

Tipperary South Riding County Council

# Measures Report

For The

## Dangerous Substances Regulations

(SI No. 12 of 2001)

(Measures to be taken to secure compliance with the standards prescribed by the Dangerous Substances Regulation)

Ray O'Dwyer  
Director of Services

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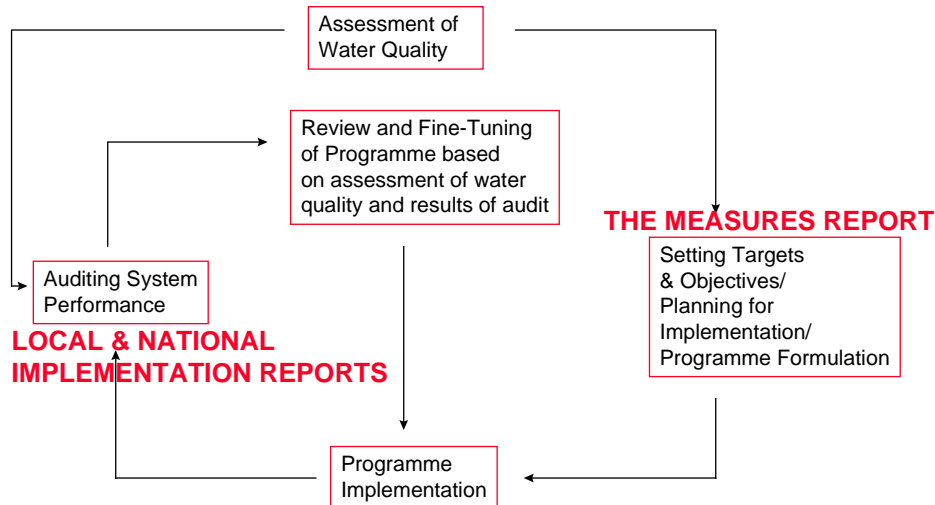
## Introduction:

The Dangerous Substances Regulations, 2001, prescribe water quality standards in relation to certain substances in surface waters, e.g., rivers, lakes and tidal waters. The substances include certain pesticides (atrazine, simazine, tributyltin<sup>1</sup>), solvents (dichloromethane, toluene, xylene), metals (arsenic, chromium, copper, lead, nickel, zinc) and certain other compounds (cyanide and fluoride). The Regulations give further effect to the EU Dangerous Substances Directive (76/464/EC) and give effect to certain provisions of the EU Water Framework Directive (2000/60/EC).

Each local authority is required to submit a Measures Report to the EPA by 31 July 2002 in line with Article 10(1) of the Regulations setting out the measures to be taken to secure compliance with the standards prescribed by the Regulations. This report sets out the status of dangerous substances in surface waters in South Tipperary; the targets to be achieved; an analysis of potential pressures; and a programme of measures to achieve the standards by 2010 as required by the Regulations.

## GENERAL APPROACH

The EPA recommends the use of an environmental management systems approach to implementation of the Regulations. This approach operates on the basic principle of **continual improvement**, which is at the heart of the Regulations. The common principles underpinning an environmental management system approach are outlined in Figure 1, adapted to the requirements of the Regulations.



**Figure 1 Generalised Environmental Management Systems Approach Adapted to Requirements of the Regulations**

# Section 1: Background Information

## 1.1 Population

Tipperary SR County covers an area of 2258 square kilometres. The County has a population of 75,514 (Census of Population 1996). Approximately 50% live in urban areas. The main towns are Clonmel (pop.15,215), Tipperary (pop.4,640), Carrick (pop.5,172), Cashel (pop.2,346), Cahir (pop.2200) and Fethard (900).

## 1.2 Topography

The County may be divided into three main physiographic regions:

*Upland Areas:* These occur in the southern, western and north-western part of the county. The mountain ranges of the Galtees are situated in the south-western part of the county and peak at a height of 915 m. OD. The Knockmealdowns which peaks at 790 m OD are situated in the southern area. In the east of the county Slievenamon mountain peaks at 717 m OD. Part of the Slievefelim mountain range is located in the north-western part of the county. Maximum elevation here is 438 m. OD. The Comeragh mountain range while situated in County Waterford is significant in that much of the mountains catchment drains into the River Suir.

*The Central Area* is characterised by gently undulating topography with elevations between 76 – 364 m. OD.

*Lowland Areas:* These areas below 75 m OD are situated north of Cahir, along the River Suir between Clonmel and Carrick-on-Suir. The Clogheen-Newcastle-Ardfinnan area is also below 60m. OD.

South Tipperary has borders with Waterford, Cork, Limerick, North Tipperary and Kilkenny. Fig.1.1 illustrates the topography of the county

## 1.3 Geology and Soil Associations

### 1.3.1 Geology

The geology of Tipperary SR is outlined in detail in the Groundwater Protection Scheme<sup>1</sup> prepared for the County by the Geological Survey of Ireland. However it can be summarised as being dominated by carboniferous limestone units mainly found in the lowlying areas. Devonian (Old Red Sandstone) rock formations are present in the upland areas of Galtees, Slievenamon and the Knockmealdowns.

### 1.3.2 Soil Associations

The main soil associations encountered in Tipperary SR are listed below and illustrated in Fig. 1.2

- Brown Podzolics with gleys , and podzols.
- Peaty Podzols with associated lithosols, gleys and blanket peat

- Acid Brown Earths with associated grey brown podzolics and gleys
- Acid Brown Earths/Gleys and Associated Peaty Gleys.
- Acid Brown Earths with associated gleys , regosols and podzols.
- Gleys with associated peaty Grey Brown Podzols
- Minimal Grey Brown Podzolics with associated gleys, brown earths and basin peats.

The lowlands have well drained soils which are deep , medium textured , have good moisture holding capacities and are good for tillage. The upland areas are characterised by poorly drained soils.

## **1.4 Water Resources**

### **1.4.1 Surface Water**

There are some 350 kilometres of rivers within the county. The principal river is the River Suir which drains the centre of the County. Stations 1200 to 2900 of the Environmental Protection Agency water quality monitoring sites on the Suir are in South Tipperary.. The main tributaries or subcatchments of the Suir in South Tipperary are the Aherlow, Anner, Ara, Multeen, Tar and Clashawley. Rivers not in the Suir Catchment are The Dead and its tributaries the Pope's River and the Cauten (tributaries of the Lower Shannon), The Munster and The Kings (both tributaries of the Nore) and the Araglin(tributary of the Blackwater).

The impact of bordering counties on water quality in South Tipperary is mainly though not exclusively confined to North Tipperary as the first eleven stations of the Suir are in North Tipperary. However both sewage and agricultural discharges originating in County Limerick affect the Aherlow. The Duag and Tar rivers have been affected by agricultural pollution originating in County Cork. The Three Rivers Project (River Suir Catchment)<sup>3</sup> commenced its work in September 1998 and the monitoring programme for this project commenced in September 1999. It should be noted that while the project is confined to the Suir Catchment it is expected that the information, monitoring and management systems provided will benefit water quality in the whole county and not just the Suir Catchment.

### **1.4.2 Ground Water**

Groundwater is an important resource providing 20% of the public water supply in addition to being the source for many private supplies. The principle aquifers in the county are associated with Lower Carboniferous Limestones and the late Devonian Kiltorcan formations. Fig 3 is a general aquifer classification map for Tipperary SR. The county has in place a Groundwater Protection Scheme prepared by the Geological Survey of Ireland. A large proportion (60%) of the county is classed as having either extreme or high vulnerability. The major groundwater sources in the county are Ironmills, Springmount, Mullenbawn, Poulatar and Poulalee. The nitrate levels in the groundwaters in South Tipperary are generally less than 25 milligrams per litre Nitrate as NO<sub>3</sub>. However

individual wells particularly located in farmyards have at times shown elevated nitrate levels. Based on the chemical analysis, phosphorous levels in the groundwater are below the detection limit of analytical methods (<5ug/l). It is assumed therefore that groundwater is not a significant source of phosphorous entry to surface waters in the county.

## **1.5 Economy**

Agriculture is the most important industry. Tipperary SR contains 170,500 ha of farmland. Of this, 16,000 ha are under tillage for crops, fruit and horticulture. 148,000 ha are used for hay, silage and pasture. 6,500 ha is suitable for rough grazing. The most important activities are dairying and cattle rearing (328,000), sheep (128,500) and pigs (95,000). The county has a considerable number of piggeries and the sow population at 13,200 is the third highest in the country. The pig numbers in the Glen of Aherlow are particularly high, being 3.5 times the average for the country<sup>2</sup>.

It is estimated that 20% of the land is under forestry this mainly being the mountainous regions on the fringes of the County. Coillte manages the majority of this forestry. However private afforestation is becoming more important due to financial incentives available.

There are ten integrated pollution control licences issued to industrial activities by the EPA. Several other industrial activities remain under the control of the Council. The industries include Merck, Sharpe and Dohme (fine chemicals manufacturing) Williamette of Europe (wood processing), Ronans (Tannery), Clonmel Health Care (Pharmaceuticals), Ranbaxy (Pharmaceuticals), Showerings (cider and soft drinks), Clonmel Chilling (Meat Processing) and National By-Products (Rendering).