

Johannesburg, South Africa

## Treated Effluent

Legislation as at 26 April 2017

FRBR URI: /akn/za-jhb/act/by-law/2017/365/eng@2017-04-26

There may have been updates since this file was created.

PDF created on 18 June 2024 at 10:36.

*Collection last checked for updates: 14 June 2024.*

[Check for updates](#)



### About this collection

The legislation in this collection has been reproduced as it was originally printed in the Government Gazette, with improved formatting and with minor typographical errors corrected. All amendments have been applied directly to the text and annotated. A scan of the original gazette of each piece of legislation (including amendments) is available for reference.

This is a free download from LawLibrary and is presented in collaboration with the African Legal Information Institute, the Judicial Institute for Africa and the Laws.Africa Legislation Commons, a collection of African legislation that is digitised by Laws.Africa and made available for free.

[www.lawlibrary.org.za](http://www.lawlibrary.org.za) | [info@lawlibrary.org.za](mailto:info@lawlibrary.org.za)

[www.laws.africa](http://www.laws.africa) | [info@laws.africa](mailto:info@laws.africa)

There is no copyright on the legislative content of this document.

This PDF copy is licensed under a Creative Commons Attribution 4.0 License (CC BY 4.0). Share widely and freely.

Treated Effluent  
Contents

Chapter 1 – Definitions and General Provisions ..... 1

    1. Definitions ..... 1

    2. Application and purpose of this By-law ..... 3

    3. Powers of the Council, the Managing Director: Johannesburg Water, the Executive Director: Environment and Infrastructure Services Department and the Executive Director: Health ..... 3

    4. Appointment of authorised officials ..... 4

    5. Delegation ..... 4

    6. Health risks and situations that require immediate action ..... 4

    7. Duties of the public ..... 4

    8. Recovery of costs ..... 4

    9. Compliance notices ..... 5

    10. Responsibility for compliance with this By-law ..... 5

Chapter 2 – Provisions Relating to the Supply of Treated Effluent ..... 5

    11. Unauthorised use of treated effluent ..... 5

    12. Application for supply of treated effluent ..... 5

    13. Agreements ..... 6

    14. Pipes in streets or public places ..... 6

    15. Termination of agreements ..... 6

    16. Interference with the treated effluent supply system ..... 7

    17. Obstruction of access to the treated effluent supply system ..... 7

    18. Servitudes ..... 7

    19. Interconnection between premises ..... 7

    20. Provision and position of isolating valves ..... 7

    21. Availability and assurance of supply ..... 7

    22. Restriction or cutting-off of supply ..... 8

    23. Metering of treated effluent supplied ..... 8

    24. Quantity of treated effluent supplied ..... 9

    25. Resale of treated effluent ..... 9

    26. Estimation of quantity of treated effluent supplied to consumer through defective meter ..... 9

    27. Special Measurement ..... 10

Chapter 3 – General Treated Effluent Installation Requirements Provision and maintenance of treated effluent installations ..... 10

    Section 28. .... 10

    29. Accepted pipes and treated effluent fittings ..... 10

30. Signage .....	11
31. Design criteria for treated effluent installations .....	11
Chapter 4 – Water Quality .....	12
32. Disclaimer in respect of treated effluent quality .....	12
33. Regulations from the Department of Water Affairs and Forestry .....	12
Chapter 5 – Health and Hygiene .....	13
34. Guide on permissible utilization and disposal of treated sewage effluent .....	13
Chapter 6 – Plans approval procedure .....	13
Section 35. ....	13
Chapter 7 – Installation by Plumbers .....	13
36. Persons permitted to do installation and other work .....	13
37. Responsibilities of a property owner or consumer .....	13
Chapter 8 – Good Use Practices .....	13
38. Management .....	13
39. Offences and penalties .....	14
40. Indemnity .....	14
41. Appeals .....	14
Schedule 1 .....	14
Schedule 2 .....	14
Schedule 3 .....	15



# Johannesburg South Africa

## Treated Effluent By-law, 2017

[Published in Gauteng Provincial Gazette 102 on 26 April 2017](#)

Commenced on 26 April 2017

*[This is the version of this document from 26 April 2017 and includes any amendments published up to 14 June 2024.]*

To control and regulate treated effluent in the City of Johannesburg; and to provide for matters connected therewith.

### Chapter 1 Definitions and General Provisions

#### 1. Definitions

In this By-law, unless the context otherwise indicates -

"**agreement**" means a signed contract agreement regarding the use and responsibilities of each party entered into between the City and a consumer;

"**authorised official**" means an authorised official of the City appointed to enforce the provisions of this By-law;

"**borehole**" means a hole sunk into the earth for the purpose of locating, abstracting or using subterranean water; and includes a spring, well and well point;

"**City**" means the City of Johannesburg established by [Provincial Notice No. 6766 of 2000](#) in terms of section 12 of the Local Government: Municipal Structures Act, 1998 ([Act No. 117 of 1998](#));

"**City Manager**" means the person appointed by the Council in terms of section 82 of the Local Government: Municipal Structures Act, 1998 ([Act No. 117 of 1998](#));

"**consumer**" means a person approved by the Council to use treated effluent from any installation connected to a connection pipe which is supplied with treated effluent from a main;

"**Council**" means

- (a) the Metropolitan Municipality of the City of Johannesburg established by [Provincial Notice No. 6766 of 2000](#), as amended, exercising its legislative and executive authority through its municipal Council; or
- (b) its successor in title; or
- (c) a structure or person exercising a delegated power or carrying out an instruction, where any power in these by-laws has been delegated or sub-delegated, or an instruction given, as contemplated in section 59 of the Local Government : Municipal Systems Act, 2000; or
- (d) a service provider fulfilling a responsibility under these by-laws, assigned to it in terms of section 81(2) of the Local Government : Municipal Systems Act 2000, or any other law, as the case may be.

"**Credit Control and Debt Collection By-Law**", means the Credit Control and Debt Collection By-Law, adopted by the council and published in the Provincial Gazette;

"**Executive Director: Environment and Infrastructure Services Department**" means the Executive Director responsible for the oversight and regulatory role over Johannesburg Water

"**Executive Director: Health**" means the Executive Director responsible for health matters in the City;

"**health nuisance**" means a situation or state of affairs that endangers life or health or adversely affects the well-being or mental well-being of a person or community, or creates an environmental risk, and "health hazard" has a similar meaning;

"**installation work**" means work in respect of the construction of, or carried out on, a treated effluent installation;

"**Managing Director: Johannesburg Water**" means the employee of the City in charge of the Water and Sanitation Services;

"**meter**" means a device which measures the quantity of treated effluent passing through it;

"**non potable water**" means water obtained from sources other than potable networks of the City and includes spring water, borehole water, groundwater and river extraction;

"**occupier**" means a person who occupies any premises or part thereof, without regard to the title under which he or she occupies;

"**owner**" means —

- (e) the person in whom from time to time is vested the legal title to premises;
- (f) in a case where the person in whom the legal title to premises is vested is insolvent or dead, or is under any form of legal disability whatsoever, the person in whom the administration and control of such premises is vested as curator, trustee, executor, administrator; judicial manager, liquidator or other legal representative;
- (g) in any case where the City is unable to determine the identity of such person, a person who is entitled to the benefit of the use of such premises or a building or buildings thereon;
- (h) in the case of premises for which a lease agreement of 30 years or longer has been entered into, the lessee thereof;
- (i) the person who has purchased immovable property from the City, in terms of a scheme that allows for the purchase price to be paid in installments and who has not received transfer from the City;
- (j) in relation to—
  - (i) a piece of land delineated on a sectional plan registered in terms of the Sectional Titles Act, 1986 ([Act 95 of 1986](#)), the developer or the body corporate in respect of the common property, or
  - (ii) a section as defined in such Act, the person in whose name such section is registered under a sectional title deed, and includes the
  - (iii) lawfully appointed agent of such a person;

"**person**" includes a juristic person;

"**pollution**" means the direct or indirect alteration of the physical, chemical or biological properties of a water resource so as to make it

- (a) less fit for any beneficial purpose for which it may reasonably be expected to be used; or
- (b) harmful or potentially harmful—
  - (i) to the welfare, health or safety of human beings;
  - (ii) to any aquatic or nonaquatic organisms;
  - (iii) to the resource quality; or
  - (iv) to property;

"**public notice**" means a notice published in a newspaper in the official languages in general use within the City ;

"**publish**" means—

- (a) to publish a notice in the Provincial Gazette,
- (b) to provide interested parties with copies of such publication, and
- (c) to post the notice so published on the notice boards of the City.

"**prescribed fee**" means a fee determined by the Council by resolution in terms of section 10G(7)(a)(ii) of the Local Government Transition Act, 1993 ([Act No. 209 of 1993](#)), or any other applicable legislation;

"**prescribed tariff**" means a schedule of prescribed fees;

"**SABS**" means the South African Bureau of Standards referred to in the Standards Act, No. 29 of 1993;

"**SANS**" means the South African National Standards and is a standard which has been set and issued by the SABS in terms of the provisions of the Standards [Act, No. 29 of 1993](#);

"**storage tank**" means a tank forming part of a treated effluent installation and used for the storage of treated effluent;

"**treated effluent**" means wastewater which has been treated;

"**treated effluent installation**" means the pipes and fittings which are situated on any premises and vested in the owner thereof and used or intended to be used in connection with the use of treated effluent on such premises, and includes a pipe and a fitting situated outside the boundary of the premises, which either connects to the communication pipe relating to such premises or is otherwise laid with the permission of the City;

"**treated effluent tracer**" means any dye or chemical approved by Council to clearly colour the treated effluent

"**water services facility**" means any land on which there is infrastructure installed or used by the City or a catchment area in connection with the supply of treated effluent;

"**well point**" means a small diameter pipe jetted into unconsolidated sandy or gravelly formations, with a pump situated at ground level to lift and distribute the water.

## 2. Application and purpose of this By-law

- (1) This By-law binds all organs of state.
- (2) Any provision in any other by-law dealing specifically with treated effluent, is subject to the provisions of this By-law.
- (3) Unless the contrary is proved, a breach of this By-law committed on premises in respect of—
  - (a) the treated effluent installation shall be deemed to be a breach by the owner of the premises and he or she can be held liable for all consequential damage; and
  - (b) the use of treated effluent from a treated effluent installation shall be deemed to be a breach by the consumer.

## 3. Powers of the Council, the Managing Director: Johannesburg Water, the Executive Director: Environment and Infrastructure Services Department and the Executive Director: Health

- (1) If the treated effluent installation or a part thereof on a premises is so defective or in such a condition or position as to cause, or be likely to cause waste or undue consumption, or a health or

safety hazard, Council may by notice in writing require the owner to comply with the provisions of this By-law within a specified period.

- (2) The Managing Director: Johannesburg Water must consult with the Executive Director: Environment and Infrastructure Services Department and Executive Director: Health on all matters where this service has an impact on health and in all matters where there is a likelihood of a health hazard or environmental pollution, provided that in cases of an emergency the Managing Director: Johannesburg Water may only inform the Executive Director: Environment and Infrastructure Services Department and Executive Director: Health of such likelihood.

#### **4. Appointment of authorised officials**

Council may appoint authorised officials to carry out relevant work in the treated effluent service

#### **5. Delegation**

- (1) The City Manager may delegate any of his or her powers and duties in terms of this By-law to any official of the City.
- (2) The Managing Director: Johannesburg Water may delegate any of his or her powers and duties in terms of this By-law to any official of the City.

#### **6. Health risks and situations that require immediate action**

- (1) Council may, in cases of health risks or situations that require immediate action take any reasonable measures to prevent or eradicate such health risks or situations.
- (2) When a health risk or situation as contemplated in subsection (1) occurs on private property, Council may—
  - (a) by written notice direct the owner or consumer to take such measures as may be deemed necessary to prevent or eradicate the health risk or situation; or
  - (b) in the event that the owner or consumer cannot be found or the owner or consumer fails to immediately comply with the requirements of Council, take such measures as may be deemed necessary to prevent or eradicate the health risk or situation.
- (3) In the event where the health risk emanates from a treated effluent installation the consumer supplied by such installation is liable for the costs incurred by the City.

#### **7. Duties of the public**

- (1) Every member of the public must, on becoming aware of any health risk or imminent situation that requires immediate attention or a situation that may give rise to pollution, immediately inform the Managing Director: Johannesburg Water who in turn must, in respect of emergencies relating to health hazards, inform the Executive Director: Health.
- (2) Any person acting in terms of subsection (1) who does not wish to be identified may request that his or her name not be disclosed in any subsequent action.

#### **8. Recovery of costs**

- (1) Every person committing a breach of the provisions of this By-law is fully liable for the consequences of the breach and to compensate the City for any loss or damage suffered or sustained by it in consequence thereof.
- (2) The City may recover any costs reasonably incurred in taking any measures in terms of this By-law from any person who was under a legal obligation to take those measures, including—
  - (a) a person on whom a compliance notice was served;



- (b) the owner of the premises concerned; or
  - (c) the consumer.
- (3) Council may issue a cost order requiring a person who is liable to pay costs incurred in terms of subsection (1) to pay those costs by a date specified in the order and such order constitutes prima facie evidence of the amount due.

## 9. Compliance notices

- (1) When an authorised official finds that a provision of this By-law is contravened or that a condition has arisen that has the potential to lead to a contravention of this By-law, such authorised official may issue a compliance notice to the consumer or owner concerned or person who is contravening the provisions of this By-law.
- (2) A notice issued in terms of subsection (1) must state –
- (a) the provision of the By-law that is being contravened or will be contravened if the condition is allowed to continue;
  - (b) the measures that must be taken to rectify the condition; and
  - (c) the time period in which the notice must be complied with.
- (3) If a person on whom notice was served in terms of subsection (2) fails to comply with the requirements of the notice, Council may take such steps as may be necessary to rectify the condition at the cost of the person responsible, or take any other action deemed necessary to ensure compliance.
- (4) Council, subject to the provisions of this By-law, retains the power to take any action including the immediate discontinuation of the water supply in appropriate circumstances.

## 10. Responsibility for compliance with this By-law

- (1) The owner is responsible for ensuring compliance with this By-law in respect of all or any matters relating to the treated effluent installation and the maintenance thereof.
- (2) The consumer is responsible for compliance with this By-law in respect of matters relating to the use of any treated effluent.

## Chapter 2 Provisions Relating to the Supply of Treated Effluent

### 11. Unauthorised use of treated effluent

No person may use treated effluent from the treated effluent supply system—

- (a) unless an agreement referred to in [section 13](#) has been concluded;
- (b) unless his or her potable water supply has a suitable backflow preventer to the satisfaction of Council installed; or
- (c) except through a metered and backflow prevented treated effluent supply point specifically installed by the City for the supply of treated effluent.

### 12. Application for supply of treated effluent

- (1) Treated effluent from the treated effluent supply system of the City will not be supplied to any premises unless the consumer, with the consent of the owner, has applied to the City for a supply and such application has been agreed to, subject to such conditions as may be imposed by Council.

- (2) The consumer is liable for all the fees in respect of the supply of treated effluent, determined in the prescribed tariffs, until the supply has been interrupted at the request of the consumer or the agreement has been terminated in accordance with this By-law.
- (3) An application must contain at least the following information -
  - (a) a declaration that the applicant is aware of and understands the contents of the agreement;
  - (b) acceptance of liability in terms of this By-law for the cost of the supply of treated effluent until the agreement is terminated;
  - (c) the name of the applicant and his or her identity number;
  - (d) the address or erf number of the premises to or on which treated effluent is to be supplied;
  - (e) the address where accounts must be sent;
  - (f) the purpose for which the treated effluent is to be used;
  - (g) the agreed date on which the supply of treated effluent will commence;
  - (h) the plumbing layout; and
  - (i) an undertaking by the applicant to inform the City of any change in regard to the provisions of (a) to (h).
- (4) Where the purpose for, or extent to which, the treated effluent applied for in subsection (3)(f) is changed, the consumer must promptly in addition to advising the City of the change, enter into a new agreement with the City.
- (5) Treated effluent may only be supplied where reticulation exists.

### **13. Agreements**

- (1) All consumers of treated effluent are required to enter into an agreement with the City subject to the provisions of this By-law.
- (2) The agreement contemplated in subsection (1) must contain all the information referred to in section 12(3)(a) to (i).

### **14. Pipes in streets or public places**

No person may for the purpose of conveying treated effluent derived from whatever source, lay or construct a pipe or associated component on, in or under a street, public place or other land owned by or under the control of the City, except with the prior written permission of Council and subject to such conditions as he or she may impose.

### **15. Termination of agreements**

- (1) A consumer may terminate an agreement for the provision of treated effluent by giving the Council not less than seven days' notice in writing of his or her intention to do so.
- (2) Council may, by notice in writing of not less than fourteen days, advise a consumer of the termination of his or her agreement for the supply of treated effluent –
  - (a) where the agreement has expired, that he or she has not made arrangements to the satisfaction of Council for the continuation of the agreement, or
  - (b) where he or she has failed to comply with the provisions of this By-law or has failed to rectify such failure following the issue of a compliance notice; or
  - (c) where he or she has failed to pay any fees due and payable in terms of the prescribed tariff.

- (3) Council may terminate an agreement for the supply of treated effluent if the premises to which such agreement relates have been vacated.

#### **16. Interference with the treated effluent supply system**

No person other than the City may effect a connection to the treated effluent system of the City.

#### **17. Obstruction of access to the treated effluent supply system**

No person may prevent or restrict the access of officials of the City to the treated effluent system.

#### **18. Servitudes**

The consumer is responsible for obtaining at his or her cost, such servitudes over other property as may be necessary for the treated effluent system.

#### **19. Interconnection between premises**

A consumer must ensure that no interconnection exists between the treated effluent installation on the premises and the treated effluent installation on other premises, unless the consumer has obtained the prior written consent of Council and has complied with any conditions imposed by him or her.

#### **20. Provision and position of isolating valves**

- (1) Council must install an isolating valve between every meter and the main.
- (2) The consumer must, at own expense, and for his or her exclusive use, provide and install an isolating valve—
  - (a) in the case of a meter installed on the premises, at a suitable point on his or her side of the meter;
  - (b) in the case of a meter installed outside the premises, at a suitable point immediately inside the boundary of his or her premises, provided that Council may, on failure of the consumer and at the consumer's expense, provide and so install an isolating valve.
- (3) No person may, without the approval of Council, tamper with the isolating valve between the meter and the main.

#### **21. Availability and assurance of supply**

- (1) The supply of treated effluent by the City does not constitute an undertaking to maintain at any time or at any point in its treated effluent system—
  - (a) an uninterrupted supply;
  - (b) a specific pressure or rate of flow in such supply; or
  - (c) a specific standard of quality of the water.
- (2) If a consumer requires an uninterrupted supply, a specific pressure or rate of flow or a specific standard of quality of water on the premises, the consumer must make his or her own arrangements for compliance with such requirements.
- (3) The City may, for the purpose of this By-law, interrupt the supply of treated effluent without prior notice.
- (4) If the consumption of treated effluent on a premises adversely affects the supply of treated effluent to another premises, Council may apply such restrictions as he or she may deem fit to the supply of treated effluent to the first-mentioned premises in order to ensure a reasonable supply of treated

effluent to the other premises, and must inform the consumer of the first mentioned premises of such restrictions.

## 22. Restriction or cutting-off of supply

- (1) Subject to any other right the City may have, Council may, if a consumer has failed to pay a sum due in terms of the prescribed tariff, by written notice inform him or her of the intention to restrict or cut off the supply of treated effluent on a specified date and to restrict or cut off such supply on or after that date.
- (2) Subject to any other right the City may have, Council may by written notice, if a consumer has contravened this By-law and has failed to rectify such contravention within the period specified in a written notice served on him or her requiring him or her to do so, inform him or her of the intention to restrict or cut off his supply of treated effluent on a specified date and to restrict or cut off such supply on or after that date.
- (3) The consumer or the owner must pay the fees for the cutting-off of supply and restoration of the treated effluent supply in terms of the prescribed tariff: Provided that all such fees are paid prior to the restoration of the treated effluent supply.
- (4) A consumer whose access to treated effluent has been restricted or disconnected, who unlawfully reconnects it, must be disconnected.

## 23. Metering of treated effluent supplied

- (1) Treated effluent supplied to premises must pass through a meter, installed in a position determined by Council.
- (2) A meter and its associated apparatus is provided and installed by the City, remains its property, and may be replaced or removed when deemed necessary by Council.
- (3) If the City installs a meter together with its associated apparatus in a treated effluent installation the consumer—
  - (a) must provide an installation point approved by Council;
  - (b) must ensure that unrestricted access is available to it at all times;
  - (c) is responsible for its protection when situated inside the property and liable for the costs arising from damage thereto excluding damages arising from normal fair wear and tear;
  - (d) must ensure that no connection is made to the pipe in which the meter is installed, between the meter and the main;
  - (e) must make provision for the drainage of water which may be discharged from the pipe in which the meter is installed, in the course of work done by the City on the meter; and
  - (f) may not use, nor permit to be used, on any treated effluent installation, any fitting, machine or appliance which causes damage or is likely to cause damage to the treated effluent supply system inclusive of the meter.
- (4) Only the City may—
  - (a) disconnect a meter and its associated apparatus from the pipe in which they are installed;
  - (b) break a seal on a meter; or
  - (c) in any other way interfere with a meter and its associated apparatus.
- (5) Any person contravening subsection (4) must pay the City the cost of such quantity of treated effluent as was supplied.

- (6) An occupier of a premises must, immediately upon detection of a leak in a service pipe or from the body of the meter or its associated fittings, inform the City.
- (7) If access to a meter is denied for reading purposes, Council may—
  - (a) upon written notice to the consumer on the premises, inform him or her of the intention to install at the consumer's cost, another meter;
  - (b) render an account for the quantity of treated effluent consumed at such premises as measured on the meter installed.
- (8) The owner of the premises is liable for all costs of the treated effluent supply system and apparatus inclusive of the meter where damaged as a result of negligence or installation of incorrect fittings or appliances.

#### **24. Quantity of treated effluent supplied**

For the purpose of assessing the quantity of treated effluent supplied through a meter over a specific period, it must be deemed, unless the contrary can be proved, that—

- (a) the quantity is represented by the difference between readings of the meter taken at the beginning and end of such period;
  - (b) the meter was registering correctly during such period; and
  - (c) the entries in the records of the City were correctly made;
- provided that if treated effluent is supplied or taken without its passing through a meter where tampering has occurred, the estimate by Council of the quantity of such treated effluent shall be deemed to be correct.

#### **25. Resale of treated effluent**

- (1) No person who is supplied with treated effluent in terms of this By-law may sell such treated effluent unless—
  - (a) provision has been made therefore in an agreement referred to in [section 13](#); or
  - (b) he or she has obtained the prior written permission of Council.
- (2) If Council grants the permission referred to in subsection (1)(b), he or she may stipulate the maximum price, determined by Council, at which the treated effluent may be sold and impose such other conditions as he or she may deem fit.
- (3) Permission referred to in subsection (1)(b) may, due to failure to comply with the conditions imposed by Council, be withdrawn at any time.

#### **26. Estimation of quantity of treated effluent supplied to consumer through defective meter**

- (1) If a meter is found to be defective, Council may estimate the quantity of treated effluent supplied to the consumer concerned during the period in which such meter was defective, on the basis of the average daily quantity of treated effluent supplied over—
  - (a) a period between two successive meter readings subsequent to the replacement of the meter; or
  - (b) a period in the previous year corresponding to the period in which the meter was defective; or
  - (c) the period between three successive meter readings prior to the meter becoming defective, whichever Council considers the most appropriate.

- (2) If the quantity of treated effluent supplied to a consumer during the period when the meter was defective cannot be estimated in terms of subsection (1), Council may estimate the quantity on any basis that is available.
- (3) The consumer must be informed of the method used by Council to estimate the quantity of treated effluent supplied to him or her, as contemplated in subsection (1) and (2) and given an opportunity to make representations to Council before a final estimate is arrived at.

## 27. Special Measurement

- (1) If Council requires, for purposes other than charging for treated effluent consumed, to ascertain the quantity of treated effluent which is used in a part of a treated effluent installation, may, by written notice, advise the consumer concerned of his or her intention to install a measuring device at any point in the treated effluent installation that he or she may specify.

*[Subsections (2) and (3) are missing in the gazetted by-law]*

- (4) The installation and removal of a measuring device referred to in subsection (1) will be carried out at the expense of the City.
- (5) The provisions of sections 23(3) (b) and 24(b) apply, insofar as they may be applicable, in respect of a measuring device that has been installed in terms of subsection (1).
- (6) The City may on receipt of a written notice from the consumer and subject to arrangement of payment of the relevant prescribed charge for water meters, read the meter to ascertain the quantity of treated effluent supplied at a time, or on a day, other than upon which the meter would normally be read.

## Chapter 3

### General Treated Effluent Installation Requirements Provision and maintenance of treated effluent installations

## 28.

- (1) A consumer must provide and maintain the treated effluent installation at own cost and, except—
  - (a) in the case of a connection to a communication pipe; or
  - (b) where permitted in terms of [section 14](#), and must ensure that the installation is within the boundary of the premises.
- (2) Before work is commenced in connection with the maintenance of a portion of the treated effluent installation which is situated outside the boundary of the premises, a consumer must obtain the written consent of Council or the owner of the land on which such portion is situated, as the case may be.

## 29. Accepted pipes and treated effluent fittings

- (1) No person may install or use a pipe or treated effluent fitting in a treated effluent installation unless it complies with Schedule 1.
- (2) Notwithstanding the provision of subsection (1), Council may for a specific use in a specific installation, permit the installation or use of a pipe or treated effluent fitting which is not included in Schedule 1.
- (3) Council may, in respect of any pipe or treated effluent fitting included in Schedule 1, impose such conditions as he or she may deem necessary in respect of the use or method of installation thereof.

- (4) Council may at any time remove a pipe or treated effluent fitting from Schedule 1 if the pipe or treated effluent fitting no longer suitable for the purpose for which its use was accepted or included.
- (5) Council must ensure that copies of Schedule 1 are available at the office of the City during working hours.

### 30. Signage

- (1) An owner of premises, on which non-potable water is used, must ensure that every terminal water fitting and every appliance which supplies or uses the water is clearly marked with a weatherproof notice indicating that such water is unsuitable for domestic purposes.
- (2) In an area where treated sewage effluent is used, the consumer shall erect weatherproof notices in prominent positions warning that such water is not suitable for domestic purposes.
- (3) Every warning notice prescribed in terms of subsections (1) and (2) must be in the three official languages used in the City.
- (4) Signage must comply with the minimum standard set in the signage of the City as contained in Schedule 2.
- (4) Prominent notices indicating that non potable water is being used is to be erected in a position clearly visible from a public thoroughfare, at positions determined by the City.

*[The gazetted by-law contains two subsections numbered (4)]*

- (5) Council may subject to national legislation or any other law substitute Schedule 2 to this By-law and issue revised or new signage applicable in terms of this section.

### 31. Design criteria for treated effluent installations

- (1) A consumer must ensure that—
  - (a) treated effluent installations comply with SANS 10252: 2004 Part 1, or as it may be amended; and
  - (b) no interconnection between treated effluent and potable water supplies exist.
- (2) If a pipe or treated effluent fitting of a particular type is unsuitable for use in a particular situation or any connection between treated effluent and potable water supplies are made, Council may by written notice to the owner—
  - (a) prohibit the use thereof; or
  - (b) require acceptable protective measures to be applied.
- (3) No person may connect to a treated effluent installation a treated effluent fitting or apparatus which causes or is likely to cause damage to the treated effluent supply system or another water installation as a result of pressure surges.
- (4) Premises that require feeds from both the treated effluent and potable supply schemes must comply with the following minimum standard:
  - (a) Where both treated effluent and potable supply is to feed into a storage tank with separate lines without connection,—
    - (i) the feeds should be into the top of such a storage tank and close with manual or float ball valves;
    - (ii) the potable supply pipe must pass over the rim of the tank, not through the sidewall and end at least 100mm above the top of the maximum possible water level in the tank to ensure an air gap is always present and no feedback is possible; and

- (iii) distribution from the tank can then take place with a pump or other reticulation system.
- (b) Feed into an irrigation system or other distribution may take place through a switchover chamber that allows only one connection at a time through a flexible hose installation.
- (c) The flexible hose installation referred to in paragraph (b) shall include the following safety systems:
  - (i) the connection of the flexible hose to the discharge or downstream side shall be fixed and unremovable;
  - (ii) a vacuum break air valve shall be installed on the discharge or downstream side; and
  - (iii) the covers to the chamber shall be lockable for controlled access.
- (5) The connection details of the chosen standard as described in subsection (5) must be submitted to Council for approval and the approved copy will form part of the signed agreement in section 13.
- (6) Any consumer with both a treated effluent and a potable water supply on the premises, must install a Reduced Pressure Zone Backflow Preventer (RPZ) in accordance with SANS 10252-1: 2004 Part 1 in all the potable water supply points entering the premises, downstream of his or her isolating valve which is situated downstream of the water meter.
- (7) The treated effluent tracer of the City with text and SABS non-potable sign must be installed—
  - (a) for the full length of all pipelines, including all distribution lines within the property;
  - (b) directly over the pipeline; and
  - (c) at a depth not greater than 500 mm below ground level.
- (8) All exposed pipelines shall be painted orange and suitably designated.

## **Chapter 4**

### **Water Quality**

#### **32. Disclaimer in respect of treated effluent quality**

- (1) The City does not warrant, expressly or impliedly, the purity of any treated effluent supplied by it or its suitability for the purpose for which the supply was granted.
- (2) The quality of the treated effluent may vary and the consumer must take this into account.
- (3) The use of treated effluent is entirely at the risk of the consumer and the City is not liable for any consequential damage or loss arising directly or indirectly therefrom.
- (4) The City is under no obligation to test the quality of the treated effluent.
- (5) Should a consumer require the quality parameters, he or she must have it analysed at own cost and the onus is on him or her to monitor the quality of the water supplied.

#### **33. Regulations from the Department of Water Affairs and Forestry**

Notices issued in terms of section 39 of the National Water Act, 1998([Act No. 36 of 1998](#)) are applicable within the area of jurisdiction of the City



## Chapter 5 Health and Hygiene

### 34. Guide on permissible utilization and disposal of treated sewage effluent

- (1) The guide on permissible utilisation and disposal of treated effluent set in Schedule 3 to this By-law is applicable within the area of jurisdiction of the City.
- (2) Council may subject to national legislation or any other law substitute Schedule 3 to this By-law and issue a revised or new guide applicable in terms of this section.

## Chapter 6 Plans approval procedure

### 35.

If a consumer wishes to install a new treated effluent installation, he or she must, in terms of applicable legislation, first obtain the written approval of the building plan for such installation

## Chapter 7 Installation by Plumbers

### 36. Persons permitted to do installation and other work

- (1) No person, who is not qualified and accredited in terms of the South African Qualifications Authority Act, 1995 ([Act No. 58 of 1995](#)) may do installation work for which approval is required in terms of section 35;
- (2) Council may maintain a register of such qualified plumbers.

### 37. Responsibilities of a property owner or consumer

- (1) A property owner or consumer must ensure that the installation work done on his or her premises is carried out by a qualified plumber and complies with this By-law.
- (2) If installation work is being done in contravention of [section 36](#), Council may by written notice require the owner of the premises concerned to cease such work until he or she has employed a qualified plumber to—
  - (a) inspect such work and rectify any part of it which does not comply with this By-law; and
  - (b) ensure that a certificate of compliance stating that the work carried out complies with this By-law is submitted to Council.

## Chapter 8 Good Use Practices

### 38. Management

A consumer should assign the responsibility for the use of treated effluent to a person suitably qualified to manage use of treated effluent.

### 39. Offences and penalties

- (1) Any person who—
- (a) contravenes any provision of this By-law;
  - (b) fails to comply with the terms of any notice issued in terms of this By-law;
  - (c) threatens, resists, hinders or obstructs or uses foul, abusive or insulting language towards or at a councillor or an employee or contractor of the Council in the exercise of any powers or performance of any duties or function in terms of this By-law, or falsely holds himself or herself to be a councillor or an employee or a contractor of the Council,

shall be guilty of an offence and be liable, on conviction, to a term of imprisonment or a fine or to both such imprisonment and such a fine.

### 40. Indemnity

The Council shall not be liable for any damages or compensation arising from anything done in good faith in the course of implementation of this By-law.

### 41. Appeals

A person whose rights are affected by a decision taken in terms of a power or duty delegated or sub-delegated in terms of this By-law, may appeal against that decision in accordance with section 62 of the Local Government: Municipal Systems Act, 2000 ([Act No 32 of 2000](#))

## Schedule 1

### Accepted Pipes and Fittings

1. The piping and fixtures used for treated effluent must be orange to be identified from the piping used for drinking water in respect of colour.
2. The taps, valves and sprayers of the irrigation system must be so designed that only authorised persons can open them or bring them into operation.
3. bears the standardization mark of the SABS in respect of the relevant SANS specification issued by the Bureau;
4. bears a certification mark issued by the SABS to certify that the pipe or treated effluent fitting complies with an SABS Mark specification or a provisional specification issued by the SABS, provided that no certification marks shall be issued for a period exceeding two years;

## Schedule 2

### Signage

Suitable signage that indicates that the water is not suitable for drinking will be required of every consumer. The examples below are the minimum standards with respect to such signage;

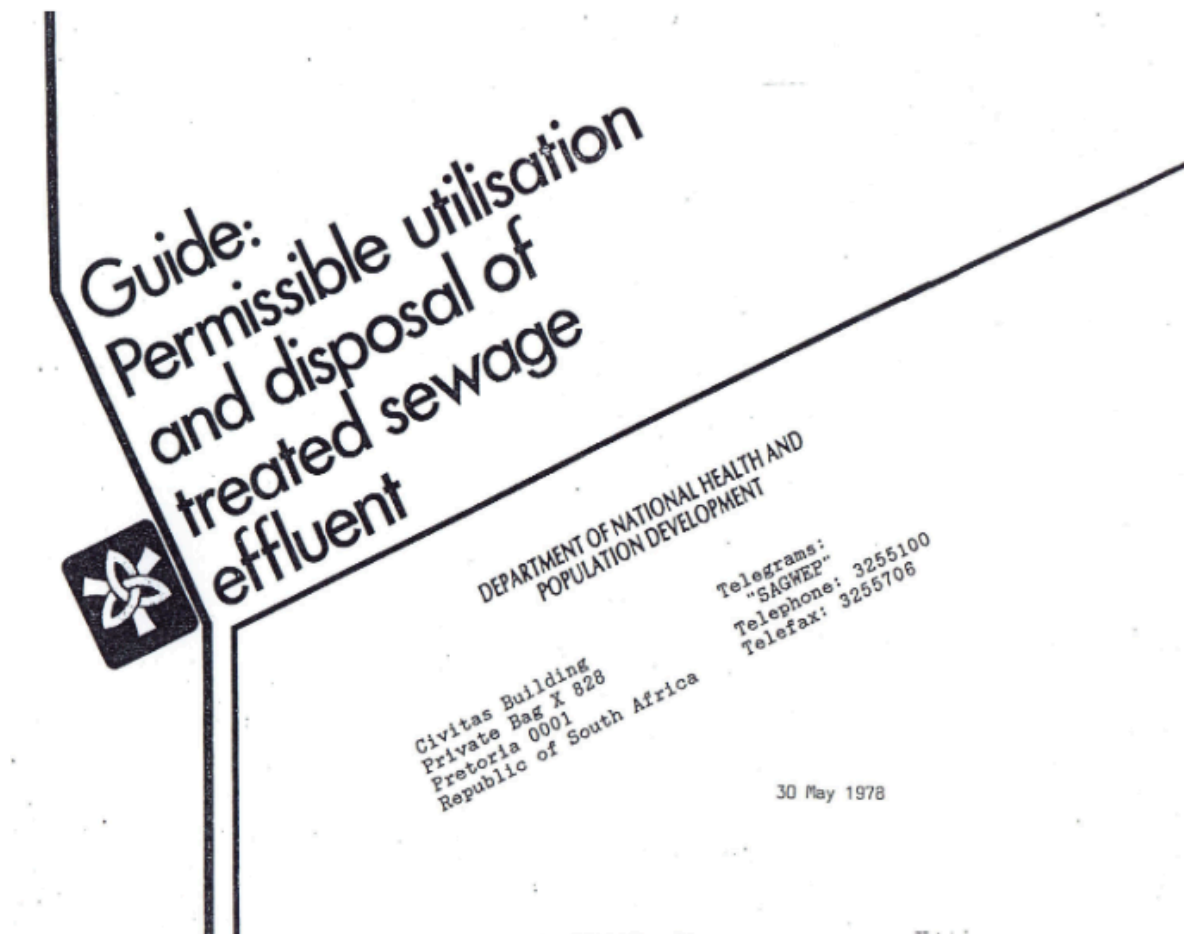


### Irrigation Notice

THESE PREMISES ARE IRRIGATED WITH TREATED WASTEWATER WHICH IS NOT SUITABLE FOR HUMAN CONSUMPTION

### Schedule 3

#### Guide: Permissible utilization and disposal of treated sewage effluent



REFERENCE: 11/2/5/3

30 MAY 1978

This guide sets out the present policy of the Department and replaces all previous relevant guides. Any person intending to use treated effluent must obtain prior permission to do so from the Regional Director concerned.

This guide is applicable only to treated sewage effluent which is mainly of domestic origin and contains little or no industrial effluent.

The Regional Directors have been empowered to relax the requirements specified in this guide or to impose additional or more stringent requirements in the light of special circumstances in specific cases.

This guide defines the following:

- A. Classification of treated effluents
- B. Directives for the use of treated effluent for irrigation purposes.
- C. Directives for other uses of treated effluents.

D. Methods of disposal and discharge of treated effluents.

E. General directives and precautionary measures.

CLASSIFICATION OF TREATED EFFLUENTS (SEWAGE PURIFICATION WORKS)		A
PS – PRIMARY AND SECONDARY TREATMENT - HUMUS TANK EFFLUENT	OD – OXIDATION POND SYSTEM	
<p><i>Conventional sewage purification according to accepted design criteria#. This includes screening and primary settling followed by biological purification such as the biological filter bed process or activated sludge process. Secondary treatment also includes the settling or clarification after biological or alternative purification methods.</i></p> <p>PST - PRIMARY, SECONDARY AND TERTIARY TREATMENT</p> <p>Final effluent complies with the GENERAL STANDARD*, with the E.coli count relaxed to a maximum of 1000 E. coli /100 ml</p> <p>In addition to the above-mentioned primary and secondary or equivalent treatment one or more tertiary treatments, viz. land treatment, maturation pond, filtration, chlorination or other types of disinfection, etc., should be applied.</p> <p>STD - PRIMARY, SECONDARY AND TERTIARY TREATMENT</p> <p>(Compare with PST)</p> <p>Final effluent complies with the GENERAL STANDARD* viz. inter alia NIL E. coli/100 ml</p> <p>SP-STD - ADVANCED PURIFICATION</p> <p>Final effluent complies with at least the SPECIAL STANDARD* and the quality compares favourably with that recommended for drinking water</p> <p>In addition to the above-mentioned primary, secondary and tertiary treatment, advanced purification also includes special</p>	<p>Final effluent contains a maximum of 1 000 E. coli/100ml</p> <p>The pond system should be designed according to a recognised standard# and operated in a nuisance-free manner. The combined retention time of the primary pond and approximately 4 secondary ponds should usually be at least 45 days. This system should drain into an irrigation dam of which the reserve storage capacity during dry weather conditions is at least 12 days. Unless sufficient space is available and the ponds are sufficiently remote from built-up areas, this system is not recommended for communities with a population exceeding 5 000.</p> <p>Every oxidation pond system which is not able to deliver effluent of the above- mentioned quality should, for the purpose of this guide, be regarded on its merits as no more than equivalent to PS.</p> <p>SEPTIC TANK EFFLUENT</p> <p>(Primary settling and limited biological purification)</p> <p>This effluent must undergo further secondary and tertiary or equivalent treatment before it may be utilised for the purposes indicated in this guide.</p> <p>For the direct use or disposal, only nuisance-free land treatment or irrigation of fenced-in plantations will be permitted on its merits.</p>	

physico-chemical purification or other advanced techniques.	
<p>* GENERAL AND SPECIAL STANDARD</p> <p>Quality requirements for purified sewage effluent as laid down by the Department of Water Affairs - see Government Notice R553 in Government Gazette Extraordinary of April 1962, and any amendments thereto. (E. coli = typical faecal coli).</p>	<p># DESIGN CRITERIA</p> <p>Design criteria such as those set out in A Guide to the Design of Sewage Purification Works of the Institute of Water Pollution Control (I.W.P.C.), Southern African Branch (November 1973).</p>

THE ABOVE CLASSIFICATION OF TREATED SEWAGE EFFLUENT TYPES IS USED IN THE FOLLOWING TABLES

DIRECTIONS THE UTILISATION OF TREATED EFFLUENTS FOR IRRIGATION					B
IRRIGATION OF	PS – PRIMARY AND SECONDARY	PST - PRIMARY, SECONDARY AND TERTIARY	STD – GENERAL STANDARD	SP-STD – ADVANCED PURIFICATION	OD – OXIDATION POND SYSTEM
<ul style="list-style-type: none"> <li>• VEGETABLES AND CROPS CONSUMED RAW BY MAN (3 EXCLUDED)</li> <li>• LAWNS AT SWIMMING POOLS, NURSERY SCHOOLS, CHILDREN'S PLAYGROUNDS</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>
<ul style="list-style-type: none"> <li>• CROPS FOR HUMAN CONSUMPTION WHICH ARE NOT EATEN RAW (VEGETABLES, FRUIT, SUGAR-CANE)</li> <li>• CULTIVATION OF CUT FLOWERS (SEE ALSO 6)</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> <li>• EFFECTIVE DRAINING AND DRYING BEFORE HARVESTING IS ESSENTIAL</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE ON ITS MERITS</li> <li>• EFFECTIVE DRAINING AND DRYING BEFORE HARVESTING IS ESSENTIAL</li> </ul>
<ul style="list-style-type: none"> <li>• FRUIT TREES AND VINEYARDS: FOR THE CULTIVATION OF FRUIT WHICH IS EATEN</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• FLOOD IRRIGATION PERMISSIBLE</li> <li>• DRIP AND MICRO-IRRIGATION PERMISSIBLE ON THEIR MERITS</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• FLOOD, DRIP AND MICRO-IRRIGATION PERMISSIBLE ON THEIR MERITS PROVIDED FRUITS ARE NOT DIRECTLY EXPOSED TO SPRAY</li> <li>• EFFECTIVE DRAINING AND DRYING BEFORE FRUITS ARE HARVESTED</li> </ul>

RAW BY MAN (SEE 2-FRUIT WHICH IS NOT EATEN RAW)		<p>PROVIDED FRUITS ARE NOT DIRECTLY EXPOSED TO SPRAY</p> <ul style="list-style-type: none"> <li>EFFECTIVE DRAINING AND DRYING BEFORE HARVESTING</li> <li>FALLEN FRUIT IS UNSUITABLE FOR HUMAN CONSUMPTION</li> </ul>			<ul style="list-style-type: none"> <li>FALLEN FRUIT IS UNSUITABLE FOR HUMAN CONSUMPTION</li> </ul>
<ul style="list-style-type: none"> <li>GRAZING FOR CATTLE EXCLUDING MILK PRODUCING ANIMALS (SEE 5)</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>ANY TYPE OF IRRIGATION PERMISSIBLE BUT NOT DURING GRAZING</li> <li>GRAZING ONLY PERMISSIBLE AFTER EFFECTIVE DRAINING AND DRYING-NO POOLS</li> <li>NOT PERMISSIBLE AS DRINKING WATER FOR ANIMALS</li> </ul>	<ul style="list-style-type: none"> <li>ANY TYPE OF IRRIGATION PERMISSIBLE</li> <li>PERMISSIBLE AS DRINKING WATER FOR ANIMALS</li> </ul>	<ul style="list-style-type: none"> <li>ANY TYPE OF IRRIGATION PERMISSIBLE</li> <li>PERMISSIBLE AS DRINKING WATER FOR ANIMALS</li> </ul>	<ul style="list-style-type: none"> <li>ANY TYPE OF IRRIGATION PERMISSIBLE BUT NOT DURING GRAZING</li> <li>GRAZING ONLY PERMISSIBLE AFTER EFFECTIVE DRAINING AND DRYING-NO POOLS</li> </ul>
<ul style="list-style-type: none"> <li>GRAZING FOR MILK PRODUCING ANIMALS (DEFINITION OF MILK-SECTION I(XV) OF THE HEALTH</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>ANY TYPE OF IRRIGATION PERMISSIBLE</li> <li>PERMISSIBLE AS DRINKING</li> </ul>	<ul style="list-style-type: none"> <li>ANY TYPE OF IRRIGATION PERMISSIBLE</li> <li>PERMISSIBLE AS DRINKING</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>



ACT 1977 (ACT 63 OF 1977)			WATER FOR ANIMALS	WATER FOR ANIMALS	
<ul style="list-style-type: none"> <li>• CROPS NOT FOR GRAZING, BUT UTILISED AS DRY FODDER</li> <li>• CROP CULTIVATED FOR SEED PURPOSES ONLY</li> <li>• TREE PLANTATIONS</li> <li>• NURSERIES - CUT FLOWERS EXCLUDED (SEE 2)</li> <li>• ANY PARK OR SPORTSFIELD ONLY DURING DEVELOPMENT AND BEFORE OPENING THEREOF</li> <li>• PARKS AND (SEE 6)</li> <li>• LAWNS AT SWIMMING POOL EXCLUDED (SEE 1)</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE ON ITS MERITS</li> <li>• NO OVER-IRRIGATION OR POOL FORMING</li> <li>• NO SMELL NUISANCE</li> <li>• PROPERLY FENCED</li> <li>• NO PUBLIC ALLOWED</li> <li>• NO MEAT ANIMALS, MILK PRODUCING ANIMALS OR POULTRY ALLOWED</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE (SEE ALSO 4 AND 5)</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE (SEE ALSO 4 AND 5)</li> </ul>
<ul style="list-style-type: none"> <li>• (i) PARKS, ONLY FOR BEAUTIFYING FLOWERBEDS, TRAFFIC ISLANDS ETC.-I.E. NOT A RECREATION AREA</li> </ul>	<ul style="list-style-type: none"> <li>• ONLY FLOOD IRRIGATION PERMISSIBLE</li> <li>• NO SPRINKLER IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• FLOOD IRRIGATION PERMISSIBLE</li> <li>• SPRINKLER PERMISSIBLE ON ITS MERITS</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> <li>• NO PUBLIC DURING IRRIGATION</li> </ul>	<ul style="list-style-type: none"> <li>• ANY TYPE OF IRRIGATION PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• FLOOD IRRIGATION PERMISSIBLE</li> <li>• PERMISSIBLE ON ITS MERITS</li> <li>• NO PUBLIC DURING IRRIGATION</li> </ul>

	• NO PUBLIC DURING IRRIGATION	• NO PUBLIC DURING IRRIGATION			
<p>• (ii) SPORTSFIELDS WHERE LIMITED CONTACT IS MADE WITH THE SURFACE EG. GOLF COURSES, CRICKET, HOCKEY AND SOCCER FIELDS, ETC.</p>	• NOT PERMISSIBLE	<p>• ANY TYPE OF IRRIGATION PERMISSIBLE</p> <p>• NO OVER-IRRIGATION AND NO POOL FORMING</p> <p>• NO PUBLIC OR PLAYERS DURING IRRIGATION</p> <p>• PUBLIC AND/OR PLAYERS ADMITTED ONLY AFTER EFFECTIVE DRAINING AND DRYING</p>	<p>• ANY TYPE OF IRRIGATION PERMISSIBLE</p> <p>• NO OVER-IRRIGATION AND NO POOL FORMING</p> <p>• NO PUBLIC AND/OR PLAYERS DURING IRRIGATION</p>	<p>• ANY TYPE OF IRRIGATION PERMISSIBLE</p> <p>• NO PUBLIC AND/OR PLAYERS DURING IRRIGATION</p>	<p>• FLOOD IRRIGATION PERMISSIBLE</p> <p>• SPRINKLER IRRIGATION PERMISSIBLE ON ITS' MERITS</p> <p>• NO OVER-IRRIGATION AND NO POOL FORMING</p> <p>• NO PUBLIC AND/OR PLAYERS DURING IRRIGATION</p> <p>• PUBLIC AND/OR PLAYERS ADMITTED ONLY AFTER EFFECTIVE DRAINING AND DRYING</p>
<p>• (iii) SPORTSFIELDS WHERE CONTACT IS OFTEN MADE WITH THE SURFACE, EG. RUGBY FIELDS, ATHLETICS TRACKS, ETC.</p> <p>• SCHOOLGROUNDS</p> <p>• PUBLIC PARKS- SPECIAL CHILDREN'S PLAYGROUNDS</p>	• NOT PERMISSIBLE	<p>• FLOOD IRRIGATION PERMISSIBLE</p> <p>• SPRINKLER IRRIGATION PERMISSIBLE ON ITS' MERITS</p> <p>• NO OVER-IRRIGATION AND NO POOL FORMING</p>	<p>• ANY TYPE OF IRRIGATION PERMISSIBLE</p> <p>• NO OVER-IRRIGATION AND NO POOL FORMING</p>	<p>• ANY TYPE OF IRRIGATION PERMISSIBLE</p>	<p>• ONLY FLOOD IRRIGATION PERMISSIBLE</p> <p>• SPRINKLER IRRIGATION NOT PERMISSIBLE</p> <p>• NO OVER-IRRIGATION AND NO POOL FORMING</p>
		<p>• NO PUBLIC OR PLAYERS DURING</p> <p>• PUBLIC AND/OR PLAYERS ADMITTED ONLY AFTER EFFECTIVE DRAINING AND DRYING</p>			

EXCLUDED (SEE 1		
--------------------	--	--

#### IRRIGATION – GENERAL REMARKS AND PRECAUTIONS

a) In order to obviate the irrigation system causing a nuisance in time, evidence must be produced that the type of soil and the size of the surface as well as the type of crop concerned are suitable for irrigation with the proposed quantity and quality of effluent.

b) The piping used for effluent be markedly different from the piping used for drinking water in respect of colour, type of material and construction. This precaution is necessary in order to obviate accidental cross-coupling of piping.

c) In order to prevent persons from unwittingly drinking effluent water or washing with it, the taps, valves and sprayers of the irrigation system must be so designed that only authorised persons can open them or bring them into operation.

d) Every water point where uninformed persons could possibly drink effluent water must be provided with a notice in clearly legible English, Afrikaans and any other appropriate official languages, indicating that it is potentially dangerous to drink the water.

e) The expression 'after effective draining and drying" in the above- mentioned table means that the particular act may take place only when no pools or drops of effluent are evident in the irrigation area concerned.

f) All possible precautions should be taken to ensure that no surface or underground water is contaminated by the irrigation water, especially where the latter does not comply with the General Standard. Excessive irrigation must therefore be avoided and the irrigation area protected against stormwater by means of suitable contours and screening walls.

g) Sprinkler irrigation shall be permitted only if no spray is blown over to areas where, such irrigation is forbidden. In this connection the quality of the effluent, the use of such adjoining area and its distance from the irrigation area must be taken into consideration before sprinkler irrigation is permitted.

DIRECTIVES FOR OTHER USES OF TREATED EFFLUENTS					C
OTHER USES OF EFFLUENTS	PS – PRIMARY AND SECONDARY	PST - PRIMARY, SECONDARY AND TERTIARY	STD – GENERAL STANDARD	SP-STD – ADVANCED PURIFICATION	OD – OXIDATION POND SYSTEM
<ul style="list-style-type: none"> <li>INDUSTRIAL AND SUNDRY USES NOT MENTIONED BEFORE</li> </ul>	<ul style="list-style-type: none"> <li>PERMISSIBLE ON MERITS IN EXCEPTIONAL CASES ONLY</li> </ul>	<ul style="list-style-type: none"> <li>EACH CASE WILL BE TREATED ON ITS MERITS</li> <li>THE EMPHASIS WILL BE ON THE E.COLI COUNT</li> <li>IN GENERAL THE EFFLUENT MUST BE FREE FROM PARASITIC OVA, PATHOGENIC ORGANISMS, TOXIC SUBSTANCE, ETC.</li> </ul>			<ul style="list-style-type: none"> <li>PERMISSIBLE ON MERITS IN EXCEPTIONAL CASES ONLY</li> </ul>
<ul style="list-style-type: none"> <li>FOOD INDUSTRY (ALSO COOLING WATER)</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>
<ul style="list-style-type: none"> <li>MINES AND INDUSTRIES: ORE TREATMENT, DUST CONTROL ETC.</li> </ul>	<ul style="list-style-type: none"> <li>PERMISSIBLE ON MERITS IN EXCEPTIONAL CASES ONLY</li> </ul>	<ul style="list-style-type: none"> <li>PERMISSIBLE ON MERITS PROVIDED HUMAN CONTACT IS EXCLUDED.</li> </ul>	<ul style="list-style-type: none"> <li>PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>PERMISSIBLE ON MERITS IN EXCEPTIONAL CASES ONLY</li> </ul>
		<ul style="list-style-type: none"> <li>ALL TAPS AND WATER DRAW-OFF POINTS IN THE EFFLUENT DISTRIBUTION SYSTEM MUST BE PROVIDED WITH CLEARLY LEGIBLE NOTICES IN ENGLISH, AFRIKAANS AND ANY OTHER APPROPRIATE OFFICIAL LANGUAGES, INDICATING THAT THE WATER IS NOT SUITABLE FOR HUMAN CONSUMPTION.</li> </ul>			
<ul style="list-style-type: none"> <li>HUMAN WASHING PURPOSES</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>PERMISSIBLE ON MERITS</li> <li>CLEARLY LEGIBLE NOTICES MUST BE DISPLAYED INDICATING</li> </ul>	<ul style="list-style-type: none"> <li>NOT PERMISSIBLE</li> </ul>

				THAT THE WATER IS NOT FIT FOR HUMAN CONSUMPTION OR FOOD PREPARATION
• FLUSH TOILETS	• NOT PERMISSIBLE	<ul style="list-style-type: none"> <li>• PERMISSIBLE ON MERITS</li> <li>• IN ORDER TO PREVENT THE USE OF EFFLUENT FOR UNAUTHORISED PURPOSES, NO OTHER DRAW-OFF BIB-COCKS SHALL BE AFFIXED TO EFFLUENT MAINS</li> </ul>	• NOT PERMISSIBLE	
• DUST CONTROL ON ROADS	• NOT PERMISSIBLE	<ul style="list-style-type: none"> <li>• PERMISSIBLE</li> <li>• EXCESSIVE SPRAYING AND POOL FORMING MUST BE AVOIDED</li> <li>• NO SURFACE OR UNDERGROUND WATER MAY BE POLLUTED</li> </ul>	• PERMISSIBLE	• NOT PERMISSIBLE
<ul style="list-style-type: none"> <li>• NO SMELL NUISANCE MAY BE CREATED</li> <li>• ANY DIRECT HUMAN CONTACT WITH THE SPRAY MUST BE PREVENTED AS FAR AS IS PRACTICABLE</li> <li>• STEPS MUST BE TAKEN TO ENSURE THAT NO EFFLUENT IS USED DIRECTLY OR INDIRECTLY FOR DOMESTIC PURPOSES</li> <li>• CONTAINERS USED FOR THE TRANSPORTATION OF EFFLUENT MUST NOT BE USED THEREAFTER FOR THE TRANSPORTATION OF DRINKING WATER BEFORE THEY HAVE BEEN EFFECTIVELY CLEANED OUT AND DISINFECTED</li> </ul>				
<p>GENERAL REMARKS: IT IS COMPULSORY THAT THE NECESSARY PRECAUTIONARY MEASURES BETAKEN WITH EACH OF THE ABOVE-MENTIONED USES IN ORDER TO PREVENT THE USE OF THE TREATED EFFLUENT FOR DRINKING OR DOMESTIC PURPOSES. IN ADDITION, IT IS ALSO COMPULSORY THAT THE MATERIAL AND/OR THE COLOUR OF THE EFFLUENT PIPELINE BE SUCH AS TO PREVENT ACCIDENTAL CROSS-COUPLING WITH DRINKING WATER PIPELINES. SEE ALSO (b) UNDER THE HEADING "IRRIGATION - GENERAL REMARKS AND PRECAUTIONS ON PAGE 7.</p>				

METHODS OF DISPOSAL AND DISCHARGE OF TREATED EFFLUENTS					D
METHODS OF DISPOSAL AND DISCHARGE OF EFFLUENTS	PS – PRIMARY AND SECONDARY	PST - PRIMARY, SECONDARY AND TERTIARY	STD – GENERAL STANDARD	SP-STD – ADVANCED PURIFICATION	OD – OXIDATION POND SYSTEM
1) DISCHARGE INTO RIVERS AND WATER COURSES, EXCLUDING ESTUARIES, DAMS AND LAGOONS - SEE 2	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• PERMISSIBLE ON MERITS WITH DUE REGARD TO LOCAL CIRCUMSTANCES SUCH AS THE DILUTION FACTOR IN THE RIVER OR STREAM, RAINFALL ETC.</li> <li>• THE PERMISSIBILITY OF DISCHARGE MUST BE DETERMINED WITH DUE REGARD TO THE USE OF THE RIVER WATER DOWNSTREAM</li> <li>• THE DISCHARGE POINT MUST BE DETERMINED WITH DUE REGARD TO THE POSITION OF WATER ABSTRACTION POINT(S) FOR DOMESTIC</li> </ul>	<ul style="list-style-type: none"> <li>• PERMISSIBLE, PROVIDED THE EFFLUENT CONTAINS NO HARMFUL SUBSTANCES IN CONCENTRATIONS DANGEROUS TO HEALTH</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>

		<p>PURPOSES LOWER DOWN THE RIVER</p> <ul style="list-style-type: none"> <li>• THE EFFLUENT MUST CONTAIN NO HARMFUL SUBSTANCES IN CONCENTRATIONS DANGEROUS TO HEALTH</li> </ul>			
<p>2) DISCHARGE INTO ESTUARIES, DAMS, LAKES, LAGOONS OR OTHER MASSES OF WATER (SEA EXCLUDED-SEE 3)</p>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• PERMISSIBLE ON MERITS IF REASONABLE ASSURANCE EXISTS THAT THE QUALITY AND VOLUME ARE SUCH AS NOT TO CAUSE NUISANCES OR HEALTH HAZARDS</li> <li>• ONCE MIXED WITH THE EFFLUENT THE WATER MUST NOT BECOME LESS SUITABLE FOR DOMESTIC USE AND/OR RECREATION</li> <li>• THE EFFLUENT MUST CONTAIN NO HARMFUL SUBSTANCES</li> </ul>	<p>PERMISSIBLE, PROVIDED THE EFFLUENT CONTAINS NO HARMFUL SUBSTANCES IN CONCENTRATIONS DANGEROUS TO HEALTH</p>	<ul style="list-style-type: none"> <li>• PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• NOT PERMISSIBLE</li> </ul>

		IN CONCENTRATIONS DANGEROUS TO HEALTH			
3)DISCHARGE INTO THE SEA	<ul style="list-style-type: none"> <li>• ONLY PERMISSIBLE BEYOND THE SURF ZONE</li> <li>THE DISCHARGE POINT MUST BE DETERMINED WITH DUE REGARD TO THE QUALITY AND VOLUME OF EFFLUENT, THE SEA CURRENTS, THE DISTRIBUTION OF AND DILUTION OF EFFLUENT, AND THE PROXIMITY OF PRESENT AND FUTURE BATHING AREAS.</li> </ul>	<ul style="list-style-type: none"> <li>• PERMISSIBLE DISCHARGE INTO THE SURF ZONE MUST BE DETERMINED WITH DUE REGARD TO THE PROXIMITY OF PRESENT AND FUTURE BATHING AREAS AND THE EFFECT ON THE QUALITY OF SEAWATER IN SUCH AREA</li> </ul>	<ul style="list-style-type: none"> <li>• PERMISSIBLE</li> </ul>	<ul style="list-style-type: none"> <li>• PERMISSIBLE ON MERITS AS FOR PS AND PST</li> </ul>	
<p>IN MOST CASES THE INFLUENCE OF THE ABOVE-MENTIONED DISCHARGES IS NOT DIRECTLY PREDICTABLE. IT WOULD THEREFORE USUALLY BE REQUIRED THAT THE NECESSARY INVESTIGATIONS BE MADE TO DETERMINE SUCH INFLUENCE WITH REASONABLE CERTAINTY.</p>					



GENERAL DIRECTIONS AND PRECAUTIONARY MEASURES	E
<p>a) The sewage purification works must be efficiently operated by adequately trained personnel at all times and must, as far as is reasonably practicable, not be overloaded.</p> <p>b) The person or authority in charge of the purification works must satisfy himself that the quality of the final effluent will at all times be in accordance with the directives as set out in this guide.</p> <p>c) Regular control tests of representative final effluent samples must be made at least quarterly and records must be kept of such tests.</p> <p>d) The person or authority in charge of the works must ensure that the quality of the final effluent and the use thereof comply with the directives set out in this guide - also when</p>	<p>such effluent is utilised by another person or body. The supply and utilisation of effluent must be terminated if the directives set out in this guide are not complied with.</p> <p>e) A person or body using the final sewage effluent for a purpose set out in this guide, but not undertaking the purification himself, must satisfy himself that only permissible utilisation practices are maintained and must forthwith discontinue the use thereof should he become aware of any deviation from the directive contained in this guide.</p> <p>f) Compliance with the requirements for the utilisation of purified sewage effluent as set out in this guide is the individual and joint responsibility of both the supplier and the user of the final effluent.</p> <p>g) In the case of a use qualified in this guide as permissible on merit, it will be necessary for the relevant uses and methods of use to be thoroughly motivated and investigated. The majority of such cases, stricter supervision and control of the system as well as the quality of the effluent will be required in order to prevent the development of any nuisance or conditions dangerous to health.</p>