

Department of Environment, Food and Agriculture
Rheynn Chymmyltaght, Bee as Eirinys



ENVIRONMENTAL PROTECTION UNIT

WATER POLLUTION INCIDENT RESPONSE PLAN



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DEFA – Environmental Protection Unit

WATER POLLUTION INCIDENT RESPONSE PLAN

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1.HISTORY

This plan gives guidance on dealing with pollution incidents to “Controlled Waters” as defined in Part 1 (1) of the Water Pollution Act 1993. Such waters are all inland waters and waters up to 3 miles offshore. It should be read in conjunction with the “Isle of Man Marine Pollution and Salvage Contingency Plan” issued by the Harbours Division of the then Department of Transport in 2004 which deals with marine pollution incidents.

This plan updates and replaces the “Plan for the integrated response to pollution of the island’s inland and controlled waters” issued by the Civil Defence Emergency Planning Unit in 2003.

2. OBJECTIVES OF PLAN

- Minimise risk to public health – this backstop position is taken where protection of life and public health is the primary consideration.
- Minimise risk to environment – following on from public health protection of the environment is the next priority.

- Timely response – required to minimise any effects of the pollution.
- Co-ordinated response – contributory departments need to work in an integrated manner to be effective at reaching the desired outcomes.
- Efficient use of staff and equipment resources – necessary to be effective and economic.
- Uphold legislation following the Department’s enforcement policy – statutory duty of responsible department to uphold the legislation for which it is responsible and to follow its own enforcement policy when breaches of the legislation are apparent.
- Education to prevent future avoidable incidents – the most effective and economic method of pollution prevention.

3. DEFINITION OF POLLUTION

Definitions within established reference texts vary for example:

Oxford advanced learner’s dictionary:

"The process of making air, water, soil, etc. dirty; the state of being dirty"

Oxford Dictionaries:

"The presence in or introduction into the environment of a substance which has harmful or poisonous effects"

Cambridge advanced learner’s dictionary and thesaurus:

"Damage caused to water, air, etc. by harmful substances or waste"

A contemporary definition appears in the popular Wikipedia:

Wikipedia:

"Pollution is the introduction of contaminants into a natural environment that causes instability, disorder, harm or discomfort to the ecosystem i.e. physical systems or living organisms. Pollution can take the form of chemical substances or energy, such as noise, heat, or light. Pollutants, the elements of pollution, can be foreign substances or energies, or naturally occurring; when naturally occurring, they are considered contaminants when they exceed natural levels".

4. SOURCES AND EFFECTS OF POLLUTION

Sewage:

Source - Derived from sewerage system overflows or direct from malfunctioning treatment facilities.

Effect – Public and animal health from pathogenic bacteria/viruses, environmental risk from organic components leading to de-oxygenation of waters. Toxic effect from ammonia on aquatic life especially fish. Toxic effect from sewage containing industrial effluents. Aesthetics from sewage litter, mal-odours from sewage and sewerage systems.

Oil:

Source – Storage tank failures, pipeline failures, poor re-fuelling/transferring practices, road traffic incidents, road run off, poor interceptor maintenance.

Effect – Visual/aesthetic/odour in low quantities, de-oxygenation and toxicity in high quantities. Contamination and smothering of wildlife and environment, clean up very difficult.

Agricultural:

Source – Dirty areas, slurry stores, silage pits, milking parlours and chemical stores on farms and smallholdings, run off from agricultural and farm land.

Effect – Organic components leading to de-oxygenation of waters. Toxic effect from ammonia on aquatic life especially fish. Toxic effect from herbicides/pesticides. Siltation smothering fish spawning and feeding grounds.

Industrial:

Source – Industrial premises, garages, railway premises, creameries, quarries, sand pits, breweries, food processing, scrapyards and landfill sites.

Effect – Toxicity to environment from industrial products/components/waste. De oxygenation effect to waters from creamery/brewery/food products. Siltation effect on fisheries from quarry and sand pit run off. Aesthetic/odour/de oxygenation/toxic effect of oils from garages, railway and scrap-yards. Organic/toxic effect from landfill sites.

Construction:

Source – Construction sites and adjacent roadways. Cement and associated products. Sand, soil, fuel oil, paints, litter.

Effect – Toxic effect to fish and environment from cement and associated products. Aesthetics and fisheries siltation problems from soil/sand run off. Aesthetic/odour/de

oxygenation/toxic effect from fuel oil. Aesthetic/toxic effect of paint and coatings.
Aesthetic effect from litter.

Natural substances in excessive quantities:

Source – Algal blooms, upland peaty run off, forestry run off, ploughed arable land run off.

Effect – Night time de-oxygenation from algal blooms, aesthetic effect of colour from peat run off, toxic effect of depressed pH from forestry run off, aesthetics and fisheries siltation problems from ploughed arable land run off.

5. CONTROLLING LEGISLATION AND DEPARTMENT

- WATER POLLUTION ACT 1993 (PART 1) – DEPT ENVIRONMENT FOOD AND AGRICULTURE (ENVIRONMENT DIRECTORATE)

S 3 Offences of polluting controlled waters etc

- (1) Subject to section 4, no person shall cause or knowingly permit-
- (a) any poisonous, noxious or polluting matter or any solid waste matter to enter any controlled waters;

- INLAND FISHERIES ACT 1976 – DEPT ENVIRONMENT FOOD AND AGRICULTURE (FISHERIES DIRECTORATE)

S 26 Penalty for use or possession of deleterious matter

(1) If any person uses in any waters any deleterious matter for the capture, destruction or injury of fish, he shall be guilty of an offence.

'deleterious matter' means any substance (including an explosive and an anaesthetic), the entry or discharge of which into any waters is liable-

- (a) to render those or any other waters poisonous or injurious to fish, spawning grounds or the food of any fish; or
- (b) to injure fish in their value as human food; or
- (c) to impair the usefulness of the bed and soil of any waters as spawning grounds or their capacity to produce the food of fish;

S 28 Taking etc, spawn, smolts or fry of salmon or trout

- (1) If any person, without reasonable excuse-
- (a) takes, sells, purchases or has in his possession the spawn or fry of salmon or trout; or
 - (b) obstructs the passage of the fry of salmon or trout; or
 - (c) injures or disturbs the spawn or fry of salmon or trout; or

(d) injures or disturbs any spawning bed, bank or shallow where the spawn or fry of salmon or trout may be, he shall be guilty of an offence.

- PUBLIC HEALTH ACT 1990 (PART IV) – DEPT ENVIRONMENT FOOD AND AGRICULTURE (ENVIRONMENT DIRECTORATE)

S 57 Prohibition of unlicensed disposal of waste

(1) Except in prescribed cases, a person shall not-

(a) deposit controlled waste (as defined in section 77) on any land or cause or knowingly permit controlled waste to be deposited on any land;

(3) A person who contravenes subsection (1)(a) in a case where-

(a) the waste in question is of a kind which is poisonous, noxious or polluting;

S 58 Provisions supplementary to S 57

(2) For the purposes of section 57(3)-

(a) the presence of waste on land gives rise to an environmental hazard if it has been deposited in such a manner or in such a quantity (whether by itself or cumulatively with other deposits of the same or different substances) as to subject persons or animals to a material risk of death, injury or impairment of health or as to threaten the pollution (whether on the surface or underground) of any water supply;

- WATER ACT 1991 – ISLE OF MAN WATER AND SEWERAGE AUTHORITY

S 8 Byelaws for preventing water pollution

(1) If it appears to the Department to be necessary for the purpose of protecting against pollution any water, whether on the surface or underground, which is vested in the Authority or which the Authority is authorised to take, the Department, on the application of the Authority, may make byelaws-

S 36 Pollution of water used for human consumption

[1972/3/4/58] (1) If any person is guilty of an act or neglect whereby any spring, well, borehole, adit or reservoir, the water from which is used or likely to be used for human consumption or domestic purposes, or for manufacturing food or drink for human consumption, is polluted or likely to be polluted, he shall be guilty of an offence and liable on summary conviction to a fine not exceeding £5,000, or on conviction on indictment to a fine.

6. STAKEHOLDERS

Department of the Environment, Food and Agriculture Environmental Protection Unit Fisheries Forestry Agriculture	DEFA
Isle of Man Water and Sewerage Authority Drainage Water supply	IOMWSA
Department of Infrastructure Works Division Coastguard	DoI
Department of Home Affairs Emergency Planning Civil Defence Corps Emergency Services Joint Control Room (ESJCR)	DHA
Isle of Man Fire and Rescue Service	IOMFRS
Department of Health Public Health Consultant	DoH
Isle of Man Angling Federation	
Manx Wildlife Trust	
Manx Basking Shark Watch	
Manx Society for the Protection of Cruelty to Animals	
All residents and visitors to the Isle of Man	

7. REPORTING ROUTE

REPORTEE – public/trader/emergency services/Government departments

RECEIVER – Emergency Services Joint Control (ESJCR)/IOMWSA/DEFA

RESPONDER

- Office hours

Co-ordinating response – DEFA EPU

Operational response

- Minor incidents - DEFA EPU
- Major incidents - DoI Works/Coastguard/IOMWSA(public sewerage)

RESPONDER

- Out of office hours

Co-ordinating response – Emergency Services Joint Control (ESJCR) or IOM FRS/DHA Emergency Planning

Operational response

- Minor incidents DEFA EPU (if available)/IOM FRS/DHA Emergency Planning
- Major incidents DoI Works/Coastguard/IOMWSA(public sewerage)

8. CONTACT LIST

Government

	<u>Out of Hours</u>	<u>Office Hours</u>
Department of Home Affairs (DHA)		
Emergency Services Joint Control Room (ESJCR)	697327	697327
Isle of Man Constabulary	631212	631212
Emergency Planning/Civil Defence	453337	694317
Isle of Man Fire and Rescue Service (IOMFRS)	697327	697327
Isle of Man Water and Sewerage Authority (IOMWSA)	695999	695949
Department of Infrastructure (DoI)		
Works Division	672000	850000
Coastguard	611033	611033

Office Hours

Department of the Environment, Food and Agriculture (DEFA) Thie Slieau Whallian reception Environmental Protection Unit	695702 685885/494714 685896/494705
Fisheries	685857
Department of Health (DoH) Public Health SITA (ref. hazardous waste disposal)	642639 695260

Others

IOM Angling Federation	497507
Manx Wildlife Trust	844432
MSPCA	851672
Manx Basking Shark Watch	801345
Ellan Vannin Fuels (Total)	844000
Manx Petroleum	691691
CPL Petroleum	673551
Darcy Spillcare Manufacture	0800 0370899

9. OPERATIONAL PRIORITIES

The scale of operational response is expected to be priority rated in the general order of the following list of risks from highest to lowest:

- Individual officer's personal protection
- Direct effect on Public Health
- Effect on public/private potable water supplies
- Fisheries effects
- General environmental effects
- Effect on industrial water abstractions

In conjunction with the above list prevalent climatic conditions should be considered which could magnify or diminish pollution effects eg drought or flood.

With regard to effects on water abstractions and catchment areas DEFA EPU and Fisheries staff have knowledge of abstraction points for potable water supplies and fish farm intakes. The emergency contact number and location for these are as follows:

Potable water intakes and catchments

Areas at risk

- Sulby reservoir catchment
- Injerbreck reservoir catchment
- Clypse/Kerrowdhoo reservoirs catchment
- East Baldwin River

Contact - Isle of Man Water Authority – Emergency no 695999

Fish Farms and Fisheries

Areas at risk

- Laxey River upstream of Laxey Glen Gardens

Contact - DEFA– Ms K McHarg 686044

- Glen Wyllin Stream catchment

Contact - Troutlodge Fish Farms – Mr R Charsley 878552

- Cornaa River catchment (Corrany arm) u/s of Cornaa village.

Contact - Troutlodge Fish Farms – Mr R Charsley 878552

- River Neb upstream of main Peel Road (A1).

Contact - Riverside Fishery Patrick – Mr K Jervis 801715

- Any watercourse running through agricultural land that could be used for livestock or arable crop watering.

Contact - DEFA Agriculture – Mr S Jaques 686096

Any incident reporting dead/distressed fish should be reported to DEFA Fisheries on 685857

10. RIGHTS OF ACCESS

Access to attend to pollution incidents, take operation pollution prevention measures and make subsequent investigations can often require access to private land/premises. The Water Pollution Act 1993 describes rights of access and “authorised persons” under Section 12 which is further detailed in Schedule 2.

DEFA may authorise any person to carry out such duties and as such any officers other than DEFA need to obtain the authorisation of DEFA unless they are covered by powers conferred by their own legislation.

The Water Pollution Act describes the right of access in emergencies and at any reasonable times. If access is refused there is a procedure for the application for a warrant.

11. COLLECTION OF EVIDENCE

DEFA is the lead Department for offences committed under Part 1 of the Water Pollution Act (1993) and Part IV of the Public Health Act (1990) administered by the Environmental Protection Unit of the Environment Directorate.

Additionally DEFA is the lead Department for offences committed under Part 3 of the Inland Fisheries Act administered by the Inland Fisheries Unit of the Fisheries Directorate.

As such DEFA officers may be required to collect evidence in the form of samples, photographs and witness statements which may include those from officers from other Departments attending incidents.

Co-operation will be sought from non-DEFA attending staff to assist in this process and likewise DEFA staff will co-operate if other parties require assistance in investigations under their legislation.

12. REMEDIAL MEASURES

- Identify pollutant, if the pollutant is unknown and its effect on Officers attending is also unknown contact without appropriate personal protective equipment (PPE) should be avoided. The IOMFRS are the only officers with appropriate PPE in such a situation. If the pollutant is known a risk assessment should be made to assess suitable PPE, DEFA Officers can assist with this assessment.
- Prevent spread of pollutant at source. Measures could include plugging leak, containment on ground, absorbents and sealing drains.
- Prevent entry of pollutant to "controlled waters". Measures could include diversion of pollutant away from water courses by bunds/excavations. Sealing drain outlets to watercourses to contain pollutant within the drainage system.
- If pollutant has entered waters every effort should be made to minimise spread. Measures could include selective absorbents, booms, containment by damming and over pumping unpolluted water, diversion of stream away from discharge by excavation, provision of settlement area by excavation and re-oxygenation by forced aeration.

The overriding concept of all the above is containment and removal rather than dilution and dispersion by washing away with water (a past method which spread pollutants into the environment and made their removal difficult if not impossible).

13. DISPOSAL OF WASTE MATERIALS

The containment, absorption and removal of pollutants can generate large quantities of waste material comprising absorbents containing pollutant, contaminated containers and booms, material used to clean multi use containers and booms and residual pollutant which may have become contaminated with other products after its loss.

Such waste materials need to be handled and stored carefully prior to disposal so as not to cause further contamination. Further advice on suitably licensed waste storage and disposal can be obtained from DEFA. In various government and local authority owned temporary storage sites for use in a large scale pollution event have been set aside for such events, these sites are located as follows:

- DoI Depot, Hilberry
- Pulrose Bridge car park, Douglas
- Port Soderick top car park
- Balthane Industrial Estate
- Goose Field, Gansey
- Boat park, Port St Mary harbour
- Old quarry west of ex Port Erin Marine Lab
- Fenella Beach car park
- Cronk car park, Ballaugh
- Jurby airfield
- Area to north of Mooragh Park, Ramsey
- Dhoon Quarry
- Car park below Laxey fire station
- Laxey Commissioners car park
- Groudle Glen car park

SITA at the Energy from waste plant have an agreement with the Department of Infrastructure Waste Management Operations Unit to provide an island wide waste collection and storage service. Bulk containers can be provided to store pollutant prior to disposal/recovery.

14. RECHARGE FOR SERVICES AND USED CONSUMABLES

Section 10 of the Water Pollution Act (1993) allows DEFA to re-charge the polluter for anti-pollution works carried out in order to:

- Prevent pollution entering waters.
 - Removal of polluting matter from waters.
 - Remedying or mitigating polluting effects in waters.
- +
- Where it is practicable restore flora and fauna dependant on the waters to the state present before the polluting incident.

Recharge under the Water Pollution Act is limited to DEFA Environmental Protection Unit (EPU) therefore any works carried out by others on their behalf that is required to be re-charged needs to be authorised by DEFA EPU and adequate records made.

15.POLLUTION PREVENTION EQUIPMENT SUPPLIES

Limited "first aid" type supplies comprising grab packs and small booms are held by DEFA EPU Manager and EP Officer (water) and are mobile. Replacement stocks are held in the stores at DEFA Forestry Depot and Douglas Fire Station.

All fire appliance vehicles hold similar Pollution grab packs.

DHA Emergency Planning Civil Defence Corps carry similar pollution grab packs in their vehicles in addition having extra stocks of booms and absorbents at Civil Defence HQ.

DoI Coastguard hold large scale absorbent booms and large fence booms for use in large rivers and harbours in depots in Douglas and Peel. In addition they hold specialist equipment comprising an oil mop separator and a disc skimmer separator.

Oil supply companies including Manx Petroleums, Ellan Vannin Fuels and CPL Petroleums carry spill kits on their vehicles and hold stocks of absorbents.

Pollution prevention equipment can be sourced from a number of suppliers. DEFA EPU have negotiated special rates with Darcy Spillcare Manufacture on the back of a large contract with the UK Environment Agency. This company can supply most of the equipment likely to be required for pollution events at bulk rate cost.

Dr P D Styles
October 2012

