

LEITRIM COUNTY COUNCIL

DANGEROUS SUBSTANCES
2006 IMPLEMENTATION REPORT



Water Quality (Dangerous Substances)
Regulations, 2001 S.I. 12 of 2001

SECTION 1 CURRENT WATER QUALITY STATUS AND TARGETS

1.1 Existing Condition

In the EPA survey of Dangerous Substances in Surface Freshwaters 1999-2000, there are 5 sites in County Leitrim.

Site no. 40 Lough Allen S.E. Drummans Island

Site no. 41 Lough Allen N.W. Drumshambo

Site no. 43 0.5 km d/s Carrick on Shannon

Site no. 44 Rail bridge d/s Masonite

Site no. 45 D/s Roosky

Atrazine, Simazine, Toluene, Xylenes, Arsenic, Chromium, Copper, Lead, Nickel and Zinc were analysed. All 5 sites complied with the standards as set out in the Regulations.

Dichloromethane, Cyanide and Fluoride were not included in the EPA survey.

The River Shannon was monitored at Carrick on Shannon upstream of the town on 1 occasion in 2005 as part of the EU (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989. Lough Gill was monitored at the intake point for the North Leitrim Regional Water Supply Scheme under the above Regulation also in 2005.

Surface water at the landfills at Mohill and Carrick on Shannon were analysed for dangerous substances as part of the Waste Licence issued by the EPA for these facilities.

Monitoring for dangerous substances was carried out at 14 No sites on rivers in Co. Leitrim in 2005. The samples were taken on two occasions i.e. March and September. The sampling points were strategically chosen at points downstream of potential pressures and at locations taking in large river catchment areas. The sites chosen on the River Shannon corresponded closely with the 3 No identified sites above. Lough Allen was not sampling for dangerous substances due to the difficulty in getting to the sampling points and also the fact that the water quality determined by the EPA survey was deemed satisfactory. Further monitoring was deemed un-necessary at this time.

See Table 1.1 for summary of sampling locations and annual mean concentrations.

1.2 Satisfactory and Unsatisfactory

Surface Water Abstractions

The data from the monitoring under the EU (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989 showed no exceedence in dangerous substance such as Arsenic, Chromium, Copper, Fluoride and Lead. No exceedences in the levels of Arsenic, Chromium, Copper, Fluoride and Lead were detected.

Landfill Impact

The surface water upstream and downstream of Mohill landfill sampled in 2003 and 2004 showed full compliance with the Water Quality (Dangerous Substances) Regulations, 2001. The surface water in the vicinity of the Carrick on Shannon landfill analysed in January 2002 showed an Arsenic level of 99µg/l and a Lead level of 48µg/l. Further exceedences have been detected in monitoring carried out in July 2003, with high levels of Copper, Lead and Chromium detected. However landfill remediation work is almost complete at this closed landfill and analysis carried out in May 2004 revealed no exceedences of heavy metal standards.

Other River Monitoring Sites

Of the 14 No sites monitored for dangerous substances in 2005 only 2 sites showed exceedences in the standards as follows:

- The Easky River downstream of Glenfarne Village at grid Ref: 201830 337213 showed a slight exceedence in the standard for cyanide at an annual mean concentration of 11.6 µg/l. This sampling site is located downstream of the IPPC licensed facility – Glenfarne Wood Products where chemical wood preservation takes place.
- The River Shannon downstream of Masonite Ire Ltd at Grid Ref: 200786 296043 showed an exceedence for fluoride at an annual mean concentration of 1013µg/l.

Leitrim County Council undertook the sampling for the above surveys and the analysis was contracted to an external laboratory. A problem with detection limits and result reporting was detected in the first round of analysis. This laboratory is no longer being used. The above annual mean concentrations were based on 3 No. samples taken at each site during the course of 2005. In each case only one sample exceeded the standard and 2 No. subsequent samples were well below the standard.

While laboratory error is seen as a probable cause of the above exceedences in Dangerous Substances Standards the exceedences have been notified to the EPA as a precautionary measure. It is proposed that the 2 No locations where exceedences in the standards were detected be re-sampled early in 2007, at the same frequency, prior to any corrective action being taken. Both upstream of the potential pressure and downstream will be sampled for the parameters identified as exceeding the standards.

1.3 Standards to be achieved by December 31, 2010

Substance	µg/l	Substance	Standard (µg/l) for Fresh Waters	
			Hardness of water measured in mg/l CaCO ₃	
			< or = 100 mg/l CaCO ₃	> 100 mg/l CaCO ₃
Atrazine	1.0	Arsenic	25	25
Dichloromethane	10.0	Chromium	5	30
Simazine	1.0	Copper	5	30
Toluene	10.0	Cyanide	10	10
Tributyltin	0.001	Fluoride	500	500
Xylenes	10.0	Lead	5	10
		Nickel	8	50
		Zinc	See note	100

Note: In the case of Zinc the standard shall be-
8µg/l for water hardness less than or equal to 10mg/l CaCO₃,
50µg/l for water hardness greater than 10mg/l CaCO₃ and less than or equal to
100mg/l CaCO₃

1.4 Proposed Article 9(1) and 9(2) extensions

Based on the data to hand at present no Article 9(1) or (2) extensions are proposed.

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SECTION 2 IDENTIFICATION OF POTENTIAL PRESSURES

2.1 Identification of pressures

The North Leitrim Regional Water Supply Scheme has just been completed and has replaced 2 No. small water treatment plants. The South Leitrim Regional Water Supply Scheme has been extended to replace a further treatment plant. There are now only 2 No. aluminium sulphate dosing water treatment plants in the County.

There are 17 No. Urban Wastewater Treatment Plants in the county.

Mohill landfill has undergone rehabilitation and the leachate from the site is seweraged to Mohill UWWTP. Carrick on Shannon landfill site has also undergone rehabilitation and work is underway to have the leachate seweraged to the local UWWTP. The EPA has issued both these facilities with a Waste Licence. The surface water and groundwater in the vicinity of each of these facilities is monitored in accordance with the licence.

There are 5 No. IPC licensed activities in operation in the County.

1. The Valspar Corporation, Water based paint manufacturers in Ballinamore discharge wastewater to the sewer in Ballinamore, which in turn discharges to the Shannon Erne Waterway.
2. Masonite Ire Ltd manufacturers of wooden door finishing at Derryoughter, Drumsna discharges wastewater to the Shannon.
3. A.S. Richardson, Newtowngore, involved in the treatment or preservation of wood, involving the use of preservatives, with a capacity exceeding 10 tonnes per day.
4. Glenfarne Wood Products Ltd, Annagh, Glenfarne, involved in the treatment or preservation of wood, involving the use of preservatives, with a capacity exceeding 10 tonnes per day.
5. Brendan Kiernan Piggery, Ballyconnell Pig Unit, Ballyheady, Ballyconnell has an IPC licence which covers land spread areas in Co. Leitrim administrative area.

There is a further IPC licensed activity located in Co. Roscommon administrative area that discharges to the sewer in Carrick on Shannon, namely Irish Rubber Components, Tullyleague, Carrick on Shannon, Co. Roscommon.

There are 14 No. licenses to discharge to waters under Section 4 of the Local Government (Water Pollution) Act, 1977 and 27 No licences to discharge to sewer under Section 16 of the Local Government (Water Pollution) Act, 1977 in operation at present.

An assessment of Waste Management (Movement of Hazardous Waste) Regulations, 1998 C1 forms gave the following list:

1. Clinical, health care, dental, Veterinary and pharmacy waste.
2. Waste from manufacture of water based paints (Valspar Corporation)
3. Waste from the production, formulation and use of resins, latex , plasticisers glues / adhesives, phenol, formaldehyde, liquid wurtz resin, Melanaine Urea Formaldehyde, COD waste, waste batteries, cytotoxic waste (Masonite)
4. Paint and Thinners
5. Glycol Ethers (Modular Cold Storage)
6. Battery Acid –sulphuric acid Sligo and Manorhamilton Carrick on Shannon Keshcarrigan and Ballinamore (Eircom)
7. Used lead acid batteries and primary batteries
8. Mercury Vapour from used fluorescent bulbs
9. Asbestos
10. Diesel, Petrol, Home heating oil
11. Cresylic Acid (Westmark Schulte Industrial Estate Carrick on Shannon)
12. Calciumhydroxide- 45% caustic soda, rubber manufacture raw materials (Elastometal Manorhamilton)
13. Xylene, ethyl alcohol (General Hospital Letterkenny Co. Donegal)
14. Concentrated Acids, Ammonia, COD Waste, liquid mercury, Expired chemicals (Leitrim County Council Laboratory)
15. Expired Chemicals (All Secondary schools)
16. Photographic fixer and developer
17. Perchloroethylene
18. Wood preservative waste containing Copper, Arsenic and Chromium
19. Used sheep dip

There were no reports of incidences or spillages of any of these substances either on site or during transport in the period July 2004 to July 2006.

2.2 Proposed new monitoring locations

The Easky River upstream and downstream of Glenfarne Wood Products will be monitored on 2 No. occasions in early 2007 for cyanide. The River Shannon upstream and downstream of Masonite Ire Ltd will be monitored on 2 No. occasions in 2007 for fluoride.

There were no other exceedences in dangerous substances detected during the period of monitoring in 2005. There are no plans to carry out any further monitoring in this regard.

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SECTION 3 PROGRAMME FOR IMPLEMENTATION

3.1 Summary of Implementation of Measures

- Monitoring for dangerous substances was carried out at 14 No sites on rivers in Co. Leitrim in 2005. The samples were taken on two occasions i.e. March and September. The sampling points were strategically chosen at points downstream of potential pressures and at locations taking in large river catchment areas.
- 48 No. Farm surveys were carried out in the Cullies River catchment. Follow up action was taken in regard to 22 No. of these farms. Follow up visits were made to a further 13 No farms in the Lough Gill catchment and 5 No farm surveys were carried out in Garadice lake area. Reference was made in each instant to storage of dangerous chemicals. There were no major issues detected.
- All complaints regarding water pollution have been investigated and followed up in accordance with documented complaint procedures.
- River channel surveys and investigations have been carried out at specific locations along the River Shannon, Bradogue River, Annadale stream, Laheen stream and stream flowing into Gangin Lake. These locations showed drop in Q value measurements in 2001-2003 period.
- Fish farm in L Allen licensed under Water Pollution Acts and licence audits carried out
- Liaison with Cavan County Council has taken place re Dowra UWWTP and Dowra Livestock Mart.
- Some of the wrong sewer connections in Mohill town were corrected and further work is needed.
- Phosphate removal facilities have been installed at 6 No. Urban Wastewater Treatment Plants, namely; Ballinamore, Drumahaire, Drumshanbo, Kinlough, Manorhamilton and Mohill.
- Liaison with Waterways Ireland re sewage holding tanks on boats and pump out facilities has taken place. A sub committee of the Shannon RBD Steering Group has been set up to co-ordinate efforts to address the issue of sewage pump outs and boat holding tanks throughout the Shannon Navigation System. Good progress is being made with enforcement action underway.
- Measure to require all marts to have Nutrient Management Plans for spreading of mart washings and slurry has commenced. Consultation in regard to intent to serve notice re NMP has been made with the EPA. This is the first step in the process. Action to completed in 2007.

See Section 4 for further details on progress during reporting period, problems encountered and future plans/new directions.

See Table 2.1 for a revised timescale for completion of remaining measures set out in Measures Report December 2004.

SECTION 4 PROGRESS TO DATE

4.1 Planning Control and Enforcement Measures

Progress during reporting period (Dec 2004 to July 2006)

- There were 4 No. licences to discharge to waters issued under Section 4 of the Local Government (Water Pollution) Act 1977 & 1990.
- A major drive to licence premises that have a trade discharge to sewer was undertaken in 2005. This resulted in 24 No. licences to discharge to sewer issued under Section 16 of the Local Government (Water Pollution) Act 1977 & 1990. A total of 51 No. enforcement notices were issued in relation to licensing of restaurants in the county. The installation and maintenance of grease traps to prevent grease entering public sewers is the main requirement for licence compliance. This is in order to prevent sewer blockages in the network and to ensure proper operation of the urban wastewater treatment plants.
- All new licences issued take into consideration the requirements of the Water Quality (Dangerous Substances) Regulations, 2001. To date there were no at risk facilities licensed. A general condition was set on each licence in regard to the parameters as a precautionary measure.
- Licence monitoring and enforcement action has included 101 samples of licensed discharges, 1 No. Section 12 notice and 1 No case for non compliance sent to Councils Solicitors for prosecution over the period.
- A total of 1439 No. environmental complaints (incl. Waste, litter, water, noise and air pollution) were investigated during the reporting period. Enforcement procedures were taken in 783 No. cases, of which 39 No. related to on the spot litter fines.
- Water Pollution Act enforcement measures have resulted in 68 No Section 12 Notices, 1 No Section 17 Notice and 11 No Section 16 notices being issued during the above period.
- A total of 21 No. Waste Management Permits were issued to date.
- There are 4 No. prosecutions under the Local Government (Water Pollution) Act 1977 & 1990 pending and 2 No. cases pending under the Waste Management Act 1996. A further 9 No cases have been dealt with under Waste Management in the reporting period.
- Farm surveys were carried out in the Cullies River system over the reporting period. A total of 48 No. farms were visited with follow up action consisting mainly of warning letters was issued to 7 No of the farms. Follow up action on 13 No. farms in the Lough Gill catchment was also completed in 2005.
- Pig slurry from Co Cavan pig farms is spread on 5 No farms in the Garadice Lake area of County Leitrim. These farms were inspected in relation to the slurry holdings and spreading operations.
- A policy on Nutrient Management Planning for New Farm Development had been adopted and is being implemented by Leitrim County Council.
- Provision of sewer network contract to commence shortly for 6 No. villages in County that do not have sewer system. Shortlist for the

DBO contract for treatment plants for these 6 sites and a further 5 existing sewerage areas has been done and Water Services are awaiting approval of final contract from DOEHLG. Phosphate removal facilities will be installed at all 11 No. locations as part of the contract.

- Extension of Carrick on Shannon UWWTP has progressed to the point where Water Services are awaiting final approval of contract documents from the DOEHLG. Phosphate removal facilities will be installed as part of the contract.

Problems Encountered

An unexpected workload of planning applications for agricultural development has occurred since Mar 2006. This has impacted considerably on the scheduled workload for 2006.

The request by the River Basin District Projects to get involved in the Small Stream Risk Assessment has also impacted on work schedules. Approx 20% of staff resources for the year was involved (3 months x 2 staff).

Future Plans/New Directions

The introduction of strict planning guidelines for proposed developments at listed lakes will be drawn up.

Preparation of a Major Pollution Control Response Project for the Upper Shannon has commenced. This initiative is in conjunction with Longford and Roscommon County Council. Leitrim County Council has commenced a risk analysis of commercial/industrial premises in the River Shannon area.

Work has commenced on compiling a panel of approved consultants for single house site suitability assessment in unsewered areas of County Leitrim.

Leitrim County Council is considering the introduction of Byelaws on septic tanks similar to those introduced by Cavan County Council.

4.2 Consultative and Co-operative Measures

Progress during Reporting Period

River Basin Management has been discussed at the Environmental Policy, Water and Sewerage Strategic Policy Committee within the County Council during the reporting period.

Public consultation as part of the River Basin District Management Planning for the Shannon, Western and NS Share RBD's in the Co. Leitrim area is ongoing at present.

Liaison with the EPA in regard to IPC licensed facilities is ongoing.

Leitrim County Council have participated fully in the Enforcement Network Erne-Blackwater Surface Water Working Group set up by the EPA. This has facilitated liaison with Cavan and Longford County Council in relation to environmental enforcement activity in shared catchment areas.

Problems Encountered

As detailed above in 4.1

Future Plans/New Directions

It is an offence under The Shannon Navigation By-laws to discharge sewage from a boat directly to the River Shannon or Shannon/Erne Waterway. Liaison with Waterways Ireland in regard to the improved implementation of this by-law is planned. Consultation will also take place with Waterways Ireland regarding the proposed review of the above By-law in particular in relation to sewage storage tanks on vessels.

Enforcement action is being taken for the provision of sewage pump out facilities to be provided by all hire boat companies and large private marinas on the Shannon and Shannon Erne Waterways in the administrative area of County Leitrim.

4.3 Monitoring Measures

Progress during Reporting Period

Monitoring for dangerous substances was carried out at 14 No sites on rivers in Co. Leitrim in 2005. The samples were taken on two occasions i.e. March and September. The sampling points were strategically chosen at points downstream of potential pressures and at locations taking in large river catchment areas. See Table 1.1 for summary of sampling locations and annual mean concentrations.

Further monitoring carried out by Leitrim County Council includes Urban Wastewater analysis, licensed discharge monitoring, pollution incident monitoring, bathing water monitoring, drinking water monitoring and groundwater monitoring at landfill sites.

Problems Encountered

Leitrim County Council undertook the sampling for the above surveys and the analysis was contracted to an external laboratory. A problem with detection limits and result reporting was detected in the first round of analysis. This laboratory services is no longer being used.

Future Plans/New Directions

It is proposed that the 2 No locations where exceedences in the standards were detected in above sampling programme be re-sampled early in 2007, at the same frequency, prior to any corrective action being taken. Both upstream of the potential pressure and downstream will be sampled for the parameters identified as exceeding the standards.

Leitrim County Council will be participating fully in the Water Framework Directive Monitoring Programme in 2007 with 25 No. river stations and 17 No. lakes to be monitored for physiochemical parameters.

Monitoring of UWWTP, drinking water, licensed discharges, landfill leachate and bathing water will continue in accordance with a scheduled programme. Pollution incidents will be monitored as required.

4.4 **Public Education and Advisory Measures**

Progress during Reporting Period

Environmental Education Officer

The Council employs a full time officer to raise public awareness on environment issues. This includes the generation of effective publicity for and maximising community participation in the Council's activities and initiatives in the area of litter management and control. Their duties include:

- Development and implementation of schools education programme;
- Liaison with community groups and local business groups;
- Implementation of the Litter Management and Waste Management Plans;
- Dealing with environmental queries.

Community Initiatives

The Council promotes national campaigns such as An Taisce's National Spring Clean as well as local waste management community initiatives. A new 'Adopt a Bring Bank' initiative to ensure that the county's 38 No. bring banks are properly maintained has been launched through Jamestown Tidy Towns and Bornacoola Development Association. Community groups receive a grant from Leitrim County Council for the upkeep or improvement works. A similar programme 'Adopt a Road' involves local communities and businesses in litter-picking on stretches of roads and the council provides assistance and litter removal.

Environmental Projects

Through Agenda 21 Environmental Fund, funding of up to €8,000 is available annually for community environmental projects. Projects including composting workshops, school and community composting projects as well as other educational activities have been supported under this programme.

The Green Schools Programme

This national programme, which is administered by An Taisce, aims to promote whole school activity to develop environmental awareness in both the school itself and the wider community. 77% of schools in the county are registered and participating in the programme. To date 6 schools have attained

the Green Flag status. The Green Schools programme is theme-based, starting with Waste Management, moving on to Energy and the third topic is water. Leitrim County Council run schools competitions annually including a table quiz for senior classes and poster competition for junior classes.

Future Plans/New Directions

Through the Waste Against Race's Action at Work programme, Leitrim County Council is looking at ways of reducing its waste and associated costs within the council itself. The Action at Work is a staff-led initiative looking at practical ways of reducing waste at work.

It is proposed to design and circulate an awareness brochure on septic tank/single house sewage treatment plant care and maintenance.

Public education will continue as above.

4.5 Summary and Conclusions

Progress during Reporting Period

The monitoring programme proposed for 2005 was successfully completed. Work has commenced on identification of sources of dangerous substances within the industrial and agricultural sectors. The issue of dangerous substances have been incorporated into licensing of discharges under the Local Government (Water Pollution) Act 1977 & 1990. Other measures identified in the Phosphorus Implementation Report 2006 will also assist in compliance with the Dangerous Substances Regulations 2001.

Problems Encountered

The rate at which new environmental legislation is enacted and its subsequent implementation has continued to be a problem for local authorities. In particular data gathering, attendance at meetings and briefings for River Basin District Projects has impacted on work schedules. The proposed river and lake monitoring programme for surveillance and operational monitoring scheduled to commence in Dec 2006 will put additional strain on staff resources.

The provision of a dedicated team is essential to the implementation of the measures set out in this report. All measures and associated timeframes are dependant on the retention of a three person dedicated team and financial support from central government where appropriate.

Future Plans/New Directions

The areas in the county that have been identified, as having failed the Dangerous Substances Regulations standards will be prioritized for monitoring. Investigations will follow in the event of continued exceedences.

Co-operation with Longford and Roscommon County Councils to produce a Major Pollution Control Response for the Upper Shannon area is a new initiative and should prove very worthwhile in promotion of dangerous substance awareness and control.

Environmental enforcement activities are planned for 8 No. quarries in the county.

Priority actions identified in the Phosphorus Regulations Implementation Report 2006 may also assist in control of dangerous substances in fresh water such as: Investigation into causes of pollution in the 6 No. lakes not in compliance with the Phosphorus Regulations

All river sites that have shown deterioration in Q value will be inspected to establish any cause for deterioration in biological quality rating, (25 No. sites identified). All necessary enforcement action follow up will be carried out. Liaison with neighboring local authorities regarding facilities outside of Co. Leitrim.

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Appendix

TABLE 1.1: SUMMARY OF CURRENT STATUS OF RIVERS IN FUNCTIONAL AREA AND STANDARDS TO BE ACHIEVED

TABLE 1.2: SUMMARY OF CURRENT STATUS OF LAKES IN FUNCTIONAL AREA AND STANDARDS TO BE ACHIEVED

TABLE 1.3: SUMMARY OF CURRENT STATUS OF TIDAL WATER AND STANDARDS TO BE ACHIEVED

TABLE 2.1 IMPLEMENTATION PROGRAMME SUMMARY TABLE FOR LOCAL AUTHORITY AREA

TABLE 2.2 IMPLEMENTATION PROGRAMME SUMMARY TABLE FOR RIVERS IN LOCAL AUTHORITY AREA

TABLE 2.3 IMPLEMENTATION PROGRAMME SUMMARY TABLE FOR LAKES IN LOCAL AUTHORITY AREA

TABLE 2.4 IMPLEMENTATION PROGRAMME SUMMARY TABLE FOR TIDAL WATERS

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