

Monitoring Plan: 2019 Update



Project	Objectives	Type	Method	Location	Data & Evidence	Timescale	Who?	Cost (Incl. In Kind)	Location of Results	Format	Archive Data?
Electrofishing	1. Assess fish populations. 2. Assess fish habitat	Surveillance	Electrofishing surveys	South Cumbria Wide. 3 year rolling programme	Historic electrofishing data (2016 full monitoring programme, limited data prior to this) and Environment Agency WFD monitoring data. Angler catch data.	On-going. Yearly surveys between July and September	SCRT Monitoring Officer	100 Hours volunteers time, 150 hours staff time, servicing the kit. £5,000 for electrofishing kit (SCRT own electrofishing kit).	SCRT website, BtoB website, SCRT Office	GIS data, PDF report	After 6 years
Riverfly	1. Identify water quality pollution events. 2. Assess trends in invertebrate life	Surveillance	Riverfly surveys	South Cumbria Wide.	Historic riverfly data. National riverfly partnership database. http://www.riverflies.org/riverflies-gis-home	On-going. Monthly surveys between April and September	SCRT: Volunteers overseen by Monitoring Officer	175 hours volunteer time	SCRT website, BtoB website, SCRT Office	GIS data, PDF report	After 5 years
Natural Flood Management	1. Assess effectiveness of Natural Flood Management Techniques 2. Reduction in flood peak size. 3. Improvement to Habitats	Project Appraisal	Flow gauges, visual assessment, Fixed point photography, water level monitoring stations	Above communities at risk. Catchment wide flood risk evaluation	NFM model (JBA and RT) previous projects/ studies e.g. Pickering and Holnicote	2017-2021	SCRT: project officer and monitoring officer. Catchment Management Groups		Cumbria Floods Partnership website, BtoB website	GIS and PDF report	
Conserving Coniston and Crake	1. Assess improvements to river habitat. 2. Improve spawning gravels 3. Increase Habitat for fish	Project Appraisal	Riverfly surveys, Electrofishing, buffer strip surveys	Coniston and Crake Catchment	EA Water Framework Directive	2016-2021	SCRT project officer and volunteers	<i>See costings for electrofishing and riverfly surveys</i>	Conserving Coniston and Crake website. BtoB website	GIS and PDF reports	

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	and invertebrates										
Elterwater	1. Reduce phosphorus concentrations in Elterwater	Project Appraisal	Water quality sampling	Elterwater		2014-2017 (Every two weeks)	SCRT		SCRT Website & United Utilities		
INNS	1. Control the spread of invasive species	Surveillance	Walkover surveys and visual assessment (on-going assessment)	South Cumbria	Historic INNS locations, Cumbria Biodiversity Data Centre	On-going	SCRT and volunteers		SCRT website & BtoB website	GIS mapping. PDF reports	After 5 years
River Restoration	1. Improve fish migration 2. Improve sediment transport and river functions	Project Appraisal	Electrofishing surveys, riverfly surveys, fixed point photography	Kent Catchment	Feasibility studies and restoration reports	2014-2018	SCRT: Project officer and Monitoring officer. Volunteers	<i>See costings for electrofishing and riverfly surveys</i>	SCRT website & SCRT offices	GIS mapping & PDF reports	
Large Woody Debris	1. Increase in habitat for fish and invertebrates	Project Appraisal	Riverfly & fixed point photography	Large woody debris installation sites		1-3years around installation	SCRT project officer and monitoring officer. Volunteers.	£500 sampling and training.	SCRT website	PDF document	After 5 years
Water Quality	1. Assess water quality, particularly in relation to high rainfall events	Surveillance	Water samples with lab. analysis	Initially Silverdale area	EA Water Framework Directive	2019-2021	SCRT project officer and volunteers	£30,000	SCRT website	PDF Report	After 5 years
Water Framework Directive Monitoring	1. Assess the current status of our catchments	Surveillance	Fish, chemical, invertebrate, phytobenthos	South Cumbria	Catchment data explorer. CaBA data package.	On-going (until 2027)	Environment Agency		Online: Catchment Data Explorer. Environment Agency	GIS and spreadsheet	
SSSI Condition Monitoring	1. Assess the condition of SSSI's	Surveillance	Habitat Surveys	South Cumbria: SSSIs (River Kent)	Water quality data (Environment Agency)	On-going	Natural England		Online: Designated Sites; Natural England database	webpage, GIS mapping	

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Fish Counter (Backbarrow and Basinghyll)	1. Assess fish populations	Surveillance	Fish Counter	Backbarrow (River Leven) and Basinghyll (River Kent)	EA fisheries data, SCRT electrofishing data.			£3-5,000 per year			
LiDAR/ Remote Sensing	1. Assess land planform	Surveillance	Remote Sensing and imagery	South Cumbria			Environment Agency		Environment Agency geodata store. SCRT Offices	GIS mapping	
Windermere Reedbeds	1. Protect and restore areas of reedbed	Project Appraisal	Habitat extent surveys, fixed point photography	Windermere	Freshwater Biological Association historic extents/ photographs	2013-2020	SCRT project officer		SCRT Offices and SCRT Website	GIS mapping, photos, PDF report	
Lakes Tour	1. Assessment of lake condition	Surveillance	Water quality and ecology assessment (including depth profiles of temperature and oxygen, phytoplankton, zooplankton, heavy metals and pesticides)	20 lakes across Cumbria	Historic Lakes tours (one every 5 years)	Every 5 years (last 2015)	Centre for Ecology and Hydrology		CEH website and NERC archive website	PDF	
Tree Planting	1. Assess the impact of tree planting on water quality	Project Appraisal	Fixed point photography, potentially pH monitoring, turbidity analysis, electrofishing surveys	Upper Duddon Valley	Forest research, Landscape Character Assessment	2017-2032	Duddon Valley Partnership	Fixed point photography at £200-£1,000 per km	SCRT Offices and BtoB website Lake District National Park Website	PDF	
	2. Assess the visual impact of tree planting										
Landscape Character Assessment	1. Provide a framework for describing an	Investigation	Review the existing Landscape	Lake District	Landscape Character Assessment 2008	On-going. 2018 review	TBC			PDF	

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	area in a systematic way		Character Assessment. Framework to be confirmed. Desk-based studies, fieldwork, stakeholder consultation.								
	2. Baseline data to facilitate future monitoring. Providing indicators for monitoring landscape change.										