

Waste Water Discharge

Licence Application

for

Swords Agglomeration.

Attachment G2

Phosphorus Regulations  
4<sup>th</sup> Implementation Report  
July 2006

# COMHAIRLE CHONTAE FHINE GALL

## Fingal County Council

### PHOSPHORUS REGULATIONS

#### 4th Implementation Report

JULY 2006



## Fingal County Council

Comhairle Contae Fhine Gall

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## EXECUTIVE SUMMARY

This report sets out the current Water Quality Status of the rivers, within the functional area of Fingal County Council (FCC) which are monitored for compliance with the Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorus) Regulations, 1998.

Section 1 outlines FCC's progress to date in terms of percentage compliance with the Phosphorus Regulations between the baseline survey 1995-97 and the current reporting period. Section 1 also provides an overview of the current water quality status of rivers in Fingal in terms of biotic index (Q value) and Molybdate Reactive Phosphorus (MRP) concentrations. The Q values included in this report were established by the E.P.A during the 2005 biological monitoring programme. The MRP concentrations are a result of Fingal's Phosphorus Monitoring Programme established under S.I No 258/1998 Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorus) Regulations 1998 in the year 2000.

Currently 44% of monitoring stations in Fingal County Council are in compliance with the standards set out in the Phosphorus Regulations. This report has highlighted that 72% of stations have experienced a reduction in Phosphorus concentrations since the last reporting period, July 2004. It has also been noted that 33% of stations have experienced a deterioration in Q Value suggesting another parameter such as suspended solids may be impacting negatively on water quality.

FCC are currently conducting an agricultural review and are increasing liaison with adjoining Local Authorities and advisory bodies such as the Environmental Protection Agency (E.P.A), Teagasc and the Irish Farmers Association (IFA). FCC have extended monitoring on rivers in the functional area to examine the impact pollution loading from tributaries is having on main river bodies. It is hoped that rigorous review of measures contained in the Phosphorus Regulations Measures Report 2000 will counter the deterioration in water quality in many of Fingal's rivers.

In addition to preventing deterioration in water quality, FCC are committed to maintaining and improving water quality as required by the EU Water Framework Directive. This is being achieved through participation in the Eastern River Basin District (ERBD) Management Project.

FCC are currently upgrading small municipal treatment plants throughout the county and are including Phosphorus removal in the development stages. It is envisaged this measure will have a positive impact on water quality.

FCC have recently installed a Lab Info system which allows for better management and improved review of data. This in conjunction with a 'flagging-system' established between FCC and the Central Laboratory, Dublin City Council, enables the Water Pollution Control Section to respond to elevated P levels effectively.

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**1.0 CURRENT WATER QUALITY STATUS AND TARGETS**

In relation to the Phosphorus Regulations, river water quality within the functional area of Fingal County Council (FCC) is measured in terms of the Biotic Index (Q value) and Molybdate Reactive Phosphorus (MRP) concentrations.

The Q Values contained in this report were established during the E.P.A's biological monitoring programme carried out in 2005.

To ascertain the MRP concentrations, Fingal County Council (FCC) established a monitoring programme in 2000 as required by S.I No 258/1998 Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorus) Regulations 1998. 18 stations on 9 individual rivers are sampled for Phosphorus on a monthly basis in order to meet the statutory requirement of 10 samples minimum for each river station per year.

The Central Laboratory, Dublin City Council (DCC), carry out analysis of the samples.

Currently 44% of monitoring stations in Fingal County Council are in compliance with the standards set out in the Phosphorus Regulations. Of the 18 stations 11% are unpolluted, 6% are slightly polluted, 78% are moderately polluted and 5% are seriously polluted

Fig 1: Below is a summary of stations indicating those improving, deteriorating and remaining static since the Phosphorus Regulations 3<sup>rd</sup> Implementation Report, July 2004.

	% Stations Improving	% Stations Deteriorating	% Stations Static
Q Value	11%	33%	56%
MRP	72%	17%	11%

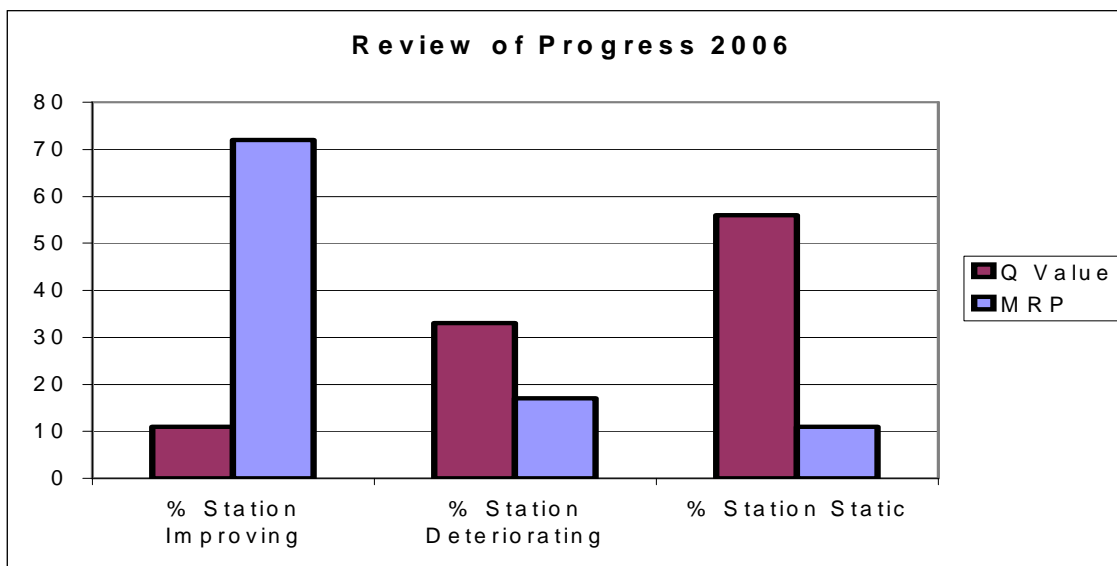
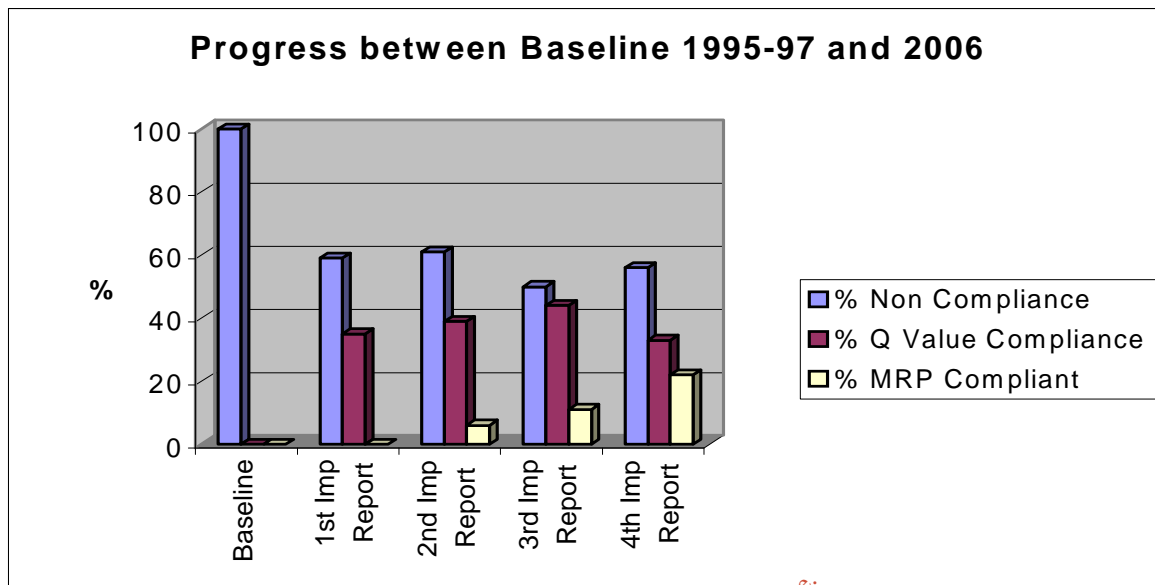


Fig 2: Below is a graph indicating progress FCC have made between the baseline survey 1995-97 and the current reporting period.



Below is an outline of the water quality in each of Fingal's rivers. Detailed results are given in Appendix B.

### 1.1 The Delvin River 08/D/01

The Delvin River forms part of the border between the Fingal County Council and Meath County Council jurisdictions in the North of Fingal. The catchment area of the Delvin River is divided between Fingal County Council and Meath County Council. The southern catchment is located in Fingal.

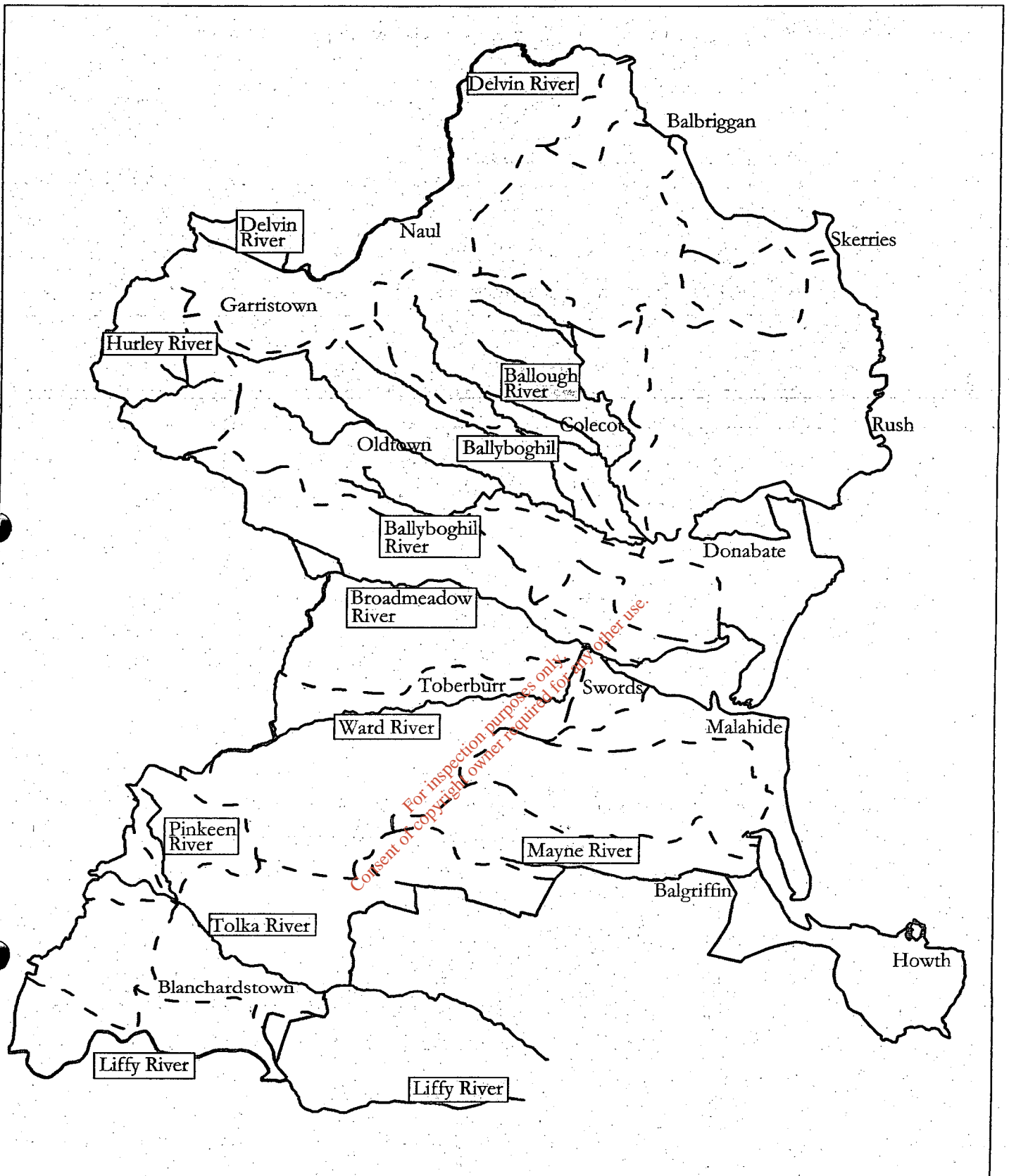
The main pressures on water quality are from agricultural runoff, three municipal treatment works at Garristown, Naul and Stamullen (Meath County Council) and onsite treatment systems.

The Delvin River has three monitoring stations.

Station 0080, Bridge West of Naul, the Q-value has remained static while the MRP concentrations are elevated. It does not comply with the requirements of the Phosphorus Regulations.

Compliance at station 0250, Bridge NW of Forty Acres, has been achieved in relation to the Q-value however the median MRP concentrations are elevated (see Fig 2 and Fig 3).

Compliance with Phosphorus Regulations has been achieved at station 0400, Bridge at Bridgefort House in relation to Q Value status. Median MRP concentrations have also reduced at this station, although they still exceed the target MRP concentrations.



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Legend:

- River
- Catchment Boundary
- Fingal County Council Boundary

Table 1. Delvin River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Delvin	08/D/01	0080	No
		0250	Yes-Q Value
		0400	Yes-Q Value

Cross border compliance meetings are held quarterly with representatives of Meath County Council (MCC) as the Delvin River forms part of the border between FCC and MCC. Station 0400 is located downstream of Stamullen Treatment Plant (MCC).

In order to maintain the Q4 status and reduce P levels at Stations 0250 and 0400 and in order to improve water quality overall at 0080, FCC propose a survey of the Delvin river in conjunction with MCC to identify any sources of pollution which may be affecting water quality at these locations. A cross border compliance meeting is scheduled for the first week in August '06 and the survey will be carried out soon after.

As diffuse pollution from agriculture is believed to be the major source of phosphorus supply to this river, it is anticipated that the proposed measures directed at the agricultural sector including the continuation of farm surveys and implementation of the Nitrates Regulations will reduce the Phosphorus levels in the Delvin. Liaison with Teagasc is ongoing.

A meeting was held with Teagasc representatives on 20<sup>th</sup> July '06. On foot of the meeting FCC will request a meeting with DAF representatives in August '06. FCC will then hold a meeting with the IFA and ICMSA in order to progress the public awareness aspect of implementation of the Phosphorus Regulations particularly in relation to farm surveys and on-site treatment system surveys.

## 1.2 The Ballough River 08/B/03

The Ballough River catchment is located entirely within the FCC area. There are no urban centres within the catchment. The Ballough River discharges to the Irish Sea at the Rogerstown Estuary located in North County Dublin.

The main pressures on water quality in the catchment are from agricultural runoff, a municipal wastewater treatment plant at Colecot, onsite treatment systems and two premises operating with a Trade Effluent Discharge Licence to waters.

Compliance with Phosphorus Regulations has been achieved at station 1400, Bridge W of Five Roads in relation to Q Value status. Median P concentrations at 1400 remain slightly elevated at this station.

There has been a deterioration in Q Value status at station 1600, Corduff Bridge from Q3-4 to Q3 and Median P concentrations at this station remain elevated.

Table 2. Ballough River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Ballough	08/B/03	1400	Yes - Q Value
		1600	Yes - Q Value

FCC are in the process of reviewing Trade Effluent Discharge Licences to waters upstream of the station in particular to ensure P is included as a licence condition.

### 1.3 The Ballyboghil River 08/B/01

The Ballyboghil River catchment is located entirely within the FCC area.

The main pressures on water quality are from agricultural runoff, two municipal wastewater treatment works at Oldtown and Ballyboghil and onsite treatment systems.

There has been a deterioration in Q status at station 1900, Bridge S of Trallie Lodge from Q3-4 to Q3. Q status has remained static at 2200, Bridge in Ballyboghil between the E.P.A's 2001 and 2005 biological survey. Median MRP concentrations have improved at both stations although they remain elevated.

Table 3. Ballyboghil River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Ballyboghil	08/B/01	1900	Yes - Q Value
		2200	No

FCC propose a desktop study of the Ballyboghil river followed by an on-site survey as agricultural activities in the area are suspected to be impacting on water quality.

### 1.4 The Broadmeadow River 08/B/02

The Broadmeadow River crosses the border with MCC and flows in an easterly direction entering the Irish Sea at the Broadmeadow Estuary at Swords, Co. Dublin downstream of the confluence with the Ward River.

The main pressures on water quality are from agricultural runoff, onsite treatment systems, run-off from construction sites and from the municipal wastewater treatment plant at Rolestown, Co. Dublin. In addition the Broadmeadow flows adjacent to the urban centre of Swords, Co. Dublin.

There has been an improvement in MRP concentrations at all stations on the Broadmeadow and target MRP has been achieved at 0800, Newtown Bridge. Q3 status has remained static at 0600 and 0700. However there has been a deterioration in Q Value from Q3 to Q2-3 at station 0800, Newtown Bridge.

Table 4. Broadmeadow River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Broadmeadow	08/B/02	0600	No
		0700	No
		0800	Yes - MRP

FCC is aware of a problem with siltation affecting the Broadmeadow River downstream of Swords and upstream of the confluence with the Ward River. There are a number of new developments in the area. FCC has introduced a number of new measures in respect of management of surface water from construction sites. These are detailed in Section 4.0.

Cross border compliance meetings continue to be held quarterly with representatives of MCC in relation to the Broadmeadow River.

The Eastern River Basin District (ERBD) Management Project have agreed to prepare a Water Quality Management Plan for the Broadmeadow River under the ERBD programme.

### **1.5 The Ward River 08/W/01**

The Ward River crosses the FCC and MCC border and flows in an easterly direction entering the Irish Sea at the Broadmeadow Estuary, Swords Co. Dublin downstream of the confluence with the Broadmeadow River.

The main pressures on water quality are from agricultural runoff, onsite treatment systems, urban stormwater overflows and misconnections to the surface water system at Swords.

Q status on the Ward River has deteriorated at the three designated monitoring points. Station 0070, Coolrath Bridge has been designated as Q2, seriously polluted. Stations 0300 and 0610 remain moderately polluted although Q status has reduced from Q3 to Q2-3 at both stations. MRP concentrations remain static but elevated.

Table 5. Ward River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Ward	08/W/01	0070	No
		0300	No
		0610	No

FCC are currently carrying out an intensive study of the Ward River at Coolrath Bridge and upstream of Coolrath Bridge. 'River-walks' are being conducted and have so far resulted in a number of diffuse sources of pollution being identified.

Cross border compliance meetings are held quarterly with representatives of MCC. A meeting is scheduled for the first week in August and a simultaneous survey of the Ward in the Meath and Fingal areas will be carried out by both Local Authorities soon after.

### 1.6 The Mayne River 09/M/03

The Mayne River forms part of the border with DCC and flows in an easterly direction entering the Irish Sea at Moyne Bridge on the Baldoyle Estuary.

The main pressures on water quality are from agricultural runoff, run-off from construction sites, stormwater overflows and misconnections to the surface water system.

The Mayne has achieved compliance with the Phosphorus Regulations in relation to MRP target and target Q Value. Q Value status on the Mayne has remained static between the 2001 and 2005 biological survey periods. A reduction in MRP concentrations has been observed at station 0500, Hole in the Wall Road Bridge.

Table 6. Mayne River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Mayne	09/M/03	0500	Yes - Q Value and MRP

FCC representatives participate in the Dublin Airport Pollution Control Committee (DAPCC) meetings on a regular basis. The water quality status of the Cuckoo stream, a tributary of the Mayne River is a subject of these meetings.

In addition FCC are in regular contact with the Water Pollution Control Section and the Drainage Department of Dublin City Council (DCC) as the Mayne River forms part of the border between FCC and DCC.

There have been a number of recent developments within the Mayne River catchment. FCC has introduced a number of new measures relating to the management of surface water on construction sites. This is detailed in Section 4.0.

### 1.7 The Pinkeen River 09/P/02

The Pinkeen River catchment is located entirely within the FCC area.

The main pressures are from agricultural activities and onsite treatment systems.

The Pinkeen has retained compliance with the target Q Value set out in the Phosphorus Regulations, since the last reporting period at station 0700, Bridge SE of Powerstown House. However, MRP concentrations remain elevated at this station.

Table 7. Pinkeen River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Pinkeen	09/P/02	0700	Yes - Q Value

As diffuse pollution from agriculture is believed to be the major source of phosphorus supply to this river, it is anticipated that the proposed measures directed at the agricultural sector including the continuation of farm surveys and implementation of the Nitrates will reduce the Phosphorus levels in the Pinkeen.

### 1.8 The Tolka River 09/T/01

The Tolka River flows from Meath, through Fingal to Dublin City (entering at Ratoath Rd). It enters Dublin Bay at North Strand, Dublin.

The main pressures on water quality are from agricultural runoff, urban stormwater overflows and misconnections to the surface water system. The river flows through densely populated areas of Mulhuddart, Blanchardstown and Castleknock with input from Clonee and Dunboyne in County Meath.

Station 0800 has retained compliance with the Q Value target set out the Phosphorus Regulations. Median MRP concentrations remain static at station 0800, Mulhuddart Bridge.

Q Value status has improved from Q2-3 to Q3 at station 1000, Abbotstown Bridge. MRP concentrations remain static at Abbotstown Bridge.

Table 8. Tolka River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Tolka	09/T/01	0800	Yes -Q Value
		1000	No

The Water Pollution Control Section are liaising with Water Services, Drainage Section regarding a misconnection survey currently being conducted in Mulhuddart.

### 1.9 The Hurley River 08/H/01

The Hurley is located in the north of the County and flows from the FCC area into MCC's jurisdiction. The Hurley forms part of the Nanny River catchment which enters the Irish Sea at Julianstown, Co. Meath.

Station 0060, Bridge S of Borranstown House remains moderately polluted, Q3 since the last biological surveying period 2002. This station was not surveyed in 2005 due to an extremely low flow in the waterbody.

A reduction in MRP levels has been noted at this station although levels remain elevated.

FCC have completed a survey of 80% of farms and septic tanks in the area. A number of farms and septic tanks posing a risk to water quality were dealt with satisfactorily under the Local Government, Water Pollution Acts 1977&1990.

Table 9. Hurley River - Stations Complying with MRP/Q Value targets

<u>River Name</u>	<u>River Code</u>	<u>Biological Monitoring Station</u>	<u>Stations Complying with MRP/Q Value 2006</u>
Hurley	08/H/01	0060	No

In order to achieve compliance with the Phosphorus Regulations, FCC intend to complete catchment wide farm surveys and septic tank surveys and liase with MCC on achieving targets.

## 2.0 IDENTIFICATION OF POTENTIAL PRESSURES

The following is a description of the measures proposed in relation to the Phosphorus Regulations. These measures are outlined in the Measures Report submitted by Fingal County Council in January 2000. The measures and the actions taken to complete each measure refer to all rivers in Fingal as a whole. The measures will be dealt with at each station on each river where applicable (See Appendix C).

### 2.1 Agriculture

The implementation of Nutrient Management Planning (NMP) has been proposed as part of a good farming practice under the Rural Environmental Protection Scheme (REPS). In general NMP is necessary due to the fact that in the region of 25% of the agricultural areas of the country as a whole have soil P levels that would be considered excessive and are increasing. Teagasc estimates soil P levels are increasing by 40,000 tonnes per annum and that 32 million euro a year is spent on unnecessary fertiliser application. Alterations in farming practices such as the use of a lower dose artificial fertiliser containing higher concentrations of nitrate and less phosphate, the use of newly developed application methods and improved storage methods will aid a reduction in P levels in all agricultural effluents.

The long-term objective of NMP on farms is to reduce phosphorus loss to water and to break the link between rainfall and stream/river concentration. NMP takes time to implement and it may be a number of years before measurable reductions in water P levels can be achieved.

With regard to Fingal, the implementation of a NMP scheme involves an assessment of the current water quality at each designated station on each river in the area. This involves establishing current Q Values in conjunction with current P levels at the places of interest (See Appendix C). In addition a Farms Survey has been proposed to identify and map all sources of agricultural effluent. A requirement of this measure is a continual assessment of water quality through implementation of a monitoring programme. The programme is designed such that sampling, delivery and analysis methods are efficient and consistent providing an effective method of gaining an accurate picture of the P levels in the rivers and the effects of these concentrations on Q Values.

The Farm Survey will involve an on-site assessment of all sources of agricultural effluent e.g. manure storage areas, crop storage areas etc. Sources such as these are particularly important as humic acids and organic acids from plant and animal manure's can mobilise the P contained in these by-products or in any soil present in the vicinity of the manure, thus making P more susceptible to the influence of rainfall. Under uncontrolled circumstances P will be constantly present in any agricultural run-off.

Fingal County Council is currently liaising with Teagasc with regard to farming practices in Fingal. The DAF will provide us with information to enable us to map all farmland boundaries in the County to assist us in the Farm Survey. The Survey involves the use of a checklist to assist in the completion of an effective and consistent report. Any areas identified as having high P levels will be paid particular attention and NMP will be applied for at these locations (See Appendix C).

## **2.2 Urban Wastewater Discharges**

This proposed measure involves an investigation into the influence of effluent discharging from treatment plants on the overall P concentrations in Fingal's rivers. FCC carried out a monitoring programme in 2003 to determine the P loading from rural treatment plants. This process will be repeated in 2006. An assessment of P levels emanating from these point sources will be carried out upstream and downstream of each Treatment Plant to establish the impact of effluent containing P.

As the rural treatment plants are being upgraded, nutrient removal has been incorporated into the overall design (see Appendix C). The principle behind this measure is to minimise the effects of point source discharges in order to concentrate on diffuse sources of P pollution.

## **2.3 Onsite Treatment Systems**

It has been proposed to carry out an assessment of on-site treatment systems in conjunction with the Farm Survey. Septic tanks, Biocycle<sup>®</sup> Units and Puraflo<sup>®</sup> Systems will be assessed. P loading emanating from these systems will be determined where they discharge directly to a stream/river.

## **2.4 Stormwater Outlets in Urban Areas**

This measure involves the removal of pollutants from stormwater outlets in urban areas. The measure will be carried out in relation to the Mayne, Ward and Tolka Rivers (See Appendix C). The aim is to reduce the influence of P from pollutants entering rivers and streams via storm water sewers and overflows. A misconnection survey has been suggested as the most effective way of approaching this problem. This point source of P pollution has a local impact so adverse effects will be reduced effectively once the misconnections are removed. The overall aim is to upgrade sewers/surface water drainage schemes displaying P output to reduce polluting potential of same.

### 3.0 IMPLEMENTATION OF MEASURES

To maintain progress towards the target values in terms of the Biotic Index and the MRP value, a number of measures are being implemented on a either countywide or on a catchment basis. These measures are aimed at countering both the diffuse pollution mainly from the agricultural sector and the point source pollution including trade effluent discharge, UWWTW discharge and storm overflows.

3.1 To counter the diffuse pollution from agricultural land a proposal was made to enact Agricultural Byelaws to regulate the spreading of fertiliser on land and to implement Nutrient Management Plans where appropriate. FCC have decided to delay the introduction of these byelaws on the advice of the Department of Agriculture and Food (DAF). The DAF advised that the introduction of the Nitrates Regulations and subsequent Nitrates Action Programme may provide more stringent criteria for storage times and fertiliser application rates than criteria contained in Agricultural byelaws FCC may introduce. FCC are liaising closely with Teagasc and the DAF in relation to the Nitrates Regulations. A comprehensive farm survey has also commenced which will facilitate inspection of current farm practices and the imposing of conditions on farms with substandard practices. A review of progress in relation to water quality under the Nitrates Action Programme will be carried out and a final decision on whether to introduce byelaws made in due course.

3.2 Other surveys underway include those of on-site treatment units (including septic tanks) and unlicensed discharges. Section 12 notices have been issued where appropriate and additional discharge licences have been issued as a result of these surveys. The surveys are at a relatively early stage and a substantial amount of work is required for completion. Due to a lack of resources FCC are considering outsourcing these farm surveys and are liaising with Wicklow County Council regarding their own experience with outsourcing farm surveys.

3.3 As part of the Eastern River Basin District, Fingal County Council are involved with the ERBD Management Project and regularly attend information meetings held in relation to the ERBD. The Final Characterisation Report was published in September 2005. The ERBD have agreed to prepare a river basin management plan for the Broadmeadow and Ward rivers. FCC are participating in the ERBD Draft Monitoring Programme.

3.4 As the majority of rivers in Fingal traverse the county boundary, continued liaison with the adjoining local authorities is required for the proper management of these rivers. Liaison with the various other stakeholders including Teagasc, IFA, Dublin Airport Authority and the industrial sector is also essential to the proper management of the various waterways within the county.

3.5 Other measures required to improve the quality of rivers under these regulations include the upgrading of Urban Wastewater Treatment Works. A considerable amount of work has been completed to date including the upgrading of Swords and Malahide WWTW and the decommissioning of Balgriffen WWTW. Upgrades of other treatment works are proposed and these will include a provision for P removal.

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### Implementation Programme Summary Table: (Fingal as a Whole)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain water quality where satisfactory and to improve unsatisfactory water quality	Assess Nutrient Management Planning (NMP) requirement at farmyard level.	Assess need for application of NMP countywide	The <i>Sludge Management Plan for Fingal County Council</i> recommends that NMP be implemented throughout Fingal.	Done	Senior Engineer Project Office.	Fingal County Council at their June 2002 meeting adopted the <i>Sludge Management Plan</i>		Y	
	Enact Bylaws to implement NMP as per <i>Sludge Management Plan</i> .	Implement NMP countywide to reduce P losses to rivers	Draft Bylaws in consultation with stakeholders for adoption by the County Council.	31.07.2004	Fingal County Council	<p>Liaison with other Local Authorities who have already implemented Bylaws.</p> <p>It has since been decided to hold off on the drafting of Agricultural Bylaws.</p>	FCC will liaise with Teagasc, the DAF and ERBD in implementing the Nitrates Regulations and Nitrates Action Programme. This measure will be reviewed periodically to check progress in relation to water quality. The need for introducing Agricultural Bylaws will be assessed in relation to the success or otherwise of the Nitrates Regulations.	N	N/A

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Continued - Implementation Programme Summary Table: (Fingal as a Whole)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain water quality where satisfactory and to improve unsatisfactory water quality .	Farm surveys Unlicensed discharge surveys.	Examine farm management and practices to reduce P inputs to rivers.	Carry out farm surveys on a catchment basis.  Where necessary follow up with enforcement action under the Water Pollution Acts.	Ongoing	Senior Exec. Engineer Pollution Control	Farm survey form completed & Farm surveys have commenced Water Pollution Control database set-up. Liaison with DAF, IFA and Teagasc agricultural review currently being carried out. Local media campaign to promote understanding and awareness in relation to Farm Surveys.	Limited resources have hindered progress in relation to completion of farm surveys on a catchment basis. FCC looking into outsourcing farm surveys. Decision due following liaison with Wicklow Coco and Meath Coco.	Ongoing	Ongoing
	Unlicensed discharge surveys.	Ensure discharges to surface waters are licensed to reduce P inputs to rivers.	Carry out surveys on a catchment basis.  Where necessary follow up with enforcement action under the Water Pollution Acts.	Ongoing	Senior Exec. Engineer Pollution Control	Surveys have commenced New licences issued on foot of survey FCC proposing to maximise the use of SuDS throughout the county. An official report on the establishment of a SuDS programme will be prepared by December '06.		Ongoing	

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Continued - Implementation Programme Summary Table: (Fingal as a Whole)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain water quality where satisfactory and to improve unsatisfactory water quality	On site treatment system surveys.	Examine on site treatment systems to reduce P inputs to rivers	Carry out surveys on a catchment basis.  Where necessary follow up with enforcement action under the Water Pollution Acts.	Ongoing	Senior Exec. Engineer Pollution Control	Surveys have commenced Water Pollution Control database set up Section 12 notices issued Integration of planning process with responsibilities for protecting water quality -FCC have formally adopted the E.P.A Guidance Document 'Treatment Systems for Single Houses'. Liaison with GSI regarding the preparation of a groundwater vulnerability map relating to septic tank discharges. Public awareness campaign relating to maintenance of septic tanks.	Limited resources have hindered progress in relation to carrying out septic tank surveys on a catchment basis. FCC assessing options.	Ongoing	Ongoing

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Continued - Implementation Programme Summary Table: (Fingal as a Whole)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain water quality where satisfactory and to improve unsatisfactory water quality	Issuing and enforcing discharge licences under the Water Pollution Acts	Reduce P inputs to rivers.	<p>Include P limit condition in discharge licences.</p> <p>Enforcement monitoring.</p> <p>Review older licences to include P limit where appropriate.</p> <p>Issue temporary discharge licences to construction sites in relation to surface water run-off.</p> <p>Issue temporary discharge licences to developments where connection to the foul sewer maybe delayed and temporary treatment systems are installed.</p>	31.07.2004	Senior Exec. Engineer Pollution Control	<p>P limit has been included in licence conditions.</p> <p>Procedure established whereby exceedences in licence limits are identified soon after sampling and companies issued with warning letters within one week.</p> <p>Schedule of licences to be reviewed has been prepared.</p> <p>Liaison with Planning and Development Control Section, Water Services Department. Water Pollution Control Section to carry out site visit at planning stages so conditions for protection of waters will be included in planning conditions.</p> <p>Liaison with Planning and Development Section, Water Services Department to identify potential discharge licences.</p>	Full time sampler appointed in 2002	Ongoing	Ongoing

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Continued - Implementation Programme Summary Table: (Fingal as a Whole)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain water quality where satisfactory and to improve unsatisfactory water quality	Use of Geographic Information System	Increase efficiency in storing and interrogating data and so implement P measures more effectively.	Use a GIS system for storing and interrogating data on a catchment basis.	Ongoing	Senior Exec. Engineer Pollution Control	<i>Catchment Envisage</i> installed and staff training completed by LGCSB Envisage has since been withdrawn and has been replaced by alternative GIS system. Liaison ongoing with LGCSB to have new software installed and relevant staff trained.	Ongoing contacts with the Computer Services Board regarding databases. LabInfo has been installed by LGCSB to aid management of data relating to water quality. Water Pollution Control Section and the IT section established a GIS for storage and analysis of water quality data to aid water quality management. Water Pollution Control Section have recently established a database to store detailed information to aid management and protection of waters. The GIS will be used to implement the RMCEI Plan for the Water Pollution Control Section.	Ongoing	
	Implement Code of Good Farming Practice	Co ordinate action with the Department of Agriculture and Food in implementing Code	Investigate notified breaches of the Code of Good Farming Practice  Notify the Department of prosecutions.	Ongoing	Senior Exec. Engineer Pollution Control			Ongoing	

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Continued - Implementation Programme Summary Table: (Fingal as a Whole)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain water quality where satisfactory and to improve unsatisfactory water quality	Public education campaign and other advisory measures	Make general public and sectoral interests aware of their obligations and so reduce P inputs to rivers.	<p>Promotion of measures through local media campaigns.</p> <p>Presentations to the Environmental Services and Parks <b>Strategic Policy Committee</b> (SPC)</p>	31.07.2004	Senior Engineer Design and Planning	<p>Presentations made to the SPC</p> <p>Liaison with Environmental Awareness Officer</p> <p>Water Services web page updated to include section on 'Water Resources Protection and Management'.</p> <p>Article in newsletter 'Fingal News', relating to maintenance of septic tanks, summer 2006.</p> <p>Septic Tank Awareness Campaign in progress.</p> <p>Agriculture to be targeted in September.</p> <p>Public awareness leaflet relating to Farm Surveys and promoting Good Farming Practice to be completed by September.</p> <p>Public awareness leaflet for Service Stations, on preventing water pollution to be completed by September.</p> <p>Information leaflet on management of surface water on construction and demolition sites being finalised.</p>		Ongoing	

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Continued - Implementation Programme Summary Table: (Fingal as a Whole)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain water quality where satisfactory and to improve unsatisfactory water quality.	Implement Water Framework Directive	Establishment of Catchment Management Groups	Participation in the Eastern River Basin District Management System	Ongoing	Senior Engineer Design and Planning	ERBD Final Characterisation Report published September 2005. Water Pollution Control Section are currently participating in the ERBD draft monitoring programme.		Ongoing	
	Stakeholder consultation and co-operation	Active involvement of stakeholders in implementing measures to reduce P inputs to rivers.	Establish procedures to enable relevant organisations contribute to implementing measures.	Ongoing	Senior Exec. Engineer Pollution Control	Meetings held with Teagasc and the IFA. Teagasc participated in drafting of the farm survey form. On-going consultation with Teagasc regarding implementation of the P Regulations and Nitrates Regulations.		Ongoing	

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## 4.0 PROGRESS TO DATE

### 4.1 PLANNING CONTROL AND ENFORCEMENT MEASURES

Fingal County Council issues, monitors and enforces Trade Effluent Discharge Licences under section 4 and section 16 of the Water Pollution Act. A routine monitoring/sampling programme of the effluent from all licensed facilities allows FCC to regulate compliance with the conditions set out in the Trade Effluent Discharge Licences.

#### Progress During Reporting Period

- Further to a review of licences, all Trade Effluent Discharge Licences to Waters now contain conditions limiting discharges of Phosphorus to 1 mg/l.
- A survey of facilities with unlicensed discharges is underway. As part of this survey, all golf courses/clubhouses have been assessed and the process of setting conditions and issuing licences to these premises has commenced. These licences shall take into account the requirements of the Phosphorus Regulations and in particular refer to the use of fertilisers.
- During the reporting period a number of previously unlicensed premises have, under instruction, applied for Trade Effluent Discharge Licences. It is expected that this number will be increased as the surveys proceed. In particular, all premises within Dublin Airport were instructed to apply for a licence. As a result, 12 premises were licensed while 4 were deemed not to require a licence.
- A "flagging system" to improve the response time to any exceedence on a Trade Effluent Discharge Licence has been implemented. A number of companies that are repeatedly discharging trade effluent in exceedence of their licence limits have been targeted and have brought their process into line with our requirements. This system has resulted in a reduction in the number of exceedences of licence conditions.
- Following the commencement of the on-site treatment system surveys and the farm surveys, a number of Section 12 notices have been issued and the required works commenced/completed. It is anticipated that the number of such notices will increase as the surveys are intensified.
- Fingal County Council respond to all reported pollution incidents and following the appropriate investigation and sourcing of the pollution, FCC take the necessary steps to have the issue resolved or rectified. It has generally been the experience that the polluter takes the appropriate steps to remedy the problem without prosecution being required. However FCC will proceed with prosecution where necessary.

*Phosphorus Regulations 4<sup>th</sup> Implementation Report July 2006*

- A Groundwater Protection Plan was prepared, in conjunction with the GSI, for the Bog of the Ring Aquifer. Based on this, the planning requirements for proposed works in this area have been increased depending on the location of the proposed development.
- FCC have established a Water Pollution GIS system and database indicating routine river monitoring points, licenced trade effluent discharge points, the location of pollution incidents, septic tank surveys, farm surveys and catchment boundaries.
- FCC have adopted the E.P.A's Guidance Document 'Treatment Systems for Single Houses'. All on-site treatment systems newly installed in the FCC area must now comply with this document.

### **Problems Encountered**

- While FCC aims to resolve all issues regarding unlicensed discharges, pollution or non-compliance with discharge licenses in a co-operative manner it is not always possible. In 2005 it was necessary to obtain an injunction against a contractor instructing them not to discharge material in exceedence of their licence as the polluting matter was impacting negatively on the Ward River. The contractor then complied with all requirements of the licence and carried out remediation works (in liaison with the Eastern Regional Fisheries Board ERFB), as far as possible on the river.
- Due to lack of resources, Farm Surveys and Septic Tank Surveys have not been carried out in 2006.

### **Future Plans/New Directions**

- Due to the level of development within the county and the resulting increased risk of discharge from the sites that may cause pollution, Fingal County Council has developed *Guidelines for Construction Sites*. Along with regular visits to sites and the subsequent licensing of discharges from sites where necessary, in order to manage surface water run-off, these guidelines propose to reduce the risk of pollution. Liaison with the Planning and Development Control Section, Water Services Department in relation to this matter is ongoing. Three licences of this nature have been issued to date.
- Fingal County Council have adopted the GSDSDS Regional Policy on Stormwater which will improve the quality of stormwater run-off entering our streams.
- Fingal County Council is investigating alternative methods of carrying out Farm Surveys and Septic Tank Surveys and are liasing with other Local Authorities. FCC are carrying out an Agricultural Review and are considering out-sourcing farm surveys and have commenced discussions with Wicklow County Council based on their own experience of out-sourcing, Meath County Council regarding cross border waterbodies, Teagasc, the IFA and other stakeholders.

- The Water Pollution Control Section propose to issue temporary discharge licences to developments where connection to the foul sewer maybe delayed and temporary treatment systems are installed. Liaison with the Planning and Development Control Section, Water Services Department in relation to this matter is ongoing.
- Under the Planning and Development Act 2000, householders proposing to install an on-site treatment system are required to pay a deposit which is returned upon inspection by FCC confirming that it is installed properly.
- FCC is investigating co-ordinating a database of all boreholes with the new GIS system.

#### **4.2 CONSULTATIVE AND COOPERATIVE MEASURES**

As most of the rivers within the functional area of Fingal County Council traverse the county boundary, FCC liase with Meath County Council and Dublin City Council on regular basis to ensure proper management of the catchments. It is anticipated that this liaison will increase following the Draft Monitoring Programme of the Eastern River Basin District.

##### **Progress During Reporting Period**

- The functional area of Fingal County Council is contained within the Eastern River Basin District (ERBD). This district comprises thirteen local authorities with Dublin City Council as the co-ordinating authority. The draft monitoring programme published by the EPA has detailed 23 monitoring points under Operational Subnet 2 the monitoring being carried out by the local authority from December 2006.
- Further to discussions with Meath County Council regarding developing a Catchment Management Plan for the Broadmeadow and Ward Rivers, it has been decided that this will come under the remit of the ERBD.
- The measures proposed in the Tolka River Basin Management Plan will continue to be implemented by Fingal County Council in association with Meath County Council and Dublin City Council. It is envisaged that this management plan will be incorporated into the Eastern River Basin Management Plan.
- Fingal County Council adopted the Sludge Management Plan in 2002 which recommends a number of measures aimed at protecting water quality. This has gone to the tender stage.
- Prior to commencement of the Farm survey, consultation was held with Teagasc and the Fingal branch of the IFA. This consultation has resulted in the farming community being more receptive to the survey process and the improvements recommended on foot of the findings. The ongoing consultation between FCC,

### *Phosphorus Regulations 4<sup>th</sup> Implementation Report July 2006*

Teagasc and the IFA is necessary to ensure that best practice is employed on all farms and that proper nutrient management and control of the use of herbicides is in place countywide. The continued liaison with the above authorities will be necessary to maximise the effectiveness of these measures.

- FCC liaise with the stakeholders at Dublin Airport and form part of a group that meets on a regular basis to co-ordinate measures to combat water pollution at the airport. This process has been effective in formulating appropriate measures and responses to any potential pollution incidents at the airport.
- Fingal County Council also liaise with the Eastern Regional Fisheries Board on various issues in relation to the protection of the various water bodies in the county.
- The issuing, monitoring and enforcement of discharge licences allows the Local Authority to liaise with the various industries within the county to control the discharge of Phosphorus.
- Water Services have completed their LAMS Submission.
- Dublin Bay Water Quality Management Co-ordinating Group meet on a regular basis to resolve issues relevant to both Local Authorities.

#### **Problems Encountered**

- Obtaining prompt sample results to enable FCC to respond to pollution incidents effectively. This has been resolved with the establishment of a 'flagging system' with DCC to notify FCC or problems as close to the time of sampling as possible to enable FCC to carry out a pollution investigation and remedy the problem.

#### **Future Plans/New Directions**

- FCC have committed to implementing a Fats, Oils & Grease Control Programme in 2007. A Pilot Study was carried out in Malahide.
- The Water Pollution Control Section are formulating an Environmental Inspection Plan for routine and non-routine monitoring work. FCC are complying with the Environmental Inspection Policy by developing a software package in co-ordination with the Environment Department to satisfy this requirement.
- FCC liaise regularly with the Central Laboratory, Dublin City Council to improve the transfer of data generated under FCC's monitoring programmes so FCC can respond more effectively to water pollution incidents.

#### **4.3 MONITORING MEASURES**

Legend:

Treatment works with outfall discharging to river

River

Catchment Boundary

Fingal County Council Boundary

Unpolluted Sample Point

Slightly Polluted Sample Point

Moderately Polluted Sample Point

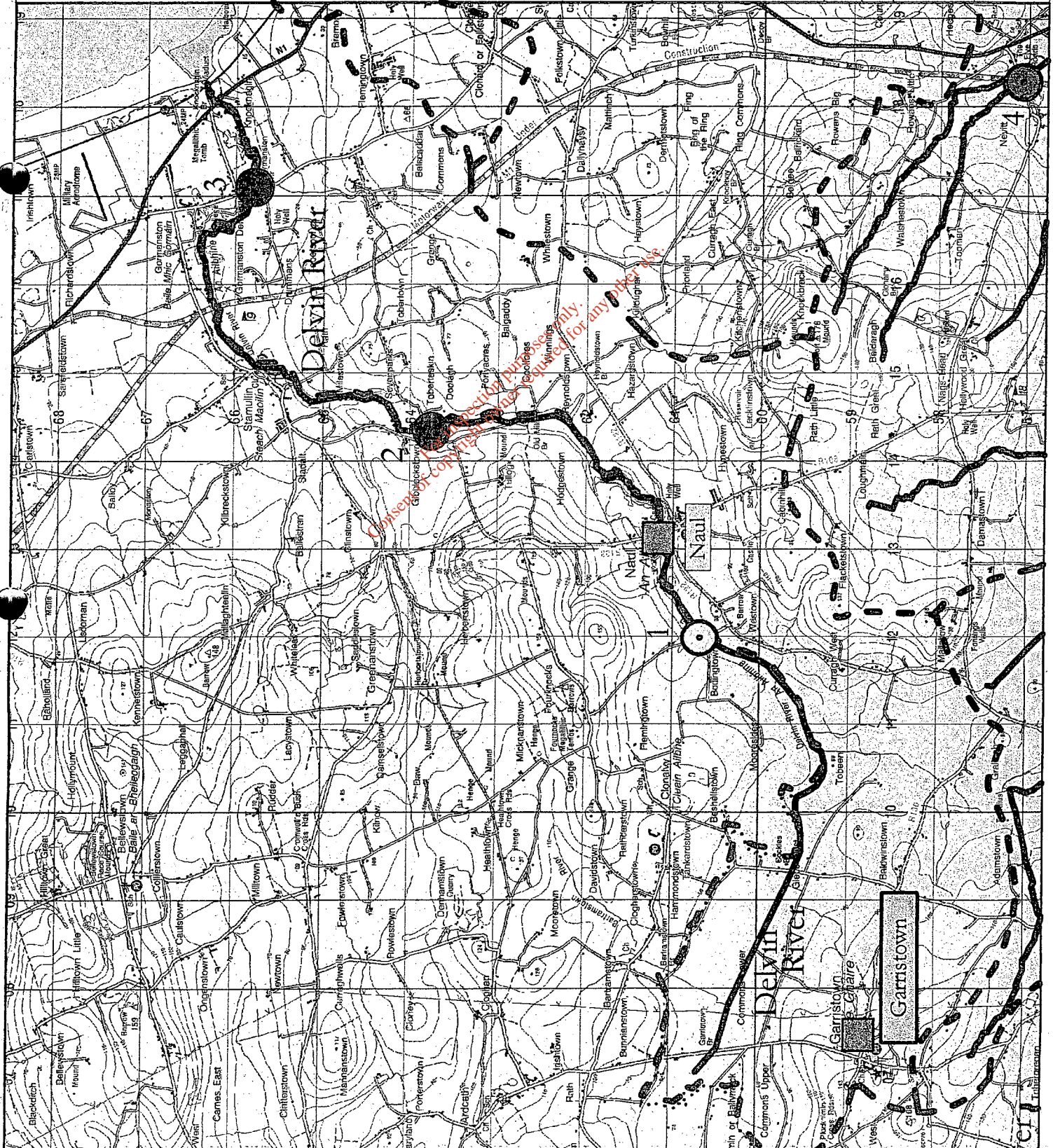
Seriously Polluted Sample Point

River Code Stat. Code Station No.

Delvin 08/D/01 0080 1

0250 2

0400 3



Comhairle Contae Fhine Gall  
Fingal County Council

Country Hall,  
Swords,  
Fingal,  
Co. Dublin

Fingal County Council  
Comhairle Contae Fhine Gall

PJ Howell  
Director of Services

P. O'Rally B.E., C.ENG., M.I.E.I.  
Senior Engineer  
Acting Senior Executive Engineer

PHOSPHORUS REGULATIONS  
FOURTH IMPLEMENTATION  
REPORT, JULY 2006

DELVIN RIVER  
CATCHMENT

D63-01A

FCC has a well established monitoring programme in place, which covers rivers, UWWTW and licensed discharges. The programme also includes monitoring under the Phosphorus and Dangerous Substances Regulations. Although this programme is quite comprehensive, it is intended that the programme be reviewed and extended as required.

### **Progress During Reporting Period**

- Samples are taken at designated locations along the nine rivers monitored within Fingal, under the Phosphorus Regulations, and then delivered to the Central Laboratory for analysis.
- Regular sampling of all licensed discharges, as recommended on their discharge licences, is carried out by a member of staff with the samples subsequently delivered to the Central Laboratory for analysis.
- A monitoring programme is in place to monitor the discharge from the urban wastewater treatment plants within the county. This programme will be continued under the Senior Executive Engineer, Drainage Maintenance. Periodic monitoring by the Water Pollution Section will continue to determine P loading to rivers from the treatment plants.
- FCC has also employed additional staff to investigate misconnections in the sewerage network and to arrange for these problems to be rectified. Progress of this procedure will undoubtedly reduce the potential for sewage pollution.
- To facilitate monitoring and the proper recording of the results of all monitoring, LabInfo software has been installed and historical data input to the system. All information will then be input into a comprehensive GIS system, which will facilitate the proper management of the various catchments. This is in the developmental stage.
- A survey of all on-site treatment works has commenced to assess the condition of all systems thus reducing the potential for pollution from these sources. Section 12 notices have been served on those premises found to be causing or have the potential to cause pollution. Due to the number of such units in the county, completion of the survey will take a considerable time. Where appropriate, discharge licences shall be required by the local authority. In 2006, these surveys have not taken place due to lack of resources.
- It is intended that the current programme be reviewed and extended accordingly to include additional sampling locations within the catchments or sub-catchments if required.

### Problems Encountered

- Sampling results were received a number of months after samples were taken thus leaving it very difficult to identify and solve the problem. FCC met with the Central Laboratory to set up a procedure, a 'flagging-system', where we are notified on a weekly basis of any exceedences, which then go through the certification procedure.
- As discussed previously, due to lack of resources, Farm Surveys and Septic Tank Surveys have not been carried out in 2006.
- The Health & Safety Aspects of this work is increasingly becoming a problem.

### Future Plans/New Directions

- As discussed previously, Fingal County Council is investigating other methods of carrying out Farm Surveys and Septic Tank Surveys and are talking to other Local Authorities
- A comprehensive catchment survey has been carried out in the Santry Catchment highlighting the existing and potential problems, which have been dealt with. Currently, a catchment management survey of The Ward catchment is being undertaken.
- A programme to establish baseline P loading to rivers from FCC's small municipal treatment plants was carried out in 2003/2004. This programme is to resume in the near future to establish current P loading from the plants. This is of particular importance as many of the small plants are being upgraded.

## 4.4 PUBLIC EDUCATION AND ADVISORY MEASURES

Public information can have a significant effect in reducing pollution or the potential for pollution. With this in mind, Fingal County Council are endeavouring to make this information more accessible through a number of media.

### Progress During Reporting Period

- Presentations have been made to relevant bodies such as the IFA, Teagasc and the Environmental Services and Parks SPC.

- An Environmental Awareness Officer is employed by FCC to raise public awareness of all environmental issues including those relating to water.
- A web page has been developed for inclusion on Fingal County Council's website. This web page provides appropriate information for the general public regarding the quality of our water bodies and the measures which individuals may take to maintain these waters.

### **Future Plans/New Directions**

- Individual campaigns targeting areas of particular concern including on-site treatment systems, misconnections and agriculture have commenced using various media where relevant. These include local papers, the FCC website, FCC newsletter and leaflet drops.
- FCC has joined with the Environment Section to take part in the Green Schools Campaign.

## **4.5 OTHER NATIONAL AND MISCELLANEOUS MEASURES RELEVANT TO THE PHOSPHORUS REGULATIONS**

### **Progress During Reporting Period**

- Additional works have been carried out to existing foul sewerage systems to improve capacity and reduce the frequency of discharge from Combined Storm Overflows. The Greater Dublin Strategic Drainage Study has modelled a number of the sewerage systems within the county and highlighted sections of sewer and overflows which require upgrading. Some of these improvements have taken place with others to be programmed for completion.
- The Rural Village Schemes are being upgraded in 2006 / 2007 period. These will include nutrient removal mechanisms.
- Various assessments of the existing networks are underway such as the Greater Dublin Strategic Drainage Study (GDSDS). This study highlights various capacity constraints within the system and recommends measures to alleviate these constraints. Of primary concern to this report is the reduction of spills from combined system overflows. In this regard, some of the recommended works have been completed with further recommendations due to be implemented in due course.
- Fingal County Council are currently undertaking a major water conservation project aimed at reducing the volume of unaccounted for water which includes that going to leakage. As this is a continual process, the level of leakage will fluctuate however FCC is committed to reducing this leakage as far as is reasonable.
- A regular monitoring programme is in place to monitor the discharge from all urban wastewater treatment works to ensure that all discharges comply with the Urban Wastewater Regulations. There have also been a number of improvements to the existing treatment works with further improvements planned as detailed in section 3 of this report. These improvements include the decommissioning of Balgriffen WWTW and the upgrading of Swords and Malahide WWTW.

## Problems Encountered

- An on-going problem within the Water Pollution Control Section is the increasing workload putting pressure on existing resources.
- Health and Safety Concerns.

Lone working has been highlighted as a health and safety concern within the Water Pollution Control Section. Farm surveys and 'river-walks' among other duties are carried out by staff. It is preferable to have two staff members on-site on these occasions. Limited resources have hindered progress in these areas. The Water Pollution Control Section has purchased a number of automatic samplers over the last number of years. These are used at rural municipal treatment works to calculate Phosphorus loading on rivers. As these samplers are portable, transportation i.e. lifting the equipment in and out of vehicles is a concern. In addition, in order to monitor and control licensed trade effluent discharges it is necessary to lift manhole covers to gain access to manhole chambers. FCC staff have completed manual handling courses in this respect Health and Safety Policy is being prepared specifically for the Water Pollution Control Section.

## Future Plans/New Directions

- FCC proposes to implement their monitoring requirements under the Draft ERBD Monitoring Programme. Liaison with the ERBD and the E.P.A is ongoing in relation to this matter. FCC recently submitted comments on E.P.A's draft document – National Surface and Groundwater Monitoring Programmes and are awaiting the publication of a final document.
- A Pilot Quality Management Scheme is proposed for the Water Pollution Section of Water Services. This will establish written procedures for issues such as; review of monitoring data under established monitoring programmes, responding to water pollution incidents, reporting on water pollution incidents and following up exceedences under Trade Effluent Discharge Licences.

## 4.6 SUMMARY AND CONCLUSIONS

### Progress During Reporting Period

- FCC has examined all aspects of Trade Effluent Discharge licensing and have made a number of improvements. These include licensing additional facilities, developing a 'flagging-system' for exceedences and responding appropriately.

- The Water Pollution Control Section has set up a GIS system to co-ordinate all the data from the section with other data such as aerial photography, mapping and drainage infrastructure.
- FCC is currently upgrading small municipal treatment works within the county to include nutrient removal.

### **Problems Encountered**

- Sampling results were received a number of months after samples were taken thus leaving it very difficult to identify and solve the problem. The establishment of a 'flagging-system' with the Central Laboratory, DCC has increased the turn around time on sample results enabling FCC to respond to pollution incidents more effectively and liaise promptly with Licensed Companies where exceedences in licence limits are identified.
- The formulation of a Health and Safety policy for the Water Pollution Control Section has helped identify problem areas such as lone working and gaining access to trade effluent discharge points. FCC have addressed these issues so duties are carried out more efficiently.
- As outlined FCC are considering the possibility of outsourcing farm surveys and septic tank surveys. Limited resources have hindered progress with this measure. Outsourcing would enable FCC to determine problem areas while retaining control of statutory elements under the Water Pollution Acts 1977&1990.

### **Future Plans/New Directions**

- A programme to control discharges of FOG's from food service outlets is being established by FCC. Currently the Water Pollution Control Section issue Trade Effluent Discharge Licences in respect of FOG's to establishments where problems are encountered. It is envisioned that a contracting company will be enlisted to carry out a survey of all food service outlets. FCC will retain the statutory rights over the issue of Trade Effluent Discharge Licences in respect of FOG's to establishments. However the contractor will monitor the establishments performance and report back to FCC in case of exceedences where FCC will respond appropriately.
- The GIS will be expanded to include information relating to farmland boundaries under the Farms Survey scheme in liaison with the DAF. The Water Pollution Control Section have recently established a database to store detailed information relating to pollution incidents, trade effluent discharge licence exceedences, farm surveys and septic tank surveys. This will be linked to the GIS to aid management and protection of waters. The GIS will be used to implement the RMCEI Plan for the Water Pollution Control Section.
- A public awareness campaign is ongoing in liaison with the Environmental Awareness Officer. An Agricultural review is being carried out and agriculture will be targeted in September. A public awareness leaflet detailing Farm Survey procedures and promoting Good Farming Practice will be completed by September in

*Phosphorus Regulations 4<sup>th</sup> Implementation Report July 2006*

liaison with Teagasc and the IFA. Public awareness leaflet for Service Stations, detailing maintenance of interceptors and preventing water pollution will be completed by September. An information leaflet on management of surface water on construction and demolition sites being finalised

- Outsourcing farm surveys and septic tank surveys is being considered as an option to overcome limited resources within the Section. Liaison with Wicklow County Council regarding their own outsourcing programme is proving beneficial. Teagasc have also been consulted on the matter.
- The Central Laboratory, DCC are setting up a new LIMS system. FCC has installed LabInfo and the two systems are compatible. The systems will allow for transfer of data between DCC and FCC allowing FCC to respond effectively to water pollution incidents and exceedences in Trade Effluent Discharge Licences.
- The smaller TW's in rural Fingal are being upgraded to include nutrient removal and reduce Phosphorus loading on riverbodies. A number of these contracts have already gone to tender for the Ballyboghil and Garristown plants. The Naul and Oldtown Treatment Plants are in the planning stages.

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**Table B.1: River Water Quality Standards to be achieved by 2007 DELVIN (08/D/01)**

<b>Local Authority Name</b>		FINGAL CO. COUNCIL			<b>Implementation Report Year</b>		JULY 2006	
<b>River Name</b>	<b>River Code</b>	<b>Biological Monitoring Station</b>	<b>Station Location Name</b>	<b>Baseline Q-Value</b>	<b>Baseline MRP Value µg/l P (median value)</b>	<b>Is Baseline Quality Satisfactory Yes/No?</b>	<b>Current Q-Value</b>	<b>Current MRP Value µg/l</b>

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								(median)
Delvin	08/D/01	0080	Bridge W of Naul	Q3-4	120	No	Q3	100
		0250	Br NW of Forty Acres	Q3	130	No	Q4	100
		0400	Bridge near Bridgefort Hse	Q3	240	No	Q4	130

[Continued]

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP Value	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle source of Pollution?	If there is an Identifiable Source, please enter details
Q4	30	No	No		Agriculture/Municipal	Not as Yet
Q3-4	50	Yes Q-Value	No		Agriculture/Municipal	Not as Yet
Q3-4	50	Yes Q-Value	No		Agriculture/Municipal	Point located d/s of Stamullen Treatment Works

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Table B.2: River Water Quality Standards to be achieved by 2007 **BALLOUGH (08/B/03)**

Local Authority Name		FINGAL CO. COUNCIL		Implementation Report Year		JULY 2006		
River Name	River Code	Biological Monitoring Station	Station Location Name	Baseline Q-Value	Baseline MRP Value µg/l (median value)	Is Baseline Quality Satisfactory Yes/No?	Current Q-Value	Current MRP Value µg/l (median)
Ballough	08/B/03	1400	Bridge W of Five Roads	Q3	No Result	No	Q3-4	40
		1600	Corduff Bridge	Q3	No Result	No	Q3	150

(Continued)

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP µg/l Value	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle source of Pollution?	If there is an Identifiable Source, please enter details
Q3-4	50	Yes-Q	No		Agriculture	Not as Yet
Q3-4	50	No	No		Agriculture	Not as Yet

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Table B.3: River Water Quality Standards to be achieved by 2007 BALLYBOGHIL (08/B/01)

Local Authority Name		FINGAL CO. COUNCIL		Implementation Report Year		JULY 2006		
River Name	River Code	Biological Monitoring Station	Station Location Name	Baseline Q-Value	Baseline MRP Value $\mu\text{g/l P}$ (median value)	Is Baseline Quality Satisfactory Yes/No?	Current Q-Value	Current MRP Value $\mu\text{g/l}$
Ballyboghil	08/B/01	1900	Bridge S of Trallie lodge	Q2	No Result	No	Q3	70
		2200	Bridge in Ballyboghil	Q3	No Result	No	Q3	90

(Continued)

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP Value $\mu\text{g/l}$	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle source of Pollution?	If there is an Identifiable Source, please enter details
Q3	70	Yes - Q Value	No		Agriculture	Not as Yet
Q3-4	50	No	No		Not Yet Identified	Not as Yet

Table B.4: River Water Quality Standards to be achieved by 2007 Broadmeadow (08/B/02)

Local Authority Name		Fingal Co. Council		Implementation Report Year		JULY 2006		
River Name	River Code	Biological Monitoring Station	Station Location Name	Baseline Q-Value	Baseline MRP Value µg/l P (median value)	Is Baseline Quality Satisfactory Yes/No?	Current Q-Value	Current MRP Value µg/l (median)
Broadmeadow	08/B/02	0600	WSW of Fieldstown House	Q3	448	No	Q3	80
		0700	Lispopple Bridge	Q3-4	384	No	Q3	80
		0800	Br. Near Waterworks	Q3	267	No	Q2-3	30

(Continued)

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP Value	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle Source of Pollution?	If there is an Identifiable Source, please enter details
Q3-4	50	No	No		Municipal /Agriculture	_____
Q4	30	No	No		Municipal/Agriculture	_____
Q3-4	50	Yes-MRP	No		Municipal/Agriculture	_____

Table B.5: River Water Quality Standards to be Achieved by 2007 Ward (08/W/01)

Local Authority Name		FINGAL CO. COUNCIL		Implementation Report Year		JULY 2006		
River Name	River Code	Biological Monitoring Station	Station Location Name	Baseline Q-Value	Baseline MRP Value µg/l P (median value)	Is Baseline Quality Satisfactory Yes/No?	Current Q-Value	Current MRP Value µg/l (median)
Ward	08/W/01	0070	Coolrath Bridge	Q2-3	138	No	Q2	120
		0300	Bridge N of Killeek	Q3	No Result	No	Q2-3	120
		0610	Bridge d/s Scotchstone Bridge	Q3	263	No	Q2-3	100

(Continued)

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP Value	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle source of Pollution?	If there is an Identifiable Source, please enter details
Q3	70	No	No		Agriculture	Not as Yet
Q3-4	50	No	No		Agriculture	Not as Yet
Q3-4	50	No	No		Agriculture/Industry	Not as Yet

Table B.6: River Water Quality Standards to be achieved by 2007 Mayne (09/M/03)

Local Authority Name		FINGAL CO. COUNCIL		Implementation Report Year		JULY 2006			
River Name	River Code	Biological Monitoring Station	Station Location Name	Baseline Q-Value	Baseline MRP Value $\mu\text{g/l P}$ (median value)	Is Baseline Quality Satisfactory Yes/No?	Current Q-Value	Current MRP Value $\mu\text{g/l}$ (median)	
Mayne	09/M/03	0500	Hole in the Wall Road Bridge	Q2-3	No Result	No	Q3	50	

(Continued)

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP Value	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle source of Pollution?	If there is an Identifiable Source, please enter details
Q3	70	Yes – Q Value and MRP	No		Municipal	Balgriffin Treatment Works

Table B.7: River Water Quality Standards to be achieved by 2007 Pinkeen (09/P/02)

<b>Local Authority Name</b>		FINGAL CO. COUNCIL		<b>Implementation Report Year</b>		JULY 2006		
<b>River Name</b>	<b>River Code</b>	<b>Biological Monitoring Station</b>	<b>Station Location Name</b>	<b>Baseline Q-Value</b>	<b>Baseline MRP Value µg/l P (median value)</b>	<b>Is Baseline Quality Satisfactory Yes/No?</b>	<b>Current Q-Value</b>	<b>Current MRP Value µg/l (median)</b>
Pinkeen	09/P/02	0700	Bridge SE of Powerstown House	Q1	No Result	No	Q3	80

(Continued)

<b>Standard to be Achieved by 2007 Q-Value</b>	<b>Standard to be Achieved by 2007 MRP Value</b>	<b>Has Either Standard been Achieved?</b>	<b>Does Article 3(9) Extension Apply?</b>	<b>If Yes, What is the Revised Compliance Date?</b>	<b>Where Quality is Unsatisfactory, What is the Principle source of Pollution?</b>	<b>If there is an Identifiable Source, please enter details</b>
Q3	70	Yes – Q Value	No		Agriculture/Municipal	Not as Yet

Table B.8: River Water Quality Standards to be achieved by 2007 Tolka (09/T/01)

Local Authority Name		FINGAL CO. COUNCIL		Implementation Report Year		JULY 2006		
River Name	River Code	Biological Monitoring Station	Station Location Name	Baseline Q-Value	Baseline MRP Value $\mu\text{g/l P}$ (median value)	Is Baseline Quality Satisfactory Yes/No?	Current Q-Value	Current MRP Value $\mu\text{g/l}$ (median)
Tolka	09/T/01	0800	Mulhuddart Bridge	Q2-3	430	No	Q3	85
		1000	Abbotstown Bridge	Q3	457	No	Q3	90

(Continued)

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP Value	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle source of Pollution?	If there is an Identifiable Source, please enter details
Q3	70	Yes – Q Value	No		Undecided, possibly industrial/municipal	Not as Yet
Q3-4	50	No	No		Municipal	Not as Yet

Table B.9: River Water Quality Standards to be achieved by 2007 Hurley (08/H/01)

Local Authority Name		FINGAL CO. COUNCIL		Implementation Report Year		JULY 2006		
River Name	River Code	Biological Monitoring Station	Station Location Name	Baseline Q-Value	Baseline MRP Value $\mu\text{g/l P}$ (median value)	Is Baseline Quality Satisfactory Yes/No?	Current Q-Value	Current MRP Value $\mu\text{g/l}$ (median)
Hurley	08/H/01	0060	Bridge S of Borranstown House	Q3	No Result	No	Q3	80

[Continued]

Standard to be Achieved by 2007 Q-Value	Standard to be Achieved by 2007 MRP Value	Has Either Standard been Achieved?	Does Article 3(9) Extension Apply?	If Yes, What is the Revised Compliance Date?	Where Quality is Unsatisfactory, What is the Principle source of Pollution?	If there is an Identifiable Source, please enter details
Q3-4	50	No	No		Agriculture	Not as Yet

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Table C.1 Implementation Programme Summary Table: DELVIN RIVER (08/D/01)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To improve Q-rating upstream of Station No. 0080 from Q3-4 to Q4.  To maintain Q-rating upstream of Station No. 0250 at Q4 or better.  To improve Q-rating upstream of Station No. 0400 from Q3 to Q4.	Provide P removal as part of upgrade of Garristown WWTP	Minimise P losses to the river using the best available technology.	Upgrade wastewater treatment facilities using the best available technology not entailing excessive costs Include P removal requirements in design brief		Senior Engineer Design and Planning.	Due to be commissioned Nov 2006			
	Address surface water infiltration in foul drainage system at Garristown.	Reduce P losses by resolving flooding problem.	Quantify extent of problem and rectify where possible.	31/07/2004	Senior Executive Engineer Drainage Maintenance	Works have been completed		Y	
	Flow proportional sampling of Garristown and the Naul WWTW effluent.	Establish P loading from wastewater treatment works to quantify impact of municipal activity within the catchment.	Carry out regular monitoring.	Ongoing	Senior Executive Engineer Pollution Control	Sampling programme in place.	Full time sampler appointed in 2002 and new equipment purchased to enable more frequent sampling. Responsibility transferred to Senior Executive Engineer Drainage Maintenance	Ongoing	
	Upgrade hydrometric station network.	To monitor river flows to enable P loading be calculated.	Refurbish existing stations at Garristown and the Naul	31/07/2004	Senior Executive Engineer Direct Labour	Provision made in Works Programme	Works included in the 2004 Works Programme. Measure may be amended. Awaiting publication of the E.P.A's – National Surface and Groundwater Monitoring Programme, Republic of Ireland – Final Report. Liaison with the E.P.A regarding proposals for the Hydromorphology element of the Operational Monitoring programme outlined in the report.	N	31-12-2004

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Table C.1 Continued - Implementation Programme Summary Table: DELVIN RIVER (08/D/01)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
			Establish new station at the freshwater boundary near Gormanstown.	31/07/2006	Senior Executive Engineer Direct Labour	Provision made in Works Programme	As above		
	Liaison structures with Meath County Council.	Increased efficiency in implementing measures.	Set up liaison structures and hold regular meetings to co ordinate policy.	Ongoing	Director of Services Senior Engineer Design and Planning	Meetings held on a regular basis		Ongoing	
			Set up liaison structures and hold regular meetings to co ordinate working arrangements and implementing measures on a catchment basis.	31/07/2004	Senior Executive Engineer Pollution Control			Ongoing	
	Provide P removal as part of upgrade of the Naul WWTP	Minimise P losses to the river using the best available technology.	Upgrade wastewater treatment facilities using the best available technology not entailing excessive costs Include P removal requirements in design brief		Senior Engineer Design and Planning		Going to tender July 06		

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Table C.2 Implementation Programme Summary Table: BALLOUGH RIVER (08/B/03)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
<p>To maintain Q-rating upstream of Station No. 1400 at Q3-4 or better.</p> <p>To maintain Q-rating upstream of Station No. 1600 at Q3-4 or better.</p>	Upgrade hydrometric station network.	To monitor river flows to enable P loading and budgets be calculated.	Establish new station at Corduff.	31/07/2006	Senior Executive Engineer Direct Labour	Provision made in Works Programme	Measure may be amended. Awaiting publication of the E.P.A's – National Surface and Groundwater Monitoring Programme, Republic of Ireland – Final Report. Liaison with the E.P.A regarding proposals for the Hydromorphology element of the Operational Monitoring programme outlined in the report.		
	Flow proportional sampling of Colecot WWTW effluent.	Establish P loading from wastewater treatment works to quantify impact of municipal activity within the catchment.	Carry out regular monitoring.	Ongoing	Senior Executive Engineer Pollution Control	Sampling programme in place.	Full time sampler appointed in 2002 and new equipment purchased to enable more frequent sampling.		

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Table C.3 Implementation Programme Summary Table: BALLYBOGHIL (08/B/01)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
<p>To maintain Q-rating upstream of Station No. 1900 at Q3-4 or better</p> <p>To improve Q-rating upstream of Station No. 2200 from Q3 to Q3-4.</p>	Upgrade hydrometric station network.	To monitor river flows to enable P loading and budgets be calculated.	Establish new station at the freshwater boundary at Daws Bridge	31/07/2006	Senior Executive Engineer Direct Labour	Provision made in Works Programme	Measure may be amended. Awaiting publication of the E.P.A's – National Surface and Groundwater Monitoring Programme, Republic of Ireland – Final Report. Liaison with the E.P.A regarding proposals for the Hydromorphology element of the Operational Monitoring programme outlined in the report.		
	Flow proportional sampling of Oldtown and Ballyboghil WWTW effluent.	Establish P loading from wastewater treatment works to quantify impact of municipal activity within the catchment.	Carry out regular monitoring.	Ongoing	Senior Executive Engineer Pollution Control	Sampling programme in place.	Full time sampler appointed in 2002 and new equipment purchased to enable more frequent sampling.	Ongoing	
	Provide P removal as part of upgrade of Oldtown and Ballyboghil WWTP	Minimise P losses to the river using the best available technology.	Upgrade wastewater treatment facilities using the best available technology not entailing excessive costs Include P removal requirements in design brief	Not known	Senior Executive Engineer Drainage Design.	Ballyboghil to be commissioned in Nov 06. Oldtown to go to tender July 06			

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Table C.4 Implementation Programme Summary Table: BROADMEADOW RIVER (08/B/02)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe [Y/N]?	If not, State Revised Timeframe
To improve Q-rating upstream of Station No. 0600 from Q3 to Q3-4.	Water Quality Plan for the Broadmeadow Estuary and Catchment to include the Broadmeadow River.	Implement Plan to reduce nutrient losses to waters	Draft Water Quality Plan in conjunction with Meath County Council for adoption by the County Council.	31/07/2004	Fingal County Council	BWQP to be included within the ERBD		N	Timeframe not known
To improve Q-rating upstream of Station No. 0700 from Q3-4 to Q4.  To improve Q-rating upstream of Station No. 0800 from Q3 to Q3-4.	Upgrade hydrometric station network.	To monitor river flows to enable P loading and budgets be calculated.	Refurbish existing stations at Fieldstown and Balheary	31/07/2004	Senior Executive Engineer Direct Labour	Provision made in 2004 Works Programme	Measure may be amended. Awaiting publication of the E.P.A's – National Surface and Groundwater Monitoring Programme, Republic of Ireland – Final Report. Liaison with the E.P.A regarding proposals for the Hydromorphology element of the Operational Monitoring programme outlined in the report.	N	31-12-2004
	Liaison structures with Meath County Council.	Increased efficiency in implementing measures.	Set up liaison structures and hold regular meetings to co ordinate policy.	Ongoing	Director of Services Senior Engineer Design and Planning	Meetings held on a regular basis		Ongoing	
			Set up liaison structures and hold regular meetings to co ordinate working arrangements and implementing measures on a catchment basis.	31/07/2004	Senior Executive Engineer Pollution Control	Contact made with Meath County Council		Ongoing	

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Table C.5 Implementation Programme Summary Table: WARD RIVER (08/W/01)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe [Y/N]?	If not, State Revised Timeframe
To maintain Q-rating upstream of Station No. 0070 at Q3 or better.	Water Quality Plan for the Broadmeadow Estuary and Catchment to include the Ward River.	Implement Plan to reduce nutrient losses to waters	Draft Water Quality Plan in conjunction with Meath County Council for adoption by the County Council.	31/07/2004	Fingal County Council	Water Pollution Control Section formulating a WQP summer 2006 WQP to be included within the ERBD		N	31/12/2005
To improve Q-rating upstream of Station No. 0300 from Q3 to Q3-4.	Liaison structures with Meath County Council.	Increased efficiency in implementing measures.	Set up liaison structures and hold regular meetings to co ordinate policy.	Ongoing	Director of Services Senior Engineer Design and Planning	Meetings held on a regular basis		Ongoing	
To improve Q-rating upstream of Station No. 0610 from Q3 to Q3-4.			Set up liaison structures and hold regular meetings to co ordinate working arrangements and implementing measures on a catchment basis.	31/07/2004	Senior Executive Engineer Pollution Control	Contact made with Meath County Council		Ongoing	
	Flow proportional sampling of Toberburr WWTW effluent.	Establish P loading from wastewater treatment works to quantify impact of municipal activity within the catchment.	Carry out regular monitoring.	Ongoing	Senior Executive Engineer Pollution Control	Health & Safety concerns regarding Flow Proportional Monitoring in the WWTW	Composite sampling over 24hours taken on a monthly basis. Responsibility taken over by Senior Executive Engineer, Drainage Operations	Ongoing	
	Decommission Toberburr WWTW	Reduce P inputs to the river.	Connect drainage network to Swords.	31/07/2004	Senior Executive Engineer Planning Control	Proposal drawn up	The rising main is being constructed at present and it is anticipated that works will be completed early in 2005	N	31/07/2005
	Remedy storm water overflows from combined systems in Swords.	Minimise effect of P losses from overflows to the river.	Model network to identify sub standard sections.  Upgrade pipelines and divert surface water from sewers.	31/07/2004	Senior Executive Engineer Drainage Design	Swords has been modelled under the <i>Greater Dublin Strategic Drainage Study</i> to identify substandard overflows. Substantial work has been carried out in Swords upgrading sewers and diverting surface water	Further works have been highlighted in the model for improvements. A timeframe for these additional works is to be decided.	Y	
	Remedy house misconnection	Eliminate P discharges from house misconnections.	Carry out misconnection surveys. Where necessary follow up with enforcement under the Water Pollution Acts.	31/07/2004	Senior Engineer Drainage maintenance		An additional member of staff has been employed to survey house misconnections		31/07/06

Table C.6 Implementation Programme Summary Table: MAYNE (09/M/03)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain Q-rating upstream of Station No. 0500 at Q3 or better.	Stakeholder consultation and co-operation.	Active involvement of stakeholders in implementing measures to reduce P inputs to rivers.	Participate in Pollution Control Committee for Dublin Airport to enable relevant organisations contribute to implementing measures.	Ongoing	Senior Exec. Engineer Pollution Control	Aer Rianta has re activated pollution Control Meetings for Dublin Airport.  Fingal Water Pollution Control is actively participating in process.		Ongoing	
	Liaison structures with Dublin City Council.	Increased efficiency in implementing measures.	Set up liaison structures and hold regular meetings to co ordinate working arrangements and implementing measures on a catchment basis.	31/07/2004	Senior Executive Engineer Pollution Control	Close contact is maintained with Dublin City Council Water Pollution Control section.			
	Flow proportional sampling of Balgriffen WWTW effluent.	Establish P loading from wastewater treatment works to quantify impact of municipal activity within the catchment.	Carry out regular monitoring.	Ongoing	Senior Executive Engineer Pollution Control	Balgriffen WWTW has been decommissioned			
	Decommission Balgriffen WWTW	Reduce P inputs to the river.	Connect drainage network to North Fringe Sewer	31/07/2004	Senior Design and Planning.	Balgriffen WWTW has been decommissioned		Y	
	Upgrade hydrometric station network.	To monitor river flows to enable P loading be calculated.	Refurbish existing stations at the Hole in the Wall	31/07/2004	Senior Executive Engineer Direct Labour	Provision made in Works Programme	Measure may be amended. Awaiting publication of the E.P.A's - National Surface and Groundwater Monitoring Programme, Republic of Ireland - Final Report. Liaison with the E.P.A regarding proposals for the Hydromorphology element of the Operational Monitoring programme outlined in the report.	N	31-12-2004

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Table C.7 Implementation Programme Summary Table: PINKEEN (09/P/02)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain Q-rating upstream of Station No. 0700 at Q3 or better.	Implement the Water Quality Plan for the Tolka River catchment.	Implement Plan to reduce nutrient losses to waters	Implement Water Quality Plan in conjunction with Meath County Council and Dublin City Council.		Fingal County Council	Reviewed with Meath County Council and Dublin City Council.		Ongoing	
	Liaison structures with Meath County Council.	Increased efficiency in implementing measures.	Set up liaison structures and hold regular meetings to co ordinate policy.	Ongoing	Director of Services Senior Engineer Design and Planning	Meetings held on a regular basis		Ongoing	
			Set up liaison structures and hold regular meetings to co ordinate working arrangements and implementing measures on a catchment basis.	31/07/2004	Senior Executive Engineer Pollution Control			Ongoing	
	Remedy storm water overflows from combined systems.	Minimise effect of P losses from overflows to the river.	Model network to identify sub standard sections.  Upgrade pipelines and divert surface water from sewers.	31/07/2004	Senior Executive Engineer Drainage Design	The Drainage network has been modelled under the <i>Greater Dublin Strategic Drainage Study</i> to identify substandard overflows. Certain improvement works have been recommended but a completion date for these works is yet to be decided.			
	Remedy house misconnections	Eliminate P discharges from house misconnections.	Carry out misconnection surveys. Where necessary follow up with enforcement under the Water Pollution Acts.	31/07/2004	Senior Engineer Drainage maintenance		An additional member of staff has been employed to survey house misconnections		

Table C.8 Implementation Programme Summary Table: TOLKA (09/T/01)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To maintain Q-rating upstream of Station No. 0800 at Q3 or better. To improve Q-rating upstream of Station No. 1000 from Q2-3 to Q3-4.	Implement the Water Quality Plan for the Tolka River catchment.	Implement Plan to reduce nutrient losses to waters	Implement Water Quality Plan in conjunction with Meath County Council and Dublin City Council.		Fingal County Council	Reviewed with Meath County Council and Dublin City Council.			
	Liaison structures with Meath County Council.	Increased efficiency in implementing measures.	Set up liaison structures and hold regular meetings to co ordinate policy.	Ongoing	Director of Services Senior Engineer Design and Planning	Meetings held on a regular basis		Ongoing	
			Set up liaison structures and hold regular meetings to co ordinate working arrangements and implementing measures on a catchment basis.	31/07/2004	Senior Executive Engineer Pollution Control			Ongoing	
	Remedy storm water overflows from combined systems.	Minimise effect of P losses from overflows to the river.	Model network to identify sub standard sections.  Upgrade pipelines and divert surface water from sewers.	31/07/2004	Senior Executive Engineer Drainage Design	The Drainage network has been modelled under the <i>Greater Dublin Strategic Drainage Study</i> to identify substandard overflows.  Certain improvement works have been recommended but a completion date for these works is yet to be decided.			
	Remedy house misconnections	Eliminate P discharges from house misconnections.	Carry out misconnection surveys. Where necessary follow up with enforcement under the Water Pollution Acts.	31/07/2004	Senior Engineer Drainage maintenance		An additional member of staff has been employed to survey house misconnections		

Table C.9 Implementation Programme Summary Table: HURLEY RIVER (08/H/01)

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed within Timeframe (Y/N)?	If not, State Revised Timeframe
To improve Q-rating upstream of Station No. 0060 from Q3 to Q3-4.	Farm surveys	Examine farm management and practices to reduce P inputs to rivers.	Carry out comprehensive farm survey for entire catchment.	Ongoing	Senior Exec. Engineer Pollution Control	Farm surveys have commenced Farm data base set up Farm survey form completed Liaison with IFA and Teagasc	80% of catchment surveyed with regard to Farm Surveys. Process has been delayed due to shortage of resources. FCC investigating alternatives.	Ongoing	
	Unlicensed discharge surveys.	Ensure discharges to surface waters are licensed to reduce P inputs to rivers.	Carry out comprehensive survey of unlicensed discharges for entire catchment .	Ongoing	Senior Exec. Engineer Pollution Control	Surveys have continued		Ongoing	
	On site treatment system surveys.	Examine on site treatment systems to reduce P inputs to rivers.	Carry out comprehensive on site treatment plant survey for entire catchment .	Ongoing	Senior Exec. Engineer Pollution Control	Surveys have commenced Data base set up	80% of catchment surveyed with regard to septic tanks. Process has been delayed due to shortage of resources. FCC investigation alternatives..	Ongoing	

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