TANZANIA

Water Utilization (Control and Regulation) CAP.331 [R.E.1992]2

Revised Edition 1993 Printed and Published by Order of the Government of the United Republic of Tanzania

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CHAPTER 331

THE WATER UTILIZATION (CONTROL AND REGULATION) ACT Act No. 42 of 1974

PART I PRELIMINARY

Short title

1. This Act may be cited as the Water Utilization (Control and Regulation) Act. G.N.No.241 of 1975

Interpretation –

2. -(1) In this Act, unless the context otherwise requires-

"Appointing authority," means in the case of the Chairman of the Central Water Board, the President and in the case of other members of every Basin Water Board, the Minister, of

"Basin Water Board" means a Basin Water Board established under section 7 in relation to a water basin;

"Central Water Advisory Board" means the Central Water Advisory Board established by section 5;

"Central Water Board" means the Central Water Board established by section 5;

"Direct discharge" means the discharge of effluent into receiving water without prior treatment;

"Domestic purposes" includes the watering spraying and dipping of stock;

"**Easement**" means a right to enter on the land of another for the purpose of constructing or maintaining works thereon or storing water thereon or carrying water under, through or over such land or for all or any of such purposes;

"Effluent" includes any flowing-out or fluid material discharged from domestic or industrial wastes systems which, by reason of its quality, quantity or characteristics, is likely to impair the beneficial use of receiving water by adversely affecting their natural state;

"Effluent treatment plant" means any device or structure designed for the treatment of effluent removing matters in suspension, detoxicating or stabilizing biodegradable organic impurities so as to prevent the occurrence of secondary decomposition upon the effluent mingling with water;

"Existing right" in relation to the use of water means a right, registered under the Cap.410 provisions of the Water Act hereby repealed and subsisting immediately prior to the date upon which this Act comes into operation, to divert, dam, store, abstract or use water.

"**Indirect discharge**" means the discharge of effluent into a sewer leading to a municipal treatment plant;

"Minister" means the Minister for the time being responsible for water development;

"National water supply" means a water supply declared as such under the provisions of section 9;

"**Pollutant**" means any substance or characteristic, whether or not harmful, added or imposed onto natural or supplied water;

"**Principal Secretary**" means the Principal Secretary of the Ministry for the time being responsible for water development;

"**Principal Water Officer**" means the Principal Water Officer appointed under the provisions of section 4;

"Central Water Board" means a Central Water Board, Board established by section 5;

"**Regional Water officer**" means a regional Water Officer appointed under the provisions of section 4;

"Regional water supply" means a water supply other than a national water supply, which is wholly or partly within a region;

"**Specified town**" means any town or other water supply are declared under section 11(1) of the Urban Water Supply Act, 1981, to be an area in which the supply of water is the responsibility of the urban Water Authority;

"Underground water" means water naturally stored or flowing below the surface of the ground and not apparent on the surface of the ground;

"The Urban Water Authority" means the National Urban Water Authority established by

section 3 of the Urban Water Supply Act 1981;

"Water" means all water flowing over the surface of the ground or contained in or flowing in or from a spring or stream or natural lake or swamp or in or beneath a watercourse and all water made available from subterranean sources by means of works, but does not include any tidal water, nor water which is used solely for the purpose of extracting minerals therefrom;

"Water basin" means any area of land delimited and declared by the Minister under section 7 to be a water basin in relation to any river or other water source;

"Water officer" in relation to an application for, or an objection to, or a grant of, or refusal to grant, a water right in respect of a national water supply means the Principal Water Officer, and in relation to an application for, or an objection to, or a grant of, or refusal to grant, a water right in respect of a regional water supply means the Regional Water Officer of the region in which such supply is situate;

"Works" include canals, channels, reservoirs, embankments, weirs, dams, wells, boreholes and other works constructed for or in connection with the diversion, damming, storage or abstraction of water or for drainage or for the generation of water power or the use of water for industrial or other purposes or for the conservation of rainfall.

(2) [Deleted by Act No.10 of 1981 s.3 (e)].

Application

Act No.10 of 1981 s.4

3. Without prejudice to the generality of Act to of the application of this Act, it is hereby Government declared that the provisions of this Act shall apply to and be carried into effect by departments of the Government, public and local authorities, and all Water Authorities appointed under the Water Works Act.

PART II APPOINTMENT OF OFFICERS AND ESTABLISHMENT OF WATER ADVISORY BOARDS

Appointment of officers

Act No.10 of 1981 s.5

4. -(1) There shall be a Principal Water Officer and also, for every region in Tanganyika, a Regional Water Officer who shall be appointed by the Minister from among persons in the

public service.

(2) The Minister may appoint such other officers as, in his opinion, may be necessary for the purpose of the administration of this Act and the subsidiary legislation made hereunder.

Establishment of Central Water Board

5. -(1) There is hereby established a central Water Board consisting of a Chairman who shall be appointed by the President, and not less than ten nor more than fifteen other members, who shall each be appointed by the Minister from among persons holding qualifications in scientific technical fields of learning, or having adequate knowledge and experience in the public affairs of Tanzania.

(2) Every member shall hold office-

(a) In the case of a member appointed in his own name until such time as the appointing authority revokes his appointment and appoints another person in his place;

(b) In the case of a member who is appointed by virtue of his holding some other office, until such time as he ceases to hold that other office.

(3) Where any member is, by reason of illness, infirmity or absence from the United republic, unable to attend any meeting of the Central Water Board the appointing authority may appoint a temporary member in his place and the temporary member shall cease to hold office on the resumption of office of the substantive member.

(4) The Central Water Board shall elect one of its members to be the Vice-Chairman who shall, subject to his continuing to be a member, hold the office of Vice-Chairman for a term of two years from the date of his election and shall be eligible for re-election.

(5) The Central Water Board shall hold meetings on such occasions at such place as it may in its discretion determine.

(6) The business of the Central Water Board shall be conducted in such manner as the Minister may, by order published in the *Gazette*, prescribe; but where no procedure, is prescribed the Central Water Board shall conduct its business in such manner, as it shall determine.

Functions of Central Water Board

6. -(1) The Central Water Board shall be the principal advisory organ in matters relating to the utilization of water, and shall have and exercise functions in relation to the control and regulation of water pollution subject to the provisions of this Act.

(2) In relation to the utilization of water-

- The Central Water Board shall advise the Principal Water officer on all matters concerning the appointment of national water supplies, the determination, diminution or modification of water rights, the measures to be taken in case of drought and the priorities to be given from time to time and in accordance with prevailing circumstances for the different purposes for which the water is required in any area of the United Republic.
- Subject to paragraph (c), the Principal Water Officer shall consider the advice of the Central Water Board before granting or refusing any application for a water right, before determining revising, diminishing or modifying any water right or existing right and before specifying a quality of water under section 21, but shall not be bound to follow that advice;
- (c) Nothing in paragraph (b) shall require the principal Water Officer to make any reference to, or to consider the advice of the Central Water Board in respect of any suspension or variation of a right under section 20 of in respect of any modification, variation, determination or diminution of a right with the consent of its holder.

(3) In relation to the control and regulation of water pollution, the Central Water Board shall have power-

(a) To carry out, and promote the carrying out of research and investigations into the causes and ways for the efficient prevention or control, of water pollution in the United Republic;

(b) To formulate and recommend to the Government comprehensive plans for the regulation of the discharge of effluent by industrial trade and other categories of users of water;

(c) To formulate, and recommend to the Minister the best ways of ensuring compliance with, uniform procedure for the sampling and examination of water sewage and industrial effluent, designating units for expressing results;

(d) To advice and assist the Government, public authorities and other persons or bodies of persons measures for the more efficient control or prevention of water pollution;

(e) To recommend to the Minister legislative measures necessary or suitable for the effective control of water pollution;

(f) To formulate effluent and receiving water standards, and programmes for ensuring compliance with those standards by domestic, commercial, industrial and other users of water;

(g) Subject to the provisions of this Act, and of any other written law relating to the extraction. supply or use of water, to any other act or thing, which, in the opinion of the Central Water Board, is necessary or expedient for the more effective control of water pollution in the United Republic.

Establishment of Basin Water Board

7. -(1) The Minister may, by order published in the *Gazette*, declare any area and land to be water basin in relation to any river proceedings of functions.

- There shall be established a Board in respect of each water basin declared under subsection (1) and the Minister shall, in the order made under subsection (1), appoint not less than seven nor more than ten persons to be members of that Basin Water Board.
- The provisions of section 5 and 6 (1) and (2) shall apply *mutatis mutandis* in relation to a regional water supply as if references in those provisions to the Central Water Board and to the principal Water officer were references to a Basin Water Board and to a Regional Water officer, subject to the preceding provisions of this section and to those of subsection (4).

(4) All the function provided for or referred to in section (1) and (2) shall, in the application of that section to a Basin Water Board and a Regional Water officer be performed in relation to a regional water source only in so far as it is within the water basin concerned.

PART III OWNERSHIP OF AND INHERENT RIGHTS TO THE USE OF WATER

All water vested in the United Republic

8. All water in Tanzania is vested in the United Republic.

Declaration of national water supplies

9. Where the Minister is of the opinion that it is in the public interest to regulate the use of water from any source in any area of Tanganyika on a national basis, he may by notice in the *Gazette*, declare such source to be a national water supply for the purpose of this act.

Right to water for domestic purposes

10. Any person having lawful access to any water may abstract and use the same for domestic purposes. Provided that nothing in this section shall be construed as authorizing the construction of any works.

Right to casual under-ground water

11. -(1) The owner or occupier of any land may: -

(a) Sink or enlarge any well or borehole thereon and abstract limited quantities of water therefrom, not exceeding 22,700 litres in any water and one day:
 Provided that this section shall not authorize the sinking of any well or borehole within 230 meters of any other well or borehole or within 90 meters of any body of surface water or enlargement of any well or borehole which is within those distances from any other well or borehole or borehole or body of surface water, as the case may be;

(b) Construct any works thereon for the conservation of rainfall, otherwise than in a river or stream and abstract and use the water so conserved.

(2) A Water Officer may determine for the purposes of paragraph (b) of subsection (1) whether any watercourse is a river or stream, and the determination of the Water Officer thereon shall be final and conclusive for the purposes of this Act.

Right to water for mining purposes Cap.123

12. -(1) The holder of a mining lease granted under the Mining Act or of a lease granted under the Mining (Mineral Oil) Act shall have in respect of the land comprised in his lease the same rights as are conferred by Cap.399 section 11 on the owner or occupier of any land and may also abstract and use any underground water encountered in any workings and construct any works required for or in connection with the use of such water.

(2) The holder of a claim registered under the Mining Act or of a disc claim shall have in respect of the land comprised in such claim the same rights as are conferred on the holder of a lease by subsection (1) and may in addition, in respect of water to which he has lawful access, abstract and use the same for prospecting and mining purposes, returning the same to the stream or body of water from which it was taken, substantially undiminished in quantity.

(3) The holder of a prospecting right or of an exclusive prospecting license granted under the Mining Act or of a prospecting or exploration license granted under Petroleum Exploration and Production Acts may, within the area specified in such license, subject to all other rights to the use of water-

(a) Abstract and use for prospecting purposes any water to which he has lawful access, returning the same to the stream or body of water from which it was taken;

(b) Sink or enlarge any well or borehole in any land on which he has the right to explore or prospect, and abstract water therefrom, not exceeding 22,700 litres in any one day; and

(c) Abstract and use any underground water encountered in any workings and construct any works required for or in connection with the use of such water.

(4) Any person abstracting underground water from any workings under the powers

conferred by this section shall comply with any directions of the Water Officer regarding the disposal of such water as it not used.

(5) Every person exercising the powers in this section contained shall, as regards the owners of any surface rights, exercise such powers and pay compensation in the same manner and to the same extent as if the powers exercised under this Act were exercisable under the Mining Act.

<u>Right to the use of water Cap.323</u>

3. The holder of an exclusive license to take trees and timber granted under the Forests forestry Act may, for such purposes within the area specified in license, subject to all other rights:

(a) Abstract and use any water to which he has lawful access-

(i) For logging or sawmilling operations of a temporary nature;

Provided that no such operation shall be deemed to be of a temporary nature unless no substantial plant is maintained in any one place for more than one year nor is intended to be so maintained; or

(ii) For fighting forest fires; or

(b) Sink or enlarge any well or borehole and abstract water therefrom not exceeding 22,700 litres in any one day.

Prohibition of use of the water except with lawful authority

4. Subject to the provisions of this Part and to the provisions of section 53 of Mining Act, no person shall divert, dam, store, abstract or use water or for any such purpose construct or maintain any works, except in accordance with an existing right or with a water right granted under this Act

PART IV GRANT OF WATER RIGHTS

Grant of water rights

15.-(1) A Water officer may grant to any person the right to divert, dam, store, abstract and use water from such source, in such quantity, for such period, whether definite or indefinite, and for such purpose as may be specified in the water right, subject to such terms and conditions as he may deem fit.

(2) Upon receipt of an application for the grant of a water right, the Water Officer shall give notice of the same in the prescribed manner. Any interested person may notify the Water Officer that he objects to the grant of a water right and may specify the grounds for such objection, and shall, if he so required, have a right to be heard thereon by

the Basin Water Board.

(3) The Water Officer-

(a) shall consider every application and any objections made to him in respect thereof, and shall refer the same to the Water Advisory Board; and

(b) may, after considering the advice of the Basin Water Board, grant such right as he may consider appropriate or may dismiss the application.

(4) Nothing in any such water right shall be deemed to imply any guarantee that the quantity of water thereon referred to is or will be available.

Consent15A.-(1) No person may discharge effluent from any
commercial, industrial or other trade charges wastes systems into receiving waters without a
Act No.10Act No.10consent duly granted by a Water officer under of 1981 this section.

s.6 (2) Upon receipt of an application for the grant of consent to discharge, the Water Officer shall

notice of application in theprescribed manner.Any interested personmaynotify the Water Officer that he objects to thegrant ofa consent to discharge and may specifythe grounds for such objection,and shall, ifhe so requires, have a right to be heard on the

objection by the Central Water Board or theBasinWater Board concerned, as the case maybe.

(3) A consent to discharge granted under

give

this section shall entitle the person to whom it is granted to discharge effluent into any underground stratum subject to the provisions of section 18A.

(4) The Minister may make provisions

regulating the procedure for making and considering

applications for the grant of consents to discharge, the making of objections to any such application, the making of appeals

against refused applications or conditions imposed on consents granted, and any other matters related to or grant of consents to discharge.

Right may 16.-(1) A Water officer may, either at the be made time of the grant or at any time after the appurtenant grant of any water right, declare that such to land right shall be appurtenant to land described in the water right and may at any time declare an existing right to be appurtenant to land affected thereby. (2) Where a water right or existing right has been declared to be appurtenant to any land, the benefit of the

right shall be enjoyed and the right may be enforced by the person who

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(3)Where in consequence of any transfer, lease or partition, any person becomes entitled the to possession of part of the land to which a water right or existing right declared appurtenant, he may abstract and use has been such proportion of the water the abstraction and use of which is permitted by the water right or existing right as may be agreed between him and the persons entitled to the possession of the remainder of the land, or, in the absence of any such assignment or agreement, as may be determined by the Water Officer. (4) Where any apportionment of water has been made under the provisions of this subsection in respect of any partition of land, the several amounts of water so apportioned shall be deemed to be appurtenant to the several parcels of such thereof shall be enjoyed and all rights thereof land and the benefit apportionment by the may be enforced, in accordance with such persons who are for the time being entitled to the possession of such parcels, and such rights shall prevail until the parcels shall again become merged with each other. (5) Any person acquiring a right to abstract and use water by agreement in accordance with the provisions of subsection (3) of this section shall within thirty days give notice thereof in the prescribed form to the Water Officer.

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17. The following conditions shall be implied in every water Conditions mining, forestry or industrial purposes or for rights right granted for certain the generation of power-Act No.10 (a) that the water used thereunderof 1981 shall be returned to the stream s.7 (i) or body of water from which it was taken or to such other stream or body be authorized by the Water of water as may Officer: (ii) shall be substantially undiminished in quantity;

(iii)s	shall not be polluted with any
matter derived from such us	se to
such extent as to be likely to	cause injury
either directly or	indirectly to public health, to
livestock or	fish, to crops,
orchards or gardens which are	irrigated by
such water or to	any product in the processing
of	which such water is used;
(iv)	shall, before its direct
discharge into receiving waters,	be so
treated or otherwise	modified as to comply with
prescribed e	ffluent and
receiving water standards.	
(b) that	precautions shall be taken to

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	the satisfaction of the Water Officer	
to prevent accumulations in a	anv	river, stream or
water-course of	silt, sand, gravel, ston	,
	age, sisal waste or any	
other substance likely to affe	•	injuriously the
use of such water;		injunousiy une
,	that the owner of the water right	
shall make periodical returns	•	Water Officer
in such form and at		s as the Minister
	prescribe, setting out the nature of	s as the winnster
may		use of the
wastes or effluent produced b	by ms	use of the
water; and		
(d)	that the owner of the water right	
shall install or facilitate the		ation at the point
of	discharge all machinery and other	
facilities necessary for the tal	king	of samples and
the collection and	treatment of effluent.	
Rights 18. -(1) Where	e a water officer has conditional on	granted a water
right subject to the construction of	works within a specified period	od, he may, works
from time to time at any time	1 1	, ,
notwithstanding that of the p		previously
allowed may have expired,		Provide and J
ano wea may nave expired,		

extend the period for the construction

of such works.

(2) At the expiration of the period allowed for the construction of the works, the Water Officer shall cause the works to be inspected by such officer as the Principal Secretary may approve who, if they have been constructed to his satisfaction, shall so certify in writing to the Water Officer.

(3) No certificate issued under this

section shall be deemed to imply any guarantee by the Government that the works are properly designed or constructed nor shall support justify any claim whatsoever against the Government or any Government officer in connection with such works.

Restriction on discharge into underground strata or borehole or any other water body

Act No.10of 1981 s.8

18A.-(1) No person to whom a consent to discharge is granted under section 15A may construct or discharge into an underground water body within 230 meters of any well strata or borehole or any other water body or within 90 meters of any body of underground water or enlargement of any well, borehole or other water body which is within those distances from any other well or borehole or body of underground water, as the case may be.

(2) The Minister may, upon recommendation made by the Central Water Board in that behalf, make provisions for the better regulations of the discharge of effluent into underground strata.

Declaration of receiving water standards

18B.-(1) The standards specified in the First and the Second Schedule to this Act shall be standards in respect of effluent and receiving water, respectively, which shall be complied with by users of water before or during discharge into water courses, receiving waters or sewers.

(2) The Minister may, by order published in the *Gazette*, add to, vary or replace any of the provisions of the First and the Second Schedule.

(3) The Central Water Board may, with the consent of the Minister, exempt any person

or body of persons from complying with the provisions of this section of such period as it may determine.

PART V REVISION, VARIATION, DETERMINATION AND DIMINUTION OF WATER RIGHTS

Position when volume inadequate to satisfy all rights granted in respect thereof

19. If, at any time, in the opinion of the Minister, in any specified area, the volume of water to which rights, he may direct the appropriate Water Officer to review the use, diversion, control and appropriation of water in that area and in so doing the Water Officer may revise the quantity allowed by any right and the terms and conditions of any right to the use of water in that area:

Provided that the Water officer shall have regard to the principle that where beneficial use of the whole right has been maintained, no right shall be cancelled or reduced except in proportion with all other rights in the same area.

Suspension of the water or variation of rights on account of drought thereupon

20. Where in the opinion of the officer on account of drought the supply of water from any source is insufficient or likely to become insufficient for the needs of the persons using it, the Water officer may at any time and from time to time, by notice in writing addressed to the holders of water rights suspend or vary all or any rights to abstract or use water from that source, for such period as he may deem necessary, and such rights thereupon shall cease for the period of the suspension or shall be exercisable only as varied, as the case may be.

Where quantity unspecified Water Officer may specify quantity

21. In respect of any existing right to the use of an unspecified quantity of water, the Water officer may at any time specify the Water quantity for which that right shall be valid, and record the same in the register of water rights and so to inform the holder of that existing right.

Variation of water rights with consent

22. A Water officer may at any time on the application or with the consent of the holder of a water right, determine or diminish the right or vary any of the conditions thereof.

Determination for breach of condition

23. Where the holder of a water right has failed to comply with any condition, express or implied, subject to which the right was granted, or has abstracted or used water in excess of that authorized or has used water for a purpose not authorized by the grant, the Water officer may by notice in writing addressed to the holder declare the right to be determined:

Provided that where the default is one capable of being remedied, the Water Officer shall first serve on the holder notice in writing specifying the default and requiring the holder to remedy the same within such time as may be specified in the notice.

Determination or diminution for non-use

24.-(1) If at any time a Water officer has reason to believe that the holder of a water right has not, during the preceding three years, made full beneficial use of that right, the Water Officer may by notice in writing addressed to such holder call upon him to show cause such respects as may be specified in the notice.

(2) If within three months of the service of such notice no reply has been received by the Water officer, he may declare the right determined or diminished or modified, as the case may be.

(3) The holder of a water right upon whom a notice has been served under subsection (1) may, within three months of such service, submit to the Water Officer a statement in writing of reasons why the right should not be determined or diminished or modified, as the case may be, or may require to be heard in the matter.

(4) The Water Officer shall consider any statement submitted to him under subsection (3) and shall, if so required, give the holder an opportunity of being heard in person or by an advocate and may thereafter by notice in writing addressed to the holder-

(a) declare the right determined; or

(b) declare the right diminished or modified in such respects as may be specified in the declaration; or

(c) declare the right to be subsisting unchanged.

25. Determination or diminution for public purpose

25.-(1) Where a Water officer is satisfied that water is required for a public purpose he may, by notice in writing addressed to the holder of any water right, determine or diminish that right to the extent that such water is required for the aforesaid public purpose, and thereupon the right shall cease or shall be exercisable only as so diminished, as the case may be.

(2) If within three months of the service of such notice no reply has been received by the Water Officer, he may declare the right determined or dimished or modified, as the case

may be.

(3) The holder of a water right upon whom notice has been served under subsection (1) may, within three months of such service, submit to the Water officer a statement in writing of reasons why the right should not be determined or diminished or modified, as the case may be, or may require to be heard in the matter.

(4) The Water Officer shall consider any statement submitted to him under subsection(3) and shall, if so required, give the holder an opportunity of being heard in person or by an advocate and may thereafter by notice in writing addressed to the holder-

(a) declare the right determined; or

(b) declare the right diminished or modified in such respects as may be specified in the declaration; or

(c) declare the right to be subsisting unchanged.

Determina-
water is required for a public purpose he diminution
for public25.-(1) Where a Water Officer is satisfied tin or
may, by notice in writing addressed to
holder of any water right, determine or purposes

diminish that right to the extent that such water is required for the aforesaid public purpose, and thereupon the right shall cease or shall be exercisable only as so diminished, as the case may be.

(2) The holder of any right determined or

diminished under the provisions of this sectionshallbeentitled to receive compensation fromthe Government for all lossresulting from thedetermination or diminution of the right. The

High Court upon the application of the holder or the Minister shall in the absence of agreement determine the amount of compensation payable.

(3) The Minister may by notice in the

Gazette declare any purpose to be a public purpose within the meaning of this section.

Application of Part V to existing rights

26. The provisions of this Part shall apply to all existing rights in the same manner as they apply to water rights granted under rights this Act.

PART VI MISCELLANEOUS POWERS

Power to create easements

27.-(1) Where any person who is the holder of a water right or who has applied for the grant of water right is unable fully to enjoy the benefit of that right without an easement, and has failed to secure an easement by agreement with the owner or occupier of the land over which the easement is required, he may apply to the appropriate Water Officer for the creation of such easement.

(2) Upon receipt of any such application, the Water Officer shall serve notice of the application on the owner or occupier of the land over which an easement is sought and on any other persons known to be interested in that land.

(3) Any interested person may notify the Water officer that he objects to the creation of an easement under this section or that he desires to be heard on the subject or compensation.

(4) The Water officer shall consider any objections made to him and shall give an opportunity of being heard to all persons who so require, and may thereafter by a certificate in the prescribed form create such easement as he may consider appropriate or refuse to create an easement.

(5) Where the water right in respect of which an easement is created has been made appurtenant to the land of the holder of the water right, then an easement created by the Water Officer may also be made appurtenant to such land, but not otherwise.

(6) Every easement created under this section shall be subject to the payment of such compensation, either by way of a capital sum or of periodical payments, as the Water Officer may decide, to such persons as the Water Officer may consider to be injuriously affected by the creation of the easement and in such proportion as the Water Officer may decide and may be made conditional on the construction and maintenance of such bridges and other works as may in the opinion of the Water officer be necessitated by the severance of the land subject to the easement.

(7) If the person enjoying the benefit of easement fails to pay such compensation as directed or to construct such bridges and other works within such time as is therefor allowed by the Water Officer, or fails to maintain or repair such bridges or other works after being required so to do by the water officer, the Water Officer may by notice in writing addressed to that person determine the easement.

(8) Any compensation due under this section, which remains unpaid, may be sued for as a civil debt.

(9) Any easement created by agreement between the holder of a water right and any other person may be made appurtenant to the land of the holder of the water right where the water right in respect of which the agreement is made is appurtenant to such land:

Provided that no such agreement shall operate to create an easement appurtenant to the land unless and until a copy of the agreement shall have been forwarded to the Water Officer by the holder of the water right.

Right to call for information (Act No.10of 1981 s.10)

28. A Basin Water Board, or a Water Officer may, for the purpose of this act, call upon any person to give information on such matters and in such manner as may be prescribed.

Power to inspect works and require reparation, etc.

29.-(1) A Water Officer and all persons authorized by him in writing and such officers as the Principal Secretary shall approve may, at all reasonable times, enter upon any land, and may inspect any works constructed or under construction thereon and may take measures to ascertain the amount of water abstracted or capable of being abstracted by means of such works or otherwise.

(2) If in the opinion of the Water Officer any works are so constructed, maintained or used or are being so constructed as to constitute a danger to life, health or property, he may require any person for the time being enjoying the benefit of those works to carry out such repairs or to effect such additions or modifications to such works or to carry out such demolitions or to change the use of the works in such manner as he may consider

necessary and may by notice in writing suspend any water right until he is satisfied that such requirement has been fulfilled, and thereupon the right shall cease for the period of the suspension.

(3) No compensation shall be payable to the owner or occupier of any land by reason that entry has been made upon such land in pursuance of the provisions of subsection (1) of this section.

Power to require demolition of unlawful works

30.-(1) A Water Officer may by notice in writing require any person-

(a) who has constructed or extended or caused to be constructed or extended any works contrary to the provisions of this Act or of any other written law, not inconsistent with the provisions of this Act, under which such person was required or authorized to construct or extend the same or cause them to be constructed or extended; or

(b) whose water right or existing right in respect of which any works are in existence has been determined under the provisions of this Act or has otherwise come to an end, to modify, demolish or destroy such works within such period, not being less than thirty days, as may be specified in the notice.

(2) If any person fails to comply with a notice served on him under subsection (1) of this section, it shall be lawful for the water officer to cause such works to be modified, demolished or destroyed from the person in default by civil suit.

Power to establish hydrographic stations and make surveys

31.-(1) The Principal Secretary and all persons authorized by him may at all reasonable times enter upon any land for the purpose of making such investigations and surveys as the Principal Secretary may consider necessary in the interest of the conservation and best use

of water, and may establish and maintain on any such land, without other authority than this Act, hydrographic stations and other works for the purpose of obtaining and recording information and statistics as to hydrographic conditions.

(2) No compensation shall be payable to the owner or occupier of any land by reason that entry has been made upon such land in pursuance of the provisions of subsection (1) of this section but compensation shall be payable for all damage done and for any land occupied for the construction of works. In the absence of agreement such compensation shall be determined by the High Court on the application of the owner or occupier or of the Minister.

PART VII

APPEALS

Appeals Act No.10 of 1981s.9

32.-(1) The Minister shall make provision for the procedure of making and hearing appeals arising from decisions of the Central Water Board and Basin Water Boards and may, for that purpose, establish an appeals committee or committees and provide for the exercise of the powers and the regulation of the procedure, of the committee or committees, as the case may be.

(2) Any person who is aggrieved by the refusal of a Water officer to grant or renew a water right, or by any conditions imposed when granting or renewing a water right, or by the determination or diminution or modification or suspension of any water right, or by the grant of or refusal to grant any easement or by the conditions subject to which any easement is created, or by an direction regarding the disposal of underground water abstracted from any workings or by any requirement that any work should be repaired, added to, altered,

demolished or destroyed, or that the use of any works be changed, may appeal to the appellate authority whose decision in the matter shall be final.

(3) Notwithstanding the provisions of subsection (1) of this section, no person may appeal against the grant or renewal of a water right or the grant of any easement, who did not make objection to such grant or renewal to the water Officer under the provisions of subsection (2) of section 15 or subsection (3) of section 27, as the case may be.

(4) In this section, "appellate authority" means, in the case of an appeal against a decision of the Principal Water

Officer, the Minister, and in the case of an appeal against a decision of a Regional Water Officer, the Regional Commissioner of the region in which the relevant regional water supply is situate.

PART VIII

OFFENSES

33. Offences and penalties Act No.17 of 1989 Schedule

33.-(1) Any person who in order to procure the grant of a water right wilfully makes any statement knowing the same to be false in any material particular or not having reason to believe the same to be true shall be guilty of an offence and liable upon conviction to a fine not exceeding 500 hundred thousand shillings or to imprisonment for a period not exceeding three years or to both such fine and such imprisonment.

(2) Any person who constructs or extends any works contrary to this act or fails, without reasonable excuse, to comply with a requirement made under section 29 or wilfully obstructs, damages or destroys any works or destroys, defaces or moves any level mark, beacon or other structure or appliance or obstructs, molests or hinders any public officer in the lawful exercise of his powers or duties under this Act shall be guilty of an offence and liable upon conviction to a fine not exceeding fifty thousand shillings or to imprisonment for a period not exceeding two years, or to both such fine and such imprisonment or in the case of a second or subsequent conviction to a fine not exceeding three years, or to both such fine and such imprisonment, and in every case where the offence is a continuing one to an additional fine not exceeding five hundred shillings in respect of every day during which the offence has continued.

(5) Any person who being required to give information under any provision of this act or under any regulation made under this act refuses without reasonable excuse to give such information or gives information knowing the same to be false, or having reason to believe the same not to be true, shall be guilty of an offence and liable upon conviction to a fine not exceeding two thousand shillings or to imprisonment not exceeding three years or to both such fine and such imprisonment.

PART IX MISCELLANEOUS PROVISIONS

Registration

34.-(1) Every Water officer shall keep a register for the registration of every grant or renewal of water right made by him and of the variation, determination or modification or suspension of water right or existing water right, and of any easement created or determined by him.

(2) The Principal Water officer shall establish a central registry of water rights registered under this Act.

(3) Every Regional Water officer shall supply without delay to the Principal Water Officer a copy of every entry made in his register of water rights and shall, upon application being made of him by any other regional Water Officer or public officer, forthwith provide without fee a copy of any entry in his register of water rights.

(4) Any person shall, on application to a Water officer, be entitled to receive certified or uncertified extracts from the register of water rights maintained by such Water officer.

(5) Extracts from any register of water rights certified to be under the hand of a water Officer shall be admissible in evidence in all legal proceedings, civil or criminal, without proof that they are under the hand of the Water Officer purported to have certified the same and shall also be prima *facie evidence* of the facts recorded therein.

(6) The entry of any easement in a register of water rights under this section shall not affect any requirements as to registration contained in, or be construed as being an effective registration for the purposes of, or in lieu of registration under the provisions of, the Registration of

Cap.117 Documents Act or the Land Registration Act.

Service of notices

Cap.334

35. A notice under this act shall be deemed to have been served on, or given to, any person-

- (a) if served on him personally; or
- (b) if left for him at his last known

address; or

(c) if sent by registered post addressed to his last known address.

Civil liability not affected

36. Subject to any express provisions in this Act, nothing contained in this act shall not affect the civil liability of any person for any damage resulting from the construction, alteration or destruction of any works or the failure to maintain the same in proper repair or from the obstruction, storage or diversion of any water.

Indemnity

37. Without prejudice to the provisions Cap.16 of section 284A of the penal Code or of the Cap.76 Public officers (recovery of debts) act, no

member of a Water Advisory Board or public officer shall be personally liable for any act or default which is done or omitted to be done in good faith in the exercise or purported exercise of the powers conferred by this act

exercise of the powers conferred by this act.

Power to make rules and regulations

38.-(1) The Chief Justice may make rules of court for regulating proceedings before the High Court and applications thereto under the provisions of this Act and for the fees to be paid in respect thereof.

(2) Subject to the provisions of subsection (1), the Minister may make regulations prescribing anything, which may be prescribed under this Act and for the better carrying into effect of the provisions on this Act, and, without prejudice to the generality of the foregoing, such regulations, may-

(a) prescribe the registers and records to be kept and the manner in which they are to be kept;

(b) provide for the forms to be used and the fees to be paid in respect of any matter required or permitted to be done under this act;

(c) provide for the advertisement of applications for the use of water and for the giving of notice to interested persons;

(d) provide for an regulate the making of objections to a Water officer and the time within which such objections shall be made;

- (e) regulate the procedure of appeals under section 32 of this act;
- (f) provide for the formation functions and conduct of local associations of water users;

(g) in the case of water right or existing right enjoyed by an association of persons, regulate the division and distribution of water between those persons;

(h) prescribe the matters on which and the manner in persons may be required to give information as provided in section 28;

(i) prescribe the quorum of, and the procedure to be adopted by Basin Water Board, the manner in which and the extent to which they shall receive evidence and hear arguments by objectors and others, and the manner in which they shall record their findings;

Cap.334

(j) provide for the transfer, to the land register under the Land Registration Act or to a register maintained under the Registration of Documents Act, of particulars of easements which were registered in the Water Grants record maintained under the Water act hereby Cap.410 repealed and which subsist on the date upon Cap.117 which this Act comes into operation.

Repeal and saving

39.-(1) [Omitted]

(2) for the avoidance of doubts it is hereby declared that the provisions of sections 14 and 15 of the Interpretation Act, shall apply in respect of the repeal of the Water and Cap.1 its re-enactment by this Act.

(3) All certificates, permits and authorities granted under the Water Act and which are valid immediately before the commencement of this act shall remain valid and continue in effect as if the same had been granted under this Act notwithstanding the repeal of the Water Act by this Act.

FIRST SCHEDULE

Standards for Receiving Waters

Category 1: Water suitable for drinking water supplies, swimming pools, food and beverage manufacturing industries, pharmaceuticals manufacturing industries or industries requiring a water source of similar quality.

Category 2: Water suitable for use in feeding domestic animals; in fisheries, shell cultures, recreation and water contact sports.

Category 3: Water suitable for irrigation and other industrial activities requiring water of standards lower than those of water in category 1 or 2.

SECOND SCHEDULE

Effluent Standards SECOND SCHEDULE (contd)

A2.2.3.8	Organochlorine	(CL)	0.005	0.005
12220	pesticides(a)	/1	0.01	0.01
A2.2.3.9	Other Pesticides	mg/1	0.01	0.01
A2.2.3.10	Phenols	mg/1	0.2	1.0
A2.2.3	B.11 Reins, tar, etc.	mg/1	2.0	5.0
A2.2.3.12	Volatile chlorinated m	ng/1	0.05	0.05
h	ydrocarbons(CI)			

THE TANZANIA TEMPORARY STANDARDS OF QUALITY OF DOMESTIC WATER

International	Та	nzania					(W	VHO	1963)
Standard Rural									Water
		ĂĂĂĂĂĂĂĂĂĂĂĂĂĂĂ	ААААААА	ААААААА	AAAAAA	AAAAAA	ААААААААА	AAAAA	AAAA
ÄÄÄÄÄÄÄÄÄÄÄÄÄ									
Group No.		ubstance	Units		Allowabl	-			
		ÄÄÄÄÄÄÄÄÄÄÄÄÄ	AAAAAAA	AAAAAAA	AAAAAA	AAAAAA	AAAAAAAAAA	AAAAA	AAAA
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄ	ÄÄÄÄÄÄÄ							
	1.	Lead Pb		mg/1		0.05	0.1		
	2.	Arsenic As		mg/1		0.05	0.05		
	3.	Selenium Se		mg/1		0.1	0.5		4.
Chromium (6+)Cr		mg/1	0.05	0.05					
	5.	Cyanide CN		mg/1		0.2	0.02		
	6.	-		mg/1		0.01	0.05		
	7.	Barium hg		mg/1		1.0	1.0		
		Mercury hg		mg/1		-	-		
	9.	Silver Ag		mg/1		-			-
ÄÄÄÄÄÄ	ÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄÄ
ÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄ						
	1.	FluorideF		mg/1		1.5	8.0		
	2.	Nitrate NO-3	mg/1	30.0)				30/100*
ÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄ		ÄÄÄÄÄÄÄ	ÄÄÄÄÄÄ	ĂÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄ
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄ	ÄÄÄÄÄÄÄÄÄ							
	1.	Colour		mg pt/1	50	50*			

	2. Turbidity(SIO	2)	mg/1			25	30*	3. T	aste
mg/1	- Une	obecti	4.	Odou	ır			mg/1	
- ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ		ÄÄÄÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄ	ÄÄÄ
	5. PH-			m	g/1		6.5-9.2	6.5-9.2*	
Total Filtrable	Residue mg/1	1,500	200*						
	Total Hardness	s(Ca Co3)	mg/1	-	600		8.	Calcium	Ca
mg/1 200	-	9. Magn	esium Mg		mg/1	15	0 300)	10.
Magnesium+Sodium	n SO r	ng/1	1,00	0 1	,000*				
	11. Sulphate SO		mg/1			400	600*		
	12. Chloride CI		mg/1			600	0.5*		
	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ		ÄÄÄÄÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄ	ÄÄÄ
	13. Iron fe		mg/1			1.0	1.5		
	14. Manganese M	n	mg/1		0.0	0.0			
	15. Copper Cu		mg/1			1.55	3.0		
16. Zinc Zn	r	ng/1				15	5		15
	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ		ÄÄÄÄÄÄÄ	ĂÄÄÄ.	ÄÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄ	ÄÄÄ

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АЛАЛАЛАЛАЛАЛА	АЛАЛАЛАЛАЛА						
	17. BOD(5 days, at $65_{\circ}F$)	mg02/1	6	6.0			
	18. PV(Oxygen Abs.KMNO)	mg/2		10	2.0		
	19. Ammonium(NH+NH)	mg/1	0.5			20.	Total
Nitrogen (Excluding		NO3				mg	/1
0.1							1.0
ÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄ
ÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄ						
	21. Surfactants (Alkyl Benzy						
	sulpho ates)	mg/1	1.0	2.0*			
	22. Organic Matter (As carbon						
	inchloriform extract)	mg/1	0.5	0.5			
	23. Phenolic Substance (As						
	phenol)	mg/1	0.002	0.002			
ÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄ
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄ						

TOXICOLOGY OF SOME ELVIRONM

A4 1. HAZARDS OF POLLUTANTS A4 TABLE-CAUSES OF POISONING ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ

Туре

Example

A4.1 Foods	Wotor Dlon	to Euro	· Aquatia fa					
	water, Plan	Water, Plants, Fungi, Aquatic fauna						
A4.2 Allergens								
A4.3 Micro-organisms	(a) Bacteria-	(a) Bacteria-small dose,*spreading rapidly						
e.g. Dysenterybacilli								
	(b) Bacteria	-Large d	lose*,grows	on in food				
e.g. Salmonella,								
	Staphyloco	occus, C	lostridium w	elchil and				
botulinum, Bacillus cerens, Vibrio parahaemolyicu					cus			
	(c) Viruses-	Small do	ose*					
A4.4 Chemicals	Inorganic	e.g.	metals,	synthetic	e.g.	pesti-		
cides, and Organic e.g. alka	alids							
A4.5 Parasites Trichi	nella, Taenia							
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄ		
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄ							
*Small dose	- few organi	sms onl	У					
*Large dose	- thousand to	o millioi	ns of organis	sms				

A411. Dangers of Micro-Organism

Bacteria are organisms of minute living cells, with characteristic varying shapes and visible only through a microscope. They are present everywhere. Most bacteria are harmless and even useful to man but a small proportion are harmful (see Tables 2 & 3). Given optimal conditions bacteria can divide into two every 10-30 minutes, and into million or billions within one day. Symptoms of bacterial illness are characteristic-diarrhoea, abdominal pains, with or without vomiting.

A4 Table 2 - Bacterial ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ		ÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
Micro-organism	Effect	Incubation	Duration	
		Period	Death	
		(hrs)	(days)	
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄ	ÄÄÄ		
Bacillus cereus Toxir	n in food	2-15 1-	-2	
Clostridium-Welchi	Toxin in in	testine 8-22	1/2-1	Clostridium botulinum
Toxin in food 2	4-72 Death	n in 1-2 or		
			510 11 01	onvalescence -6 months

Escherichiacoli Infection 4-36 1-7 Salmonella Infection 12-36 1-7 2-6 Staphylococcus Toxin in food Streptococcus Toxin in food 3-12 1-2 ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ

Any pathogenic micro-organism including viruses living in or passing through the intestinal tract may be transmissible by untreated water which is polluted by raw or even inadequately treated sewage. In order to cause an illness the water must be grossly polluted. That is why sewage should be well treated before being discharged into or near a water body.

A4 TABLE 3 - RESERVOIRS AND TRANSMISSION OF HARMFUL BACTERIA

Man or Beat

Nose/Skin Lesion	Bowels
Staphylococci	Sewage/Water, Meats, Offals, Sick Cas carrie
Hands	Salmonellae, Dysenter bacilli CI. wetchil
Food	Food
multiphylin warm kitcl	hen Food poisoning
Food poisoning	

A4 III - DANGERS OF ECONOMIC POISONS

There are nowadays several economic poisons, including pesticides which often cause poisoning and death to man and beast by the pesticides themselves, their raw materials, their containers and effluent etc., being dumped into or near water bodies. The toxicity of a chemical is expressed by means of an LD value, which is a statistical estimate of the dosage necessary to kill 50 per cent of a large population of the test species, under stated conditions (see Table 4).

The organic phosphorus as well as carbonate poisons, act as more or less irreversible inhibitors the enzyme cholinesterase, and thus allow the accumulation of acetylcholine. Organe-chlorine pesticides and several rodenticides are also so deadly poisonous that both manufacturers, traders and users of pesticides should never the allowed to dump any pesticides or under contaminated containers or effluent into or near a water body.

A4 TABLE 4 -ACUTE ORAL AND DERMAL LD⁵⁰ VALUES OF SOME ORGANO-

PHOSPHORUS PESTICIDES FOR WHITE ARE

Oral LD⁵⁰ (mg/Kg.) Dermal LD⁵⁰ (mg/Kg.)

Carbophenoth	ien		30	1	0	54	27	
Clorthion				880	890	4,500	54,100	DDCP
		•••	80 5	б	107	75		
Delnav		•••	43 2	3	235	63		
Demeton		•••		6.2	2.5	14	8.2	
Dos non		•••		108	76	900	455	
Dicaphtion		•••		400	330	790	1,250	
Dimethoate		•••		215	-	400	-	
Ethien		•••	65 2	7	245	62		
Fenthion		•••		215	245	330	330	
Guthion		•••		13	11	220	220	
Malathion		•••	•••	1,375	5 1,00	0 4,4	444 4,444	Methyl
parathion			14	24	67	67		
purumon	•••	•••	11	24	0.	07		
Methyl trithio	 n	•••	98 12		215	190		
-	 n 	···· ···					6.8	
Methyl trithio	n 	 		20 13	215	190	6.8 2.5	
Methyl trithio Parathion	 n 	 		20 13	215 3.6 1.1	190 21		
Methyl trithio Parathion Phorate	 	··· ··· ···		20 13 2.3	215 3.6 1.1 3.7	190 21 6.2	2.5	
Methyl trithio Parathion Phorate Phosdrin	 	···· ··· ··· ···	98 12 23.5	20 13 2.3 6.1	215 3.6 1.1 3.7 3.5	190 21 6.2 4.7	2.5 4.2	
Methyl trithio Parathion Phorate Phosdrin Phosphamido	 	···· ··· ··· ···	98 12 23.5	20 13 2.3 6.1 23	215 3.6 1.1 3.7 3.5	190 21 6.2 4.7 143	2.5 4.2	2,000 2,000
Methyl trithio Parathion Phorate Phosdrin Phosphamido TEPP Trichlorfon	 n 		98 12 	20 13 2.3 6.1 23 1.05 	215 3.6 1.1 3.7 3.5 - 630	190 21 6.2 4.7 143 2.4	2.5 4.2 107 - 560	2,000 2,000 ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ

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A4 TABLE 5-ACUTE ORAL AND DERMAL DL^{50} VALUES FOR ORGANOCHLORINE

PESTICIDES FOR WHITE RATS

Oral LD⁵⁰ (mg/Kg.) Dermal LD⁵⁰ (mg/Kg.)

Aldrin			39 60	98	98			
Chlordane			335	430	840	690		
Chlorobenzila	ate		1,040)	1,220	-		
D D A			740	680	-	-		
D D E			880	1,2	- 240	-		
D D T			113	1	18 -	2,510		
Dieldrin			46	46	90	60		
Endrin		11	7.8 7.5	-	15			
Heptachlor			100	162	195	250		
Lindane (BH	C)		88	91 1,	000	900		
Thiodan			43	18	130	74		
Toxaphene			90	80	1,075	780		
ÄÄÄÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄÄÄ	ÄÄÄ	ÄÄÄÄÄ	ÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄ
ÄÄÄÄÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄ	ÄÄÄÄÄÄ	Ä				

		-0.05mg/m ₃	Thallium			4mg/kg-	-	limit
in air								
					-0.1	mg/m ₃		
Warfin		1.7mg/kg.		limit in	air	-		
					-0.1	mg/m ₃		
Fungicides						0		
Ferban		LD ⁵⁰ r	ng/kg -17,000) rats	-			
Zimram		LD ⁵⁰ mg/kg -	1,400 -	-				
Maneb		LF ⁵⁰ mg/kg - 7	7,500 -	-				
Zineb		LD ⁵⁰ mg/kg - 5	,200 -	-				
Nabam		LD ⁵⁰ mg/kg -	395 -	-				
Organo-M	lercurys	30	mg/kg rats	s limit ir	1 air			
-	-	-0.01mg/m^3	m/.					
		•						

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Pentachlorophenols 2 percent - limit in air Na salt -0.5mg/m ₃
Herbicides:
Arsenic compounds 50 mg. 128 mg. man limit in air
$-0.5 mg/m_3$
Chlorophenoxys(2,4.D) limit in air
-10mg/m ₃
Dinitrophenols LD^{50} -10 LD^{50} -30 - limit in air
-0.2mg/m ₃
ӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒӒ
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
A4-TABLE 7 - TOXICITY OF SOME METALS AND OTHER TOXICANTS
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
Toxicant Toxic Lethal T st Other
Dose Dose Supp.
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
Arsenic 2mg/kg man max. in
Frisenic 2mg/kg man max.m food-3
ug/g;in
water-

0.05 mg/1

Asbestos Cadmium		5mpped 14mg. 300mg/kg. rabbit max in food -0.2-30 ppm.
Carbon monoxide		- 4000 ppm. man
Formaldehyde	-	800 ppm. rat
Hudrogen-sulphide		- 700 ppm man
Lead		- 5mg/100g. man
		(adult)
		(bone) max in food -0.2-30 ppm; in water-0.1 ppm.
Mercury		8mg/m ₃ - man -
Nitrogen Oxide		- 320 ppm mice in 1 hr.
Ozone		2 ppm - man in 2 hrs.
Sulphur dioxide		- 50 ppm rabbit in 30 days
Iron		30mg/m_3 - man max.in
		food-250

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ppm; water-1.0

A4. IV. - HAZARDS OF IONIZING RADIATIONS

All radiation exposure is harmful, and any unnecessary exposure to or dumping of wastes containing ionizing radiation should be avoided. Ionizing radiation can cause bodily harm (somatic hazards) to the individual who is exposed, or even genetic harm to his

offsprings. The pollution of water bodies by radioactive material is an increasingly serious problem, particularly where reactors are in operation; or where radioisotopes are used e.g. treatment of malignancies by Radium or Cobalt in hospitals or in studies of sea pollution by effluent using radioisotope tracers. Nuclear weapon tests too pollute the atmosphere and some environments by their "fall-out". Use of radio-active material and international bodies.

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WATER UTILIZATION (CONTROL AND REGULATION) ACT [SUBSIDIARY LEGISLATION]

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WATER UTILIZATION (CONTROL AND REGULATION) ACT

NOTICES

The following Notices have been omitted in this edition: G.N.No.241 of 1975 - The appointed date on which the Water Utilization (Control and Regulation) Act shall come into operation.

G.N.No.238 of 1975 - The appointment of Principal Water Officer and Water Officer, respectively.

G.N.No.239 of 1975 - The appointment of Regional Water Engineers.

G.N.No.240 of 1975 - The appointment of the Control Water Advisory Board

NOTICES

Under section 9

G.Ns.No.242

THE WATER UTILIZATION (DECLARATION OF NATIONAL of 1975 WATER SUPPLY SOURCES) NOTICE, 1975 No.59 of 1978

1. This Notice may be cited as the Water Utilization (Declaration of National Water Supply Sources) Notices, 1975.

2. All sources of water specified in the Schedule to this Notice are hereby declared to be national water supply sources.

SCHEDULE

-	No.	Sources	Catchment	
	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄÄÄÄÄÄÄÄÄÄ	ÄÄÄÄÄ
1	1 Umba River		IR	

1. Umba River		 	IB
2. Sigi River		 IG	
3. Pangani River		 ID	
4. Luengeta River		 IDA	
5. Mombo River		 	IDB
6. Mkomazi River		 IDB	
7. Pangani-Ruvu Riv	er	 	IDC
8. Rau River		 IDC	
9. Himo River		 	IDC
10. Mue River		 IDC	
11. Miwaleni Springs		 IDC	
12. Nyumba ya Mung	u Dam	 ID0	2
13. Kikuletwa River		 IDD	
14. Weruweru River		 IDD	
15. Malala River		 	IDD
16. Kware River		 	IDD
17. Nduruma River		 IDD	

18. Kikafu River	 		IDD
19. Karanga River	 	IDD	
20. Umbwe River	 		IDD
21. Isii River	 	IDD	
22. Gomberi River	 	IDD	

SCHEDULE (contd)

No. Sources Catchment

23. Gararagua River	•••	•••	IDD	
24. Usa River		•••	IDD	
25. Tengeru River		•••	IDD	
26. Themi River		•••		IDE
27. Wami River		•••		IG
28. Mkundi River	•••	•••	•••	IG
29. Diwale River		•••	IC	θE
30. Kinyasungwe Riv	/er	•••	•••	IGD
31. Mkondo River		•••		IGD
32. Makutopora Grou	und Wat	er	IGI)
33. Ruvu River	•••	•••	IF	ł
34. Ngerengere River	r	•••	IHA	
35. Morogoro River		•••	IHA	
36. Mgeta River		•••		IHB
37. Njenje River		•••		IK
38. Rufiji River		•••		IK
39. Luwegu River		•••		IK
40. Luhombero River	r	•••	IK	
41. Pitu River		•••	IK	
42. Ruhudji River		•••	IKA	
43. Great Ruaha Rive	er	•••	IKA	
44. Little Ruaha Rive	er	•••	IKA	
45. Njombe River		•••	•••	IKA
46. Kizigo River		•••		IKA
47. Muhuwesi River			IKA	
48. Mkoji River	•••	•••	•••	IKA
49. Chimala River		•••	IKA	

SCHEDULE-(contd)

ÄÄÄÄÄÄÄÄ No.

Sources

Catchment

ÄÄÄÄÄÄÄÄ

51.	Mbarali River		 IKA	
52.	Mkalangali River		 IKA	
53.	Mbembera River		 IKA	
54.	Mbangali River		 IkA	
55.	Yovi River		 	IKA
56.	Lukosi River		 	IKA
57.	Kimani River		 	IKA
58.	Kilombero River		 IKB	
59.	Mbarangandu Riv	er	 	IKB
60.	Lumemo River		 	IKB
61.	Mnyera River		 	IKB
62.	Kihanzi River		 IKB	
63.	Muse River		 	IKB
64.	Matandu River		 IL	
65.	Mbwemkuru Rive	er	 	IM
66.	Lukuledi River		 IN	
67.	Mbangaka River		 IQ	
68.	Lumesuro River		 IQ	
69.	Lituhi River		 	IRA
70.	Lake Nyasa		 	IRA
71.	Ruhuhu River		 	IRB
72.	Ruvuma River		 	IRB
73.	Lyangala River		 IRC	
74.	Katuma River		 	IRC
75.	Rufirio River		 IRC	
76.	Kavu River		 	IRC
77.	Mbaka River		 	IRC

No.

Catachment

78. Lukima River				IRC
79. Kiwira River		•••		IRC
80. Rungwa River .		IR	С	
81. Mawonga River	•••	•••	2K	
82. Wembere River			2K	
83. Sibiti River				2KC
84. Bubu River		•••	•••	2R
85. Songwe River				3A
86. Lupa River		•••	•••	3A
87. Lake Rukwa				3A
88. Saisi River			3B	
89. Nkarua River		•••	•••	3B
90. Momba River		•••	•••	3B
91. Kabenga River	•••	•••	3C	
92. Mtonzi River				3C
93. Msaidia River	•••	•••	3C	
94. Mfizi River		•••	•••	3C
95. Luiche (Sumbawa	nga) Ri	ver	3C	
96. Ipatia River	-	•••	•••	3D
97. Muipa River		•••	•••	3D
98. Makambe River	•••		3D	
99. Yeye River		•••	•••	3E
100. Kikamba River	•••		3E	
101. Lukwate River			3E	
102. Wuku River				3E
103. Malagarasi River			4A	
104. Mtambe River				4A
105. Ugala River				4A
-				

SCHEDULE-(CONTD)

No.

Sources

Catchment

10 < 1 < 1 < U' > D'		4 D	
106. Luiche (Kigoma) River	•••	4B	
107. Lake Tanganyika		4B	
108. Lugonozi River		4D	
109. Lufugu River			4D
110. Msenguzi River		4D	
111. Ifume			4E
112. Kalambo River		4H	
113. Luamfi River			4J
114. Kagera River			5A
115. Ruvuvu River			5A
116. Ngono River			5A
117. Lake Victoria		5B	011
118. Mara River			5D
119. Grumeti River		5D	
120. Simiyu River			5D
121. Mbarageti River		5E	-
122 Naromoru River		IAA	
123 Kimengelia River		1AA	
124 Lake Jipe	 1DC	11 11 1	
125 Ndurumanga Rive	-	1DD	
126 Kigeri Kubwa/Nd			D
-		1DDA	
5			
128 Namwe River		1DDA	L
129 Njoro River	1DD		
130 Ngare Nairobi No			
131 Ngare Nairobi Sou	uth Riv	er 2CA	1
132 Kirubuma River	2	H	
133 Mto wa Simba Riv	ver	2H	
134 Mto wa Mbu Rive	er 2H		

No.

Source

135. Mbarageti Lake Manyara
136. Kirongozi River 2H
137. Dudumera River 2H
138. Magara River 2H

2H

Catchment

139	Kuo River	2H	
140	Mayoka North Riv	ver	2H
141	Mayoka South Riv	ver	2H
142	Willi Willi River	2H	
143	Dagaa River		2H
144	Gehere River		2H
145	Yambi River		2H
146	Lake Eyasi	2K	
147	Lake Natron		2K
148	Lake Kitangiri	2K	
149	Uaso Nyiro River	2K	
150	Kelema River		2K
151	Nzofwe River		3A
152	Mbalizi River		3A
153	Imeta River		3A
154	Mlowo River		3A
155	Ruchungi River	3C	

REGULATIONS

Made Under Section 38(f) GN.No.175 THE SONGWE RIVER WATER USERS ASSOCIATION of 1975 REGULATIONS

1. These Regulations may be cited as the Songwe river Water Users' Association Regulations.

2.-(1) There is hereby formed an association which shall be known as the Songwe River Water Users Association.

(2) The Association, including its committees, shall have status of a legal person and in that capacity it shall be capable of suing and being sued.

(3) The liability of any venture of the Association shall be limited.

(4) The members of the Association shall originally be the Mbeya Cement Company Limited and the Mbeya Textile Mill Limited and shall later include such other persons, companies, committees and authorities as may be admitted by vote at a General or ExtraOrdinary Meeting of Members.

Acts.1974 No.42

3. The objects of the Association shall be:

(a) to operate Water rights issued from time to time under the provisions of Water Rights issued from time to time under the provisions of water Utilization (Control and Regulation) Act, 1974 and to ensure that there is continuous adequate supply of water to the members of the association;

(b) to operate and maintain in the Water intake and the pumping station at Songwe River and the Water Reservoir;

(c) to operate and maintain Effluent Treatment System;

(d) to liase with the Central and Local Government Authorities for the better operation of the Water Right;

(e) in collaboration with other related bodies, to plan for and undertake any modification expansion of Water Works or such other works as may from time to time be necessary for the better operation of the Water Right.

4. Subject to the availability of water at the Water Reservoir, Mbeya Textile Mill Limited and Mbeya Cement Company Limited shall be entitled to supply of 4,500 cubic meters and 1,500 cubic meters per day respectively, provided however, that in the case of the available water from the Water Reservoir bring insufficient for purpose of meeting the said quota the available water shall be supplied to the said Mbeya Textile Mill Limited and Mbeya

cement Company Limited in the ratio of 3:1 respectively.

5. The members shall be responsible for the drawing of water from the reservoir, and the pumping of the same to their respective factories and the Association shall, by means of appropriate devices under its exclusive control, meter and control quantities of water drawn by the members.

6. The Association shall be responsible for the treatment effluent and sewage from the factories owned by the members in compliance with the standard specified under the Water Right.

7.-(1) There shall be an Annual General Meeting of the members to be held once in every year and not more than fifteen months following the previous Annual General Meeting. An Extraordinary General Meeting of the Association may be called by fifty percentum of

members giving two weeks' notice to the Secretary in writing.

(2) Two members represented by persons appointed in writing shall constitute the quorum, provided that if the total number of members increases above two, then the quorum shall be half the number of members plus one.

(3) All decisions of the Annual or Extraordinary General Meeting shall be made by a majority of votes.

(4) The Annual General Meeting shall have the following powers-

- (a) to consider and approve the annual budget of the Associations;
- (b) to appoint bankers and auditors for the Association;
- (c) to consider annual report of the Management Committee;
- (d) to consider application for membership in the Association;

(e) from time to time to review appointment to the Management Committee and make any necessary changes in the composition of the said Committee; and

(f) generally to lay down policies for the efficient management of the affairs of the Association.

8. The Management of the Association shall rest in the management Committee constituted by the Chief Executives of the member companies, two other top officials from each of the member companies and ex-officio members who shall be the Regional Development Director - Mbeya, Regional Water Engineer-Mbeya, Regional Lands officer-Mbeya or their representatives and one member from the Ministry of Industries.

(2) The Regional Development Director shall be the Chairman and a Secretary shall be appointed by the Committee members.

(3) The Management Committee shall-

(a) appoint and employ such employees as may be necessary to fulfil the purpose of the association;

(b) fix the appropriate water rates to be levied on the users;

(c) through its authorized officers, collect and receive any moneys due to the association and pay moneys owing by the Association from time to time and open and maintain a Bank Account through its authorized officers and submit annual audited Accounts to the Annual General Meeting;

(d) the Committee shall meet at least once in each quarter of the year and the quorum at the meeting shall be half the number of the total number of the members provided that there is a representative from each of the member companies.

9. The Association shall finance its operations out of the funds to be raised from the rates on the users.

10. The Association shall not be liable for any indebtedness other than that contracted by its committees duly authorized in writing.

REGULATIONS

Under section 38 (2)

G.N.No.233 of 1975 THE WATER UTILIZATION (GENERAL)REGULATIONS

PART I PRELIMINARY

Title

1. These Regulations may be cited as the Water utilization (General) Regulations, 1975.

Interpretation

2. In these Regulations, unless it is otherwise provided-"Board" depending on the context, means either of the Board established by section 5 of the Act;

"Chairman" means the Chairman of the Board and includes a person elected to preside at a meeting of the Board;

"hearing" means a sitting of the Board for the purpose of taking evidence or receiving submissions or representations relating to a matter referred to it;

"member" means a member of the Board and includes the Chairman;

"the Act" means the Water Utilization (Control and Regulation) Act, 1975;

"water right" includes an existing right.

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PART II

APPLICATIONS

Notification 3. Where an application is made in of accordance with section 15 of the Act, the applications Water Officer shall prepare a notice setting under out the particulars of the application and section 15 cause it to bepublished in the *Gazette* (a) served upon all persons named in the (b) application as being liable to be affected by the grant of the right for which the application is made, and upon such other persons as he thinks fit: and displayed at the District Office of (c) the district in which the right for which the application is made will, if granted, be exercised. Notification 4. Where in consequence of any transfer, of lease or partition of land under section 16 (3) applications of the Act and the person who becomes entitled under to the possession of part of the land to which section 16 (3) a water right or existing right has been declared

appurtenant applies to the Water Officer to determine the proportion of the water which he may abstract and use, the Water

officer shall cause a copy of the application to be served upon every person who is entitled to possession of the remainder of the land to which the water right, of which the applicant seeks and apportioned

part, is appurtenant.

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 Time
 5.-(1) A Water officer may refuse to within consider any objection to an application for a which to
 water right, the apportionment of water right, tender

 or an easement if the objection reaches him objections
 forty days after the relevant date.
 (2)

 In this regulation the expression
 (1) A Water officer may refuse to within water right, the apportionment of water right, tender
 (2)

"relevant date" means-

(a) in the case of an objector served with a notice under regulation 3 or copy of an application under regulation 4, the date on which such notice or copy was served upon him; (b) in the case of an objector who is not

entitled under regulation 3 to have notice of an application served upon him, the date on which the application were first published

in the Gazette; and

(c) in the case of an objector to an application for and easement the date upon which notice was served on him under section 27(2) of the Act.

Service of
every applicant for a water right, uponThe Water officer shall cause to be objections served
applicant for a water right, upon
the apportionment of a water right or
an applicants
easement a copy of every objection received byupon
himwithin the period specified in regulation5 together with a copy of any
other objection5 together with a copy of any
or, in the case of an application which is

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referred to a Board, which is sent to the

Board.

PART III REFERENCE TO BOARDS

Documents		7.	Where a Water officer refers a	any to be sent to
application to	a Board	l, he sha	all send to the Board	Chairman of the
Board-				
in relation to	(a)	a copy	of the application;	
application	(b)	a copy	of every objection received	
within the per	iod spec	ified in		regulation 5, and such
other			objections as he thinks fit; and	d
		(c)	such other information relevant	nt to
the application	n as the	Water of	officer	deems
necessary for the Boa	rd to giv	ve		full consideration to
the application			and the object	ions thereto, and the
	Chairman shall lay the same before			
the Board.				
Documents		8. -(1)	Where a Water officer refers to	a to be sent to Board
any matter, other than concerning-	n a matte	er referr	ed the Board to	in paragraph (2),
cases	(a)	the de	termination, revision,	
diminution or	modific	ation of	f a water	right; or
		(b)	the specification of a quantity	of
water under se	ection 2	1 of the	Act, he	shall inform
the Chairman of the				

Board whether or not the holder of any water right liable to be affected such by determination, revision, diminution, modification or specification has been notified that the right is being referred to the Board, and, if such holder has been notified, inform the Chairman of any representations the holder has made. (2)Where a water officer refers to a Board any matter concerning the determination, diminution or modification of a water right under section 24 of the Act, he shall send to the Chairman of the Board a copy of the notice served by him under subsection (1) of section 24 of the Act and a copy of any statement made by the holder of the water right under subsection (3) of that section. In addition to the information and (3)documents specified in paragraphs (1) and (2), the Water officer may send to the Chairman of the Board such information relevant to the matter as he deems necessary for the Board to give full consideration to the matter referred to it. The Chairman shall lay before the (4) Board all documents and information received by him under this regulation.

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PART V WATER ADVISORY BOARDS

Appointment9.The Minister shall appoint one of the of
members of the Central Water Advisory Board to Chairmanbe Chairman of
be Chairman of
the Board.the Board.The Regional
of a Boardof a Board
Commissioner shall appoint one of the
of the Regional Water Advisory Board to be
Chairman of the Board.

Convening **10.**-(1) The Chairman shall, by giving to and

		even days' notice, quorum at	convene	all
meetings of the B				
meetings of	. ,	Chairman shall preside at all Board		
meetings	of the Board at w	hich he is present.		
	(3)	In the absence of the Chairman from	L	
a meeting	of the Board a m	nember elected by the	members	
present shall preside at that meeting.				
	(4)	At a meeting of the Board-		
	(a)	not less than one third of the		
members,	one of them bein	ng the	Secretary, sh	nall
form a quorum; or				
ionn a quorum, o	1			
ionn a quorani, o	(b)	if the Board consists of less than		
•			them	
•	(b) embers, five mem			
fifteen me	(b) embers, five mem ry, shall form	bers, one of		
fifteen me being the Secreta	(b) embers, five mem ry, shall form (5)	bers, one of a quo Where the Chairman receives a		
fifteen me being the Secreta requisition	(b) embers, five mem ry, shall form (5) n signed by two n	bers, one of a quo Where the Chairman receives a nembers or by a Water	rum. Officer call	ing
fifteen me being the Secreta	(b) embers, five mem ry, shall form (5) n signed by two n vene a meeting	bers, one of a quo Where the Chairman receives a	rum. Officer call	ing

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11.-(1) Subject to paragraphs (2) and (3), business by the Board may Conduct of meetings or by circulation of papers. conduct its business either at and decisions of (2)A decision of the Board at a meeting Board shall be by a majority of votes of the members present and voting. A decision of the Board on a circulation of papers shall be by the concurrence of the majority of the members. When any business is conducted by (3) circulation of papers any member may require much business to be referred to a meeting of the Board. (4) In the event of an equality of votes at a meeting of the Board the person presiding at the meeting shall have, in addition to his deliberative vote, a casting vote. Notification 12. Where the Board proposes to meet to of meetings consider any application or other matter of Board referred to it, the Chairman shall give reasonable notice of the time and place at which the Board is to meet toevery person who has made an (a) objection to the application within the prescribed time and given notice that he wishes to be heard;

(b)	any other person	n whom the Board	
considers fit to be given an		opportunity	of
appearing; and			
(c)	the applicant the	e objector to whose	
application appears.			

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13.-(1) Whenever the Board meets to entitled to Persons consider any application or other matter referred to itappear and every person who has made an be heard (a) objection to an application; any person to whom the Board has (b) given notice in accordance with paragraph (b) of regulation 12; and (c) the applicant the objector to whose application is given notice. shall be entitled to appear at the meeting and be heard, as the case may be, in support of his objection, or on the application or other matter to which the notice relates, or in support of his application. (2)Any person who is entitled, under this regulation to appear may appear in person or by advocate and be heard and shall have the right to give evidence, or call witness to give evidence, cross-examine witnesses, and to make submissions to the Board.

Summoning 14. The Board shall have, as regard the of witnesses, attendances, swearing and examination of administer-witnesses, the production and inspection of documents, and other matters necessary or oaths, etc proper for the due performance of its functions, all such power, rights and privileges as are vested in a superior court of record and, without limiting the generally of the foregoing, may-

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(a) on its own motion or on the application of a person entitled to be heard, by notice signed by the Chairman, require any person to

appear at the time and place mentioned therein to testify to all matters within his knowledge relative to a subject matter before the Board. and to bring with him and produce any document, book or paper that he has in his possession or under his control relative to the subject matter of the hearing; administer oaths and examine any (b) person upon oath, affirmation or otherwise; and

(c) during the hearing receive such additional information as it may consider credible or trustworthy and necessary for dealing with the subject-matter before it.

Written **15.** The Board may, on its own motion or representon application of a person entitled to be heard, permit any person appearing or required to appear as a witness before the Board to give evidence by tendering, and verifying by oath, a written statement.

Admissistatement, document, information, or matter evidence that may in its opinion assist it to deal

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effectually with the subject-matter before it, whether or not the same would be admissible in a court of law.

Procedure **17.**-(1) Subject to paragraph (2), the of earnings Board shall govern its own procedure at any hearing. At any hearing, the Board shall (2)observe the rules of natural justice, and shall hear all evidence made by or on behalf of the persons entitled to tendered and representations appear and be heard which it considers relevant to the subject matter or the hearing, save that at any time during the hearing it may, if it has sufficient evidence to arrive at a decision on the subject matter, decide not to receive further evidence or representations.

Expenses **17A.** A person required to appear and give evidence before the Board shall be paid such appropriate substance

allowance as are paid to government officers travelling on duty and shall be reimbursed any monies spent on transport, food and accommodation on production of *bona fide* documents in proof thereof.

Record of **18.**-(1) The Board shall cause to be kept minutes of and maintained a book in which are recorded meetings minutes of each meeting and proceedings at each and hearing showing adequate details of-

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evidence at hearings	(a)	the bu (b) (c) (d)	siness conducted or transacted; all evidence received; all arguments heard; and all findings made by the Board concerning any act, matter or th	ing	
authorized or required to be done or					ecided by the
Board.	required	10 0 0 u		u	served by the
Dourd		(2)	The minutes of each meeting sh	all be	
read at the nex	t ensuir	· /	ing and, if passed		s correct, shall
be confirmed by the signature			of the Chairman.		
, , , , , , , , , , , , , , , , , , ,	8		The Chairman shall cause a cop	ov of	
			-	ed to	the water
Officer.			Ĩ		
		(4)	Before the close of every meeting	ng a	
summary of th	ne resolu	ition ma	ide by the Board at	tł	ne previous
meeting shall be appre			Board, signed b	y the Ch	airman, and a
сору	thereof	f shall f	orthwith be dispatched to the	-	Water
Officer.			-		
		(5)	A copy of a summary of resolut	tions	
dispatched to t	the Wate	er office	er shall be	sufficient	notification
to him for all purpose	S		of every resolution mad	e at the r	neeting.
PART V					

APPEALS

Notice of **19.-**(1) Any person wishing to appeal under intention of section 32 of the Act shall give to the Water appeal Officer and to the appellate authority a notice

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of his intention to appeal within thirty days of the notification to him of the decision of the Water Officer or the service upon him of the certificate or the grant in respect of which the appeal is to be made or, if he is not а person upon whom the Water Officer is required by the Act or by these Regulations to serve notice of such decision, within thirty days of the decision. (2)Notwithstanding paragraph (1), the appellate authority may, for good cause, extend the period within which notice of appeal may be given. Upon receipt of a notice of intention of case Preparation 20. to appeal and within twenty-one days of the receipt of the notice,m the Water Officer shall cause to be prepared and transmitted to the appropriate appellate authorityin the case of an appeal against a (a) decision given in respect of any application, three copies of-(i) a written statement showing the name and address of the applicant and every objector to the application, and the decision appealed against; the application in respect of (ii) which the decision appealed against was given; (iii) the relevant portion of the

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	minutes showing the advice of	Ĩ
the Board, if any was	given;	
(iv)	any objection which was refer	red
to the Board;		
(v)	all other documents which we	re
considered by the Wa	ter officer	
in arriving at the decision		appealed
against; and		
(vi)	a written statement signed by	
the Water Officer indicating		
concisely the grounds of the		decision

appealed against and any conclusion of fact arrived at by him. (b) in every other case three copies of the documents specified in subparagraphs paragraph (a), together with any (iii), (v) and (vi) of notice relevant to the matter served by the Water Officer on the appellant and any representation or statement made by him to the Water Officer.

Memo-21. The appellant shall, within twenty-randum ofonedays after giving notice of appeal, Appealtransmit to the appellate authority andtheWater officer three copies of his memorandum ofappeal setting out concisely and under distinctandconsecutively numbered heads the grounds ofhis objection to thedecision of the WaterOfficer.

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Deciding **22.**-(1) Subject to paragraph (2), upon on the receipt of the memorandum of appeal, the appeal appellate authority shall proceed to and determine the appeal. consider (2)The appellate authority may, if it thinks it desirable, give an opportunity to the appellant to be heard in support of his memorandum of appeal. (3) When the appellate authority decides to hear the appellant in support of his memorandum of appeal, it shall give an opportunity to be heard to-(a) the Water officer; and if the appeal is against the decision (b) of the Water Officer on an application-(i) all objectors to the application if the appellant was the original applicant; or (ii) the original applicant is the appellant was an objector to the application. (4) In deciding on the appeal the appellant authority shall not confine its considerations to the grounds of appeal set out in the memorandum of appeal.

PART VI GENERAL

Notification 22A. -(1) The water officer shall, in of each case where he is required by	addition	to
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decisions of the Act to give notice, give notice of every Water which an appeal lies under Officer section 32 of the Act to- (a) the person whose application has been determined by such decision or whose		from
water right, easement, or works have	been	SO
affected;	ocen	50
(b) all persons who have objected to the		
application where an application may	be objected	d to;
and		
(c) all persons on whom the Water office	r	
is required to serve notice of the	ma	king
of an application.		
(2) Notwithstanding paragraph (1), the		
Water Officer may not give notice under this regulat		any
person on whom, as a result of the decision, he has already	served a	
certificate or grant under the Act.		
information relevant to any calling for application or matter before him information such information either orally or in writing or production of a document. (2) Where information is to be given	possession to give by be sent to	of him the
(3) Where a person is required to attend		

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Water Advisory Board.

Forms **24.**-(1) The forms set out in the First copies and Schedule to these Regulations shall be used in annexures all matters to which they refer with such adaptation and modifications as the circumstances require and in such number of copies as may be specified therein. Whenever it is provided in a form (2)that there be annexed thereto any document, the form shall be deemed to be not properly completed if the document specified therein is not annexed thereto.

Fees 25.-(1) The fees set out in the Second Schedule to these Regulations shall be payable to the Water Officer in respect of the matters specified in that Schedule. (2) Where an appellate authority allows an appeal under section 32 of the Act, it may, if it deems it fit, direct the Water Officer to refund any fee or any part thereof paid in respect of the appeal and the Water Officer shall give effect to the direction.

Offenses **26.**-(1) Any person who, having been given notice, as prescribed, to appear and given evidence before a Board or, as the case may be,

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to give inform	ation to a Water Officer, without		
reasonable excuse-			
(a)	fails to attend as required by the		
notice; or			
(b)	fails or refuses to appear and report		
himself from day to day until	excused	or	released
from further attendance.			
shall be guilty	of an offence and liable, on		
conviction, to a fine not excee	eding two thous	and shil	lings.
(2)	If a person appearing as required		-
before a Board, without reasonable excuse-			
(a)	refuses or fails to be sworn or make		
an affirmation;			
(b)	refuses or fails to answer a question		
that he is required to answer b	by or	with	the
concurrence of the Chairman;	or		

before a

(c) refuses or fails to produce a
document that he was required toproduce by anotice under theseRegulations served on him as
prescribed,
he shall be guilty of an offence and liable on
conviction to a fine not exceeding two thousandshillings.

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FIRST SCHEDULE

Form A

APPLICATION FOR WATER RIGHT The Water Utilization (Control and Regulation) Act, 1974 (Section 15)

(To be completed in quintuplicate)

To: The Water officer,

- 1. Name of applicant
- 2. Postal Address
- 3. Particulars of land in respect of which application is made-
 - District Region
 - (b) Location or Village
 - (c) Name
 - (d) Land Office No.Ian
 - (e) Hectarage
- (f) *Freehold, leasehold, right of Occupancy for......years (other interest):

(g) Title of applicant:

(a)

- (h) Name and address of owner of reversion, if any, other than the President (if none, state none):
 - (i) Details of other sources of water used on the land;
 - 4. Particulars of Water Right for which application is made:- (1) Body of water
 (2) Whether application made to *divert/dam/store/abstract
 (3) Purpose

*(a)

No. of persons (b) Stock: No. of Stock

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(c) Irrigation: No. of hectares and crops(d) Fish Farming: hectorage of ponds			
(e) Industrial:			
(f) Mechanical: Fall available:	ft.		
Height water to be lifted:	ft.		
(g) Power: Fall available:	ft.		
Horsepower to be dev	veloped.		
Type of power plant p	-		
(h) Mining: Description of plant in use.			
Type of ore to be crus	shed or treated.		
(i) Public Supply:			
Total quantities of water:			
(4) Point of Intake			
(5) Point of Return			
5. (a) Particulars of possible pollution			
(b) Measures to be taken to avoid pollution			
6. Particulars of works			
(a) Constructed			
(b) to be constructed			
7. (a) Is application made for the grant to be	made appurtenant to	the	land
specified in paragraph 3?			
(b) If the application is not the owner of the	e land, has the	owner	been
informed that application is made for such	declaration?		
8. The name and address of other users who	may be affected by the	grant o	of the
water right for which application is made.			

*Strike out whichever does not apply

A separate application must be made in respect of each body of water State amount in gallons daily or cusecs (540,000 gallons per diem = 1 cusec) State amount in litres daily cummecs (86,400,000 litres = 1 cumec)

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Signature of Applicant

If the applicant does not own the whole interest in the land, attached to this application the consent of the owner to the application that the grant be made appurtenant to the land.

Use space below for a SKETCH MAP which must contain the following particulars:-

(a) The plan of the property and the adjoining properties.

(b) The body of water referred to.

(c) The point on the body of water where it is desired to abstract water or construct works and the line of furrow; and

(d) the true North

If possible use a tracing from the plan attached to your little deeds.

NOTE:-

The applicant is requested to give the Kilometres and simple description of the road to the property from the turn-off on a main road, or any well-known landmark, to facilitate inspection.

Form B DESCRIPTION AND PLANT OF WORKS CONSTRUCTED AND/OR PROPOSED

For Official Use Only No. Zone. Region.

NOTICE OF APPORTIONMENT OF WATER RIGHT ON SUBDIVISION OF LAND The Water Utilization (Control and Regulation)

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Act, 1974 (Section 16 (4))

To: The Water Officer

1. Name of person acquiring right

2. Address

3. Particulars of land subdivided and the owners thereof

Date

before subdivision
4. Particulars of subdivision and the owner of the parcels
5. Particulars of Water Right
6. Particulars of declaration of appurtenancy of water right
specified in paragraph 5 to land specified in paragraph
7. Particulars of apportionment of water right
8. Particulars of works in respect of apportionment
Date
Signature of Grantor
Date
This form must be accompanied by a plan showing full
details of the subdivision apportionment and Works.

Form C

person

APPLICATION FOR AN EASEMENT

The Water Utilization (Control and Regulation) Act, 1974

(Section 27)

(To be completed in quintuplicate)

- To: The Water officer
- 1. Name of application
- 2. Postal address
- 3. Particulars of Water Right
- 4. Particulars of land in respect of which right was granted
- 5. Is the water right appurtenant to the land?
- 6. Particulars of land over which easement is sought, and of all having an interest therein

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7. Particulars of easement sought

8. Particulars of existing and proposed works

9. Particulars of compensation proposed

10. Particulars of attempts to obtain an easement by agreement

Signature of Applicant

(This form must be accompanied by a plan showing full details of the easement sought)

Form D CERTIFICATE OF THE CREATION OF AN EASEMENT The Water Utilization (Control and Regulation) Act, 1974 (Section 27 (4))

Date

I hereby certify that in exercise of the powers vested in me	by	section	27
of the Water Ordinance (Cap.410) I have this day created the following e	easer	nent:-	
Particulars of Easement:			
Particulars of dominant tenement and owner:			
Particulars of Water Right:			
Particulars of Servient tenement:			
On the following terms and conditions.			
This easement is appurtenant to the said dominant tenement.			
Date Water Officer			
Date Water Officer			
Signed and delivered by the said(Water Officer)	who	o is kno	wn
	who	o is kno	wn
Signed and delivered by the said(Water Officer)	who	o is kno	wn
Signed and delivered by the said(Water Officer) to me personally, in my presence thisday of19	who	o is kno	wn
Signed and delivered by the said(Water Officer) to me personally, in my presence thisday of19 (Signature)	who	o is kno	own
Signed and delivered by the said(Water Officer) to me personally, in my presence thisday of19 (Signature) (Postal Address)		o is kno gistration	

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	PROVISIONAL/FI The Water Utili	NAL GRANT OF zation (Control and Act, 1974 (Section 15)			
No:		Zone:	Region:		
1.	Name of holder:		0		
2.	Address:				
3.	Particulars of Water Ri	ght:			
4.	This right is/is not appu	urtenant to:			
5.	Works:				
6.	Whether grant subject	to construction of w	orks specified in	paragraph	5
and due by w	which works to be complete	ted:			
7.	This water right is gran	ited subject to the p	rovisions of the	Wa	ater
Utilization (C	Control and Regulation) A	Act, 1974 and the	special	terms	and
conditions sp	becified overleaf.				
Date			Water Officer		
*To	be completed in quintupli	cate in the case of o	objections and		
applications					
Strik	ke out whichever does not	t apply			
To b	be completed in the case of	of applications only			
To b	be completed in the case of	of objections to appl	lications for	W	ater
right only					

Form F For Official Use Only Reference No.: NOTICE REQUIRING ATTENDANCE/PRODUCTION OF DOCUMENTS The Water Utilization and Regulation Act, 1974 (Regulation 14 and 27)

In the matter of

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Notice is hereby given by the Water Officer/Water Advisory Board required* produce the Water of.....are to to Office......Water Advisory Board..... atday of..... 19..... the following:to attend before the Water officer/Water Advisory Board at on the day of19...... at the hour of and to bring with you: You are further requested to sign on the reverse of the copy hereof an acknowledgement of service of this notice and to return the copy to me on or before the day of

Dated this day of19.....

Water Officer/Chairman, Water Advisory Board

NOTE:-

The penalty for no-Compliance with this notice under regulation 30 of the Water Utilization (General) Regulations, 1974, is a fine not exceeding Shs.2,000/=. If the person whose attendance is required is not resident within the district in which he is required to attend, this notice shall be accompanied by tender of expenses of attendance in accordance with regulations 15 and 27.

*Delete as appropriate

(Back of form I)

Dated thisday of19....

Signature

Form G NOTICE OF INTENTION TO APPEAL The Water Utilization (Control and Regulation) Act, 1974

(Regulation 19)

For Official Use Only

Reference:

To:The Water officer:

I/We.....of

.....wish to appeal against the decision of the Water Officer (state decision appealed against).

which notified to by notice No.....

dated the Signed

Date

DATE: (1) A copy of this notice must be sent to the Minister responsible for water or to Regional Commissioner of the region in which the relevant regional water supply is situate.

(2) The fee of Shs.250/= must accompany this notice.

SECOND SCHEDULE

FEES

Matter

Shs.

Fee

1. Application for a water right to be made appurtenant to land (including an application for water right, which comprises

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	an application for the water right to be made appurtenant to	
	land) 100/=	=
2.	Application for a water right other than an application specified	in item
1	50/=	

Item

50/= 250/=

All other applications
 On every appeal to the Minister