Hants, Eastbourne County Borough.	3,400,000	Adur, Arun, Cuckmere, Old Haven, Ouse, Rother and South West Sussex Rivers Catchment Boards. Ouse and Rother Fishery Boards.	Suggested combination of two Catchment Areas & Dorset Rivers (no Catchment Board). See also Isle of Wight in Part B.
Hampshire and Dorset Rivers.	Parts of Hants, Wilts, Dorset. (No County Boroughs.)		Hampshire Rivers Catchment Board. Avon and Stour Catchment Board. Hampshire Rivers and Frome Fishery Boards.	
Somerset Rivers ...	Somerset (major portion); small part of Dorset. (No County Boroughs.)	2,000,000	Somerset Rivers Catchment Board, Avon, Brue and Parrett Fishery Board.	
Avon (Bristol) ...	Bristol County Borough, Bath County Borough. Gloucester, Somerset and Wilts. (parts).	5,000,000	Catchment Board. Avon, Brue and Parrett Fishery Board.	
Severn ...	Parts of Counties of Gloucester, Worcester, Warwick, Hereford, Salop, Montgomery, Radnor, Oxford, Northants, Leicester, Staffs, Flint, Denbigh, Merioneth. County Boroughs of Gloucester, Worcester, Coventry, Wolverhampton (part), and Dudley (part).	8,800,000	Catchment and Fishery Boards.	
Wye ...	Parts of Brecknock, Cardigan, Carmarthen, Gloucester, Hereford, Monmouth, Montgomery, Radnor, Worcester.	845,000	Wye Catchment and Fishery Boards.	
South Wales ...	Parts of Glamorgan, Monmouth, Brecknock — Newport County Borough. Cardiff County Borough. Merthyr Tydfil County Borough. Swansea County Borough and part of Carmarthen.	Not Known.	Mid Glamorgan Rivers Catchment Board. Taff and Ely. Ognore and Usk Fishery Boards.	Combination for consideration is Rivers Usk, Ebbw, Rhymney, Taff, Tawe, Neath and Mid-Glamorgan Rivers.

Area	Local Government Areas	Approx. (1937) R.V. (to nearest 100,000).	Existing Authorities	Remarks
North Wales Rivers	Anglesey, Caernarvon, Parts of Flint, Denbigh, Merioneth. (No County Borough.)	1,100,000	Anglesey, Caernarvon, Conway, Dysynni, and Merionethshire Catchment Boards; Conway and Elwy and Clwyd Fishery Boards, Dovey Fishery Board, Seinton Fishery Board.	
Dee	Parts of Cheshire, Denbigh, Flint, Merioneth and Salop and Chester County Borough.	1,500,000	Catchment and Fishery Boards, Joint Pollution Committee for non-tidal basin.	Clwyd Catchment Board might be combined with this area.
Cheshire Rivers (except Dee)	Parts of Cheshire, Derby, Staffs and Salop. Parts of Birkenhead and Wallasey County Boroughs.	1,800,000	Cheshire and North-East Cheshire Catchment Boards.	Combination of two Catchment Areas and River Birkett. (No Catchment Board.)
Lancashire Rivers	Lancashire (except Barrow-in-Furness, Bootle and Liverpool) parts of Cheshire, Derby, Westmorland and West Riding.	Not known, but in excess of 25,000,000	Alt, Crossens, Douglas, Lune, Mersey, South Lancashire, Wyre and North Lonsdale Rivers Catchment Boards. Lancashire Rivers Board. Lune and Ribble Fishery Boards.	The area is based on that of the Lancashire Rivers Board, but corresponds with river basins. This entails adding parts of Catchment Areas not now within the Rivers Boards area. The Ribble has no Catchment Board. See also Ribble in Part B.
Cumberland Rivers	Parts of Cumberland and Westmorland. Carlisle County Borough (if Eden added).	431,000 (excluding Eden, Furness and South West Cumberland)	Derwent, Kent, Wever and Wam-pool, South Cumberland Rivers, Ellen, etc. and North Cumberland Rivers Catchment Boards. Derwent, Eden, Kent and West Cumberland Fishery Boards.	

APPENDIX VII—continued

PART B. Rivers with no Catchment Boards.

Rivers	Local Government Areas	Existing Authorities	Remarks
Tyne and Wear	Parts of Northumberland and Durham (Newcastle, South Shields, Gateshead and Sunderland C.Bs. if tidal waters included).	Tyne and Wear Fishery Boards	There are other rivers in Northumberland which have been formed into a Catchment Area named Northumberland Rivers. There is a Fishery Board for the Coquet.
Tees	Parts of Durham and Yorks (N.R.) Darlington C.B. (Middlesbrough C.B. if tidal waters included).	Tees Fishery Board	For consideration whether Esk (wholly N.R. Yorks) which has a Fishery Board might not be combined with the Tees.
Devon Rivers :— (Axe, Otter, Exe, Teign, Taw, Torridge, Dart, Avon and Plym).	Part of Devon, Exeter C.B. ;	Avon, Axe, Dart, Exe, Tamar and Plym, Taw and Torridge, Teign Fishery Boards.	
South West Wales Rivers	Cardigan—Pembroke, Carmarthen	Teify and Ayrton, Towy—Fishery Boards.	
Ribble	Parts of Lancashire and Yorkshire (Preston, Blackburn and Burnley County Boroughs).	Ribble Conservancy and Fishery Board.	See also Lancashire Rivers in Part A.
Isle of Wight	County Council	Drainage Board.	Might be grouped with Hants. and Dorset Rivers.

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Type of subject	General heading	Detailed heading	Remarks
1	General heading	Detailed heading	Remarks
2	General heading	Detailed heading	Remarks
3	General heading	Detailed heading	Remarks
4	General heading	Detailed heading	Remarks
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6	General heading	Detailed heading	Remarks
7	General heading	Detailed heading	Remarks
8	General heading	Detailed heading	Remarks
9	General heading	Detailed heading	Remarks
10	General heading	Detailed heading	Remarks

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ENGLAND AND WALES

SHOWING PROPOSED RIVER BOARD AREAS

A - Areas for which there are Catchment Boards

- 1 OUSE (YORKS)
- 2 HULL
- 3 TRENT
- 4 LINCOLNSHIRE RIVERS
- 5 NENE AND WELLAND
- 6 OUSE (GREAT)
- 7 NORFOLK RIVERS
- 8 SUFFOLK RIVERS
- 9 ESSEX RIVERS
- 10 RODING
- 11 KENT RIVERS
- 12 SUSSEX RIVERS
- 13 HAMPSHIRE AND DORSET RIVERS
- 14 SOMERSET RIVERS
- 15 AVON (BRISTOL)
- 16 SEVERN
- 17 WYE
- 18 SOUTH WALES RIVERS
- 19 NORTH WALES RIVERS
- 20 DEE
- 21 CHESHIRE RIVERS
- 22 LANCASHIRE RIVERS
- 23 CUMBERLAND RIVERS

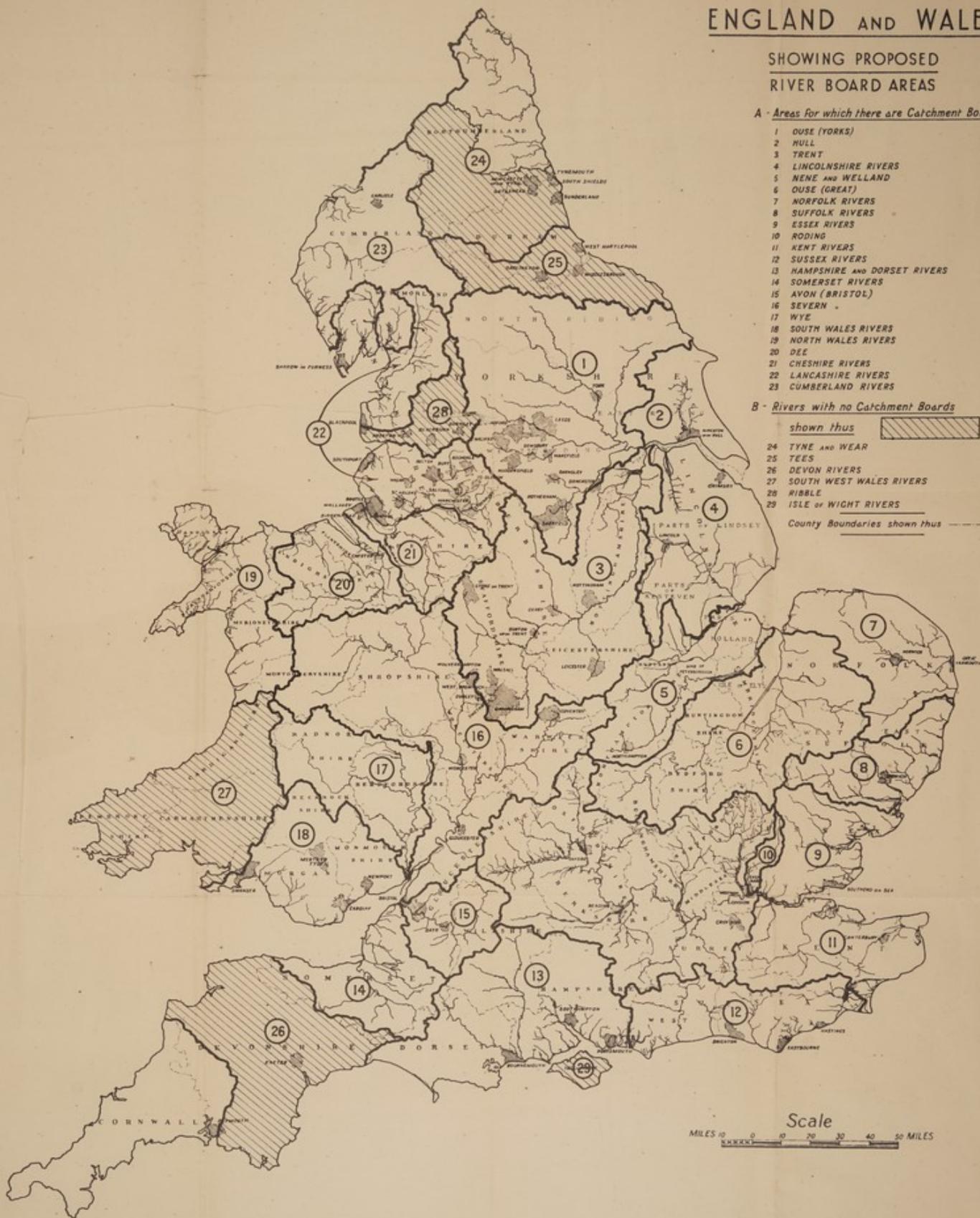
B - Rivers with no Catchment Boards

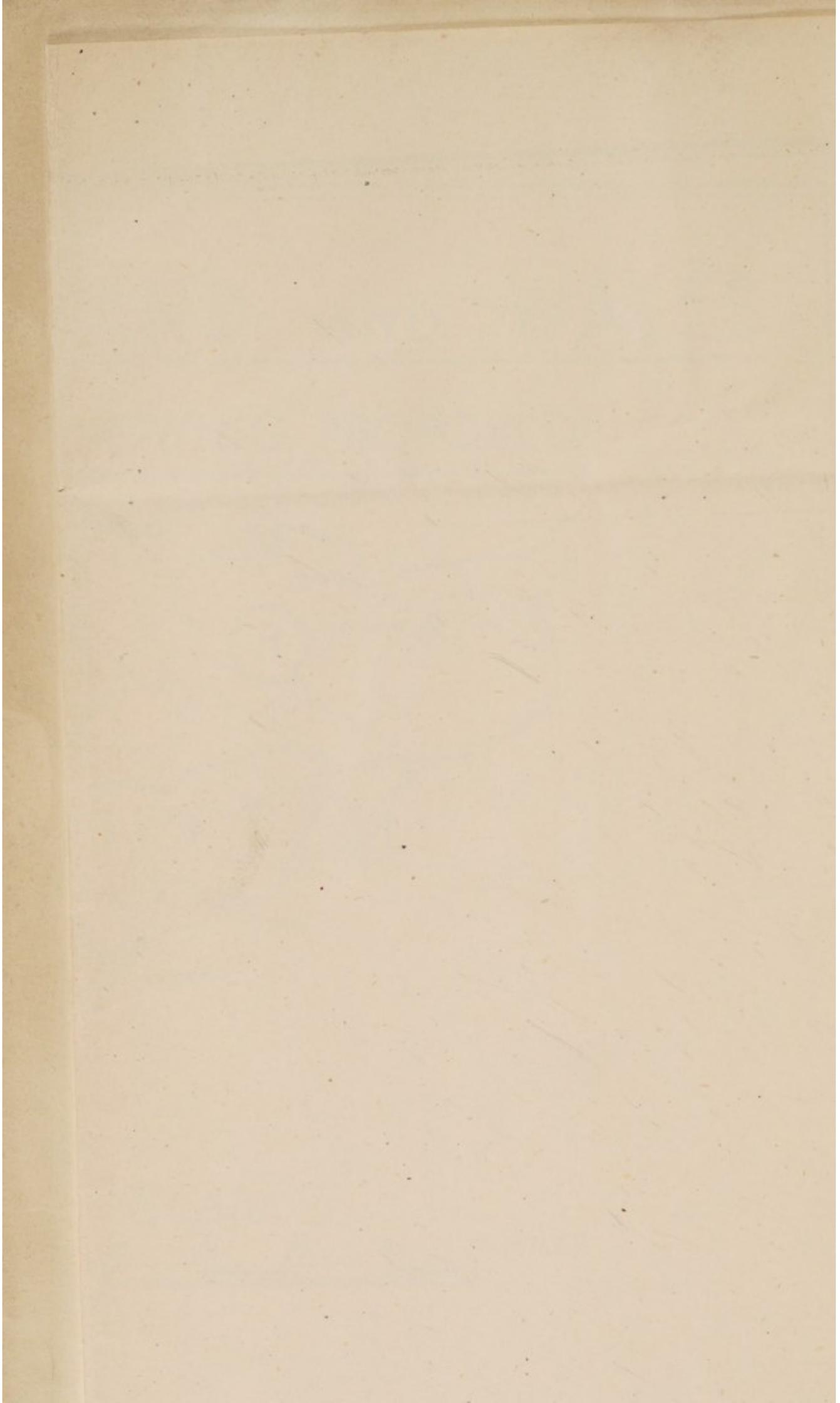
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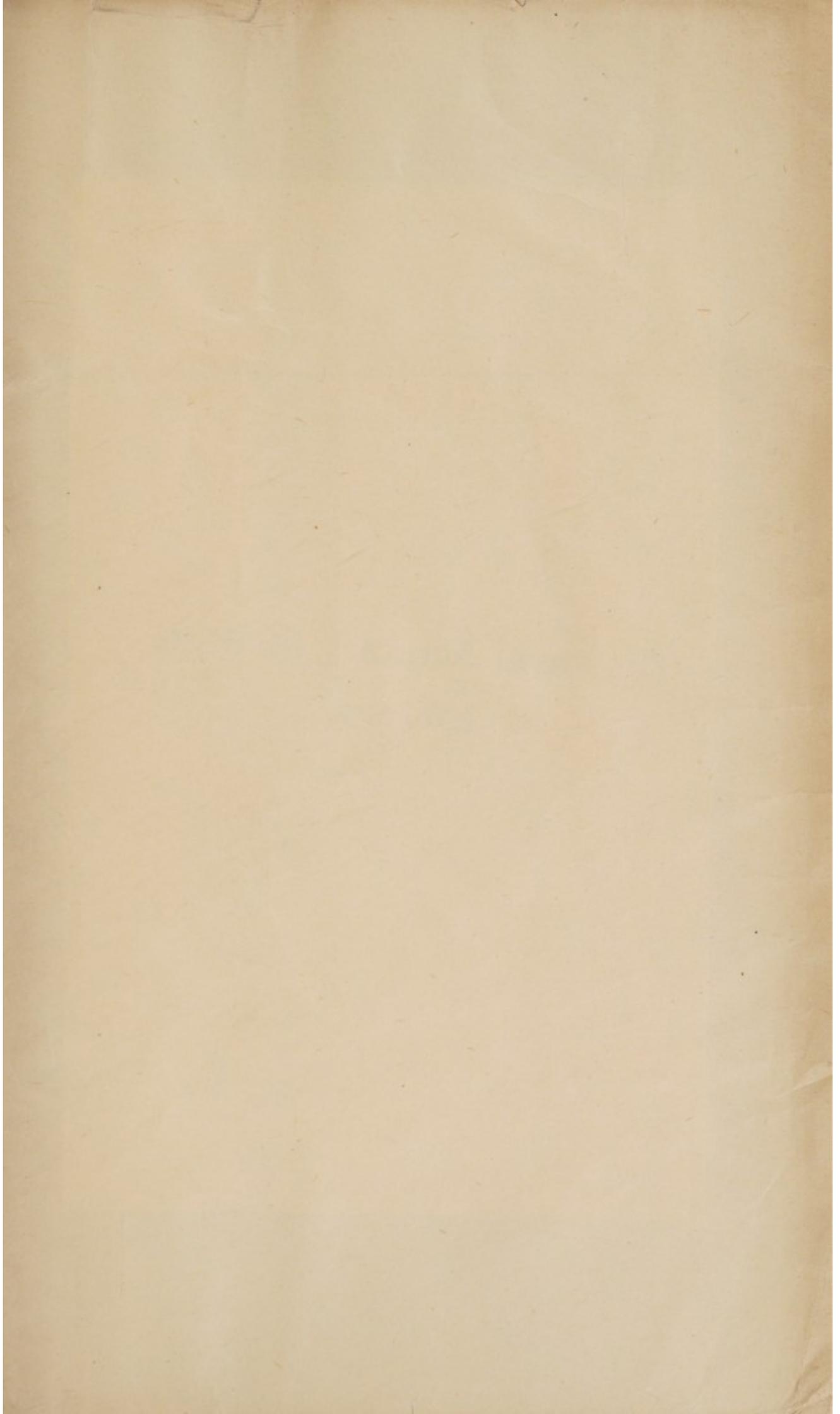


- 24 TYNE AND WEAR
- 25 TEES
- 26 DEVON RIVERS
- 27 SOUTH WEST WALES RIVERS
- 28 RIBBLE
- 29 ISLE OF WIGHT RIVERS

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