

Water quality planning – identifying schemes for the PR09 National Environment Programme (NEP): Identifying environmental outcome measures

Operational instruction

1141_08

Issued 01/12/08

What's this document about?

This document specifies the information that should be collected by Regions and Areas on environmental outcomes to enable assessment of the catchment and higher level benefits of water quality schemes being put forward in the PRO9 NEP.



Document details

Who does this apply to?

Regional/area WQ planning teams
Regional/area GW&CL teams
Regional PR09 coordinators
WQ and LQ policy teams
NPTS teams

It may also be useful to the following teams:

- Environment Management teams
- National Permitting Team.



Related documents



Feedback

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Contact for queries

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Introduction

Scope

By the end of November 2008, we will need to have identified the environmental outcomes that are expected to be accrued through the proposed PR09 final NEP for each water company and at an Environment Agency area and regional level.

The environmental outcomes relating to the river basins under the Water Framework Directive will be identified and collated by the National Water Quality team.

What do I have to do?

The stages in the process

As part of the development of the National Environment Programme (NEP) for PR09 the environmental outcomes will have been identified for each proposed improvement scheme. These have been populated in the environmental outcomes field of the scheme appraisal information pro-forma and the 'environmental outcome' field of the PR09 NEP summary spreadsheet for Water Quality as required in [378_07 Water Quality Planning: Identifying schemes for PRO9 National Environment Programme.](#)

The stages of the process are described in the table below.

Stage	Description
1	Calculate the environmental outcome measures for Water Quality Outcome Measures and Combined Measures and group for each Area, Region, the ten Water and Sewerage Companies and Wales ¹ .
2	Enter the results into the Environmental Outcome Measures Spreadsheet – Environmental Outcome Measures – PR09 Final NEP (circulated separately as supporting document).
3	Quality assure the spreadsheet and return to Keith Davis (Head Office – Water Quality Policy) by 3 rd December 2008.
4	Many of the environmental outcome measures for individual assets will have been calculated as part of the work in developing the initial National Environment Programme. However, further technical appraisal of schemes has resulted in some changes to the proposed PR09 programme. It will therefore be necessary to check that the measures are identified and grouped appropriately.
5	The overall results for the Region may not be the sum of the measures for each Area in the Region as this may result in double counting. This is particularly the case where a river or estuary being improved forms the border between two Areas, or where two adjoining Areas are improving a unit of coastal water (e.g. SAC or SPA). Where a water body being improved is adjacent to two Regions, the Regional PR09 Coordinators should consult to find out if the water body is being counted in the measures for both

¹ There is no requirement to report separately the environmental outcome measures for the water only companies.

Stage	Description
	regions. Where this is the case record it as a comment appended to the cell (in the reporting spreadsheet) of the Regional measure.
6	The measures for the 10 Water and Sewerage Companies are to be reported by the region that acts as the June Return Account Manager for the company. This will require the PR09 coordinators to consult to ensure all the environmental outcomes for each company are recorded. The region with responsibility for managing a water body are to calculate the environmental outcome measures and where appropriate pass this information to the region that acts as the June Return Account Manager.

Measuring the environmental outputs

Measures to use

All lengths are to be reported in kilometres (km)
All areas are to be reported in square kilometres (km²)

Driver specific measures

The environmental outcome measures contained in [Water Quality Outcome Measures](#) relate to the environmental changes estimated to result from improvement schemes assigned to a single driver (or driver group).

Each of the environmental outcome measures (as defined in each row of the tables) are independent of each other.

Example: Groups of schemes in a catchment resulting from the U1 driver and the F1a driver may affect the same stretch of river, say 5 km in length. This 5 km will be assigned to both the U1 indicator **and** the F1a measure in [Water Quality Outcome Measures](#).

However, where two or more schemes affect the same length of river (e.g. two qualifying discharges affect a specific Sensitive Area (U2 driver) then that length of river is counted only once under the relevant measure.

Total environmental output measures

The environmental outcome measures contained in [Combined Measures](#) relate to the environmental changes that may result from improvement schemes assigned to **groups** of drivers. Care should be taken to ensure that there is no double counting of benefits when deriving the results for these measures.

Example: Consider the measure 'Length of river at reduced risk of eutrophication'. Possible drivers include U1 (P removal schemes), U2, H1, H3, WFD2 and I1. **Diagrams A and B** below illustrate how the length is identified in two different cases.

Diagram A Overlapping designations (see [Combined Measures](#))

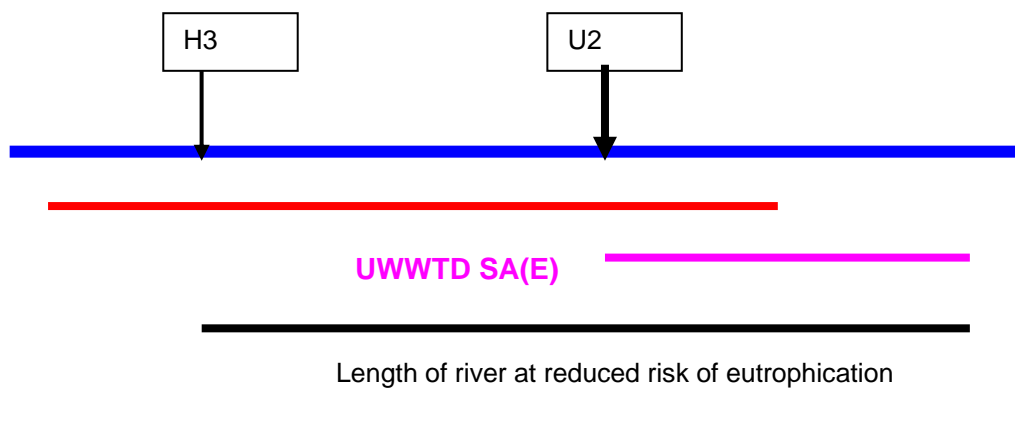
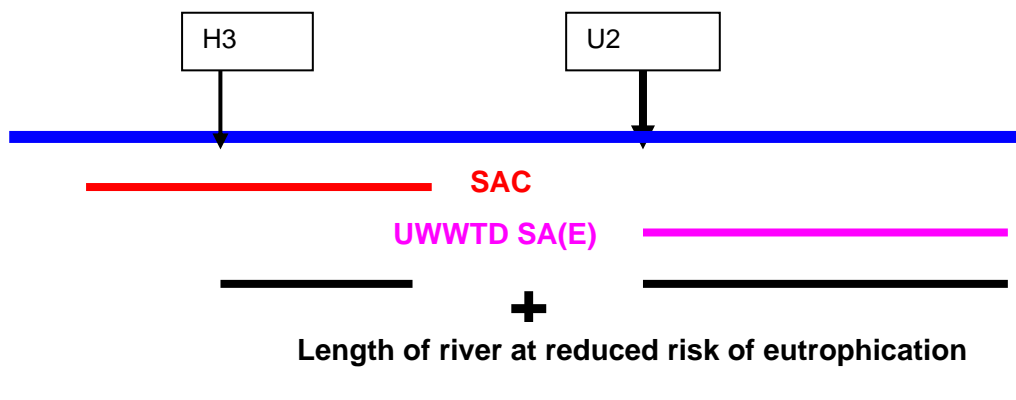


Diagram B Discrete designations (see [Combined Measures](#))



Calculating environmental outcome measures

Investigations Where only a requirement for an investigation has been identified, do not include the unit of the environment to be investigated in the output measures.

**UWWTD
sensitive
areas**

Rivers

This is the whole length of the designated Sensitive Area, from the first upstream direct qualifying discharge to the downstream boundary of the Sensitive Area. This length of river is counted only once for each area summary, regardless of the number of direct and indirect qualifying discharges. As a QA check the length of river calculated centrally in each Sensitive Area is contained in **Length of Riverine Stretches designated as a result of the 2005 review of Sensitive Areas.**

Lakes

Regions will need to identify the lake area affected by improvement schemes. This information should be contained in the reports regions submitted to head office in support of the proposal to designation the Sensitive Area.

Estuarine and coastal waters

The area of water body in the Sensitive Area is contained in the reports regions submitted to head office in support of the proposal to designation the Sensitive Area. As a QA check the area of the water body calculated centrally in each Sensitive Area is contained in [Area of reservoir, estuarine and coastal waters.](#)

**Fresh water
fish, WFD, no
deterioration**

Fresh Water Fish Directive, the Water Framework Directive (ammonia, BOD, phosphorus and dissolved oxygen) and No Deterioration (flow) environmental indicators are based on GQA stretch lengths. Identify the stretch (or stretches) improved (or prevented from deteriorating) by a scheme (or group of schemes). Use the GQA stretch lengths (from the GQA database) to assign the environmental indicator.

**Nature
conservation
environmental
indicators for
designated
sites**

The length of watercourse and area of wetland/lake will be as defined by EN/CCW in the designation of the site. From this identify the length/area affected by a water company asset (discharge).

Rivers

If say a discharge enters a watercourse halfway down the designated reach, then the environmental indicator is the length of river from the discharge point to the end of the designation. However, if the discharge (or results of an abstraction) represents a barrier to migratory fish (and the species in question is one of the reasons for designation) then the environmental outcome measure is the whole length of the designated reach.

Wetlands/lakes

The impacted area of such water bodies will, usually, be the total area of the water body. Where this is not the case local knowledge of the site should be used to define the area. It is important to only include the area affected by water company assets.

SSSIs

For improvements to SSSIs only include in the outcome measures those SSSIs that are NOT part of a Habitats Directive site (SAC or SPA).

Unsatisfactory intermittent discharges

Only the number of improvement schemes is required for this environmental measure in [Combined Measures](#).

UID1

This should now include all Thames Tideway schemes.

The numbers for other non UID1 drivers should be included where there are improvements to intermittent discharges. This will include for example intermittents included under the F1a, B1, rB1, rB2, S1, WFD1 and WFD2 drivers.

Marine environment

In the absence of site specific information; where only the length of coastline affected by an improvement scheme is known, multiply the length (km) by 0.5 to give the area (km²).

Groundwaters

Regions will need to identify the Groundwater Body (Water body ID or name) that is improved by the scheme and whether this body is at Good or Poor status. Speak to the Area Groundwater and Contaminated Land co-ordinator for assistance.

Water quality outcome measures

Ref	Driver	Environmental outcome measure
1.1	U1, U2	A. Length of river at a reduced risk of eutrophication
1.2		B. Number of freshwater lakes at reduced risk of eutrophication
1.3		C. Area of freshwater lakes at a reduced risk of eutrophication
1.4		D. Area of estuarine and coastal waters (km ²) at reduced risk of eutrophication
1.5	F1a	Length of river improved currently significantly failing fwf standards
1.6	WFD1, WFD3 and WFD4	Length of river improved currently significantly failing wfd ammonia, bod or dissolved oxygen standards
1.7	WFD2	Length of river improved currently significantly failing wfd p standards
1.8	FLOW1	Length of river prevented from deteriorating and resulting in an RQO failure
1.9	B1	Number of bathing waters improved that are currently failing to achieve imperative standards (current directive)
1.10	rB1, rB2	Number of bathing waters improved to or maintained at sufficient status under the revised bathing waters directive
1.11	S1	Number of Shellfish Waters improved towards achieving compliance with the Guideline coliform flesh standard of the Shellfish Waters Directive
1.12	H1-H7	A. Length of river improved towards conservation objectives

Ref	Driver	Environmental outcome measure
1.13		B. Number of freshwater lakes improved towards meeting international conservation objectives
1.14		C. Area of freshwater lakes improved towards meeting international conservation objectives
1.15		D. Area of estuarine and coastal waters improved towards meeting international conservation objectives
1.16		E. Number of wetlands improved towards meeting international conservation objectives
1.17		F. Area of wetlands improved towards meeting international conservation objectives
1.18		I1-I4
1.19	B. Number of freshwater lakes improved towards meeting national conservation objectives	
1.20	C. Area of freshwater lake improved towards meeting national conservation objectives	
1.21	D. Area of estuarine and coastal waters improved towards meeting national conservation objectives	
1.22	E. Number of wetlands improved towards meeting national conservation objectives	
1.23	F. Area of wetlands improved towards meeting national conservation objectives	
1.24	BAP1	A. Length of river specifically improved towards bap conservation requirements
1.25		B. Number of freshwater lakes improved towards meeting bap conservation requirements
1.26		C. Area of freshwater lakes specifically improved towards bap conservation requirements
1.27		D. Area of estuarine and coastal waters specifically improved towards bap conservation requirements
1.28		E. Number of wetlands improved towards meeting bap conservation requirements
.29		F. Area of wetlands improved towards meeting bap conservation requirements
1.30	L1	a. Length of river improved to meet local requirements.
1.31		b. Number of freshwater lakes improved to meet local requirements
1.32		c. Area of freshwater lakes improved to meet local requirements
1.33		d. Area of estuarine and coastal water improved to meet local requirements
1.34	G1, G2, G3	a. Number of Groundwater bodies improved to Good Status
1.35		b. Number of Groundwater bodies where status is maintained (no deterioration)

Combined measures

Ref	Driver	Environmental outcome measure
3.1	U1, U2, F1a, WFD1, WFD2, WFD3, WFD4, FLOW1, H1-H7, I1-I4, BAP1, L1, UID1	Total length of river improved or prevented from deteriorating
3.2	U1, U2, H1-H7, I1-I4, BAP1, L1	a. Number of freshwater lakes improved or prevented from deteriorating
3.3		b. Total Area of freshwater lakes improved or prevented from deteriorating
3.4	U1, U2, H1-H7, I1-I4, BAP1, L1, UID1	Total area of estuarine and coastal waters improved or prevented from deteriorating
3.5	U1 and U2 (P removal schemes), H1, I1 (P removal), BAP1, L1, WFD2	Length of river at reduced risk of Eutrophication
3.6	U1 and U2 (N removal schemes), H2, I1 (N removal), BAP1	Area of estuarine and coastal waters at reduced risk of Eutrophication
3.7	UID1 and UIDs with other non UID drivers (e.g. F1a, B1, rB1, rB2, S1)	Number of unsatisfactory intermittent sewage discharges improved
3.8	H1-H7, I1-4, BAP1	a. Length of river improved towards conservation objectives
3.9		e. Number of freshwater lakes improved towards conservation objectives
3.10		c. Area of freshwater lakes improved towards conservation objectives
3.11		d. Area of estuarine and coastal waters improved towards conservation objectives
3.12		e. Number of wetlands improved towards conservation objectives
3.13		f. Area of wetlands improved towards conservation objectives
3.14	B1, rB1, rB2	Number of bathing waters improved under current and revised Bathing Water Directives
3.15	G1, G2, G3	Number of groundwater bodies improved or status maintained

Length of riverine stretches designated as a result of the 2005 UWWTD review of Sensitive Areas

Site name	Region	Designation status	Length (km)
Badsey Brook	Midlands	SA(E)	2.0
Rea Brook	Midlands	SA(E)	23.0
River Itchen	Midlands	SA(E)	10.0
River Mease	Midlands	SA(E)	31.3
River Salwarpe	Midlands	SA(E)	25.0
River Strine/Strine Brook	Midlands	SA(E)	13.5
River Swift	Midlands	SA(E)	11.0
River Tern	Midlands	SA(E)	40.2
River Trent	Midlands	SA(E)	270.4
Rivers Strout Smestow	Midlands	SA(E)	42.8
Glaze Brook	North West	SA(E)	12.2
River Dane	North West	SA(E)	43.9
River Tame	North West	SA(E)	31.2
River Yeo	South West	SA(E)	43.0
Rivers Brue, Sheppey and Alham	South West	SA(E)	63.2
Little Stour	Southern	SA(E)	6.5
River Hamble	Southern	SA(E)	4.8
River Rother West	Southern	SA(E)	34.6
Tidal River Great Stour	Southern	SA(E)	15.0
Waldron Ghyll/Fiver Cuckmere	Southern	SA(E)	18.2

Area of reservoir, estuarine and coastal waters designated as a result of the 2005 UWWTD review of Sensitive Areas

Site Name	Region	Designation Status	Area (km ²)
Lower Fal Estuary	South West	SA(E)/PW(E)	27
Slapton Ley	South West	PW(E)	0.77
Bewl Reservoir	Southern	SA(E)	3.18
Darwell Reservoir	Southern	SA(E)	0.64
Hamble Estuary	Southern	SA(E)/PW(E)	2.23
Medina Estuary	Southern	SA(E)/PW(E)	1.6
Newtown Harbour	Southern	SA(E)/PW(E)	2.1

Related documents

Links

No related documents
