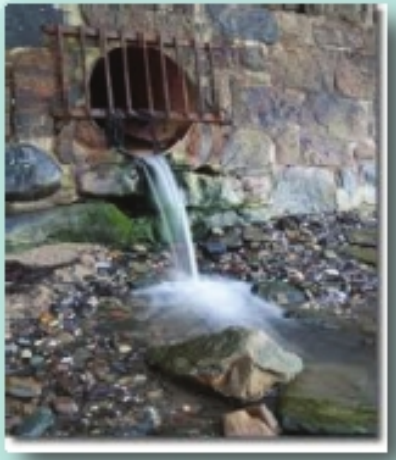
## Licensing Procedures

- All applicants shall obtain relevant application forms from the nearest NEMA office or download the same from the NEMA Website: www.nema.go.ke
- Fill forms indicating EIA or EA Reference Number and attach supporting documents such as site location, maps, sketch of facility/site In relation to water body indicating three sampling points. In addition the applicant must attach design plan of the treatment works, effluent analysis from NEMA accredited laboratories, company PIN Certificate and Certificate of incorporation.
- The applicant shall pay the prescribed application fee equivalent to KShs 5,000 through NEMA's KCB Revenue Account 233971386. A NEMA official receipt will be issued to the applicant on evidence of payment such as bank deposit slips or copy of a banker's cheque.
- Applicant shall return the duly filled forms and documents to the District Environment Officer who will then forward the form to NEMA Headquarters for processing
- The application will then be reviewed within 21 working days and an approval for licensing will be given with relevant conditions or a decline stating the reasons
- Upon approval, a license fee shall be paid as follows:
  - Application fee of KShs 5,000- to confirm
  - Licensing fees of KShs. 100,000- to confirm

Upon payment, a license shall be issued within 30 working days and will be liable for renewal every year based on evidence of adherence to set conditions.

## Offences and Penalties

EMCA 1999 identifies various environmental offences and states that any person who contravenes any part of the regulations commits an offence. The water quality regulations stipulates upon conviction by a court of law a fine not exceeding five hundred thousand Kenya Shillings (KShs 500, 000) in contravention to any part of the regulations. In addition to the above the court may give such other orders as provided for by the Act.

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*DTP Designs/Illustration by: FK Mugambihi, A J Wawwa*


National Environment Management Authority (NEMA)

# Water Quality Regulations, 2006

# Tanneries Sector

*Enhancing Quality Water for All*


Financed by European Union

RECOMAP

## Introduction

There are various registered leather-tanning industries that process leather products. Most of these industries process raw hides to the wet blue stage for export. The process of converting rawhides or skins into leather require tanning agents. The mostly used tanning agents are trivalent chromium and vegetable tanning extracted from specific tree barks. Almost all leather made from lighter weight cattle hides and from the skin of sheep lambs goats and pigs is chrome tanned. Most tanneries have inefficient effluent pre-treatment plants with inadequate capacity to recover chrome and lime effluents.

Effluents from leather treatment plants and Tanneries pollute the environment through contamination to water, air and soil. Ammonia and sulphide emissions may occur during some wet processing steps such as deliming and unhairing. Hydrogen sulphide

gas released from tanneries causes bad smell around the environs of such facilities which has been a major cause of complaint from residents living near such industries. Further, exposure of human beings to chromium salts for periods of 2 to 26 years has been reported to cause cancer of the digestive tract while in plants, high levels of chromium supply can inhibit seed germination and subsequent seedling growth.

## Targeted Facilities

Leather treatment plants and Tanneries Potential areas of Pollution and Pollution Paths Effluents are likely to contaminate water, air and soil. Ammonia and sulphide emissions may occur during some wet processing steps such as deliming and unhairing. Alkaline sulphides can be converted to hydrogen sulphide if PH is less than 8.0 resulting in release of gas.

## Obligations

- EMCA 1999 requires that EIA and environmental audit (EA) be carried out for processing and manufacturing industries, chemical works, process plants including tanning and dressing of hides and skins.
- The water quality regulations prohibits one from discharging or applying any pollutants into the aquatic environment unless such pollutant complies with the standards set out in annex 2 (third Schedule).
- Operators/owners of tanneries that discharge effluents into the environment shall carry out daily effluent discharge quality and quantity monitoring and shall submit quarterly records of such monitoring to NEMA.

## Standards

The following are the Permitted Water Quality Standards provided in the Fourth Schedule as guided in the Third Schedule of the Regulations, applicable to the leather tanning and finishing:

Permitted Water Quality Standard Parameters

No.Parameter Guide Value (Maximum allowable)

| | | |
|---|---|---|
| 1 | BiologicalOxygen Demand (BOD 5 days at 20 C) | 30mg/l |
| 2 | Total Suspended Solids (TSS) | 30mg/l |
| 3 | pH | 5.0-9.0 (marine) 6.5-8.5 (non-marine) |
| 4 | Faecal coliform | |
| (E.coli counts/ 100ml) | | |
| nil | | |
| 5 | Oil and grease | nil |
| 6 | Temperature | ±3oC |
| 7 | Nitrate | 100mg/l |
| 8 | Total Chromium | 2 |
| 9 | Chrome | |
| 10 | Tannin | |
| 11 | Oil | |
| 12 | Colour dye and pigment Hazen units | 15 |