

***Rules and Regulations
Governing Water
Conservation & Protection in
Saudi Arabia***

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الرئاسة العامة للأرصاد وحماية البيئة

**PRESIDENCY OF METEOROLOGY AND ENVIRONMENT
(PME)**

Management of Water Resources

- ◆ *The Government implements its water policies and rules and regulations through the following ministries, organizations and agencies:*
 1. *Ministry of Water and Electricity*
 2. *Ministry of Municipal and Rural Affairs*
 3. *Presidency of Meteorology and Environment*
 4. *The Saudi Arabian Standards Organization*

Management of Water Resources

- ◆ *Ministry of Water and Electricity* : which is responsible for planning and development of all water resources, providing drinking water, collecting and treatment of waste water, and its reuse and disposal. The Ministry is also encouraged of licensing of all activities concerning the exploration and use of water resources, water and waste water services. Therefore, *it's a key organization in implementations of most water-related policies and programs.*

Management of Water Resources

- ◆ *Ministry of Municipal and Rural Affairs : is also responsible for street cleaning and for regularly collecting and safely disposing of all forms of waste (sewage, garbage, rubbish storm water). **Reuse of treated effluents for irrigation of plant nurseries and public greenery is practiced.** Community sanitation control measures cover a wide range of activities.*

Management of Water Resources

- ◆ *Presidency of Meteorology and Environment: its main responsibilities were grouped into the following main categories: environmental surveys and pollution assessment and control, establishment of environmental standards and regulations, recommendations on practical measures for emergency situations, keeping abreast of environmental developments on the international scene, and preparing and issuing climatological, environmental and meteorological analyses, forecasts and bulletins.*

Management of Water Resources

- ◆ *Saudi Arabian Standards Organization: is the national organization responsible for quality control. It prepares and publishes performance and product standards (such as bottled and non-bottled water) which include a condition that those goods and commodities will not have an adverse effect on the environment or create a health hazard .*

Main Policies and Strategies

- ✚ Digging of wells will not be authorized unless a license is obtained from the ministry of Agriculture and Water, listing the stipulations and the technical specification necessary to be adhered to. Also well digging contractors are listed and categorized with accordance to their administrative and technical capabilities.*
- ✚ The encouragement of the reuse of sanitary waste water and irrigation drainage water for agriculture purposes.*

Main Policies and Strategies

- ✚ The encouragement of construction of specialized projects and plants in the main cities of the kingdom **to pump the treated water through pipelines networks to farms** in villages and rural areas surrounding these cities.*
- ✚ The adoption of strategy for **diversification of agricultural production and conservation of water saving crops** and those, which enjoy regional competitive advantage.*

Main Policies and Strategies

- ✚ The construction of numerous dams on main valleys of the kingdom in order to **conserve rain and flood water** for the different uses and contribute to the underground water storage.*
- ✚ The implementation of an **effective schedule at farm to deliver irrigation** waters according the actual needs.*
- ✚ The use of advance irrigation system in some regions to **help in improving irrigation efficiency and reducing irrigation water** use.*

Main Policies and Strategies

- + Moving some of the fodder and cereals areas from **high crop zones to lower** water requirement area.*
- + The Introductions of some **control measures on water pumping** at farm level by water metering.*
- + The establishment of several **pricing categories** for penalizing subscribers in a way that leads all water users to conserve water.*

Main Policies and Strategies

- + The adoption of a nationwide campaigns to **educate and spread awareness** among the public about water saving.*
- + Encouraging scientific research aimed at **finding additional sources** to benefit from wastewater.*

Regulations and Legislations

- ✦ *The conservation of water resources, which laid down the rules for the conservation and regularization of water use, as approved by Royal Decree No. M/34, dated 24/8/1400AH, indorsing the Resolution of the Council of Ministers No. 140 dated 19/7/1400AH.*
- ✦ *The Protection of the General Public Facilities Statutes, as approved by Royal Decree no M/62 on 20/12/1405, indorsing the Resolution of the Council of Ministers No. 225 dated 26/11/1405AH which provides for the protection of water works, the protection of rivers against the dumping of wastes, and the violation of water facilities.*

Regulations and Legislations

- ✦ *The **restriction of Sediment removal** from certain wadis, as approved by Royal Decree No. 114/M of 15/7/1407AH. Since, these sediments are considered as water containers.*
- ✦ *The **regulatory system governing the recycling and re-utilization of used waters and effluents**, issued by Ministerial Council's Decision No 42, on 11/2/1421AH, and approved by Royal Decree No M/6, and dated 13/2/1421AH.*
- ✦ *The **Technical Provisions and Specifications for Sensatory equipments and materials used for water rationalization.***

General Environmental Regulation

- *Royal Decree No 34, dated 28/7/1422 AH, which approves Decision no 193 which was taken by the Council of Minister on 7/7/1422 AH relative to the adoption of the **General Environmental Regulatory System in the Kingdom.***
- *Ministerial Decision No. 1/1/4/5/1/924 dated 3/8/1424AH has Approved the **Rules for Implementation of the General Environmental Regulation,** and its amendment by Decision No. 1/1/4/2391 dated 8/5/1426AH.*

General Environmental Regulation

- *It has **four comprehensive chapters**, which **comprise twenty-four articles** contribute to the following: enhancing ecological awareness about the importance of protecting, preserving, and developing the environment and preventing pollution from affecting it; protecting public health from the hazards of activities and works which adversely impact on the environment; preserving, developing and rationalizing the use of natural resources.*

General Environmental Regulations

- *It is also stresses the importance of environmental planning as an integral part of any comprehensive sustainable development policy in all fields. The system also underscores the importance of heightening environmental and ecological awareness among the citizens and instilling in their minds **the principle of individual and collective responsibility** in order to induce them to preserve and improve it. Last but not least, the system emphasizes the importance of encouraging voluntary national endeavors in environmental protection.*

Contents of the G.E.R.

- ✿ *Chapter One: Articles 1 and 2: Definitions and Aims;*
- ✿ *Chapter Two: from Article 3, which bears on the responsibilities and the duties devolving to the concerned authorities (the General Directorate of Meteorology and the Protection of the Environment) to Article 16 which covers the responsibilities and the duties falling to the concerned authorized authorities and persons, in addition to some technical matters.*

Contents of the G.E.R.

✿ *Chapter Three: provides for violation and penalties (Articles 17 and 18). The remaining three Articles, 19,20, and 21 provide for the legal and procedural matters relative to the imposition of penalties and the procedures of appeal against the suit before Diwân al-Madâlim (the Ombudsman)*

Contents of the G.E.R.

✿ **Chapter Four:** *some general provisions. Articles 22, 23, and 24 bear on **the coordination** with the competent authorities with a view of setting up the by-laws of the Environmental Regulatory System. The Articles also **stipulate** that the regulations, ordinances, decisions, and instructions relating to the environment will continue to be enforceable providing there are no contradictions among their provisions.*

Basic Principles of G.E.R.



*The General Environment Regulatory System find a **basis in the Islamic Shari`ah** (Law), which, broadly speaking, seeks to remove all kinds of damage and harm. The system also expresses, in its current status, Article 32 of the **Governance System**, which stipulates that “the State shall strive to preserve and protect the environment, prevent any pollution which may adversely impact on it, and protect and develop its natural resources.”*

Basic Principle of G.E.R.

- *Underscoring the importance of environmental **awareness** and the enhancement of **a sense of responsibility** for the environment.*
- *The reinforcement of the concept of environmental protection from **an Islamic perspective** and the consolidation of the role played by Mosques in urging society to preserve and protect the environment.*

Legal References and Instruments

Article Article 13 from the General Environmental Regulations Stated that :Anyone establishing production, services, or other activities should take all necessary steps to achieve the following:

- *Not to pollute surface, underground, or coastal waters with solid or liquid wastes directly or indirectly. etc...*

Legal References and Instruments

*Article Article 13 from the Rules of Implementation Stated that :All persons engaged in productive activities, service or other activities shall take the necessary actions to comply with the regulations. These should be achieved in accordance with **environmental standards and criteria issued by the competent agency according to the regulations:***

Legal References and Instruments

13.1 Prevent direct or indirect contamination of surface, ground and coastal waters that may be caused by solid or liquid residues.

13.1.1 Comply with the environmental standards and criteria set forth in the appendices to these Rules and coordinate with the public Agency to ensure their implementation.

Legal References and Instruments

*13.1.2 To employ the best available technologies and **means and take the necessary precautions to avoid contamination of surface, ground and coastal waters**; and control and minimize pollution in accordance with the approved environmental criteria.*

*13.1.3 Remove **all forms of contamination of surface, ground or coastal waters resulting from the said activities** and bear all the costs of the prevention, control and minimization of contamination, remediation of the contaminated environment and compensate the affected parties.*

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Legal References and Instruments

Continues...

*13.1.4 Prevent the discharge, in any quantity, of **any type of solid or liquid wastes**, substance, element, organic or inorganic compound that may be classified as hazardous into surface, ground or coastal waters.*

Legal References and Instruments

- ◆ *Article (3-5) from the Rules of Implementation Stated that: In pursuit of Article III of the General Environmental Regulations, the **Competent Agency shall be entrusted with the tasks of preserving the environment and preventing its degradation** by several means, ...which include " Ensure public agencies and persons commitment to the environmental regulations, standards and criteria, taking the necessary actions to achieve this purpose in coordination and conjunction with concerned and licensing agencies "*.

Legal References and Instruments

- ◆ *Article (3-5-4) from the Rules of Implementation Stated that: In pursuit of Article III of the General Environmental Regulations, the Competent Agency shall be entrusted with the tasks of preserving the environment and preventing its degradation by several means, ...which include " Coordination and cooperation with the concerned and licensing agencies to provide and develop monitoring and inspection tasks to ensure public agencies and persons commitment to environmental regulations, standards and criteria (Appendices 1, 2 and 3)".*

Legal References and Instruments

- ◆ *Article (14.2.1) from the Rules of Implementation Stated that: In conjunction with the concerned agencies, the **Competent Agency shall follow up on the implementation of standards, criteria, guidelines and procedures** that govern the production, transportation, storage, recycling, treatment or disposal of chemical, toxic and hazardous materials as indicated in appendix 4.*

Legal References and Instruments

- ◆ *Article XIX from the Rules of Implementation Stated that " **Violations of these Regulations and their Rules for Implementation shall be controlled by employees designated by a decision of the Competent Agency. The Rules for Implementation shall specify the procedures for controlling and documenting violations**".*

PME Water Quality Standards

- ***“Environmental Protection Standards”***
(Document No. 1401-01) in 1401H (1981-1982), which came into force as of the first of Du Al-Qa'dah 1402H. Updated and upgraded, latest in the series being 1988-89 (Document No.1409-01, 1409H).
- *The document includes **source and ambient standards design to protect air and water** quality by limiting the emission of pollutants from sources and the concentration of pollutants in air and water.*

PME Environmental Standards

- *Water quality standards (WQS) were promulgated in order to: minimize the volume of waste generated; reduce discharge of pollutants at source to minimum; ensure maximum assimilation of pollutants; protect the quality of the ambient water bodies; and control the quality of waste water before discharge to the central treatment facilities*

Receiving Water Guidelines

- *Intended to provide guidance for location, design and operation of new facilities and modifications to existing facilities, and for the operation of existing facilities, pending development of receiving water standards.*
- *Apply at the edge of mixing zone and beyond from any facility to coastal waters. Unless otherwise stated, each interim guideline refers to a thirty-day average.*
- *Cover physiochemical pollutants as well as organic, inorganic and biological contaminants*

Receiving Water Guidelines

- *These are **interim guidelines** until the relevant standards are developed for the receiving water bodies based on the best usage of water body. Each interim guideline refers to a thirty-day average.*
- *The national RWG stipulates that the **maximum changes** from the typical local baseline concentration at the edge of the mixing zone, as result of the discharge of physiochemical, organic and /or inorganic pollutants, must not exceed 5%.*

Performance Standards for Direct Discharge

- ✿ *Applicable to all facilities with the intention to discharge its waste directly to a receiving water body. To ensure that sources adopt the best available practical technology in order to control pollution at its origin.*
- ✿ *Cover sanitary sewage, surface runoff, cooling water discharges, boiler water and air-conditioning blowdown, process water, and any other stream of industrial or municipal origin. Segregation of wastewater of different character must be pursued to the maximum extent possible*

Performance Standards for Direct Discharge

- *Uncontaminated surface runoff and once-through cooling water **may be discharged to** receiving water without treatment as long as their thermal input does not exceed the RWG stipulated guidelines.*
- ***Promulgated in order to protect** primarily the coastal marine environment for their industrial, commercial and recreational uses and to protect their aesthetic like visual appearance of waters and prevention of excessive turbidity, eutrophication and odors*

Pretreatment Guidelines for Discharge to Central Treatment Facility

- *This set of guidelines is **intended to provide guidance for the removal of substances that significantly effect the performance of the central treatment facilities, and substances that are not adequately controlled at central treatment.***

Pretreatment Guidelines for Discharge to Central Treatment Facility

- It is provide enough **bases for designing a facility** of any government, public or private organization interested to develop its own treatment facility. Accordingly, this set of guidelines is not binding as long as the quality of effluents from a treatment facility conforms to PME PSDD.

Pretreatment Guidelines for Discharge to Central Treatment Facility

- *In the present PME is in **the process of proposing a major modifications and upgrade of these standards** with special emphasis on the Water Body Classification and quality limits of each class based on its "Best Uses" for various phys-chemical and biological parameters, trace metals and organic constituents. Subsequently, **the new version will include** water body classification, ambient and source discharge standards and criteria for all wastewater discharged in the Kingdom of Saudi Arabia*