



# Water (Northern Ireland) Order 1999

## Guide for Vehicle Wash Operators

### Treatment and Disposal Options



An Agency within the Department of the

**Environment**

[www.doeni.gov.uk](http://www.doeni.gov.uk)

## *Environment & Heritage Service*

Environment and Heritage Service is an Agency within the Department of Environment. Our aim is to protect and conserve the natural and built environment and to promote its appreciation for the benefit of present and future generations. We have diverse responsibilities for regulating activities which have the potential to impact on our environment and for ensuring they are undertaken in a sustainable way.



## *Legal Requirement*

Under Article 9 of the Water (NI) Order 1999, the consent of the Department is required to make a discharge of trade effluent to a waterway or underground strata. "Trade Effluent" means any liquid, either with or without particles or matter in suspension, which is discharged from any premises or site used for carrying on any trade or industry.

Discharges of vehicle-wash effluent have the potential to pollute waterways and groundwater. Such discharges are considered to be trade effluent and require consent.

Vehicle-wash formulations are chemically based products, the majority of which are made up from a combination of three different types of surfactants.

Wash water will contain between 1% - 2% of chemical product diluted into water. Effluent leaving the vehicle-wash, in addition to its chemical component, will contain dirt particles, organic matter, and oil residues.

This effluent is known to be moderately toxic to aquatic life.

## *Recommended Disposal Route*

It is recommended, given the nature of the effluent that vehicle-wash effluent, where feasible, should connect into the foul sewer for treatment and disposal, subject to permission being obtained from Water Service.

Water Service is an Agency within the Department for Regional Development, and can be contacted at Northland House headquarters on Belfast 028 9024 4711.

### *Sites where connection to sewer is not available*

Where no foul sewer is available, a vehicle-wash operator, will need to consider the following options.

1. Treatment and discharge to a waterway.
2. Treatment and discharge via a soak-away to underground strata.
3. Collection into a holding tank for disposal via land spreading.

In respect of the first two options consent to discharge under the Water (NI) Order 1999 is required. Environment and Heritage Service should be contacted at an early stage.

Spreading of effluent to land is regulated at a local council level under the Pollution and Local Government (NI) Order 1978. The contact in this instance will be the Environmental Health/Technical Services Department at your local Council.



### *Discharge to a Waterway*

Consent conditions are site specific and vary depending upon the following criteria:

- (1) the proposed daily discharge volume for the vehicle-wash.
- (2) the water quality target for the receiving waterway.
- (3) the available dilution under low flow conditions in the receiving waterway.

A dilution ratio of 1:100 for effluent to river water is required, at times of low flow.

EU Directives 82/242 and 82/243 prohibit the use of detergents where biodegradability is less than 80%.

### *Discharge via a soak-away to underground strata*

Consent to discharge via a soak-away into underground strata is dependent upon the suitability of the land to percolate wash water, and the predicted daily discharge volume generated by the vehicle-wash. The most commonly used form of soak-away is a sub-surface irrigation area, comprising a herringbone pattern of land drains laid in shallow, shingle filled trenches. Soak-away drains are usually located within one metre of the ground surface. A Percolation test needs to be conducted in accordance with BS 6297: 1983, and should be carried out by an independent professional. The test will determine the extent and area of the soak-away.

The option exists, particularly for new developments, to combine sewage and vehicle-wash effluent and discharge this combined effluent under consent to a soak-away. The combined daily discharge volume and percolation test need to be calculated.

## *Design and Good Practice*

As the detergent fraction present in vehicle wash can emulsify oil, it is therefore important, not to allow this effluent to connect into a site's oil separator system. A discharge of emulsified oil through an oil separator will have a polluting impact on a receiving waterway, which is an offence under the Water Order and could lead to prosecution.

In order to avoid this type of pollution, it is recommended that a dedicated drainage system be constructed for wash bays.

A typical treatment system for a vehicle-wash will consist of grit trap and/or a settlement tank possibly incorporating a stone filter. Grit traps should be desludged on a regular basis; this waste material must be disposed off to a licensed waste disposal site.

T-pipes installed on the inlet and outlet pipes of settlement tanks will help trap oil. To allow representative samples to be collected of the treated effluent, a sample point is required after the treatment system.

Wash bays for lorries, coaches, or PSV cleaning, are more likely to produce an oily discharge. As part of a treatment system for this class of vehicle a dedicated oil separator could be added between a grit trap and the settlement facility.

Large commercial vehicle-wash operations may install re-circulation systems for wash water and waste.

*Discharge via a soak-away to  
underground strata*

From a good practice and environmental protection perspective, a discharge of treated effluent to underground strata presents the best disposal option, as long as ground conditions and the required land area is suitable.



Further information and advice on the contents of this leaflet and on any aspect of water pollution prevention can be obtained from:

Environment and Heritage Service  
Water Management Unit  
Calvert House  
23 Castle Place  
BELFAST  
BT1 1FY

Telephone: (028) 9025 4754

Fax: (028) 9025 4865

E-mail: [ehsinfo@doeni.gov.uk](mailto:ehsinfo@doeni.gov.uk)

Visit: [www.ehsni.gov.uk](http://www.ehsni.gov.uk)

Water Pollution Hotline (24 hrs) 0800 80 70 60



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