A clear solution for farmers

CATCHMENT SENSITIVE FARMING

Priority Catchment Targeting Summary
April 2014 – March 2015

Catchment: Frome , Piddle & Fleet	**CSFO: Charlotte Woodford**	
Target Area: 46,292 ha	**Total Area: 60,260 ha**	**Total Nº of Farms: 600** **Target Nº of Farms: 370**

Reasons for designation

The Frome & Piddle

- Both of these catchments have been designated with the CSF Project for a number of reasons;
- Both rivers flow into Poole Harbour a designated N2k SPA & Ramsar site. Much of this marine site is subject to eutrophication due to elevated nitrate levels. The majority of nutrient inputs probably reflect diffuse sources but are enhanced by STW discharges (recent modeling estimates this to be 12% and agriculture 86%). Environment Agency (EA) data also shows rising trends in nitrates in the ground water and, as this feeds the watercourses, may have an impact. As a result of this Poole Harbour now has a Nutrient Management Plan in place and a Nitrate Reduction Strategy Implementation Plan is now in the process of being agreed for both diffuse and point sources.
- A Poole Harbour Catchment Initiative Agriculture & Land Management Group has been established to help take this forward from an agricultural perspective – this incorporates the CSF Liaison Group
- Recent projects (2012 – 2014 and ongoing into 2015) have been undertaken by both EA and CSF to look at the implementation of practical on farm measures to improve nitrate use efficiencies. The outcomes from these will help inform/demonstrate/encourage adoption in the wider catchment
- The River Frome SSSI is failing favourable condition largely due to sediment and phosphates. High sediment inputs from some tributaries are perceived to be due to arable especially maize cultivation, intensive dairy and ploughing on the steep slopes in the upper reaches, producing very silty runoff The EA (in partnership with the Frome, Piddle and West Dorset Fisheries Association) has an annual gravel cleaning programme to remove fine silt from spawning grounds on the Frome.
- The Bere Stream SSSI, a sub-catchment of the Piddle is failing favourable condition largely due to phosphates and sediments.
- Both the Piddle and Frome catchments have been designated as NVZs since 2002.
- Various sediment research projects have been undertaken in the catchments in recent years including LOCAR (Lowland Catchment Research), a NERC funded research project to study the level of sediment within the watercourse. A report produced by ADAS (Collins, 2008) based on survey work in the River Frome over a 3 year period 2005-08 looking at sediment fluxes and sources within the catchment revealed that 70% of sediment loading in the catchment originated from the headwaters. Whilst the greater proportion was coming from cultivated land, permanent pasture also had a significant impact.
- There has also been a Landcare Project which had a particular focus on maize production and impacts on sedimen loading.
- Sedimentation of salmon gravels is a contributing to the decline of the fishery. High stock densities and cattle accessing the river and maize management all contribute to this.
- The River Frome and Piddle was chosen as a Pilot Catchment under the Defra Catchment Based Approach (CaBA). 2012. This is now being taken forward by Wessex Water (the host Co-ordinator) working closely with CSF to ensure integration and avoiding duplication

The Fleet

The Fleet forms part of the Chesil & Fleet Lagoon SSSI, SPA, SAC & Ramsar site. The West Fleet is currently assessed as unfavourable due to elevated nutrient levels and sediment loading from agriculture resulting in eutrophication. STWs are also an issue as is the presence of a swannery. An annual nutrient budget for Fleet (Mainstone & Parr, 1999) showed diffuse and agricultural sources a significant influence with up to 84% of the annual load of N and 70% of P from agriculture. Johnston and Gilliland (2000) reported that N and P peak in the winter due to agricultural run-off and several features of nature conservation importance are considered vulnerable to impacts from high nutrient levels. (All derived from English Nature report 551)

Priorities – Protected Areas

SPA, Sensitive Area Eutrophic, SSSI

Poole Harbour: N2k SPA, Ramsar - Eutrophic due to elevated nitrate levels
Fleet: N2k SPA, SAC, RAMSAR SSSI – Eutrophic due to elevated nitrate levels

Upper Frome : SSSI– Unfavourable due to nitrates and phosphates
Lower Frome : SSSI Failing due to sediments & phosphates
Bere Stream : SSSI Failing due to phosphates and sediments

Water Bodies Failing Good Ecological Status [GES] (Bad or Poor condition)
Ref EA Catchment Information Packs 2013

Surface waters:
Frome (lower) : Poor due to phytobenthos, fish and macrophytes
Piddle (lower) : Poor due to phytobenthos, fish and macrophytes
Groundwater :
Entire catchment - Frome, Piddle & Fleet

Sediment Fingerprinting – Waterbodies identified as having high loadings
Upper Piddle, Frome upper & headwaters, Wraxall Brook, Cerne and Sydling

Objectives

Separate clean and dirty water around livestock holdings to minimise the amount of dirty water produced and then requiring spreading to land
Reduce the loss of dirty water from livestock holdings via runoff to surface waters and leaching to groundwater.
Reduce the loss of sediment, and associated and soil-bound phosphate particles through appropriate changes in land management
Reduce connectivity between the land and surface water, through promotion of track management
Reduce inputs of fertilizer to reduce leaching to groundwater and run-off to surface waters

Delivery

Sub-catchment - Target approximately 160 farms within the sub-catchments of the Frome headwaters, upper, lower and north stream, Wraxall Brook, Hooke, Compton Valence Stream, Cerne, Sydling Brook, Upper and Lower Piddle, Devils Brook and Bere Stream which are either failing WFD Good Ecological Status and most significantly contributing to protected areas in unfavourable condition. These farms will be invited to attend workshops and offered soil, manure and nutrient planning training and advice to address associated soil wash and run-off issues.

Approximate numbers of farms in each sub-catchment

Frome headwaters: 6
Upper Frome : 3
Wraxall Brook: 9
Hooke: 25

Cerne: 5
Sydling Brook: 4
Compton Valence Stream:5
North Stream:5
Lower Frome : 35
Upper Piddle: 25
Devils Brook: 15
Bere Stream: 15
Lower Piddle: 16
Fleet:6

Total c 160

As there are circa 600 farms within the Poole Harbour catchment resources are being focused at the farms in sub-catchments listed above to provide a realistic target to work to.

Targeting Map
NB – should include Fleet