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Appendeces of Report on Salmon Monitoring Programme Funded under the Conservation Stamp Fund 2012

June 2013







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June 2013

Appendeces

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A. Appendix: Electrofishing Results.

Presentation of Electro-fishing Results

Data is presented for rivers electro-fished in each River Basin District in 2012. Results of any previous catchment wide electro-fishing surveys undertaken over the 2007-2012 period are also shown. Data is presented on the number of sites electro-fished each year and the Surveys mean capture rates.

A.1 Neagh Bann IRDB.

A.1.1 Summary.

Since 2007 five rivers in the Neagh Bann Inland Fisheries District have been surveyed as part of the ongoing catchment-wide electrofishing surveys. At present three rivers are meeting the threshold of 17 salmon fry per 5min. Only one catchment, the Fane, was surveyed in this district in 2012. Catchment-wide electrofishing results (Table A.1.1.) show the 2012 survey result was an improvement on that recorded in 2009 and overall the catchment is just above the 17 salfry/5min threshold.

	200	7	200)8	20	09	20	010	20)11	20)12	Total	Surveys
IFI Code /River	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Mean (2012)
Neagh Bann IRDB														
002/Flurry							3	6.67					3	6.67
003/Castletown					6	28.59							6	28.59
004/Fane					5	16.17					7	22.09	12	19.13
005/Glyde			16	2.49	14	17.08	14	31.61					44	17.06
006/Dee			29	8.55	18	16.92	20	21.72	20	20.13			87	16.83

Table A.1.1 Catchment-wide Electrofishing data for Neagh Bann IRDB 2007-2012 showing the number of sites electrofished each year and the average salmon fry captured /5min for those sites. Also shown is the Surveys Mean capture rate.



Figure A.1.1: Summary of CWEF results in NBIRDB 2007-2012.

A.1.2	Fane, Neagh Bann IRDB.
	, 0

IFI Salmon Catchment #:	6
2012 survey:	18/09/2012 - 19/09/2012.
Sampling carried out by:	Ronan McCormick and Tony Holmes.
Mean Salmon index (2012):	22.09 fry/5min.
Mean Salmon index (all surveys):	19.13 fry/5min.

This is the second CWEF survey of this catchment. A catchment wide survey of the Fane catchment was



Figure A.1.2: Length distribution of Salmon captured in 2012 CWEF Survey on the Fane River.

Spawning Year	Fry Year	1SW Conservatio n Limit	1SW Predicted Surplus	Status	SalFry/ 5min
2007	2008	543	223	Open	
2008	2009	543	214	Open	16
2009	2010	543	273	Open	
2010	2011	543	387	Open	
2011	2012	543	604	Open	22

Table A.1.2. Conservation limits and provisional returns on the Dee catchment along with the CWEF fishing result. carried out in September 2012. The survey comprised 14 sites, 7 of which were included in the analysis. Salmon fry were present at 6 sites. The maximum fry catch was 34 salmon at site 5. The mean catch of included sites was 20.09 salmon fry/5min. Locations of sites are displayed. The other fish recorded were brown trout, European eel, stoneloach, gudgeon and roach. Two cohorts of juvenile salmon were captured as can be seen in figure A.1.2. The modal length category of 0+ fry caught was 7.5cm.

Conclusion

The Fane had a mean catch of 22.09 salfry/5min in 2012 resulting in a cumulative average of 19.13 salmon fry/5min, this is above the threshold of 17 salmon fry per minute. The survey established the Salmon were not present above Lough Muckno. The Fane continues to be open for fishing.

River	site Number	×	۲	Riffle Grade	Sal Fry Captured	Status	salFry/ 5min
Fane	001	296603	303731	2	11	Include	13.6
Fane	002	291879	307659	2	0	Include	0
Fane	003	290956	309583	1	26	Include	32.7
Fane	004	289888	311171	1	17	Include	24
Fane	005	288617	312861	1	34	Include	43.7
Fane	006	294850	304769	2	20	Include	27
Fane	007	293651	306757	2	10	Include	13.6
Fane	020	284399	317107	2	0	Above Muckno	
Fane	022	284956	320417	2	0	Above Muckno	
Fane	023	285513	321619	2	0	Above Muckno	
Fane	024	288349	320924	2	0	Above Muckno	
Fane	025	283275	321245	2	0	Above Muckno	
Fane	026	284041	321860	2	0	Above Muckno	
ane	021	287379	316774	3	0	Unsuitable Habitat	

Table A.1.3. Results of CWEF on the Fane catchment in 2012.



Map A.1.1: CWEF sites on the Fane Catchment 2012

A.2 Eastern River Basin District.

A.2.1 Summary

Since 2007, seven salmon rivers have been surveyed in the Eastern River Basin District (ERFB) as part of the on-going catchment-wide electrofishing surveys. These are presented in (Table A.2.1). Two catchments were surveyed on 2012, a review off the Liffey was undertaken and that catchment is now split into upper and a lower catchments. All catchments showed reductions in CWEF averages this year. However both the Boyne and the Lower Liffey catchments currently have a salmon index of over 17 fry per 5min. A brief survey of two sites on the Tolka produced no salmon fry this year.

	200	7	20	008	20	009	20	010	20	11	20	12	Total	Surveys
IFI Code /River	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Mean (2012)
Eastern RDB														
008/Boyne			127	21.91	142	17.54	143	19.38					412	19.61
013/Broadmeadow							3	0.00					3	0.00
014/Tolka									12	1.08	2	0.00	14	0.54
015/Liffey Lower			4	21.33	6	40.12	10	25.16	12	17.47	5	12.12	37	23.24
015/Liffey Upper			10	12.93	26	5.11	35	8.15	52	16.20	26	10.13	149	10.51
016/Dodder									6	13.93			6	13.93
018/Dargle					5	1.40	17	2.53	16	7.52			38	3.82
021/Vartry			4	10.00	4	15.11	13	2.54	11	15.07			32	10.68
026/Avoca			16	3.79	29	5.56	23	5.20	65	18.88	23	5.15	156	7.72

Table A.2.1: Catchment-wide Electrofishing data for ERFB 2007- 2012 showing the number of sites successfully electrofished each year and the average salmon fry captured /5min for those sites. Also shown is the Surveys Mean capture rate.



Figure A.2.1. Summary of CWEF results in ERFB from 2007 to 2012.

For assessment purposes it was feasible to separate the Liffey into the Upper and Lower Liffey catchment units because of the presence of two counter facilities in different sections of the catchment. The fish counter on the lower Liffey at Islandbridge and a separate fish counter on the upper Liffey at

Shannon.



Map A.2.1: Showing Locations of fish counters used to assess salmon passage on the Upper and Lower Liffey.

Leixlip allow for individual assessment of each sub-catchment; a full counter operates at Leixlip. Catchment wide electro-fishing assessment was undertaken in each sub-catchment and this revised assessment process for the system allowed the Standing Scientific Committee on Salmon to provide separate advice for the upper and lower Liffey in the 2012 advice. This approach is consistent with that adopted for two of the other large hydro-dam rivers, the Lee and the

A.2.2.1.	Liffey Lower; Comprising sites not upstream of Fish Pass at Lexlip Reservoir.
IFI Salmon Catchment #:	15.1
2012 survey:	19/09/2012 - 31/09/2012.
Sampling carried out by:	Maurice Carolan and Oisin Cahill.
Mean Salmon index (2012):	12.12 fry/5min.
Mean Salmon index (all surveys):	23.24 fry/5min.

Retrospective analysis of this sub area has been undertaken, 24 sites were identified within the area. Over a period of five years 37 surveys were identified and used in analysis. The 2012 survey comprised 7



Figure A.2.2 Length distribution of Salmon captured in 2012 CWEF Survey on the Liffey Lower Catchment.

sites 5 of which were included in the analysis. Salmon fry were present at 2 sites. The maximum fry catch was 20 salmon at sites 29 and 80; salmon were absent from one site. The mean catch of included sites was 12.12 salmon fry/5min. Locations of sites are displayed on the other fish recorded were Eel, Stickleback, Minnow and Stoneloach. The modal length category of 0+ fry caught was 7.5 cm.

River	Site Number	×	Y	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Liffey Lower	029	301323	235801	1	20	Include	25
Liffey Lower	072	297927	237604	2	0	Include	0
Liffey Lower	080	300429	235863	1	20	Include	22.6
Liffey Lower	095	296415	237816	2	8	Include	10
Liffey Lower	103	300086	236773	2	3	Include	3
Liffey Lower	019	297051	237841	1	1	Eff <60%	
Liffey Lower	070	294762	238557	1	0	Above Barrier	

Table A.2.1. Results of CWEF on the Liffey Lower catchment in 2012.

Year	# Sites in Analysis	Annual Salmon Fry/ 5min
2008	4	21.33
2009	6	40.12
2010	10	25.16
2011	12	17.47
2012	5	12.12
Grand Total	37	23.24

TableA.2.2:SummaryOfannualaverageSalmonfryfrom LiffeyLowerCatchment.

Conclusion

The spawning along the Lower Liffey Catchment has been good over a period of years as indicated by the CWEF average. This section of the river will therefore be opened on a catch and release basis in 2013.



Map A.2.2.CWEF sites on the Liffey Lower Catchment 2012.



Map A.2.3: CWEF sites on the Liffey Upper Catchment 2012

A.2.2.2.	Liffey Upper; Comprising Sites Upstream of Fish Pass at Leixlip Reservoir.
IFI Salmon Catchment #:	15.2
2012 survey:	29/08/2012 - 20/09/2012.
Sampling carried out by:	Fergal Caffery, Maurice Carolan and Oisin Cahill.
Mean Salmon index (2012):	10.13 fry/5min.
Mean Salmon index (all surveys):	10.51 fry/5min.

Retrospective analysis of this sub area has been undertaken, 81 sites were identified within the area. Over a period of five years 149 surveys were identified and used in analysis. The 2012 survey comprised



Figure A.2.3. Length Distribution of Salmon Captured in the 2012 CWEF on the Liffey upper.

26 sites all of which were included in the analysis. Salmon fry were present at all sites. The maximum fry catch was 42 salmon at site 83; the minimum was 1 fry at site 35. The mean catch of included sites was 10.13 salmon fry/5min. Locations of sites are displayed on .The other fish recorded were Brown trout, crayfish, eel, lamprey, minnow and stoneloach. The modal length category of 0+ fry caught was 7.5 cm.

River	Site Number	×	¥	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Liffey Upper	006	297083	232605	1	9	Include	10
Liffey Upper	007	285375	220727	1	2	Include	2
Liffey Upper	008	285470	220272	1	15	Include	15
Liffey Upper	009	285303	219601	1	2	Include	2
Liffey Upper	011	282117	212456	0	4	Include	4
Liffey Upper	012	282153	212108	1	1	Include	1
Liffey Upper	014	292343	210057	1	22	Include	25.6
Liffey Upper	015	284194	209721	2	8	Include	8
Liffey Upper	016	284238	209824	2	4	Include	4
Liffey Upper	025	291065	209494	1	18	Include	18
Liffey Upper	032	292202	227555	2	11	Include	11
Liffey Upper	034	292690	226279	1	4	Include	4
Liffey Upper	035	292397	229197	2	1	Include	1
Liffey Upper	043	288870	209562	1	15	Include	15
Liffey Upper	047	292693	209740	2	7	Include	9
Liffey Upper	048	292895	209557	0	4	Include	4
Liffey Upper	049	291189	209007	1	17	Include	17.8
Liffey Upper	060	288601	227428	1	5	Include	5.71
Liffey Upper	077	283000	219096	1	6	Include	6.55
Liffey Upper	078	284085	219518	2	3	Include	3
Liffey Upper	083	292147	210293	1	42	Include	48.8
Liffey Upper	086	288334	209405	1	19	Include	22
Liffey Upper	087	281360	213680	1	7	Include	7
Liffey Upper	098	280752	215241	1	3	Include	3
Liffey Upper	104	292408	226425	1	12	Include	12
Liffey Upper	105	286771	221534	1	4	Include	4

Conclusion

The Upper Liffey had a CWEF average of 10.51 salfry/5min which is below the SSC threshold.

Year	# Sites Used In Analysis	Annual Salmon Fry/ 5min
2008	10	12.93
2009	26	5.11
2010	35	8.15
2011	52	16.20
2012	26	10.13
Total	149	10.51

Table A.2.4. Summary Of annualaverage Salmon fry from theLiffey Upper Catchment.

Table A 2 2	Desculto	of the OV	1/22	- 1:44-		2012
Table A.Z.3.	Results	of the CV	ver on th	е спте	ey upp	er zuiz.

A.2.3	Avoca, Eastern RDB.
IFI Salmon Catchment #:	26
2012 survey:	05/09/2012 - 30/09/2012
Sampling carried out by:	Fergal Caffrey, Joe Delaney, Maurice Carolan, Oisin Cahill, and Oliver Conlon.
Mean Salmon index (2012):	5.15fry/5min.
Mean Salmon index (all surveys):	7.72 fry/5min.

This is the fifth CWEF survey of this catchment, carried out in September 2012. The survey comprised 30



Figure A.2.4. Length distribution of Salmon captured in 2012 CWEF Survey on the Avoca River.

Sites, 22 of which were included in the analysis. Salmon fry were present at 25 sites. The maximum fry catch was 11 salmon at site 5. Locations of sites are displayed on The other fish recorded were Eel, Stickleback, Minnow, Stoneloach, Gudgeon and Crayfish. Two cohorts of juvenile salmon were captured as can be seen in Figure A.2.3.1. The modal length of 0+ fry caught was 6.5 cm.

River	Site Number	×	×	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Avoca	001	321652	175236	2	2	Include	2
Avoca	002	320507	176409	1	0	Include	0
Avoca	005	311796	179079	1	11	Include	15
Avoca	006	317213	185010	1	8	Include	12
Avoca	007	314657	187297	2	3	Include	3
Avoca	010	319175	188918	1	5	Include	5
Avoca	012	314357	195656	2	0	Include	0
Avoca	014	317274	199182	1	10	Include	12.7
Avoca	020	309306	181516	1	7	Include	7
Avoca	021	307257	184766	1	5	Include	5.71
Avoca	022	307662	183631	3	1	Include	1
Avoca	025	310907	177870	1	1	Include	1
Avoca	027	315992	192962	1	2	Include	2
Avoca	034	320350	180059	2	0	Include	0
Avoca	039	312566	196694	1	4	Include	4
Avoca	051	316529	198381	1	10	Include	10
Avoca	052	314451	195794	1	3	Include	4
Avoca	074	312686	179496	2	8	Include	10
Avoca	080	307555	175028	2	0	Include	0
Avoca	115	321967	175187	0	1	Include	1
Avoca	116	0	0	1	7	Include	7
Avoca	117	317025	192099	2	4	Include	5
Avoca	119	312687	179496	2	7	Include	11
Avoca	004	318828	177061	2	2	Eff <60%	
Avoca	008	319180	183265	2	7	Eff <60%	
Avoca	013	315892	196911	1	4	Eff <60%	
Avoca	024	310533	190730	3	2	Eff <60%	
Avoca	073	310958	180106	0	2	Eff <60%	
Avoca	118	316466	192486	2	2	Eff <60%	
Avoca	014	317276	199205	2	0	Exclude	

Conclusion

The Avoca had a mean catch of 4.93 salfry/5min in 2012 resulting in a cumulative average of 7.72 salmon fry/5min to date which is below the threshold level of 17 salmon fry/5min. It is estimated, based on electro-fishing results, that in 2012 the salmon population was below conservation limit.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007	2959	-1102	Closed	2008	3.79	3.79
2008	2959	-1500	Closed	2009	5.56	4.67
2009	2959	-1500	Closed	2010	5.20	4.85
2010	2959	-1500	Closed	2011	18.88	8.36
2011	2959	-1500	Closed	2012	5.15	7.72

Table A.2.6. Conservation limits and provisional returns on the Avoca catchment along with the CWEF fishing results and averages for pervious years

Table A.2.5. Results of the CWEF on the Avoca 2012.



Map A.2.4: CWEF sites on the Avoca Catchment 2012.

A.3 South Eastern River Basin District.

A.3.1 Summary

Since 2007, eleven rivers have been surveyed in the South Eastern River Basin District (ERBD) as part of the on-going catchment-wide electrofishing surveys. These are presented in (). Six rivers currently have a survey average salmon fry capture rate of greater than 17 fry per 5min, Owenavorragh, Slaney, Corock, Nore and Colligan and the Barrow. Two catchments were surveyed in 2012.The Barrow has shown an improvement in salmon fry density in 2012 bringing it above the threshold. The Owenduff showed an improvement on previous surveys.

	20	07	200)8	20	009	20	010	20)11	20)12	Total	Surveys
IFI Code /River	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Mean (2012)
South Eastern RDB														
028/Owenavorragh							7	19.76					7	19.76
031/Slaney	8	19.05			31	15.94	79	18.42					118	17.80
033/Corock									4	37.11			4	37.11
034/Owenduff(Wexford)							3	4.97	6	10.65	6	15.91	15	10.51
035/Pollmounty	6	4.33											6	4.33
037/Barrow	81	18.92			65	11.10	76	8.83	58	20.48	68	27.32	348	17.33
038/Nore							97	18.83					97	18.83
050/Mahon			9	2.11									9	2.11
051/Tay									6	8.75			6	8.75
053/Colligan									5	29.32			5	29.32

Table A.3.1. Catchment-wide Electrofishing data for SERFB 2007-2012 showing the number of sites electrofished each year and the average salmon fry captured /5min for those sites. Also shown is the Surveys Average capture rate.



Figure A.3.1: Summary of CWEF results in SERFB from 2007 to 2012.

RDB.

IFI Salmon Catchment #:	33
2012 survey:	21/08/2012
Sampling carried out by:	Noel Power and Tony Byrne.
Mean Salmon index (all surveys):	37.11 fry/5min.

This survey was carried out in September 2012 and comprised 4 sites. The survey was severely curtailed by prolonged periods of unsuitable high water conditions. For this reason no index was



calculated for this system. Despite the low numbers of sites surveyed and poor sampling conditions the numbers of salmon observed were high. Salmon fry were present at all sites. The maximum fry catch was 38 salmon at site 1; the minimum catch was 6 fry at site 4. The modal length category of 0+ fry caught was 6.5 cm. Other fish caught were brown trout, European eel, Minnow, Sea Trout, stone Loach and three-spined sticklebacks.

Figure A.3.2. Length distribution of Salmon captured in 2012 CWEF Survey on the Corock Catchment.

River	Site Number	×	۷	Status Sal Fry Captured Riffle Grade		Status	SalFry/ 5min
Corock	001	285781	117728	1	38	Too Few Sites	
Corock	002	285388	118674	1	13	Too Few Sites	
Corock	004	286154	122398	1	6	Too Few Sites	
Corock	006	287160	118471	1	9	Too Few Sites	

Table A.3.2. Results of CWEF on the Corock catchment in 2012.

A.3.3 Owenduff (Wexford), South Eastern RDB.

IFI Salmon Catchment #:	34
2012 survey:	21/09/2012
Sampling carried out by:	Noel Power and Tony Byrne.
Mean Salmon index (2012):	15.91
Mean Salmon index (all surveys):	10.51 fry/5min.

This, the third CWEF survey of this catchment was completed in September 2012. The survey comprised 6 sites visits, all of which were included in the analysis (Table A.3.3). Salmon fry were present at 5 sites. The maximum fry catch was 20 salmon at site 4. The mean catch of included sites was 15.91 salmon fry/5min. Locations of sites are displayed on. The other species recorded were brown trout, European eel and stoneloach. Two cohorts of juvenile salmon were captured as can be seen in figure A.3.3 the modal length category of 0+ fry caught was 5.5 cm.

Conclusion

River	Site Number	×	Y	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Owenduff(Wx)	001	278251	135096	3	0	Include	0
Owenduff(Wx)	002	278992	122453	2	11	Include	14.5
Owenduff(Wx)	003	275644	135096	2	5	Include	5.77
Owenduff(Wx)	004	279081	119329	2	20	Include	27.2
Owenduff(Wx)	005	281011	116595	2	19	Include	24.4
Owenduff(Wx)	007	280622	117514	1	18	Include	23.5

 Table A.3.3. Results of CWEF on the Owenduff (Wexford) catchment in 2012



Figure A.3.3. Length distribution of Salmon captured in 2012 CWEF Survey on the Owenduff (Wexford) Catchment.

The Owenduff (Wexford) had a mean catch of 15.91 salfry/5min in 2012 resulting in a cumulative average of 10.51 salmon fry/5min to date which is below the threshold level of 17 salmon fry/5min. It is estimated, based on electro-fishing results, that in 2012 the salmon population was below conservation limit.

Spawning Year	1SW CL	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2009	201	-110	Closed	2010	4.97	4.97
2010	201	-110	Closed	2011	10.65	7.81
2011	201	-110	Closed	2012	15.91	10.51

Table A.3.4. Salfry averages and SSC status



Map A.3.1: Owenduff Catchment 2012

A.3.4 Dalfow, South Eastern RDE	A.3.4	Barrow, South Eastern RDB
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IFI Salmon Catchment #:	37
2012 survey:	09/08/2012 - 09/09/2012.
Sampling carried out by:	Noel Power and Tony Byrne.
Mean Salmon index (2012):	27.32 fry/5min.
Mean Salmon index (all surveys):	17.33 fry/5min.

This, the fifth CWEF survey of this catchment was completed in September 2012. The survey comprised 101 sites visits, 68 of which were included in the analysis. Salmon fry were present at 60



Figure A.3.4 Length distribution of Salmon captured in 2012 CWEF Survey on the River Barrow Catchment

sites. The maximum fry catch was 86 salmon at site 102, the minimum catch was 0 fry. The mean catch of included sites was 27.32 salmon fry/5min. Locations of sites are displayed on. The other species recorded were brown trout, crayfish, dace, European eel, gudgeon, Mararitifera three-spined stickleback, minnow and stoneloach. Two cohorts of juvenile salmon were captured as can be seen in Figure A.3.4. The modal length category of 0+ fry caught was 5.5 cm.

1-1

River	Site Number	×	×	Riff Grade	Sal Fry Captured	Status	SalFry/ 5min
Barrow	004	238552	214740	1	49	Include	77.8
Barrow	006	236611	213207	1	82	Include	117
Barrow	007	236079	213005	1	40	Include	60
Barrow	008	234727	211079	1	64	Include	94.8
Barrow	009	235141	210531	1	26	Include	37.1
Barrow	010	235542	209721	2	53	Include	64.9
Barrow	014	270906	143589	2	14	Include	18.2
Barrow	018	273309	150093	2	22	Include	35.2
Barrow	019	273109	152681	3	0	Include	0
Barrow	022	274426	150992	2	14	Include	14
Barrow	023	278268	150998	2	14	Include	16.2
Barrow	025	279042	151105	2	27	Include	38.3
Barrow	028	268199	153887	3	21	Include	30.5
Barrow	029	267425	155404	1	16	Include	22.2
Barrow	033	268697	164563	2	14	Include	19.6
Barrow	034	277952	160117	1	3	Include	3
Barrow	038	281930	156867	2	0	Include	0
Barrow	040	269301	177237	2	8	Include	12.2
Barrow	041	268835	178419	2	16	Include	25.7
Barrow	043	267299	180183	2	16	Include	22.8
Barrow	044	271852	181622	1	5	Include	7.65
Barrow	045	272644	182167	1	38	Include	52.1
Barrow	047	275887	183167	1	24	Include	31.4
Barrow	050	268869	183922	2	26	Include	32.7
Barrow	051	265846	185979	2	50	Include	71.4
Barrow	052	264938	185652	2	22	Include	34.4
Barrow	053	264121	185570	2	18	Include	26.7
Barrow	054	272927	184953	1	19	Include	23.9
Barrow	056	280130	197237	2	0	Include	0
Barrow	057	279930	193234	2	23	Include	33.1
Barrow	058	260264	198270	1	24	Include	32.4
Barrow	061	267919	203363	2	0	Include	0
Barrow	062	269830	203081	2	0	Include	0

River	Site Number	×	×	Riff Grade	Sal Fry Captured	Status	SalFry/ 5min
Barrow	063	272272	202626	2	16	Include	20.2
Barrow	065	268118	204154	2	17	Include	22
Barrow	066	270486	205608	3	0	Include	0
Barrow	071	266627	219137	2	2	Include	3
Barrow	072	267542	219531	2	15	Include	22.5
Barrow	079	253135	216739	3	1	Include	1
Barrow	084	245512	207375	2	22	Include	22
Barrow	085	244925	207319	2	23	Include	36.1
Barrow	086	244143	206565	1	22	Include	36.2
Barrow	088	241857	205274	1	14	Include	21.6
Barrow	091	234126	210397	1	24	Include	37.7
Barrow	092	276916	151582	1	23	Include	34.5
Barrow	099	273483	187615	1	12	Include	19.1
Barrow	105	242871	205487	1	29	Include	45.6
Barrow	108	269155	175629	2	6	Include	9
Barrow	111	261216	154390	0	2	Include	2
Barrow	112	262826	153091	2	13	Include	15.7
Barrow	114	235733	209573	2	22	Include	22
Barrow	115	235241	212689	1	67	Include	99.1
Barrow	118	259634	197087	2	37	Include	42.7
Barrow	119	276198	146702	2	8	Include	9.85
Barrow	121	280781	171348	1	18	Include	23.6
Barrow	122	261425	199060	2	34	Include	43
Barrow	123	271736	182934	1	44	Include	48.8
Barrow	125	274777	188766	1	14	Include	17.3
Barrow	127	276825	184178	1	31	Include	40.2
Barrow	129	273188	150684	3	0	Include	0
Barrow	132	269979	144153	2	12	Include	13.5
Barrow	134	273409	154561	3	0	Include	0
Barrow	137	269528	174777	2	20	Include	24.5
Barrow	139	261454	216702	3	0	Include	0
Barrow	142	279242	170036	1	7	Include	9.73
Barrow	147	266924	153552	2	18	Include	30

River	Site Number	×	۷	Riff Grade	Sal Fry Captured	Status	SalFry/ 5min
Barrow	148	270841	143848	2	25	Include	30
Barrow	151	0	0	2	0	Include	0
Barrow	016	268466	144426	2	4	Eff <60%	
Barrow	030	266586	156489	1	26	Eff <60%	
Barrow	031	265295	157014	2	28	Eff <60%	
Barrow	046	274226	181487	2	7	Eff <60%	
Barrow	089	241662	205143	1	17	Eff <60%	
Barrow	097	272552	203248	2	3	Eff <60%	
Barrow	110	260868	155631	2	4	Eff <60%	
Barrow	113	277360	147109	2	3	Eff <60%	
Barrow	128	264611	153074	2	16	Eff <60%	
Barrow	133	275124	175091	2	11	Eff <60%	
Barrow	149	279918	195455	2	21	Eff <60%	
Barrow	150	278268	150989	1	9	Eff <60%	
Barrow	078	255876	216207	2	4	Figile	
Barrow	014	270906	143589	2	8	Too High	
Barrow	022	274426	150992	3	11	Too High	
Barrow	023	278268	150998	0	9	Too High	
Barrow	025	279042	151105	2	0	Too High	

River	Site Number	×	¥	Riff Grade	Sal Fry Captured	Status	SalFry/ 5min
Barrow	027	282658	147832	1	0	Too High	
Barrow	036	278722	158855	2	0	Too High	
Barrow	047	275887	183167	1	4	Too High	
Barrow	054	272927	184953	1	12	Too High	
Barrow	058	260264	198270	2	24	Too High	
Barrow	063	272272	202626	2	0	Too High	
Barrow	092	276916	151582	2	23	Too High	
Barrow	118	259634	197087	2	21	Too High	
Barrow	119	276198	146702	2	0	Too High	
Barrow	121	280781	171348	2	10	Too High	
Barrow	121	280781	171348	1	14	Too High	
Barrow	122	261425	199060	2	19	Too High	
Barrow	123	271736	182934	1	15	Too High	
Barrow	127	276825	184178	1	15	Too High	
Barrow	132	269979	144153	1	0	Too High	
Barrow	148	270841	143848	2	11	Too High	

Table A.3.5. Results of CWEF on the Barrow catchment in 2012.

Conclusion

The Barrow had a mean catch of 27.32 salfry/5min in 2012 resulting in a cumulative average of 17.33 salmon fry/5min to date which is above the threshold level of 17 salmon fry/5min.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2006				2007	18.92	
2007	12026	-8859	Closed	2008		
2008	12026	-7003	Closed	2009	11.10	15.01
2009	12118	-7292	Closed	2010	8.83	12.95
2010	12117	-7343	Closed	2011	20.48	14.83
2011	12117	-7324	Closed	2012	27.32	17.33

Table A.3.6.Conservation limits and provisional returns on the Barrow catchment along with the CWEF fishing results and averages for pervious years in which surveys took place.



Map A.3.2. CWEF sites on the Barrow Catchment 2012.

Site						
Number	2007	2009	2010	2011	2012	Mean
001	1			-	-	1.00
001	10	E				12.00
002	19	5				12.00
003	46	15				30.50
004	68	12	1	27	49	31.40
005	41	18				29.50
006	53	30			82	55.00
007	48	18	6	30	40	28.40
008	72	25	15	20	64	41.40
008	73	23	15	30	26	41.40
009	53	24	_		26	34.33
010	18		5	60	53	34.00
011	10	11				10.50
012	15	2				8.50
014	19	4	1	14	22	12 00
015	20	2	-			11 50
015	20	3	2			11.50
016	13	4	2	11	4	6.80
017	0			13		6.50
018	7	5	4	20	22	11.60
019	0	3	0	0	0	0.60
020	0	3	0			1 00
020	0	0	0			0.00
021	0	17	6	20	25	0.00
022	11	1/	6	29	25	17.60
023	8	20	6	29	23	17.20
024	0					0.00
025	0	24	2	12	27	13.00
026	0	0	1	1	İ	0.00
027	0	2	1	0	0	0.60
027	0		1	0	21	0.00
028	U	/	U	U	21	5.60
029	13	7	30	35	16	20.20
030	17	3	12	58	26	23.20
031	30	2			28	20.00
032	27	13			-	20.00
032	14	20	10	12	14	10.40
033	14	2	10	12	14	10.40
034	12	4	0	36	3	11.00
035	0					0.00
036	0	2	1	0	0	0.60
037	0					0.00
038	0	0	0	0	0	0.00
030	0	0	0	0	0	0.00
039		0				0.00
040	22	4	0	0	8	6.80
041	23	5			16	14.67
042	29	3				16.00
043	26	11	14	15	16	16.40
044	18	0	9	28	5	12.00
045	10	1/	1	20	20	20.00
043	19	14	4	23	30	20.00
046	17	10	10	34	/	15.60
047	9	10	4		28	12.75
048	2	4				3.00
049	31	13				22.00
050	20		2	0	26	12.00
050	45		10	27	50	35.00
052	40		10	2/	30	17.00
052	- 1/		b	Z4 -	22	17.25
053	8		0	5	18	7.75
054	0	30	40	30	31	26.20
055	17	16			L	16.50
056	21	10		29	0	15.00
057	40	29	23	27	23	28.40
057	10	12	11	27	40	24.60
050	19	12	11	55	48	24.00
059	10	0		ļ		5.00
060	0	0				0.00
061	28	4	2	5	0	7.80
062	12		15	0	0	6.75
063	22		2	0	16	10.00
064	2		-	Ŭ	10	3 00
004	21		-		47	3.00
065	- 31		5		1/	1/.6/
066	7	1	0	0	0	1.60
067		0				0.00
068	0					0.00
069	28	17			1	22.50
070	12	0				6.50
070	1.5		-	17	-	0.00
0/1	4	5	5	1/	2	6.60
072	3	4	6	25	15	10.60
073	1	0	4	0		1.25
074	0	0	0	0		0.00
075	0	0	0	0	1	0.00
076	Č	0		Ť	<u> </u>	0.00
0/0	U	U	I	l I	1	0.00

Site	Survey Year					
Number	2007	2009	2010	2011	2012	Mean
077	0					0.00
078	14	5	1	21	4	9.00
079	8	1	3	10	1	4.60
080	0					0.00
081	4	0	0	0		1.00
082	28					28.00
083	23	7				15.00
084	2	4	6	5	22	7.80
085	14	28	5	19	23	17.80
086	17	13	11	11	22	14.80
087	4	6				5.00
088	4	4	4	0	14	5.20
089	4	4	0	13	17	7.60
090	67	36	-			51.50
091	29		1	18	24	18.00
092	23	14	9	18	46	21 75
092		20	5	10	-10	20.00
093		20	0	0	2	0.75
097		0	0	0	5	0.75
098		0	0	10	10	0.00
100			9	40	12	22.33
100		-	4			4.00
101		5				5.00
102		0				0.00
103		1				1.00
104		2				2.00
105			17	0	29	15.33
106		3				3.00
107			12			12.00
108			12	17	6	11.67
109			7			7.00
110			18	4	4	8.67
111			12	1	2	5.00
112			2	4	13	6.33
113			5	18	3	8.67
114			4		22	13.00
115			4	29	67	33.33
116			0			0.00
117			0			0.00
118			22		63	42.50
119			5	10	8	7.67
121			13	31	42	28.67
122			25	14	53	30.67
123			12	26	59	32.33
124			11	-		11.00
125			13		14	13 50
126			0	0		0.00
127			24	29	46	33.00
128			<u>_</u>	1	16	8.67
120			0	0	0	0.00
129			0	20	0	28.00
121				20		26.00
122			1	12	10	20.00 g 20
122			21	12	11	16.00
104			21	0	0	10.00
134				20	U	28.00
135				38		38.00
136				0	20	0.00
137				8	20	14.00
138				28		28.00
139				0	U	0.00
140				0		0.00
141				0		0.00
142				46	7	26.50
143				19		19.00
144			0			0.00
145				11		11.00
147					18	18.00
148					36	36.00
149	Γ	Γ	Γ		21	21.00
150					9	9.00
151					0	0.00

Table A.3.7: Results of CWEF on the Barrow catchment in from 2008 to 2012 (Salfry/5min)

A.4 South Western River Basin District.

A.4.1 Summary

Since 2007, twenty nine rivers have been surveyed in the South-Western River Basin District (SWRBD) as part of the on-going catchment-wide electrofishing surveys. These are presented in. Eleven rivers currently have a survey average salmon fry capture rate of greater than 17 fry per 5min, while eighteen fall below that level. Five catchments were surveyed in 2012. The Tourig, Mealagh, Cloonee and Finnihy all fell below the Threshold of 17salfry/5min.A small survey was undertaken on a sub-catchment the Ilen River to assess salmon passage over a falls. This survey found salmon parr both above and below the falls.

	20	07	20	08	20	09	20)10	20	11	20)12	Total	Surveys
IFI Code /River	# Sites	Avg	# Sites	Mean (2012)										
South Western RBD														
055/Lickey			3	12.37									3	12.37
057/Finisk			12	10.55									12	10.55
058/Glenshelane	6	22.72	5	10.96									11	16.84
060/Bride			19	10.40			25	24.70					44	17.55
061/Tourig											8	9.40	8	9.40
062/Womanagh			8	15.45									8	15.45
064/Owennacurra	18	15.76											18	15.76
066/Lower Lee (Cork)					21	0.26							21	0.26
077/Mealagh											7	12.82	7	12.82
080/Glengarriff					8	5.93							8	5.93
081/Ardrigole	17	17.15											17	17.15
082/Kealincha	3	0.00											3	0.00
083/Lough Fada	4	3.23											4	3.23
086/Cloonee											6	16.18	6	16.18
088/Roughty									8	19.78			8	19.78
089/Finnihy											6	8.61	6	8.61
090/Blackwater (Kerry)	5	30.54	10	15.52	12	12.24							27	19.43
093/Owreagh	5	10.33											5	10.33
098/Inney	19	24.63			11	19.78							30	22.20
099/Emlaghmore	3	2.07											3	2.07
101/Carhan	6	15.76											6	15.76
102/Ferta	8	19.42											8	19.42
103/Behy	8	15.41	9	6.14	9	4.03	8	8.71	10	7.17			44	8.29
105/Cotteners			9	17.42									9	17.42
107/Maine	55	31.88	48	32.81	16	34.23							119	32.97
108/Emlagh	4	10.37	5	3.66	5	13.38	5	3.84	5	2.59			24	6.77
109/Owenascaul	5	20.41			10	22.27							15	21.34
110/Owenalondrig					7	21.90							7	21.90
111/Milltown (Kerry)			6	12.94			7	26.44					13	19.69

Table A.4.1. Catchment-wide Electrofishing data for SWRBD 2007- 2012 showing the number of sites successfully electrofished each year and the average salmon fry captured /5min for those sites. Also shown is the Surveys Average capture rate.



Figure A.4.1. Summary of CWEF results in SWRFB from 2007 to 2012

A.4.2	Tourig, South Western RBD.
IFI Salmon Catchment #:	88
2012 survey:	26/09/2012
Sampling carried out by:	Mick Flannery and Tony Holmes
Mean Salmon index (2012):	9.4 fry/5min.
Mean Salmon index (all surveys):	9.4 fry/5min.

This is the first CWEF survey of this catchment and was carried out in September 2012. The survey



Figure A.4.1. Length distribution of Salmon captured in 2012 CWEF Survey on the Tourig River.

comprised 8 sites, all of which were included in the analysis. Salmon fry were present at 7 sites. The maximum fry catch was 22 salmon at site 4; the minimum catch was 0 fry at site 8. The mean catch of included sites was 9.4 salmon fry/5min. Locations of sites are displayed on map A.4.1. The other fish recorded were brown trout and three-spined stickleback. Two cohorts of juvenile salmon were captured, Figure A.4.2. The modal length category of 0+ fry caught was 5.5 cm.

River	Site Number		Y	Sal Fry Captured Riffle Grade Y		Status	SalFry/ 5min
Tourig	001 206302 80		80214	1	11	Include	15.6
Tourig	002	204870	80022	1	9	Include	10.6
Tourig	003	203942	79904	1	6	Include	6
Tourig	004	202866	80416	1	22	Include	23
Tourig	005	201822	80877	1	11	Include	11
Tourig	006	201566	81465	1	2	Include	2
Tourig	007 201333 83761		83761	1	7	Include	7
Tourig	008	201200	85122	2	0	Include	0

Table A.4.2. Results of CWEF on the Tourig Catchment in 2012.

Conclusion

The Tourig had a mean catch of 9.4 salfry/5min which is below the threshold level of 17 salmon fry/5min. It is estimated that in 2012 the population was below the conservation limit. The catchment remains closed to fishing.

Spawning Year	Fry Year	1SW CL	1SW Predicted Surplus	Status	Mean SalFry/ 5min
2007	2008	90	-53	Closed	
2008	2009	90	-53	Closed	
2009	2010	90	-54	Closed	
2010	2011	90	-54	Closed	
2011	2012	90	-54	Closed	9.40

Table A.4.3. Conservation limits and provisional returns on the Tourig catchment along with the 2012 CWEF fishing result.



Map A.4.1: CWEF Sites on the Tourig 2012.

A.4.3	Ilen, South Western RBD.
IFI Salmon Catchment #:	88
2012 survey:	24/09/2012.
Sampling carried out by:	Tony Holmes, Tim Moore and Leslie Payne.

A partial survey of this catchment carried out on 24th September 2012. The survey comprised 7 sites upstream and downstream of Dromore Falls. A fish pass has been in place on these falls for a

number of years. Salmon fry were found to be absent from all sites upstream of the falls, but present below the falls, parr were present at sites both upstream and downstream of the falls. It appears that spawning over the 2011-2012 winter was less successful than that in the previous winter. The pass was unobstructed and apparently passable at the time of the survey. It may be advisable to periodically monitor the pass to ensure it is passable and to assess impacts of differing flow regimes.

River	Site Number	×	۲	Riffle Grade	Sal Fry Captured
llen	001	104462	45333	3	No
llen	002	103932	45970	3	No
llen	003	105596	45534	2	No
llen	004	105485	45501	2	No
llen	005	104450	45017	1	No
llen	006	103521	44787	1	Yes

Table A.4.4. Results of Survey on Ilen 2012.



Table A.4.2. Locations of 5min sampling sites on the Ilen River 2012.

A.4.4 Mealagh, South Western RBD.

IFI Salmon Catchment #: 2012 survey: Sampling carried out by: Mean Salmon index (2012): Mean Salmon index (all surveys): 77 24/09/2012 - 25/09/2012. Tim Moore and Tony Holmes. 12.82 fry/5min. 12.82 fry/5min.



Figure A.4.3. Length distribution of Salmon captured in CWEF Survey on the Mealagh catchment in 2012.

River	Site Number	×	×	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Mealagh	001	100607	49986	1	3	Include	4.2
Mealagh	002	100991	49798	1	14	Include	14
Mealagh	003	101314	49941	1	23	Include	23
Mealagh	004	101671	50116	1	14	Include	17.7
Mealagh	005	102145	50249	3	14	Include	16.8
Mealagh	006	102385	50680	3	4	Include	4
Mealagh	007	102727	51243	3	9	Include	10
Mealagh	008	103208	51289	3	0	Above Barrier	
Mealagh	009	103637	51340	1	0	Above Barrier	
Mealagh	010	106427	52889	3	0	Above Barrier	
Mealagh	011	111776	53308	2	0	Above Barrier	
Table A.4.5. I	Result	s of CWE	F on the N	1eala	gh cato	hment in 2012.	

This is the first CWEF survey of this catchment it was carried out in September 2012. 11 Sites Were surveyed,7 of which were included in the analysis. Salmon fry were present at 9 sites. The maximum fry catch was 23 salmon at site 3, no salmon were present above Inchiclogh Waterfall. The mean catch of included sites was 12.82 salmon fry/5min. Locations of sites are displayed on map A.4.3.1. The other fish recorded were European eel and brown trout. The modal length category of 0+ fry caught was 6.5cm.

Conclusion

The Mealagh had a cumulative Salfry average of 12.82 salmon fry/5min to date which is below the threshold of 17 salmon fry/5min. However the SSC asses this river to be above it CL based on rod catch and the Catchment remains open.



Map A.4.3: Showing Location of Sites electrofished in 2012.

A.4.5 Cloonee, South Western RBD.

IFI Salmon Catchment #:	89
2012 survey:	24/09/2012 - 25/09/2012.
Sampling carried out by:	Kevin Delahunty Tony Holmes.
Mean Salmon index (2012):	8.61 fry/5min.
Mean Salmon index (all surveys):	8.61 fry/5min.

This is the first CWEF survey of this catchment it was carried out in September 2012. 6 Sites Were



Figure A.4.4. Length distribution of Salmon captured in CWEF Survey on the Mealagh catchment in 2012.

surveyed, all of which were included in the analysis (). Salmon fry were present at 5 sites. The maximum fry catch was 14 salmon at site 4, no salmon were present at site 3. The mean catch of included sites was 8.61 salmon fry/5min. Locations of sites are displayed on map A.4.3.1. The other fish recorded were flounder and brown trout. Two cohorts of juvenile salmon were captured as can be seen in. the modal length category of 0+ fry caught was 5.5cm.

River	Site Number	×	¥	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Cloonee	001	78433	63467	3	12	Include	15.2
Cloonee	002	79318	63511	3	1	Include	1
Cloonee	004	84969	62313	1	20	Include	20
Cloonee	005	84655	62520	1	24	Include	26.9
Cloonee	006	83515	63712	2	8	Include	8
Cloonee	007	83335	63672	1	26	Include	26
Cloonee	003	85311	62141	2	0	Above Barrier	

Table A.4.6. Results of CWEF on the Cloonee catchment in 2012.

Conclusion

The Cloonee had a cumulative Salfry average of 8.61 salmon fry/5min which is below the threshold level of 17 salmon fry/5min. This is in agreement with the SSC assessment that this river is below its Conservation Limit, and the Catchment remains closed.

t	2011 75 -29		Closed	2012	16.18	16.18	
,	2010	75	-29	Closed	2011		
	2009	75	-29	Closed	2010		
2	2008	75	-29	Closed	2009		
-	2007	75	-29	Closed	2008		
	Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min

this river is below its Conservation Limit, and Table A.4.7. SSC assessments and CWEF results for the Cloonee Catchment 2012.



Map A.4.4. CWEF sites on the Cloonee Catchment 2012.



Finnihy, South Western RBD.



Map A.4.5. Sites Surveyed on the Finnihy 2012.

IFI Salmon Catchment #:	108
2012 survey:	20/09/2012
Sampling carried out by:	Kevin Delahunty and Tony Holmes.
Mean Salmon index (2012):	8.61 fry/5min.
Mean Salmon index (all surveys):	8.61 fry/5min.

This is the first CWEF survey of this catchment and was carried out on 20/9/2012. The survey



Figure A.4.5. Length Distribution of Salmon Captured in the Finnihy 2012 CWEF survey.

comprised 6 sites, all of which were included in the analysis (). Salmon fry were present at 5 sites. The maximum fry catch was 14 salmon at site 4, the minimum catch was 0 fry at site 3 The mean catch of included sites was 8.61 salmon fry/5min. Locations of sites are displayed on Other fish recorded were brown trout and flounder. Two cohorts of juvenile salmon were captured as can be seen i the modal length of 0+ fry caught was 6 cm.

River	Site Number	×	۲	Riffle Captured Status 7 7 4 Include		Status	SalFry/ 5min
Finnihy	001	87761	74123 2 4 Include		Include	4.36	
Finnihy	002	86609	75113	1	10	Include	11.7
Finnihy	003	86206	75501	1	0	Include	0
Finnihy	004	90044	73345	2	14	Include	15.3
Finnihy	005	90104	71790	2	8	Include	9.71
Finnihy	006	90924	70988	1	8	Include	10.7

Table A.4.8. CWEF results for the Finnihy Catchment 2012.

Conclusion

The Finnihy had a mean catch of 8.61 salfry/5min in 2012 which is below the threshold level of 17 salmon fry/5min. This is in agreement with the SSC estimates that the river is below its conservation limit.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007	141	-55	Closed	2008		
2008	141	-55	Closed	2009		
2009	141	-63	Closed	2010		
2010	141	-63	Closed	2011		
2011	141	-63	Closed	2012	8.61	8.61

Table A.4.9. Conservation limits and provisional returns on the Finnihy catchment along with the CWEF fishing result.

A.5 Shannon River Basin District.

Summary

Since 2007, fourteen catchments have been surveyed in the Shannon River Basin District, Table A.5.1. Prolonged periods of heavy rain during the period available for the 2012 survey meant that no surveys were completed this year.

	20	007	200)8	20	009	20	10	20)11	201	2	Total	Surveys
IFI Code /River	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Avg	# Sites	Mean (2012)
Shannon IRBD														
112/Feohanagh					10	16.61							10	16.61
114/Owenmore (Kerry)	10	25.07											10	25.07
117/Lee (Kerry)			30	0.67									30	0.67
118/Brick	6	0.00											6	0.00
120/Galey					31	12.99							31	12.99
125/Deel									40	0.14			40	0.14
126/Maigue					50	2.82	59	16.05					109	9.44
128/Shannon Graney							30	0.19					30	0.19
128/Shannon Kilcrow							25	0.69					25	0.69
128/Shannon Woodford							8	0.00					8	0.00
131/Fergus	19	12.96			29	4.10	32	6.84					80	7.97
133/Doonbeg							12	10.31					12	10.31
134/Skivaleen									5	14.82			5	14.82
143/Aughyvackeen									5	1.00			5	1.00

Table A.5.1. Catchment-wide Electrofishing data for SHRFB 2007- 2012 showing the number of sites successfully electrofished each year and the average salmon fry captured /5min for those sites. Also shown are the overall average capture rate and the Surveys Average capture rate.



A.6 Western River Basin District.

A.6.1 Summary

Since 2007, twenty five rivers have been surveyed in the Western River Basin District (ERFB) as part of the on-going catchment-wide electrofishing surveys. These are presented in table A.6.1. Four rivers currently have a survey average salmon fry capture rate of greater than 17 fry per 5min, these are the Culfin, Erriff, Carrownisky and Drumcliff. Five catchments were surveyed in 2012, the Erriff the Carrownisky, the Cloonaghmore and the Garvogue all recorded good numbers of salmon fry. The Owenwee showed a marked improvement on previous surveys.

	2007		2008		20	09	20	10	2011		2012		Total	Surveys
IFI Code /River	# Sites	Avg	# Sites	Mean (2012)										
Western RBD														
145/Kilcolgan					35	2.51							35	2.51
146/Clarinbridge									6	7.26			6	7.26
148/Knock									6	12.53			6	12.53
149/Owenboliska (Spiddal)			21	4.06									21	4.06
150/Owenriff	31	15.75											31	15.75
163/Owenglin					16	11.57							16	11.57
167/Culfin			6	30.83									6	30.83
168/Erriff	44	29.51	46	24.10	33	16.03	46	20.43	32	20.86	25	27.40	226	23.05
171/Carrownisky			16	18.25							19	20.60	35	19.43
172/Bunowen					2	13.62							2	13.62
173/Owenwee (Belclare)							10	8.47	9	7.25	11	15.27	30	10.33
178/Newport (L. Beltra)	11	16.06			7	4.74							18	10.40
179/Srahmore					3	4.33							3	4.33
181/Owengarve					3	5.51							3	5.51
185/Owenduff (Glenamong)					1	6.00							1	6.00
186/Owenmore (Bangor)					5	7.63							5	7.63
187/Glenamoy	14	28.16			4	5.65							18	16.91
188/Muingnabo	4	0.78											4	0.78
193/Ballinglen	6	10.65							12	15.09			18	12.87
194/Cloonaghmore			40	8 96			33	9 71	27	22.27	33	17 32	133	14 56
(Palmerstown)			40	0.50			55	5.71	27	22.27	55	17.52	155	14.50
196/Brusna					34	4.70							34	4.70
198/Leaffony	6	5.76			12	7.95							18	6.86
203/Garvogue (Bonnet)	52	18.41	47	13.26	53	16.83	53	11.31	24	7.08	39	18.54	268	14.24
205/Drumcliff							17	17.72					17	17.72
207/Grange	4	5.75			6	3.29							10	4.52

Table A.6.1. Catchment-wide Electrofishing data for WRFB 2007- 2012 showing the number of sites successfully electrofished each year and the average salmon fry captured /5min for those sites. Also shown is the Surveys Average capture rate.



Chart A.6.1: Summary of CWEF results in ERFB from 2007 to 2012.

A.6.2	Erriff, Western RBD.
IFI Salmon Catchment #:	168
2012 survey:	13/09/2012 - 01/10/2012.
Sampling carried out by:	Paddy Gargan, Barry Kelly, Alan McDonnell, John Kilcoyne, and Micheal John Madden, Paudrig O'Malley.
Mean Salmon index (2012):	27.40 fry/5min.
Mean Salmon index (all surveys):	23.05 fry/5min.

This is the sixth CWEF survey of this catchment. The survey comprised 27 sites 25 of which were



Figure A.6.1. Length distribution of Salmon captured in 2012 CWEF Survey on the Erriff River.

included in the analysis. Salmon fry were present at all sites. The maximum fry catch was 49 salmon at site 51. The mean catch of included sites was 27.40 salmon fry/5min. Locations of sites are displayed on Map A.6.1. Other fish recorded were brown trout, European eel, minnow, stone loach and threespined stickleback. The modal length of 0+ fry caught was 5cm (Figure A.).

Conclusion

River	Site Number	×	Y	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min	
Erriff	007	0	0	0	32	Include	36.9	
Erriff	010	0	0	2	19	Include	22.6	
Erriff	011	0	0	1	18	Include	22.3	
Erriff	012	0	0	2	13	Include	17	
Erriff	013	0	0	2	27	Include	32.1	
Erriff	014	0	0	1	12	Include	15.2	
Erriff	019	0	0	1	13	Include	13	
Erriff	020	0	0	2	17	Include	23	
Erriff	021	0	0	2	16	Include	20	
Erriff	024	0	0	2	20	Include	24.8	
Erriff	025	0	0	0	24	Include	27.7	
Erriff	026	0	0	2	11	Include	14.4	
Erriff	027	0	0	2.5	20	Include	27	
Erriff	029	0	0	2.5	19	Include	26.6	
Erriff	031	0	0	1.5	23	Include	28.3	
Erriff	032	0	0	2	8	Include	8	
Erriff	033	0	0	2	13	Include	16	
Erriff	034	0	0	1	44	Include	49	
Erriff	035	0	0	1	30	Include	37	
Erriff	037	0	0	2	24	Include	27.7	
Erriff	039	0	0	2	43	Include	49	
Erriff	040	0	0	2	31	Include	31	
Erriff	041	0	0	2	28	Include	28	
Erriff	051	0	0	0	49	Include	53.5	
Erriff	056	0	0	1	30	Include	35	
Erriff	050	0	0	2	1	Too Small		
Erriff	042	0	0	3	21	St order<2		

The Erriff had a mean catch of 27.40 salfry/5min in 2012 resulting in a cumulative average of 23.05

salmon fry/5min to date which is above the threshold level of 17 salmon fry/5min. The Erriff is above CL based on counter data and is fished as an index site under the catchment wide electro-fishing programme.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2006			Open	2007	29.51	29.51
2007	1299	1621	Open	2008	24.10	26.80
2008	1299	2346	Open	2009	16.03	23.21
2009	1299	1299 716		2010	20.43	22.52
2010	1299	512	Open	2011	20.86	22.19
2011	1299 605		Open	2012	27.40	23.05

Table A.6.2.Conservation limits and provisional returns on the Erriff catchment along with the CWEF fishing results and averages for pervious yeas in which surveys took place.

Table A.6.1. Results of CWEF on the Erriff catchment in 2012.



Map A.6.1.CWEF sites on the Erriff Catchment 2012.

Site	Survey Year							Site	Survey Year						
Number	2007	2008	2009	2010	2011	2012	Mean	Number	2007	2008	2009	2010	2011	2012	Mean
001	15.00	26.00	15.00	11.00	25.00		18.40	031	11.00	23.00	10.00	19.00	20.00	23.00	16.60
002	8.00	31.00	30.00	12.00			20.25	032	0.00	5.00	9.00	10.00	3.00	8.00	5.40
003	29.00	30.00	18.00	14.00	21.00		22.40	033	11.00	9.00	1.00	5.00	12.00	13.00	7.60
004	34.00	15.00	19.00	25.00	20.00		22.60	034	17.00	42.00	10.00	62.00	20.00	44.00	30.20
005	13.00	29.00	16.00	20.00	37.00		23.00	035	50.00	28.00	8.00	20.00	22.00	30.00	25.60
006	31.00	43.00	23.00	20.00	20.00		27.40	036	9.00	10.00	3.00	8.00			7.50
007	47.00	31.00	13.00	25.00	13.00	33.00	25.80	037	22.00	15.00		18.00	5.00	24.00	15.00
008	41.00	37.00	19.00	29.00	25.00		30.20	038	2.00						2.00
009	21.00	27.00	10.00				19.33	039	27.00	10.00	8.00	29.00	9.00	43.00	16.60
010	28.00	17.00	6.00	12.00	18.00	21.00	16.20	040	26.00	15.00	9.00	1.00	10.00	31.00	12.20
011	31.00	15.00	11.00	18.00	27.00	17.00	20.40	041	16.00	9.00	10.00	0.00	4.00	28.00	7.80
012	37.00	12.00	14.00	14.00	8.00	13.00	17.00	042	6.00	8.00	1.00	1.00	7.00	21.00	4.60
013	39.00	18.00	17.00	29.00	24.00	27.00	25.40	043	25.00	17.00	9.00	26.00			19.25
014	27.00	20.00	4.00	14.00	9.00	12.00	14.80	044	9.00	3.00	2.00	12.00			6.50
015	7.00	12.00	11.00	2.00			8.00	045	40.00	32.00	9.00	21.00			25.50
016	4.00	7.00	18.00	4.00			8.25	046	9.00	31.00	12.00	10.00			15.50
017	16.00	17.00	22.00	27.00			20.50	047	11.00	13.00	8.00	24.00			14.00
018	20.00		13.00	14.00			15.67	048	19.00						19.00
019	58.00	32.00	17.00	28.00	16.00	13.00	30.20	049	21.00	14.00	0.00	11.00			11.50
020	28.00	26.00	11.00	17.00	27.00	17.00	21.80	050	20.00	0.00	12.00	12.00	0.00	1.00	8.80
021	37.00	19.00	17.00		17.00	16.00	22.50	051	41.00	19.00	1.00	9.00	16.00	49.00	17.20
022		25.00		22.00			23.50	052	6.00		0.00	0.00			2.00
023	22.00		9.00	5.00			12.00	053	11.00	6.00	3.00		0.00		5.00
024	46.00	18.00	20.00	23.00	18.00	20.00	25.00	054	10.00	5.00	0.00				5.00
025	35.00	16.00	26.00	20.00	17.00	24.00	22.80	055				12.00			12.00
026	1.00	5.00	2.00	7.00	6.00	11.00	4.20	056				26.00	21.00	30.00	23.50
027	33.00	41.00	8.00	17.00	19.00	20.00	23.60	057				9.00			9.00
028	0.00	0.00	0.00	0.00			0.00	058			22.00				22.00
029	4.00	7.00	0.00	5.00	5.00	19.00	4.20	059			1.00				1.00
030	0.00	3.00	0.00	8.00	10.00		4.20								

Table A.6.3. Results of CWEF for each site on the Erriff catchment 2007- 2012.
A.6.3	Carrowinsky, Western RBD
IFI Salmon Catchment #:	171
2012 survey:	10/09/2012 - 27/09/2012.
Sampling carried out by:	Barry Kelly and John Kilcoyne
Mean Salmon index (2012):	20.60 fry/5min.
Mean Salmon index (all surveys):	19.43 fry/5min.

This second CWEF survey of this catchment carried out in September 2012. The survey comprised 19



Figure A.6.2. Length distribution of Salmon captured in 2012 CWEF Survey in the Carronisky Catchment.

River	Site Number	×	×	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min	
Carrownisky	001	76033	277436	1	18	Include	20	
Carrownisky	002	77078	277319	2	19	Include	21.9	
Carrownisky	003	78148	277301	2	17	Include	18.9	
Carrownisky	005	79807	275999	2	11	Include	11	
Carrownisky	006	80541	275666	1	13	Include	14.9	
Carrownisky	007	80197	274734	1	6	Include	6	
Carrownisky	008	80048	274125	1	16	Include	18.7	
Carrownisky	009	80595	273387	1	25	Include	27.8	
Carrownisky	010	81257	273007	1	39	Include	48	
Carrownisky	011	81514	272416	2	40	Include	42.9	
Carrownisky	012	81866	272369	1	42	Include	53	
Carrownisky	013	82251	272397	2	22	Include	28	
Carrownisky	014	75385	275943	2	6	Include	7.33	
Carrownisky	015	75809	275421	2	15	Include	16.7	
Carrownisky	016	75962	275309	2	8	Include	8.84	
Carrownisky	017	76864	274879	2	22	Include	24.2	
Carrownisky	019	76433	275555	2	13	Include	14.5	
Carrownisky	020	77611	275280	3	0	Include	0	
Carrownisky	021	79454	276269	2	8	Include	9	
Table A.6.4. Results of CWEF on the Carrownisky catchment in								

Conclusion The Carrowin

was 6.5cm.

The Carrowinsky had a mean catch of salfry/5min of 19.43 which is above the threshold level of 17 salmon fry/5min. Based on these results the Carrowniskey was opened for catch and release fishing in 2013.

sites all of which were included in the analysis. Salmon fry were present at all but

one site. The maximum fry catch was 42

salmon at site 12. The mean catch of

included sites was 20.60 salmon fry/5min.

Brown trout were also recorded. Two

cohorts of juvenile salmon were captured

The modal length category of 0+ fry caught

Spawning Year	1SW CL	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007	365	-259	Catch/Rel	2008	18.25	18.25
2008	365	-75	Catch/Rel	2009		18.25
2009	365	-57	Catch/Rel	2010		18.25
2010	365	-133	Catch/Rel	2011		18.25
2011	365	-126	Catch/Rel	2012	20.60	19.43

Table A.6.3: Conservation limits and provisional returns on the Carrowinsky catchment along with the CWEF fishing results and averages for pervious yeas in which surveys took place.

2012.			



Map A.6.2.CWEF sites on the Carrownisky Catchment 2012.



IFI Salmon Catchment #:	173
2012 survey:	07/09/2012 - 12/09/2012.
Sampling carried out by:	Barry Kelly and John Kilcoyne.
Mean Salmon index (2012):	15.27 fry/5min.
Mean Salmon index (all surveys):	10.33 fry/5min.



This, the third CWEF survey of this catchment, was carried out in September 2012. The survey

Figure A.6.3A.6.1. Length distribution of Salmon captured in 2012 CWEF survey on the Owenwee (Belclare) River.

comprised 11 sites, all of which were included in the analysis (). Salmon fry were present at all but one site. The maximum fry catch was 21 salmon at sites 3, 5 and 11. The mean catch of included sites was 15.27 salmon fry/5min. Locations of sites are displayed on map A.6.5.1. The other fish recorded were brown trout and margaritifera Two cohorts of juvenile salmon were captured, Figure A.6.5.1The modal length category of 0+ fry caught was 5.5 cm.

Conclusion

The Owenwee (Belclare) had a mean catch of 15.27 salfry/5min in 2012 resulting in a cumulative average of 10.33 salmon fry/5min to date which is below the threshold level of 17 salmon fry/5min. It is estimated, based on electro-fishing results, that in 2012 the salmon population was below conservation limit

Site	S			
Number	2010	2011	2012	Mean
001	0.00	2.00	10.00	4.00
002	2.00	0.00	11.00	4.33
003	16.00	4.00	21.00	13.67
004	4.00	6.00	18.00	9.33
005	14.00	13.00	21.00	16.00
006	0.00	0.00	0.00	0.00
007	1.00	6.00	2.00	3.00
008	22.00	27.00	19.00	22.67
009	13.00		13.00	13.00
010	0.00	0.00	1.00	0.33
011	7.00		21.00	14.00
005 006 007 008 009 010 011	14.00 0.00 1.00 22.00 13.00 0.00 7.00	13.00 0.00 6.00 27.00 0.00	21.00 0.00 2.00 19.00 13.00 1.00 21.00	16.00 0.00 3.00 22.67 13.00 0.33 14.00

Table A.6.5. Results of CWEF for each site on the Owenwee 2007- 2012.

Spawning Year	1SW C L	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007	378	-114	Catch/Rel	2008		
2008	378	-114	Catch/Rel	2009		
2009	378	-15	Catch/Rel	2010	8.47	8.47
2010	378	-126	Catch/Rel	2011	7.25	7.86
2011	378	-118	Catch/Rel	2012	15.27	10.33

Table A.6.6. Conservation limits and provisional returns on the Owenwee (Belclare) catchment along with the CWEF fishing results and averages for pervious years in which surveys took place.

River	Site Number	×	~	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Owenwee (Belclare)	001	91117	278854	1	10	Include	11.4
Owenwee (Belclare)	002	93112	278549	2	11	Include	13.8
Owenwee (Belclare)	003	95491	278738	2	21	Include	26
Owenwee (Belclare)	004	93642	278812	2	18	Include	22.3
Owenwee (Belclare)	005	96180	278750	1	21	Include	24.8
Owenwee (Belclare)	006	97428	277608	2	0	Include	0
Owenwee (Belclare)	007	97638	280772	2	2	Include	2.86
Owenwee (Belclare)	008	97413	280948	1	19	Include	23.8
Owenwee (Belclare)	009	96877	281791	1	13	Include	15.8
Owenwee (Belclare)	010	97893	280179	2	1	Include	1.29
Owonwoo (Bolclaro)	011	07241	200460	1	21	Include	26

Table A.6.7. Results of CWEF on the Owenwee (Belclare) catchment in 2012.



Map A.6.3. CWEF sites on the Owenwee (Belclare) Catchment 2012.

A.6.5 Cloonaghmore, North Western RBD.

IFI Salmon Catchment #:	194
2012 survey:	11/09/2012 - 15/09/2012.
Sampling carried out by:	John Burke, Paddy Butler, Brian Flannery and Brian McDermot.
Mean Salmon index (2012):	17.32 fry/5min.
Mean Salmon index (all surveys):	14.56 fry/5min.

This, is the fourth CWEF survey of this catchment, was carried out in September 2012. The survey



Figure A.6.4. Length distribution of Salmon captured in 2012 CWEF survey on the Cloonaghmore Catchment.

Site Number	×	Y	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
002	0	0	0	22	Include	22
005	0	0	0	9	Include	11
007	113870	328036	2	11	Include	13.2
008	112321	329316	2	0	Include	0
010	110735	328438	2	2	Include	2
012	110240	328748	0	1	Include	1.25
015	113097	326066	2	24	Include	25
016	111696	326159	1	16	Include	22
017	0	0	0	17	Include	24
018	110511	326795	1	19	Include	20.5
019	109241	327024	2	9	Include	12.5
021	108234	326744	2	12	Include	13.6
022	109122	327145	2	8	Include	10.2
023	108105	326809	2	14	Include	16
024	0	0	1	13	Include	15.9
026	114046	325612	1	18	Include	21
027	113496	325021	1	19	Include	26.4
029	0	0	0	26	Include	32

comprised 33 sites, all of which were included in the analysis. Salmon fry were present at 28 sites. The maximum fry catch was 59 salmon at site 34, the minimum catch was 0 fry at site 8. The mean catch of included sites was 17.32 salmon fry/5min. Locations of sites are displayed on map A.6.7.1. The only other fish recorded was brown trout. Two cohorts of juvenile salmon were captured as can be seen in Figure A.. The mid-point of the modal length class of 0+ fry caught was 5.5 cm.

Site Number	×	¥	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
031	111165	323485	1	16	Include	23
032	109672	323121	1	11	Include	16
033	0	0	0	19	Include	22
034	107149	324353	1	46	Include	51
035	105820	326729	2	16	Include	19.3
036	105733	326948	1	9	Include	11.5
037	105575	327475	1	10	Include	12
039	112039	325322	2	16	Include	21
043	105301	324360	1	14	Include	17.5
049	110226	326840	2	6	Include	8.73
052	104724	328339	2	2	Include	3.33
053	111920	328464	2	0	Include	0
057	106520	323894	2	36	Include	44
066	0	0	0	13	Include	18.6
067	0	0	0	15	Include	15

Table A.6.8. Results of CWEF on the Cloonaghmore catchment in 2012.

Conclusion

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007	1261	-752	Closed	2008	8.96	8.96
2008	1261	-753	Closed	2009		8.96
2009	1261	-755	Closed	2010	9.71	9.33
2010	1261	-785	Closed	2011	22.27	13.65
2011	1261	-785	Closed	2012	17.32	14.56

The Cloonaghmore had a mean catch 17.32 salfry/5min in 2012 resulting in a cumulative average of 14.56 salmon fry/5min to date which is below the threshold level of 17 salmon fry/5min. Based on the data since 2008, the average salmon fry density is below the SSC index but results indicate significant salmon spawning in the catchment in winters 2010/2011 and 2011/2012.





Map A.6.4: Clooghnamore CWEF sites 2013.

Site		Survey	/ Year		
Number	2008	2010	2011	2012	Mean
001	8.00	11.00			9.50
002	10.00	17.00	29.00	22.00	19.50
003	0.00				0.00
004	0.00	0.00			0.00
005	4.00	10.00	15.00	9.00	9.50
006	0.00				0.00
007	0.00	4.00	4.00	11.00	4.75
008	0.00		0.00	0.00	0.00
009	0.00				0.00
010	0.00	0.00		2.00	0.67
011	0.00				0.00
012	0.00			1.00	0.50
013	0.00				0.00
014	2.00				2.00
015	15.00	12.00	12.00	24.00	15.75
016	16.00	5.00		16.00	12.33
017	6.00		11.00	17.00	11.33
018	36.00	17.00	39.00	19.00	27.75
019	4.00		1.00	9.00	4.67
020	5.00	5.00			5.00
021	1.00	0.00	2.00	12.00	3.75
022	4.00	1.00	2.00	8.00	3.75
023	2.00	2.00	20.00	14.00	9.50
024	22.00	12.00	33.00	13.00	20.00
025		16.00			16.00
026	16.00		25.00	18.00	19.67
027	21.00	22.00	37.00	19.00	24.75
028	0.00				0.00
029	14.00	17.00	31.00	26.00	22.00
030			19.00		19.00
031	15.00	14.00	25.00	16.00	17.50
032	11.00	16.00	29.00	11.00	16.75
033	13.00	10.00	28.00	19.00	17.50
034	45.00	25.00	43.00	46.00	39.75
035	5.00	5.00	16.00	16.00	10.50

Site		Surve	y Year		
Number	2008	2010	2011	2012	Mean
036	4.00	3.00	13.00	9.00	7.25
037	3.00	3.00	6.00	10.00	5.50
038	3.00	9.00			6.00
039	6.00	6.00	8.00	16.00	9.00
040	1.00	4.00	4.00		3.00
041	0.00	9.00			4.50
042	13.00	11.00			12.00
043	1.00		8.00	14.00	7.67
044	3.00				3.00
045		1.00			1.00
046		6.00			6.00
047		4.00			4.00
048		0.00			0.00
049			9.00	6.00	7.50
052			0.00	2.00	1.00
053			2.00	0.00	1.00
057			14.00	36.00	25.00
066				13.00	13.00
067				15.00	15.00
1048		11.00			11.00
1049			0.00		0.00
1050			0.00		0.00
1051			0.00		0.00
1052			0.00		0.00
1053			20.00		20.00
1054			0.00		0.00
1055			0.00		0.00
1056			0.00		0.00
1057			0.00		0.00
1058			0.00		0.00
1059			0.00		0.00
1060			0.00		0.00

 Table A.6.10. Results of CWEF on the Cloonaghmore catchment in from 2008 to 2012 (Salfry per5 min)

IFI Salmon Catchment #:	203
2012 survey:	03/09/2012 - 23/09/2012.
Sampling carried out by:	Francis Byrne, Michael Thornton and Paul Condon.
Mean Salmon index (2012):	18.54 fry/5min.
Mean Salmon index (all surveys):	14.24 fry/5min.

This, the sitxh CWEF survey of this catchment carried out in September 2012. The survey comprised

Garvogue, North Western RBD.



A.6.6

Figure A.6.5: Length Distribution of Salmon Captured in 2012 survey on Garvogue.

42 sites, 39 of which were included in the analysis (Table A.6.11). Salmon fry were present at 36 sites. The maximum fry catch was 30 salmon at site 29, the minimum catch was 0 fry at site 22. The mean catch of included sites was 7.08 salmon fry/5min. Locations of sites are displayed on map A.6.8.1. The other fish recorded were Stickleback, Minnow and Stoneloach. Two cohorts of juvenile salmon were captured as can be seen in Figure A.. The modal length of 0+ fry caught was 6.5 cm.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2006					18.41	18.41
2007	2395	-1680	Catch/Rel	2008	13.26	15.84
2008	1048	298	Catch/Rel	2009	16.83	16.17
2009	957	218	Catch/Rel	2010	11.31	14.95
2010	2262	587	Catch/Rel	2011	7.08	13.38
2011	2262	84	Catch/Rel	2012	18.54	14.24

The Garvogue had a mean catch of 7.08 salfry/5min in 2012 resulting in a cumulative average of 14.24 salmon fry/5min to date which is below the threshold level of 17 salmon fry/5min. The 2012 catchment wide results are disappointing compared to data recorded in previous years.

Table A.6.8.3: Conservation limits on the Garvogue catchment along with the CWEF fishing results and averages for pervious yeas in which surveys took place.

River	Site Number	×	¥	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Garvogue (Bonnet)	003	179899	331610	3	2	Include	3
Garvogue (Bonnet)	006	183627	331857	2	26	Include	33
Garvogue (Bonnet)	007	184866	333782	3	28	Include	40
Garvogue (Bonnet)	008	185666	335342	3	13	Include	17
Garvogue (Bonnet)	010	186672	337363	3	8	Include	8
Garvogue (Bonnet)	012	187473	340249	3	28	Include	38
Garvogue (Bonnet)	013	187261	340565	1	55	Include	73
Garvogue (Bonnet)	014	186973	341279	1	36	Include	45
Garvogue (Bonnet)	016	185049	344169	1	46	Include	61.3
Garvogue (Bonnet)	018	183904	344724	1	43	Include	55.3
Garvogue (Bonnet)	020	180611	330279	3	9	Include	11.7

River	Site Number	×	×	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Garvogue (Bonnet)	021	179045	329137	3	2	Include	2
Garvogue (Bonnet)	023	185079	333195	2	9	Include	9.9
Garvogue (Bonnet)	024	185739	333333	1	12	Include	12.6
Garvogue (Bonnet)	025	185597	332819	3	4	Include	4.62
Garvogue (Bonnet)	027	186322	338206	1	31	Include	36.8
Garvogue (Bonnet)	028	186220	338509	2	25	Include	33
Garvogue (Bonnet)	029	186150	339121	0	27	Include	32.8
Garvogue (Bonnet)	030	186041	339332	3	26	Include	33
Garvogue (Bonnet)	031	185270	339990	3	2	Include	2
Garvogue (Bonnet)	034	185547	339518	3	1	Include	1.33
Garvogue (Bonnet)	035	184917	339094	1	14	Include	17.8
Garvogue (Bonnet)	036	184573	338907	1	11	Include	13.9
Garvogue (Bonnet)	037	184052	338620	3	1	Include	1.25
Garvogue (Bonnet)	038	188024	339270	1	3	Include	3
Garvogue (Bonnet)	039	188589	339300	3	8	Include	10
Garvogue (Bonnet)	040	190354	339858	1	15	Include	17.5
Garvogue (Bonnet)	041	191228	339672	1	16	Include	20.7
Garvogue (Bonnet)	042	191968	339653	3	8	Include	9.23
Garvogue (Bonnet)	043	192266	338973	1	0	Include	0
Garvogue (Bonnet)	044	192032	338309	2	14	Include	16.8
Garvogue (Bonnet)	045	192122	337538	3	14	Include	15.9
Garvogue (Bonnet)	046	192251	336926	1	11	Include	12.7
Garvogue (Bonnet)	047	192146	336603	3	2	Include	2.25
Garvogue (Bonnet)	049	188452	339893	3	0	Include	0
Garvogue (Bonnet)	052	185350	344135	3	6	Include	9.33
Garvogue (Bonnet)	053	185294	344324	1	6	Include	7.5
Garvogue (Bonnet)	054	182814	329537	1	10	Include	12
Garvogue (Bonnet)	055	184209	329265	1	0	Include	0
Garvogue (Bonnet)	001	169480	335976	2	7	Efficiency <60%	
Garvogue (Bonnet)	052	185350	344135	3	6	High Water	
Garvogue (Bonnet)	022	179565	328633	1	3	Stream order<2	

Table A.6.11. Results of CWEF on the Garvogue catchment in 2012.

Site	Survey Year						
Number	2007	2008	2009	2010	2011	2012	Mean
001	8.00	12.00	17.00	27.42			16.11
002	12.73	9.00	8.00	4.00			8.43
003	19.76	7.50		4.00		3.00	10.42
004	4.00	16.00	17.00	6.00			10.75
005	18.00	23.00	33.00	15.00			22.25
006	45.00	25.71	57.00	42.00		33.00	42.43
007	36.00	18.46	31.00	25.77		40.00	27.81
008	57.11	16.15	43.00	27.00		17.00	35.82
009	10.64	10.67	16.00	5.00			10.58
010	2.00	13.00	11.00	2.00		8.00	7.00
011	2.00		6.00	0.00			2.67
012	66.83	60.94	64.00	41.33		38.00	58.28
013	63.60	50.67	66.05	42.27		73.00	55.65
014	40.47	17.59	27.74	36.00		45.00	30.45
015	66.58	18.67	43.84	35.10			41.05
016	23.64	25.33	26.67	15.53		61.33	22.79
017	15.29	11.64	12.27	0.00			9.80
018	52.80	19.09	29.46	43.73		55.29	36.27
019	18.78	12.50	18.79	0.00			12.52
020	6.43	9.00	3.00	4.80	11.00	11.65	6.85
021	11.88		3.00	3.00	3.60	2.00	5.37
023	13.60	8.73	7.64		7.00	9.90	9.24
024	10.13	10.18	12.83	4.80	9.33	12.60	9.45
025	9.75	1.43	4.86	5.96	3.00	4.62	5.00
026	9.82	17.89	21.65	3.75	4.00		11.42
027	63.25	19.50	49.88	43.00	25.00	36.81	40.13
028	27.56	37.53	51.55	31.00	20.78	33.04	33.68
029	36.00	28.30	19.60	10.18	30.46	32.79	24.91
030	18.40	26.24	29.33	6.67	24.00	33.00	20.93
031	5.77	4.86	3.86	7.00	0.00	2.00	4.30

Site			Surve	y Year			
Number	2007	2008	2009	2010	2011	2012	Mean
032	2.67	0.00	0.00	0.00			0.67
033	1.00	0.00	0.00	0.00			0.25
034	7.08	2.67	11.81	1.00	3.67	1.33	5.25
035	18.57	10.71	7.58	0.00	7.22	17.82	8.82
036	4.36	5.04	1.11	0.00		13.89	2.63
037	3.21	0.00	0.00	0.00	0.00	1.25	0.64
038	12.73	20.00	32.00	27.92		3.00	23.16
039	10.18		11.00	18.82		10.00	13.33
040	25.88	8.50	25.00	17.68		17.50	19.27
041	31.86	10.29	19.00	6.00		20.71	16.79
042	3.00	1.67	1.00	0.00		9.23	1.42
043	1.00	0.00	0.00	0.00	0.00	0.00	0.20
044	5.00	10.40	7.00	3.43	0.00	16.80	5.17
045	7.50	1.50	6.11	2.00	0.00	15.91	3.42
046	10.64		6.25	12.57	0.00	12.69	7.37
047	0.00	4.57	2.33	0.00	0.00	2.25	1.38
048	0.00	6.00	0.00	0.00			1.50
049	0.00	0.00	0.00	0.00	2.50	0.00	0.50
050	0.00		0.00	0.00	0.00		0.00
051	0.00	0.00	0.00	0.00	0.00		0.00
052	16.00	10.46	15.58	2.67	12.46	9.33	11.43
053	20.70		5.00	0.00	6.00	7.50	7.93
054			6.00	15.00		12.00	10.50
055			0.00	0.00		0.00	0.00
056		0.00					0.00

Results of CWEF for each site on the Garvogue catchment 2007-2012.



Map A.6.5: Garvogue CWEF Sites 2013.

A.7 North Western River Basin District.

A.7.1 Summary

Since 2007, thirty rivers have been surveyed in the North Western River Basin District (ERFB) as part of the on-going catchment-wide electrofishing surveys. These are presented in. Seven rivers currently have a survey average salmon fry capture rate of greater than 17 fry per 5min, The Eany, Oily, Bungosteen, Glen, Owentocker, Clady and Lackagh. Eight rivers were surveyed in 2012, The Clady and Eany recorded excellent numbers of salmon, while the Owenwee Bracky, Lackagh and Leannan all recorded moderate salmon fry densities.The Isle burn had very poor results, while the Erne survey encountered no salmon at all.

	20	07	20	08	20	09	20	10	20	11	20	12	Total	Surveys
IFI Code /River	# Sites	Avg	# Sites	Mean (2012)										
North Western RBD														
208/Duff	11	7.84	10	9.31	9	18.59	11	25.16					41	15.23
210/Erne			15	7.37	22	0.17	53	0.29	17	0.06	62	0.00	169	1.58
212/Ballintra					3	10.27							3	10.27
213/Laghy					9	8.58							9	8.58
214/Eske			14	13.10	14	16.99	17	16.30					45	15.46
215/Eany							30	15.86			21	30.08	51	22.97
216/Oily					11	9.49			7	33.68			18	21.59
217/Bungosteen									10	25.12			10	25.12
219/Glen (Ballyshannon)							18	19.44					18	19.44
220/Owenwee (Yellow R)	9	21.45	3	5.00	8	14.81					4	20.31	24	15.39
221/Bracky			8	10.82							13	19.91	21	15.37
222/Owentocker			10	20.06									10	20.06
226/Owenamarve					6	3.76							6	3.76
228/Gweedore (Crolly R.)			4	15.99					11	11.32			15	13.65
229/Clady			6	16.12							11	37.21	17	26.67
234/Glenna					6	16.80			6	3.77			12	10.29
235/Tullaghobegly			3	8.33			9	9.05					12	8.69
236/Ray			8	6.43					11	14.89			19	10.66
240/Lackagh			7	18.86	9	15.82			12	19.20	11	23.57	39	19.36
248/Leannan	9	9.47	29	7.41	29	8.73	29	16.71	28	12.36	28	21.51	152	12.70
249/Swilly			3	6.22	17	7.36							20	6.79
250/Isle (Burn)											10	2.12	10	2.12
251/Burnfoot			3	7.77			5	2.90					8	5.33
252/Mill (Letterkenny)							3	0.00					3	0.00
253/Crana					23	15.74							23	15.74
256/Clonmany			4	16.61			12	6.59					16	11.60
257/Straid							5	0.20					5	0.20
258/Donagh							10	4.25					10	4.25
259/Glennagannon					10	16.65			11	4.05			21	10.35
261/Culoort							18	4.03					18	4.03

Table A.7.1.: Catchment-wide Electrofishing data for NWRFB 2007- 2012 showing the number of sites successfully electrofished each year and the average salmon fry captured /5min for those sites. Also shown is the Surveys Average capture rate.



Chart A.7.1: Summary of CWEF results in NWRFB from 2007 to 2012.

A.7.2 Erne, North Western RBD.

IFI Salmon Catchment #:	210
2012 survey:	14/08/2012 - 27/09/2012.
Sampling carried out by:	Kevin Murphy, Jimmy O'Rielly, Frank Greene, Val Fitzpatrich and Tony Holmes.
Mean Salmon index (2012):	0.00 fry/5min.
Mean Salmon index (all surveys):	1.58 fry/5min.

This CWEF, the fifth survey, was carried out in September 2012. The survey comprised 62 sites, all of which were included in the analysis (Table A.7.1). Salmon fry were absent from all sites. Locations of sites are displayed on MAP. The other fish recorded were brown trout, crayfish, European eel, gudgeon, lamprey, minnow and perch.

River	Site Number	×	۲	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Erne	301	235283	290632	3	0	Include	0
Erne	302	235994	291229	3	0	Include	0
Erne	304	236722	291040	2	0	Include	0
Erne	306	238934	291865	2	0	Include	0
Erne	309	239170	293138	3	0	Include	0
Erne	310	241402	293684	0	0	Include	0
Erne	312	242556	292903	1	0	Include	0
Erne	314	243063	293411	2	0	Include	0
Erne	315	244460	293481	2	0	Include	0
Erne	317	245880	293293	3	0	Include	0
Erne	318	245186	294001	2	0	Include	0
Erne	320	246432	295173	2	0	Include	0
Erne	322	247062	296318	3	0	Include	0
Erne	323	248424	296654	2	0	Include	0
Erne	324	247152	297553	2	0	Include	0
Erne	325	247365	298285	2	0	Include	0
Erne	328	235296	289012	2	0	Include	0
Erne	401	235370	283888	2	0	Include	0
Erne	402	233682	284784	3	0	Include	0
Erne	403	231542	285495	2	0	Include	0
Erne	501	255704	312337	2	0	Include	0
Erne	503	255661	312947	2	0	Include	0
Erne	504	255725	313132	2	0	Include	0
Erne	505	257582	313986	2	0	Include	0
Erne	506	257636	314273	2	0	Include	0
Erne	602	252329	309764	0	0	Include	0
Erne	603	251844	308997	2	0	Include	0
Erne	604	251790	308903	2	0	Include	0
Erne	605	251239	307040	2	0	Include	0
Erne	606	251311	306752	1	0	Include	0
Erne	607	251032	306818	1	0	Include	0
Frne	608	250552	305513	1	0	Include	0

River	Site Number	×	~	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Erne	609	250714	304589	2	0	Include	0
Erne	610	250997	303589	2	0	Include	0
Erne	611	251384	305209	2	0	Include	0
Erne	612	252262	306682	2	0	Include	0
Erne	614	252929	305164	2	0	Include	0
Erne	615	252948	303681	3	0	Include	0
Erne	616	254109	302041	3	0	Include	0
Erne	617	251883	305079	2	0	Include	0
Erne	619	253329	302930	3	0	Include	0
Erne	620	255265	301245	3	0	Include	0
Erne	621	255946	301106	3	0	Include	0
Erne	622	256099	301802	3	0	Include	0
Erne	623	256838	302239	0	0	Include	0
Erne	625	257459	301238	2	0	Include	0
Erne	626	254878	305789	3	0	Include	0
Erne	627	253280	307707	3	0	Include	0
Erne	628	252790	308747	0	0	Include	0
Erne	629	252923	311221	2	0	Include	0
Erne	630	251092	304286	0	0	Include	0
Erne	631	253414	305282	2	0	Include	0
Erne	632	253975	304900	3	0	Include	0
Erne	633	253009	306053	0	0	Include	0
Erne	634	253113	309499	0	0	Include	0
Erne	635	253048	309752	0	0	Include	0
Erne	636	252959	310029	3	0	Include	0
Erne	637	252448	310063	3	0	Include	0
Erne	638	250657	305740	2	0	Include	0
Erne	639	250052	303904	1	0	Include	0
Erne	640	249197	305648	1	0	Include	0
Erne	641	249080	302187	1	0	Include	0

Table A.7.1. Results of CWEF on the Erne catchment in 2012.

Conclusion

The Erne had a mean catch of 0 salfry/5min in 2012 resulting in a cumulative average of 1.58 salmon fry/5min to date. The catchment is above two hydro-electric power stations on the Erne and the current results reflect the extent of spawning of wild or feral (derived from hatchery releases) in the

catchment. A report on the five years catchment-wide survey of the Erne is being prepared separately to compare with electro-fishing undertaken at the same sites in the 1990's.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007			Closed	2008	7.37	7.37
2008			Closed	2009	0.17	3.77
2009			Closed	2010	0.29	2.61
2010			Closed	2011	0.06	1.97
2011			Closed	2012	0.00	1.58

Table A.7.2. Results of CWEF on the Erne catchment infrom 2008 to 2012 (Salfry per5 min)



Map A.7.1: CWEF Sites on the Erne 2013.

A.7.3	Eany, North Western RBD.
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IFI Salmon Catchment #:	215
2012 survey:	28/08/2012 – 28/09/2012.
Sampling carried out by:	Alan Mahon, Dara Timpson and Paul Gallagher.
Mean Salmon index (2012):	30.08 fry/5min.
Mean Salmon index (all surveys):	22.97 fry/5min.

This, the second CWEF survey of this catchment was carried out in September 2012. The survey



Figure A.7.1. Length Distribution of Salmon Captured in 2012 survey on Eany.

comprised 21 sites, all of which were included in the analysis () Salmon fry were present at all sites. The maximum fry catch was 54 salmon at site 11, the minimum catch was 11 fry at sites 13 and 16. The mean catch of included sites was 30.08 salmon fry/5min. Locations of sites are displayed on . The only other fish recorded was eel. Two cohorts of juvenile salmon were captured, Figure A.7.6.1. The modal length of 0+ fry caught was 5 cm.

Conclusion

The Eany had a mean catch of 29.02 salfry/5min in 2012 resulting in a cumulative average of 22.97 salmon fry/5min to date which is above the threshold level of 17 salmon fry/5min.

River	Site Number	×	×	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Eany	004	191042	385186	1	30	Include	34
Eany	005	191484	385156	3	17	Include	17
Eany	007	191012	385712	2	19	Include	20.9
Eany	009	190549	384053	1	34	Include	35.9
Eany	010	190614	383823	1	33	Include	36.4
Eany	011	190236	383353	1	54	Include	56.9
Eany	012	189793	382476	1	33	Include	29.7
Eany	013	188646	382173	1	11	Include	40.9
Eany	014	187980	382292	1	15	Include	15
Eany	016	186389	382121	3	11	Include	12
Eany	018	185187	381905	2	13	Include	16
Eany	019	184123	381445	1	35	Include	37
Eany	020	183614	381184	1	29	Include	35
Eany	022	182689	379758	2	25	Include	25
Eany	024	187479	385381	2	35	Include	41.8
Eany	025	186896	384313	2	21	Include	25
Eany	026	186511	383877	1	45	Include	53
Eany	027	185616	383527	1	25	Include	29.3
Eany	028	185052	383501	2	24	Include	29
Eany	029	185037	382967	2	14	Include	15
Eany	030	184436	381852	2	23	Include	26.8

Table A.7.3: CWEF results on the	e Eany catchment 2012
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	Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
	2007	1740	456	Open	2008		
Г	2008	1740	1386	Open	2009		
	2009	1740	808	Open	2010	15.86	15.86
	2010	1740	283	Open	2011		15.86
	2011	1740	194	Open	2012	30.08	22.97
				-			

Table A.7.4: Conservation limits and provisional returns on the Glenna catchment along with the CWEF fishing results and averages for pervious yeas in which surveys took place.



Map A.7.2: CWEF Sites on the Eany 2013.

A.7.4 Owenwee (Yellow), North Western RBD.

IFI Salmon Catchment #:	220
2012 survey:	06/09/2012.
Sampling carried out by:	Dara Timpson and Paul Gallaghe
Mean Salmon index (2012):	20.31 fry/5min.
Mean Salmon index (all surveys):	15.39 fry/5min.



Figure A.7.2. Length distribution of salmon captured in Owenwee (Yellow) Catchment 2012.

This is the fourth CWEF survey of this catchment carried out in September 2012. The survey comprised four sites, all of which were included in the analysis (). Salmon fry were present at all sites. The maximum fry catch was 25 salmon at site 8. The mean catch of included sites was 20.31 salmon fry/5min. Locations of sites are displayed on The only other fish recorded was brown trout. Two cohorts of juvenile salmon were captured. The modal length of 0+ fry caught was 5.5cm.

Conclusion	River

The Owenwee had a mean catch of 20.31 salfry/5min in 2012, resulting in a cumulative average of 15.39 salmon fry/5min to date, below the threshold of 17 salmon fry/5min.

River	Site Number	×	۲	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Owenwee (Yellow R)	008	155989	380226	1	25	Include	28.3
Owenwee (Yellow R)	017	155343	380466	2	10	Include	12.1
Owenwee (Yellow R)	019	155228	380681	2	11	Include	13.5
Owenwee (Yellow R)	020	155852	380139	1	23	Include	273

Table A.7.5. Results of the CWEF on the Owenwee (Yellow) Catchment 2012.

Site

Number

001	3.00				3.00
002	10.00				10.00
003	10.00	4.00			7.00
004	18.00				18.00
005	25.00	6.00			15.50
006	44.00	5.00	24.00		24.33
007	25.00				25.00
008	11.00			25.00	18.00
009	0.00				0.00
010	0.00				0.00
011	0.00				0.00
012			18.00		18.00
013			20.00		20.00
014			14.00		14.00
015			27.00		27.00
016			0.00		0.00
017			2.00	10.00	6.00
018			0.00		0.00
019				11.00	11.00
020				23.00	23.00

Table A.7.7. Results of CWEF to Date on the Owenwee (Yellow) River.

 Survey
 Year

 2007
 2008
 2009
 2012
 Mean

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2006			Catch/Rel	2007	21.45	21.45
2007	184	-42	Catch/Rel	2008	5.00	13.22
2008	184	-42	Catch/Rel	2009	14.81	13.75
2009	184	-42	Catch/Rel	2010		13.75
2010	184	-42	Catch/Rel	2011		13.75
2011	184	-42	Catch/Rel	2012	20.31	15.39
Table A.7.6 CL and Drovisional Baturns to Owenwee						

Table A.7.6. CL and Provisional Returns to Owenwee (Yellow) River with annual CWEF Results.



Map A.7.3. CWEF sites on the Owenwee (Yellow) Catchment 2012.

A.7.5 Bracky, North Western RBD.

IFI Salmon Catchment #:	217
2012 survey:	09/08/2012 - 10/08/2012.
Sampling carried out by:	Bill Ferry and Cormac Goulding.
Mean Salmon index (2012):	19.91 fry/5min.
Mean Salmon index (all surveys):	15.37 fry/5min.



This, the second CWEF survey of this catchment, was carried out in August 2012. The survey comprised 14 sites 13 of which were included in the analysis (Table A.7.9). Salmon fry were present at 10 sites. The maximum fry catch was 40 salmon at site 3. The mean catch of included sites was 19.91 salmon fry/5min. Locations of sites are displayed on map A.7.4.1. Other fish recorded were brown trout, European eel, Founderand three-spined stickleback. Two cohorts of

juvenile salmon were captured, Figure A.7.4.1. The modal length of 0+ fry caught was 5.5 cm.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007	305	-47	Catch/Rel	2008	10.82	10.82
2008	305	-47	Catch/Rel	2009		10.82
2009	305	-47	Catch/Rel	2010		10.82
2010	305	-47	Catch/Rel	2011		10.82
2011	305	-47	Catch/Rel	2012	19.91	15.37

Conclusion

Table A.7.8. Cl and provisional returns on the Bracky catchment along with the CWEF averages.

River	Site Number	×	4	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Bracky	001	172785	389493	2	27	Include	36.3
Bracky	003	172767	387850	1	40	Include	49.4
Bracky	004	172534	387521	3	1	Include	1.36
Bracky	007	172925	389841	3	13	Include	15
Bracky	008	174080	389846	2	16	Include	22.3
Bracky	009	171129	387902	1	19	Include	25.6
Bracky	010	169844	387146	2	0	Include	0
Bracky	011	172845	387724	2	9	Include	11.1
Bracky	012	172956	387796	2	0	Include	0
Bracky	013	172916	388620	1	31	Include	41.1
Bracky	015	172853	387063	3	0	Include	0
Bracky	016	172722	388905	2	15	Include	20.8
Bracky	017	172069	388805	1	28	Include	35.9
Bracky	014	172151	387385	3	0	Above Barrier	

Table A.7.9. Results of CWEF on the Bracky catchment in 2012.

The Bracky had a mean catch of 15.37 salfry/5min which is below the threshold level of 17 salmon fry/5min. The Bracky remained closed to fishing for 2013.



Map A.7.4. Sites on the Bracky Catchment 2012.

A.7.6	Clady, North Western RBD.
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IFI Salmon Catchment #:	229
2012 survey:	05/09/2012 - 06/09/2012.
Sampling carried out by:	Cormac Goulding and Bill Ferry.
Mean Salmon index (2012):	37.21 fry/5min.
Mean Salmon index (all surveys):	26.67 fry/5min.

This, the second CWEF survey of this catchment was carried out in September 2012. The survey



Figure A.7.4.Length distribution of Salmon captured in 2012 CWEF Survey on the Clady Catchment.

comprised 11 sites, all of which were included in the analysis (). Salmon fry were present at 10 sites. The maximum fry catch was 81 salmon at site 2. The mean catch of included sites was 37.21 salmon fry/5min. Locations of sites are displayed on. The other fish recorded were Eel and brown trout. Two cohorts of juvenile salmon were captured as can be seen in Figure A.7.5.1. The modal length of 0+ fry caught was 5.5 cm.

Conclusion

The Clady had a mean catch of 37.21 salfry/5min in 2012 resulting in a cumulative average of 26.67 salmon fry/5min to date which is above the threshold level of 17 salmon fry/5min. Thee SSC assessed the Clady to be above CL for 2012..

River	Site Number	×	×	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Clady	001	181680	423660	1	46	Include	56.3
Clady	002	183618	422926	1	81	Include	100
Clady	003	186239	422084	3	0	Include	0
Clady	004	187901	422023	2	2	Include	2.32
Clady	005	189566	419131	1	9	Include	11
Clady	007	189589	420816	2	46	Include	57
Clady	008	189816	419072	2	38	Include	50.1
Clady	009	180650	423675	1	37	Include	45.1
Clady	010	190166	418907	3	3	Include	3.69
Clady	011	190997	419821	2	35	Include	43
Clady	012	185157	422530	1	32	Include	40.7

Table A.7.11. Results of CWEF on the Clady catchment in 2012.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5mir	Mean SalFry 5min
2007	515	150	Cataly (Dal	2000	-	16.12
2007	515	156	Catch/Rel	2008	16.12	16.12
2008	515	174	Catch/Rel	2009		16.12
2009	515	169	Catch/Rel	2010		16.12
2010	515	134	Catch/Rel	2011		16.12
2011	515	-128	Catch/Rel	2012	37.21	26.67

Table A.7.10. Conservation limits and provisional returns on the Clady catchment along with the CWEF fishing averages.



Map A.7.5. CWEF Sites on the Clady 2012.

A.7.7

Lackagh, North Western RBD.

IFI Salmon Catchment #:
2012 survey:
Sampling carried out by:
Mean Salmon index (2012):
Mean Salmon index (all surveys):

240 27/07/2011 - 11/08/2012. Bill Ferry and Cormac Goulding. 23.57 fry/5min. 19.36 fry/5min.



Figure A.7.5. Length distribution of Salmon captured in 2012 CWEF Survey on the Lackagh River.

This, the fourth CWEF survey of this catchment was carried out in August and September 2012. The survey comprised 14 sites, 11 of which were included in the analysis. A review of the wetted area available to Salmon in this catchment has been undertaken and the previous surveys have been re-appraised in light of this. Salmon fry were present at 10 sites. The maximum fry catch was 36 salmon at site 1. The mean catch of included sites was 23.57 salmon fry/5min. Locations of sites are displayed on The other fish recorded were brown trout and Minnow. More than one cohort of juvenile salmon was captured, Figure

A.7.8.1. The modal length of 0+ fry caught was 3.5 cm.

Conclusion

The Lackagh had a mean catch of 23.57 salfry/5min in 2012 resulting in a cumulative average of

River	Site Number	×	Y	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Lackagh	001	204965	424213	1	36	Include	44
Lackagh	003	199337	418289	1	29	Include	36
Lackagh	004	198776	417614	2	13	Include	18
Lackagh	005	211836	431054	2	13	Include	17.6
Lackagh	008	211081	429060	3	0	Include	0
Lackagh	013	204235	423413	2	22	Include	30.6
Lackagh	014	199775	418655	1	28	Include	36
Lackagh	016	212219	431650	2	9	Include	12.3
Lackagh	017	205243	424540	1	34	Include	41.8
Lackagh	019	205816	424799	2	10	Include	14.4
Lackagh	020	205557	424221	3	6	Include	8.57
Lackagh	009	210392	428269	3	0	Above Barrier	
Lackagh	015	200173	423779	3	0	Above Barrier	
Lackagh	021	206202	423587	0	0	Above Barrier	

19.36 salmon fry/5min to date which is above the threshold level of 17 salmon fry/5min. The catchment will therefore be open for catch and release in 2013.

Table A.7.13. Results of CWEF on the Lackagh catchment in 20)12.
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Site					
Number	2008	2009	2011	2012	Mean
001	16.00	34.00	39.00	36.00	31.25
002	26.00	26.00			26.00
003	13.00		8.00	29.00	16.67
004	10.00		8.00	13.00	10.33
005	32.00	12.00	19.00	13.00	19.00
006	14.00	0.00	0.00		4.67
007	0.00	4.00			2.00
008	0.00	0.00	0.00	0.00	0.00
009	0.00	0.00	0.00	0.00	0.00
010	0.00	0.00			0.00
011		3.00			3.00
012		7.00			7.00
013			13.00	22.00	17.50
014		13.00	13.00	28.00	18.00
015			0.00	0.00	0.00
016			11.00	9.00	10.00
017			50.00	34.00	42.00
018		26.00			26.00
019			13.00	10.00	11.50
020			4.00	6.00	5.00
021				0.00	0.00

Table A.7.14. Results of CWEF for each siteon the Lackagh catchment 2007- 2012.

Spawning Year	1SW Conservation Limit	1SW Predicted Surplus	Status	Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2007	1083	-444	Closed	2008	18.86	18.86
2008	1083	-419	Closed	2009	15.82	17.34
2009	1083	-422	Closed	2010		17.34
2010	1083	-503	Closed	2011	19.20	17.96
2011	1083	-504	Closed	2012	23.57	19.36
						-

Table A.7.12. Conservatio	n limits and	l provisiona	returns
on the Lackagh catchment	along with	the CWEF av	verages.



Map A.7.6. CWEF sites on the Lackagh Catchment 2012.

ion Catchment #:	248

IFI Salmon Catchment #:	248
2012 survey:	25/07/2012 - 13/08/2012.
Sampling carried out by:	Bill Ferry and Cormac Goulding.
Mean Salmon index (2012):	21.51 fry/5min.
Mean Salmon index (all surveys):	12.70 fry/5min.

This, the sixth CWEF survey of this catchment carried out in July and August 201. The survey

Leannan, North Western RBD.



A.7.8

Figure A.7.6. Length distribution of Salmon captured in 2012 CWEF Survey on the Leannan River.

comprised 29 sites, 28 of which were included in the analysis (Table A.7.15). Salmon fry were present at 19 sites. The maximum fry catch was 40 salmon at site 12. The mean catch of included sites was 21.51 salmon fry/5min. Locations of sites are displayed on Map A.7.7. The other fish recorded were Eel, Stickleback and Dace. Two cohorts of juvenile salmon were captured as can be seen in Figure A.7.9.1. The modal length of 0+ fry caught was 6 cm.

River	Site Number	×	۲	Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Leannan	001	219033	421830	3	13	Include	17.9
Leannan	003	215087	420916	1	34	Include	42.7
Leannan	005	213356	419132	2	23	Include	30.7
Leannan	007	206808	416987	1	7	Include	9
Leannan	009	202438	414038	1	32	Include	39.1
Leannan	010	222226	421023	2	14	Include	20
Leannan	011	221685	420994	3	19	Include	19
Leannan	012	219716	420996	1	40	Include	54.9
Leannan	013	209550	415952	3	22	Include	26.6
Leannan	014	207197	416985	2	0	Include	0
Leannan	015	200391	413952	3	21	Include	25.4
Leannan	016	219028	419454	2	25	Include	30.6
Leannan	017	211946	422188	2	1	Include	1.18
Leannan	018	217018	417233	3	9	Include	11.3
Leannan	019	215688	416500	0	0	Include	0
Leannan	021	214139	420478	2	38	Include	47.3
Leannan	022	212205	422903	2	32	Include	41
Leannan	023	210789	423120	3	0	Include	0
Leannan	024	209642	415274	2	17	Include	20.3
Leannan	025	199857	414072	3	0	Include	0
Leannan	026	208225	413219	2	0	Include	0
Leannan	027	205195	417317	2	15	Include	19.1
Leannan	028	202269	413468	1	17	Include	21.9
Leannan	029	201543	413558	2	21	Include	27.1
Leannan	031	201543	413637	2	25	Include	31.3
Leannan	038	209008	413465	2	25	Include	29.6
Leannan	039	218770	419194	3	3	Include	4
Leannan	040	212969	421421	2	22	Include	32.4
Leannan	020	214934	421049	2	16	Not Smpled	

Conclusion

The Leannan had a mean catch of 21.51 salfry/5min in 2012 indicating good spawnig during the 2011-2012 winter season. The cumulative CWEF average of 12.70 salmon fry/5min to date is below the threshold level of 17 salmon fry/5min.

Spawning Year	1SW Conservation Limit	Status 1SW Predicted Surplus		Fry Year	Annual SalFry/ 5min	Mean SalFry/ 5min
2006			Closed	2007	9.47	9.47
2007	3619	-2820	Closed	2008	7.41	8.44
2008	3619	-2620	Closed	2009	8.73	8.53
2009	3619	-2619	Closed	2010	16.71	10.58
2010	3619	-2608	Closed	2011	12.36	10.94
2011	3619	-2611	Closed	2012	21.51	12.70

 Table
 A.7.16.
 SSC assessments
 and
 CWEF averages

 between 2008 to present.

Table	A.7.15.	Results	of	CWEF	on	the	Leannan	catchment	in
2012.									

Site	Survey Year						Site Survey Year								
Number	2007	2008	2009	2010	2011	2012	Mean	Number	2007	2008	2009	2010	2011	2012	Mean
001	2.00	1.00	6.00	8.00	15.00	13.00	6.40	021		5.00	4.00	3.00	2.00	38.00	3.50
002	4.00						4.00	022		2.00	0.00	1.00	0.00	32.00	0.75
003	8.00	17.00		26.00	10.00	34.00	15.25	023		0.00	0.00	0.00	0.00	0.00	0.00
004	5.00						5.00	024		2.00	2.00	1.00	0.00	17.00	1.25
005	7.00	12.00	13.00	17.00	7.00	23.00	11.20	025				0.00	0.00	0.00	0.00
006	5.00						5.00	026		0.00		0.00	0.00	0.00	0.00
007	14	5.00	9.00	10.00	6.00	7.00	8.80	027		11.00	18.00	9.00	14.00	15.00	13.00
008	3	0.00	1.00				1.33	028		13.00	19.00	35.00	19.00	17.00	21.50
009	18	22.00		32.00	52.00	32.00	31.00	029		12.00	37.00	20.00	21.00	21.00	22.50
010		0.00	14.00	1.00	2.00	14.00	4.25	030			0.00				0.00
011		1.00	4.00	0.00	4.00	19.00	2.25	031		10.00	15.00	46.00	10.00	25.00	20.25
012		14.00	20.00	51.00	56.00	40.00	35.25	032			0.00				0.00
013		1.00	10.00	12.00	6.00	22.00	7.25	033			0.00				0.00
014		19.00	30.00	61.00	37.00	0.00	36.75	034		6.00					6.00
015		7.00	6.00	17.00	7.00	21.00	9.25	036		0.00					0.00
016		3.00	3.00	15.00	6.00	25.00	6.75	037		2.00	0.00				1.00
017		0.00	0.00	0.00	0.00	1.00	0.00	038			1.00	0.00	1.00	25.00	0.67
018		0.00	0.00	0.00	0.00	9.00	0.00	039				0.00	0.00	3.00	0.00
019		1.00	0.00	0.00	0.00	0.00	0.25	040				18.00	0.00	22.00	9.00
020		7.00	2.00	14.00	10.00	16.00	8.25	041			0.00				0.00

Table A.7.17. Conservation limits and provisional returns on the Leannan catchment along with the CWEF fishingand averages



Map A.7.7. CWEF Sites on the Leannan 2012.

A.7.9	Isle Burn, North Western RBD.
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IFI Salmon Catchment #:	250
2012 survey:	08/08/2013 - 04/09/2012.
Sampling carried out by:	Bill Ferry and Cormac Goulding.
Mean Salmon index (2012):	2.12 fry/5min.
Mean Salmon index (all surveys):	2.12 fry/5min.

This, the first CWEF survey of this catchment was carried out in august and september 2012. The



Figure A.7.7. Length Distribution of Salmon Captured 2012 during Isle Burn CWEF survey.

survey comprised 10 sites, all of which were included in the analysis (Table A.7.18). Salmon fry were present at only 2 sites both on the same tributary. The maximum fry catch was 11 salmon at site 6. The mean catch of included sites was 2.12 salmon fry/5min. Locations of sites are displayed on Map A.7.8. The other fish recorded were brown trout, Europen eel, flounder and three-spined stickleback. Two cohorts of juvenile salmon were captured as can be seen in Figure A.7.7. The modal length of 0+ fry caught was 6.5 cm.

Conclusion

The Isle burn had a very low mean catch of 2.12 salfry/5min in 2012 this is well below the threshold level of 17 salmon fry/5min.

River	Site Number	× ≺		Riffle Grade	Sal Fry Captured	Status	SalFry/ 5min
Isle (Burn)	001	223928	409686	3	0	Include	0
Isle (Burn)	002	223292	408563	2	0	Include	0
Isle (Burn)	003	222717	407802	3	0	Include	0
Isle (Burn)	004	222932	410394	2	0	Include	0
Isle (Burn)	005	221872	409408	1	0	Include	0
Isle (Burn)	006	224540	410309	2	11	Include	13.6
Isle (Burn)	007	225674	410058	2	6	Include	7.58
Isle (Burn)	008	226602	410750	3	0	Include	0
Isle (Burn)	009	224819	409021	3	0	Include	0
Isle (Burn)	010	222994	407901	2	0	Include	0

Table A.7.18. Results of CWEF on the Isle Burn catchment in 2012.



Map A.7.8. CWEF sites on the Isle Burn Catchment 2012.

B. Other Species.

B.1 Distribution of Eel.



Map B.1.1. Eel distribution in catchments surveyed in 2012 indicating the catchments and sites where Eel were recorded.

B.2 Distribution of Minnow.



Map B.2.1. Minnow distribution in catchments surveyed in 2012 indicating the catchments and sites where minnow were recorded.





Map B.3.1. Stoneloach distribution in catchments surveyed in 2012 indicating the catchments and sites where stoneloach were recorded.Distribution of Roach.

B.4 Distribution Of Roach



Map B.4.1. Roach distribution in catchments surveyed in 2012 indicating the catchments and sites where roach were recorded.

B.5 Distribution Of Gudgeon.



Map B.5.1. Gudgeon distribution in catchments surveyed in 2012 indicating the catchments and sites where gudgeon were recorded



B.6 Distribution of Three-Spined Stickleback.

Map B.6.1. Three-spined Stickleback distribution in catchments surveyed in 2012 indicating the catchments and sites where stickleback were recorded.

B.7 Distribution of Lamprey.



Map B.7.1.Lamprey distribution in catchments surveyed in 2012 indicating the catchments and sites where Lamprey were recorded.

B.8 Distribution Of Crayfish.



Map B.8.1. Crayfish distribution in catchments surveyed in 2012 indicating the catchments and sites where crayfish were recorded.

B.9 Distribution of Flounder.



Map B.9.1. Flounder distribution in catchments surveyed in 2012 indicating the catchments and sites where flounder were recorded
B.10 Distibution of Pike.



Map B.10.1. Pike distribution in catchments surveyed in 2012 indicating the catchments and sites where Pike were recorded.

B.11 Distibution of Perch.



Map B.11.1. Perch distribution in catchments surveyed in 2012 indicating the catchments and sites where Perch were recorded.

B.12 Distibution of Margaritifera.



Map B.12.1. Margaritifera distribution in catchments surveyed in 2012 indicating the catchments and sites where Margaritifera were recorded.

B.13 Distibution of Dace.



Map B.13.1. Dace distribution in catchments surveyed in 2012 indicating the catchments and sites where Dace were recorded.

B.14 Distribution of Trout.



Map B.14.1. Trout distribution in catchments surveyed in 2011 indicating the catchments and sites where trout were recorded.

	2007		2008		2009		2010		2011		2012		Total	Surveys Mean	Surveys	Surveys Mean	Surveys Mean	Surveys Mean
IFI Code /River	# Sites	Avg	Sites ((2008)	(2009)	(2010)	(2011)	(2012)										
Neagh Bann IRDB																		
002/Flurry							3	6.67					3			6.67	6.67	6.67
003/Castletown					6	28.59							6		28.59	28.59	28.59	28.59
004/Fane					5	16.17					7	22.09	12		16.17	16.17	16.17	19.13
005/Glyde			16	2.49	14	17.08	14	31.61					44	2.49	9.78	17.06	17.06	17.06
006/Dee			29	8.55	18	16.92	20	21.72	20	20.13			87	8.55	12.73	15.73	16.83	16.83
Eastern RDB																		
008/Boyne			127	21.91	142	17.54	143	19.38					412	21.91	19.73	19.61	19.61	19.61
013/Broadmeadow							3	0.00					3			0.00	0.00	0.00
014/Tolka									12	1.08	2	0.00	14				1.08	0.54
015/Liffey Lower			4	21.33	6	40.12	10	25.16	12	17.47	5	12.12	37	21.33	30.72	28.90	26.02	23.24
015/Liffey Upper			10	12.93	26	5.11	35	8.15	52	16.20	26	10.13	149	12.93	9.02	8.73	10.60	10.51
016/Dodder									6	13.93			6				13.93	13.93
018/Dargle					5	1.40	17	2.53	16	7.52			38		1.40	1.97	3.82	3.82
021/Vartry			4	10.00	4	15.11	13	2.54	11	15.07			32	10.00	12.56	9.22	10.68	10.68
026/Avoca			16	3.79	29	5.56	23	5.20	65	18.88	23	5.15	156	3.79	4.67	4.85	8.36	7.72
South Eastern RDB																		
028/Owenavorragh							7	19.76					7			19.76	19.76	19.76
031/Slaney	8	19.05			31	15.94	79	18.42					118	19.05	17.50	17.80	17.80	17.80
033/Corock									4	37.11	2	29.41	6				37.11	33.26
034/Owenduff (Wexford)							3	4.97	6	10.65	6	15.91	15			4.97	7.81	10.51
035/Pollmounty	6	4.33											6	4.33	4.33	4.33	4.33	4.33
036/Aughnavaud	1	1.00			1	0.00	1	0.00	1	1.00	2	6.47	6	1.00	0.50	0.33	0.50	1.69
037/Barrow	81	18.92			65	11.10	76	8.83	58	20.48	68	27.32	348	18.92	15.01	12.95	14.83	17.33
038/Nore							97	18.83					97			18.83	18.83	18.83
050/Mahon			9	2.11									9	2.11	2.11	2.11	2.11	2.11
051/Tay									6	8.75			6				8.75	8.75
053/Colligan									5	29.32			5				29.32	29.32
South Western RBD																		
055/Lickey			3	12.37									3	12.37	12.37	12.37	12.37	12.37
057/Finisk			12	10.55									12	10.55	10.55	10.55	10.55	10.55
058/Glenshelane	6	22.72	5	10.96									11	16.84	16.84	16.84	16.84	16.84
060/Bride			19	10.40			25	24.70					44	10.40	10.40	17.55	17.55	17.55
061/Tourig											8	9.40	8					9.40

C. Overall Catchment-wide Electro-fishing results 2007 to 2012.

	2007		2008		2009		2010		2011		2012		Total	Surveys Mean	Surveys	Surveys Mean	Surveys Mean	Surveys Mean
IFI Code /River	# Sites	Avg	# Sites	(2008)	(2009)	(2010)	(2011)	(2012)										
062/Womanagh			8	15.45									8	15.45	15.45	15.45	15.45	15.45
064/Owennacurra	18	15.76											18	15.76	15.76	15.76	15.76	15.76
066/Lower Lee (Cork)					21	0.26							21		0.26	0.26	0.26	0.26
072/llen											6	0.33	6					0.33
077/Mealagh											7	12.82	7					12.82
080/Glengarriff					8	5.93							8		5.93	5.93	5.93	5.93
081/Ardrigole	17	17.15											17	17.15	17.15	17.15	17.15	17.15
082/Kealincha	3	0.00											3	0.00	0.00	0.00	0.00	0.00
083/Lough Fada	4	3.23											4	3.23	3.23	3.23	3.23	3.23
086/Cloonee											6	16.18	6					16.18
088/Roughty									8	19.78			8				19.78	19.78
089/Finnihy											6	8.61	6					8.61
090/Blackwater (Kerry)	5	30.54	10	15.52	12	12.24							27	23.03	19.43	19.43	19.43	19.43
093/Owreagh	5	10.33											5	10.33	10.33	10.33	10.33	10.33
098/Inney	19	24.63			11	19.78							30	24.63	22.20	22.20	22.20	22.20
099/Emlaghmore	3	2.07											3	2.07	2.07	2.07	2.07	2.07
101/Carhan	6	15.76											6	15.76	15.76	15.76	15.76	15.76
102/Ferta	8	19.42											8	19.42	19.42	19.42	19.42	19.42
103/Behy	8	15.41	9	6.14	9	4.03	8	8.71	10	7.17			44	10.78	8.53	8.57	8.29	8.29
105/Cotteners			9	17.42									9	17.42	17.42	17.42	17.42	17.42
107/Maine	55	31.88	48	32.81	16	34.23							119	32.34	32.97	32.97	32.97	32.97
108/Emlagh	4	10.37	5	3.66	5	13.38	5	3.84	5	2.59			24	7.01	9.14	7.81	6.77	6.77
109/Owenascaul	5	20.41			10	22.27							15	20.41	21.34	21.34	21.34	21.34
110/Owenalondrig					7	21.90							7		21.90	21.90	21.90	21.90
111/Milltown (Kerry)			6	12.94			7	26.44					13	12.94	12.94	19.69	19.69	19.69
Shannon IRBD																		
112/Feohanagh					10	16.61							10		16.61	16.61	16.61	16.61
114/Owenmore (Kerry)	10	25.07											10	25.07	25.07	25.07	25.07	25.07
117/Lee (Kerry)			30	0.67									30	0.67	0.67	0.67	0.67	0.67
118/Brick	6	0.00											6	0.00	0.00	0.00	0.00	0.00
120/Galey					31	12.99							31		12.99	12.99	12.99	12.99
125/Deel									40	0.14			40				0.14	0.14
126/Maigue					50	2.82	59	16.05					109		2.82	9.44	9.44	9.44
128/Shannon Graney							30	0.19					30			0.19	0.19	0.19
128/Shannon Kilcrow							25	0.69					25			0.69	0.69	0.69
128/Shannon Woodford							8	0.00					8			0.00	0.00	0.00
131/Fergus	19	12.96			29	4.10	32	6.84					80	12.96	8.53	7.97	7.97	7.97
133/Doonbeg							12	10.31					12			10.31	10.31	10.31

	2007		2008		2009		2010		2011		2012		Total	Surveys Mean	Surveys Mean	Surveys Mean	Surveys Mean	Surveys Mean
IFI Code /River	# Sites	Avg	Sites	(2008)	(2009)	(2010)	(2011)	(2012)										
134/Skivaleen									5	14.82			5				14.82	14.82
143/Aughyvackeen									5	1.00			5				1.00	1.00
Western RBD																		
145/Kilcolgan					35	2.51							35		2.51	2.51	2.51	2.51
146/Clarinbridge									6	7.26			6				7.26	7.26
148/Knock									6	12.53			6				12.53	12.53
149/Owenboliska (Spiddal)			21	4.06									21	4.06	4.06	4.06	4.06	4.06
150/Owenriff	31	15.75											31	15.75	15.75	15.75	15.75	15.75
163/Owenglin					16	11.57							16		11.57	11.57	11.57	11.57
167/Culfin			6	30.83									6	30.83	30.83	30.83	30.83	30.83
168/Erriff	44	29.51	46	24.10	33	16.03	46	20.43	32	20.86	25	27.40	226	26.80	23.21	22.52	22.21	23.09
171/Carrownisky			16	18.25							19	20.60	35	18.25	18.25	18.25	18.25	19.43
172/Bunowen					2	13.62							2		13.62	13.62	13.62	13.62
173/Owenwee (Belclare)							10	8.47	9	7.25	11	15.27	30			8.47	7.86	10.33
178/Newport (L. Beltra)	11	16.06			7	4.74							18	16.06	10.40	10.40	10.40	10.40
179/Srahmore					3	4.33							3		4.33	4.33	4.33	4.33
181/Owengarve					3	5.51							3		5.51	5.51	5.51	5.51
185/Owenduff (Glenamong)					1	6.00							1		6.00	6.00	6.00	6.00
186/Owenmore - Muinhin					5	7.63							5		7.63	7.63	7.63	7.63
187/Glenamoy	14	28.16			4	5.65							18	28.16	16.91	16.91	16.91	16.91
188/Muingnabo	4	0.78											4	0.78	0.78	0.78	0.78	0.78
193/Ballinglen	6	10.65							12	15.09			18	10.65	10.65	10.65	12.87	12.87
194/Cloonaghmore (Palmerstown)			40	8.96			33	9.71	27	22.27	33	17.32	133	8.96	8.96	9.33	13.65	14.56
196/Brusna					34	4.70							34		4.70	4.70	4.70	4.70
198/Leaffony	6	5.76			12	7.95							18	5.76	6.86	6.86	6.86	6.86
203/Garvogue (Bonnet)	52	18.41	47	13.26	53	16.83	53	11.31	24	7.08	39	18.54	268	15.84	16.17	14.95	13.38	14.24
205/Drumcliff							17	17.72					17			17.72	17.72	17.72
207/Grange	4	5.75			6	3.29							10	5.75	4.52	4.52	4.52	4.52
North Western RBD																		
208/Duff	11	7.84	10	9.31	9	18.59	11	25.16					41	8.58	11.91	15.23	15.23	15.23
210/Erne			15	7.37	22	0.17	53	0.29	17	0.06	62	0.00	169	7.37	3.77	2.61	1.97	1.58
212/Ballintra					3	10.27							3		10.27	10.27	10.27	10.27
213/Laghy					9	8.58							9		8.58	8.58	8.58	8.58
214/Eske			14	13.10	14	16.99	17	16.30					45	13.10	15.04	15.46	15.46	15.46
215/Eany							30	15.86			21	30.08	51			15.86	15.86	22.97
216/Oily					11	9.49			7	33.68			18		9.49	9.49	21.59	21.59
217/Bungosteen									10	25.12			10				25.12	25.12

	2007		2008		2009		2010		2011		2012		Total	Surveys	Surveys	Surveys	Surveys	Surveys
IFI Code /River	# Sites	Avg	Sites	(2008)	(2009)	(2010)	(2011)	(2012)										
219/Glen (Ballyshannon)							18	19.44					18			19.44	19.44	19.44
220/Owenwee (Yellow R)	9	21.45	3	5.00	8	14.81					4	20.31	24	13.22	13.75	13.75	13.75	15.39
221/Bracky			8	10.82							13	19.91	21	10.82	10.82	10.82	10.82	15.37
222/Owentocker			10	20.06									10	20.06	20.06	20.06	20.06	20.06
226/Owenamarve					6	3.76							6		3.76	3.76	3.76	3.76
228/Gweedore (Crolly R.)			4	15.99					11	11.32			15	15.99	15.99	15.99	13.65	13.65
229/Clady			6	16.12							11	37.21	17	16.12	16.12	16.12	16.12	26.67
234/Glenna					6	16.80			6	3.77			12		16.80	16.80	10.29	10.29
235/Tullaghobegly			3	8.33			9	9.05					12	8.33	8.33	8.69	8.69	8.69
236/Ray			8	6.43					11	14.89			19	6.43	6.43	6.43	10.66	10.66
240/Lackagh			7	18.86	9	15.82			12	19.20	11	23.57	39	18.86	17.34	17.34	17.96	19.36
248/Leannan	9	9.47	29	7.41	29	8.73	29	16.71	28	12.36	28	21.51	152	8.44	8.53	10.58	10.94	12.70
249/Swilly			3	6.22	17	7.36							20	6.22	6.79	6.79	6.79	6.79
250/Isle (Burn)											10	2.12	10					2.12
251/Burnfoot			3	7.77			5	2.90					8	7.77	7.77	5.33	5.33	5.33
252/Mill (Letterkenny)							3	0.00					3			0.00	0.00	0.00
253/Crana					23	15.74							23		15.74	15.74	15.74	15.74
256/Clonmany			4	16.61			12	6.59					16	16.61	16.61	11.60	11.60	11.60
257/Straid							5	0.20					5			0.20	0.20	0.20
258/Donagh							10	4.25					10			4.25	4.25	4.25
259/Glennagannon					10	16.65			11	4.05			21		16.65	16.65	10.35	10.35
261/Culoort							6	4.03					6			4.03	4.03	4.03

Table C.1: Summary of all sites included in analyses 2007 to 2012.



D. Boxplots: CWEF results included in analysis for each catchment >2 surveys.





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