

using science to create a better place

Restormel Fish Counter (River Fowey)
Annual Report 2011

Environmental Monitoring Team
Devon and Cornwall Area
May 2012

Contact for further information:

Paul Elsmere
Environment Agency
Environmental Monitoring Team (Devon and Cornwall Area)
Unit 19/26 Pennygillam Industrial Estate
Launceston
Cornwall PL15 7ED
Telephone: 01208 265417
Email: paul.elsmere@environment-agency.gov.uk

Contents

Executive Summary

1	INTRODUCTION	1
2	BACKGROUND	1
3	NET BUY-BACK	2
4	SPECIES APPORTIONMENT	2
5	VALIDATION OF COUNTER EFFICIENCY	2
6	RESULTS	3
6.1	Upstream salmon counts (minimum estimates)	3
6.2	Upstream sea trout counts	5
6.3	Large sea trout estimate (March – June 2011)	7
6.4	Small sea trout estimate (March 2011 – February 2012)	7
6.5	Video validation and counter efficiency	8
6.5.1	Fish counter detection efficiency	8
6.5.2	Fish counter sizing efficiency	8
6.6	Rod and net catches	9
6.7	Other species	9
6.8	Environmental factors	10
6.8.1	Flow	10
6.8.2	Water temperature	10
7	DATA PROCESSING	11
8	UPDATE	11
9	DOWNTIME	11
10	REFERENCES	12
11	APPENDICES	13

List of Tables

Table 1 - Fish counter sizing efficiencies (2011).....	14
Table 2 - Fish counter detection efficiency	15
Table 3 - Adjustments for sizing and detection efficiencies applied to trace verified (raw) salmon counts	16
Table 4 - Adjustments for sizing and detection efficiencies applied to trace verified (raw) large sea trout counts.....	16
Table 5 - Adjustments for sizing and detection efficiencies applied to trace verified (raw) small sea trout counts.....	16
Table 6 - Monthly upstream counts (minimum estimates) for salmon on the River Fowey July to February 1995 – 2011/12	19
Table 7 - Monthly upstream counts for sea trout at Restormel 1995 – 2011/12	19

List of Figures

Figure 1 - Annual upstream counts (minimum estimates) for salmon on the River Fowey over the period July to February 1995 – 2011/12	4
Figure 2 - Monthly salmon counts (minimum estimates) recorded on the River Fowey (July 2011 – February 2012).....	4
Figure 3 - Annual upstream counts (minimum estimates) for sea trout on the River Fowey 1995 – 2011/12	6
Figure 4 - Monthly upstream sea trout counts recorded on the River Fowey (March 2011 – February 2012).....	7
Figure 5 - Daily upstream counts of salmon in relation to flow (cumecs) at Restormel Weir (July 2011 to February 2012 inclusive).....	17
Figure 6 - Daily upstream counts of sea trout in relation to flow (cumecs) at Restormel Weir (March 2011 to February 2012 inclusive).....	17
Figure 7 – Monthly upstream counts of salmon in relation to temperature (°C) at Restormel Weir (March 2011 to February 2012 inclusive)	18
Figure 8 - Monthly upstream counts of sea trout in relation to temperature (°C) at Restormel Weir (March 2011 to February 2012 inclusive)	18

List of Appendices

Appendix 1 - Video validation protocol and methodology.....	13
Appendix 2 - Daily upstream counts in relation to flow at Restormel Weir 2011/2012.....	17
Appendix 3 - Monthly upstream counts in relation to temperature (°C) at Restormel Weir 2011/2012.....	18
Appendix 4 – Monthly upstream counts for salmon and sea trout on the River Fowey 2011/12.....	19
Appendix 5 - Daily movements of salmon and sea trout recorded at Restormel fish counter in 2011/12.....	21

Executive summary

- This report presents the upstream counts of migratory salmonids recorded on the River Fowey at Restormel Weir fish counting station (SX 107 613) over the period March 2011 to February 2012 inclusive.
- The minimum upstream **salmon estimate** for 2011, over the period July 2011 to February 2012, was **675**. This is 45 per cent lower than 2010 (1,220) and 28 per cent lower than the 10-year average (934).
- The minimum upstream **sea trout estimate** for 2011 was 10,022. Overall, the sea trout run estimate for 2011 was 27 per cent lower than in 2010 (13,648) and was the fifth highest count recorded in the last 17 years. Minimum estimates for large sea trout and small sea trout are as follows:
 - **363 large sea trout** (deflections greater than 70 March to June), which is 1 per cent lower than 2010 (367) and 43 per cent lower than the 10-year average (645). This is the fourth lowest large sea trout estimate recorded at Restormel over the past 17 years.
 - **9,659 small sea trout** (deflections less than 50), which is 27 per cent lower than the run estimate for 2010 (13,282) and 4 per cent above the 10-year average (9,252).
- The fish counter at Restormel had six periods of downtime due to counter faults which equated to 19 days of downtime overall. Fish counts were estimated for downtime caused by counter faults but not for weir cleaning due to the small numbers of fish involved.

Important: *The salmon and sea trout run estimates in this report were calculated using fish counter data from March 2011 to February 2012, inclusive. As a result the figures may differ from those quoted by ICES who class a run year as January to December, inclusive.*

1 Introduction

The following report presents the upstream salmon and sea trout counts recorded on the River Fowey at Restormel Weir fish counting station (SX 107 613) over the period March 2011 to February 2012 inclusive. The counter data has been considered in relation to:

- daily mean residual flow (cumecs)
- temperature (°C)

The flow data reflects the residual flow at Restormel Weir following abstraction by South West Water (SWW) at Restormel Water Treatment Works (SX 107 613).

The report also includes details of the on-going counter validation work and the annual audit of counter data. This is primarily used to assess counter efficiency and to improve species apportionment.

2 Background

The Restormel fish counter is situated on the River Fowey and is approximately three kilometres upstream of the tidal limit.



The current fish counter is a resistivity-based system (Logie C) manufactured by Aquantic Ltd and covers all three channels of the gauging weir at

Restormel. The counter was installed in 1994 and data collection commenced in 1995.

A description detailing the operation of the resistivity fish counter at Restormel is available on request.

3 Net buy-back

National byelaws to protect spring salmon were introduced in April 1999 for ten years. On 1 January 2010 they were renewed for a further ten years. These byelaws restrict the salmon-netting season on the River Fowey from the beginning of the season (2 March) until 1 June. However, as the River Fowey does not have a significant run of 'spring' salmon, netsmen receive a special dispensation to net for sea trout before the 1 June, provided that any salmon caught before the 1 June are released.

The licensed net fishing season was then closed by a full season net buy-back agreed from 2009 to 2017. This agreement with the netsman was funded by South West Water (SWW) and negotiated by the Environment Agency.

The SWW buy-back and the national spring salmon byelaws close all legal net fishing for salmon and sea trout within the Fowey estuary until 2017. The aim of the buy-back scheme is to mitigate for sea trout and salmon spawning, which was lost due to the construction of Colliford Reservoir.

4 Species apportionment

The counter records electrical changes that are directly proportional to the size of fish that have traversed the counter electrodes. Species apportionment is possible due to the linear relationship that exists between fish length and deflection size. However, it is not possible to distinguish between a salmon and a sea trout of comparable size. It is therefore inevitable that the salmon count may include some large sea trout and *vice versa*. A data handling protocol (refer to 2010 report or available on request) has been developed to minimise this eventuality.

5 Validation of counter efficiency

Trace information, graphical information produced by the counter when an event occurs, is initially used as a quick way of checking raw fish counter data and identifying any potential problems. Analysis of trace data can also be used to improve count accuracy when video data is unavailable.

The counter data is audited, using video footage taken over the weir, on an annual basis. Counter events are matched to the corresponding video events, which can then be used to assess the detection and sizing efficiency of the counter (Appendix 1) and investigate anomalies in the counter data.

Video validation and the annual audit of counter data is a vital part of the fish counter work at Restormel and gives confidence in the accuracy of the data recorded by the fish counter.

Note: a) To aid in interpretation of the data, axis scaling may differ between the monthly summary plots. Care should therefore be taken when interpreting the data within each figure.

b) The flow data presented is the residual flow that exists at Restormel Weir following water abstraction by South West Water.

6 Results

The figures and graphs presented in this report (except where stated) have been adjusted for:

- detection efficiency only (1995 to 2005)
- detection and sizing efficiency (2005 to 2011)

Historical trapping and netting data indicated that:

- a) very few salmon enter the River Fowey prior to the end of June
- b) the upstream migration of large sea trout is almost over by the end of June

Bearing the above in mind, the assumptions for estimating the relative proportions of salmon and large sea trout from the salmon / large sea trout count data are as follows:

- ← **Large sea trout** = fish with deflections greater than or equal to 70, equivalent to a 70 cm fish, running between March and June and are discounted from the salmon estimate
- ← **Salmon** = fish with deflections greater than or equal to 70 (July and August) and with deflections greater than or equal to 50 (September to February).

A full breakdown of the analysis and the protocol used can be found in the 2010 report or is available on request.

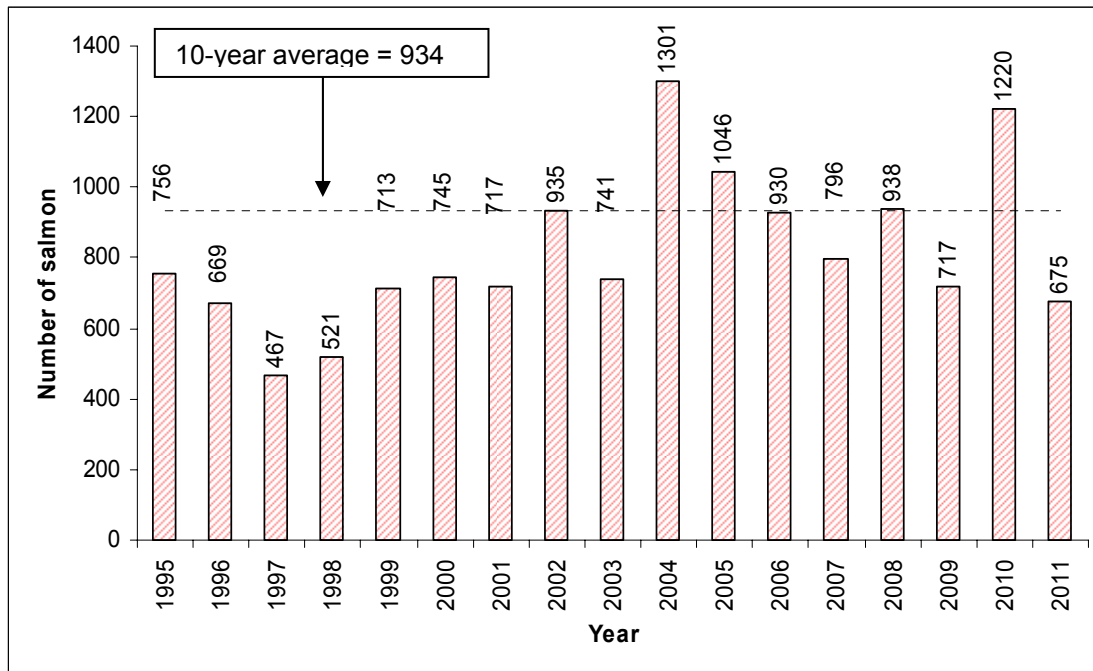
6.1 Upstream salmon counts (minimum estimates)

Historic trapping, netting and rod catch records indicate that a small early run of salmon starts moving into the Fowey from the beginning of July. The main run of salmon enters the river later in the year usually from October to February.

The minimum upstream **salmon estimate** for 2011, over the period July 2011 to February 2012, was **675**. This is 45 per cent lower than 2010 (1,220) and 28 per cent lower than the 10-year average (934).

All of the monthly salmon counts with the exception of November were below the 10-year average.

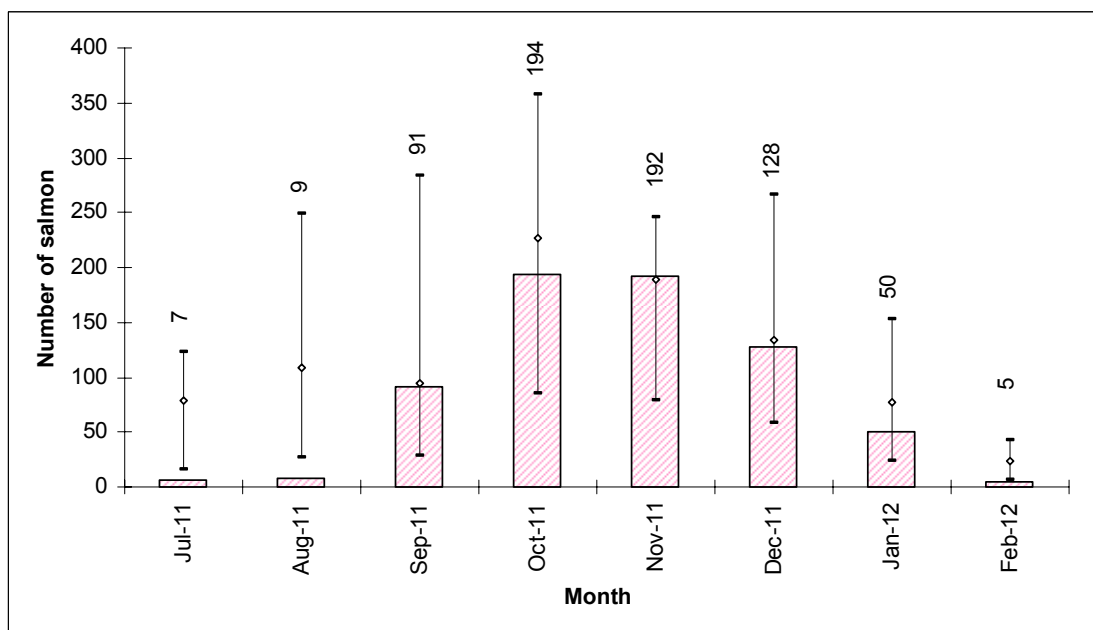
Figure 1 - Annual upstream counts (minimum estimates) for salmon on the River Fowey over the period July to February 1995 – 2011/12



*Dotted line indicates the 10-year average (2001 – 2010)

**For between year comparisons refer to Appendix 4, Table 6.

Figure 2 - Monthly salmon counts (minimum estimates) recorded on the River Fowey (July 2011 – February 2012)



*Data labels and coloured bars indicate 2011/12 figures. High-low bars indicate max, min and average from 2001 - 2010.

Figure 1 indicates a decrease in the number of salmon running into the river in 2011 when compared to 2010. The count estimate (675) was also lower than the 10-year average (934).

The 2011 salmon count was the fourth lowest recorded since the counter was installed in 1995.

In all months the number of salmon recorded by the counter was within the historical range (in other words, between the maximum and minimum) recorded over the last 10-years, with the exception of July, August and February (Figure 2).

The majority (76 per cent) of the 2011 salmon run (514 fish) was recorded in October, November and December.

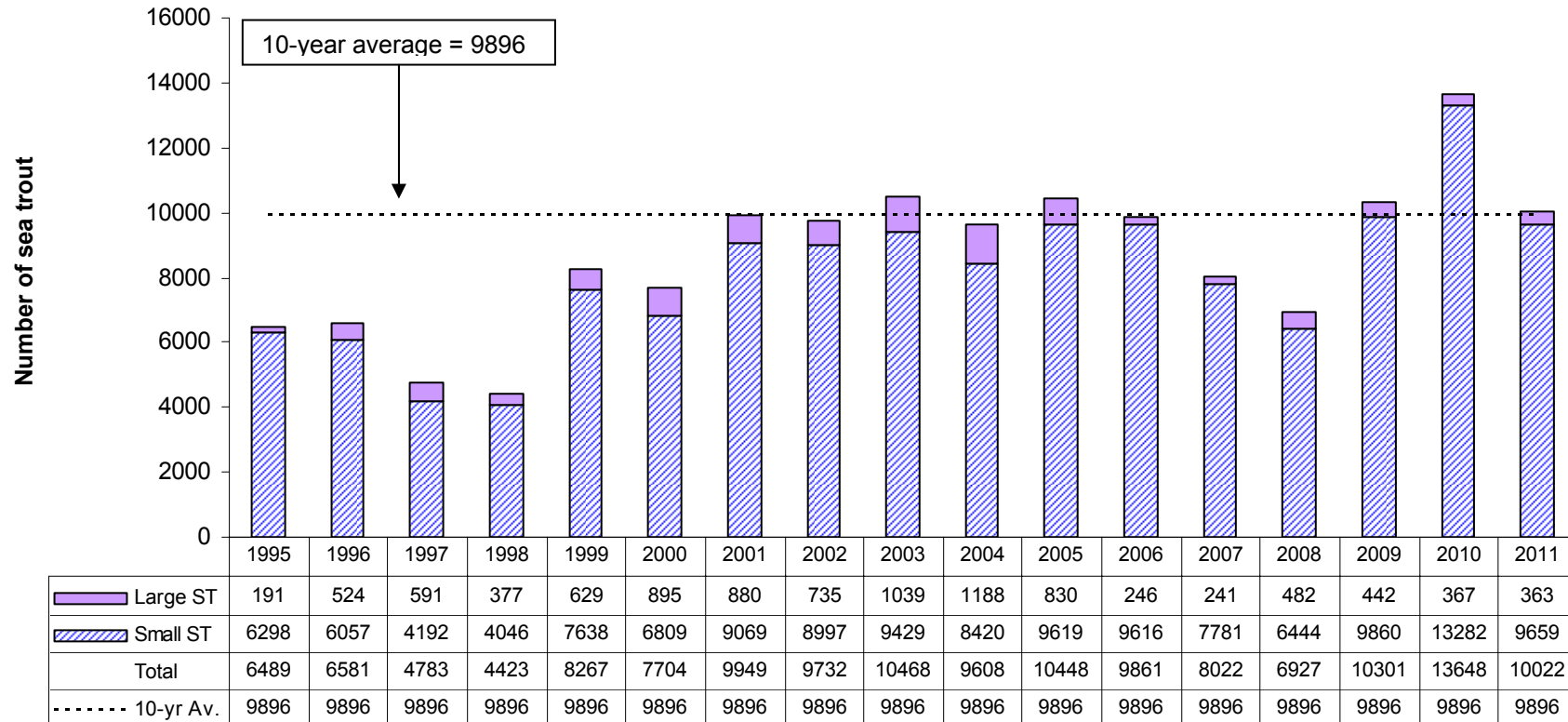
6.2 Upstream sea trout counts

The minimum upstream **sea trout estimate** for 2011 was **10,022**. Overall, the sea trout run estimate for 2011 was 27 per cent lower than in 2010 (13,648) and was the fifth highest count recorded in the last 17 years.

Overall, the 2011 sea trout counts are 1 per cent up on the 10-year average (9,896).

Figure 3 shows the relative proportions of large and small sea trout within the 2011 sea trout run in relation to the 10-year average.

Figure 3 - Annual upstream counts (minimum estimates) for sea trout on the River Fowey 1995 – 2011/12

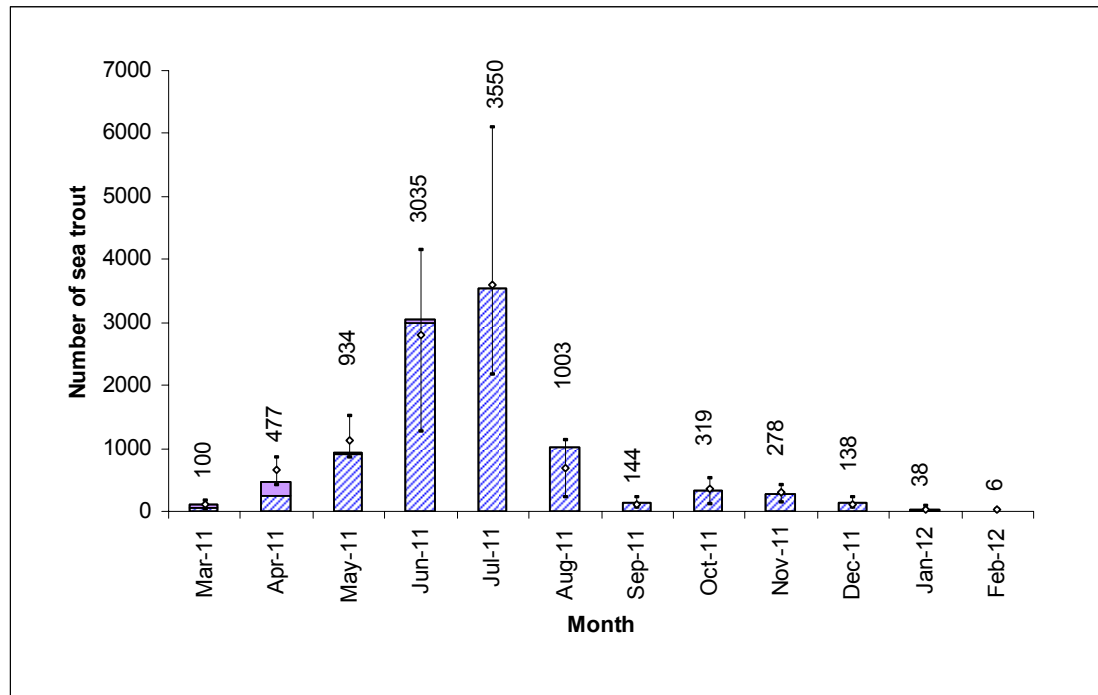


*10-year average (dotted line) indicates average for sea trout count (large sea trout plus small sea trout)

**For between year comparisons refer to Appendix 4, Table 7.

The 2011 sea trout counts are below the 10-year monthly averages for all months, with the exception of June, August, September, December and January (Figure 4).

Figure 4 - Monthly upstream sea trout counts recorded on the River Fowey (March 2011 – February 2012)



Note: Data labels indicate the 2011 /12 figures. The high / low bars indicate the 10-year max, min and average (2001 – 2010) for all sea trout age classes.

6.3 Large sea trout estimate (March – June 2011)

The minimum **large sea trout estimate** for 2011 was **363**. This estimate is 1 per cent lower than 2010 (367) and 43 per cent lower than the 10-year average (645). This is the fourth lowest large sea trout estimate recorded at Restormel over the past 17 years.

The large sea trout count for 2011 was less than all of the 10-year monthly averages with the exception of April.

Although numbers of returning large sea trout have increased in comparison to those recorded in 2006 and 2007 large sea trout numbers are still significantly below the figures recorded in 2003 (1039) and 2004 (1188) and have been decreasing year on year since 2004.

6.4 Small sea trout estimate (March 2011 – February 2012)

For the purposes of this report, salmonids that are less than 70cm (March to June inclusive) or 50cm (July – February inclusive) are classified as small sea trout.

The **small sea trout estimate** for 2011 was **9,659**. This figure is 27 per cent lower than the run estimate for 2010 (13,282) and 4 per cent above the 10-year average (9,252).

The monthly small sea trout counts were lower than the 10-year averages for all months with the exception of May, June, August, September and December.

The 2011 count is the third-highest small sea trout count recorded over the past 17 years of counter operation.

6.5 Video validation and counter efficiency

Video validation data was collected using a PC-based video capture card (Voltek – SuperDVR) and was downloaded onto an archive drive once a week.

The counter detection efficiencies were calculated from the number of fish that were seen on video and recorded by the counter (3 May to 31 August).

Additional video footage was collected between September and December to estimate silver eel escapement, but has not been used in the efficiency calculations.

6.5.1 Fish counter detection efficiency

The overall detection efficiency of the counter for upstream salmonids in 2011 was 87 per cent. The counter detected all of the salmon that were seen during the video reviews. Decreases in the overall efficiency of the counter were due to the counter missing small sea trout in June and July, either because of multiple events or elevated flows.

Detection efficiencies were calculated using data for upstream migrating salmonids (individuals and groups) detected by the counter or seen on video (Appendix 6). Non-target species (such as otters) or spurious events were removed from the data prior to this analysis.

To calculate the detection efficiency of the fish counter, 48 hours of the footage collected in 2011 were blind watched. This is 1.6 per cent of the total time available and 2 per cent of the video collected (3 May to 31 August).

The counts have been adjusted for all months where video validation data was available (actual or historic) to correct for any losses in detection efficiency.

6.5.2 Fish counter sizing efficiency

To determine the counter sizing efficiency all of the footage from the blind and non-blind watched video (637 events) over the period 3 May to 31 August was analysed.

Adjustments for errors in fish sizing have only been applied to those months for which sizing efficiencies have been calculated (May to August).

Table 1 (Appendix 1) utilises matched counter and video data for upstream migrating salmonids to identify errors in the sizing ability of the counter. The matched counter and video data indicates that the counter was incorrectly classifying fish in all months reviewed (May to August) with a significant proportion of the fish initially being mis-classified as large sea trout or salmon.

The mis-classification of large sea trout and salmon during May and June was a particular problem and is likely to have been due to low flows. Under these conditions medium sized fish in the range 40 to 60 cm can return a larger deflection value as they tend to pass closer to the electrodes. For example, a 50 cm fish could return a deflection of over 70cm, which would then be incorrectly classified as a large sea trout or salmon.

Reductions in detection and sizing efficiency can usually be attributed to large numbers of sea trout passing over the weir in groups of two or more, unusual flow conditions or a combination of the two. The review of the available video footage allows us to correct for these events. It is this type of information that can be used to fine tune the settings of the fish counter and improve the detection and sizing efficiencies in the long term.

6.6 Rod and net catches

The salmon rod catch for the River Fowey in 2011 was 126, of which 89 were released back to the river; this represents a 71 per cent catch and release rate. The total declared rod catch (retained and released combined) accounts for 19 per cent of the total estimated salmon run in 2011. In 2010 it was 25 per cent.

The 2011 sea trout rod catch was 866, with 588 released back to the river; this represents a 68 per cent catch and release rate. The 2011 declared rod catch (retained and released combined) was the same as 2010 and accounts for 9 per cent of the total estimated sea trout run (all age classes).

Due to the net buy-backs no salmon or sea trout were caught by the Fowey nets-men in 2011.

6.7 Other species

Otters and eels were regularly seen passing over the weir during the reviews of the 2011 video footage. Some of these events have been identified from analysis of the trace data or from the video footage (where available). All of the fish counter data presented in this report has been adjusted to remove these events from the salmonid count.

We have been investigating the use of downstream count data, video footage and knowledge of when silver eels are likely to be moving out of the river to estimate silver eel escapement (adult eel migration out of the river). This

information will enable us to better protect local eel populations and formulate more effective Eel Management Plans (EMPs)

No other species were identified from video footage.

6.8 Environmental factors

Flow, temperature and water conductivity are routinely measured at Restormel. Flow is generally considered to be the dominant factor controlling the upstream migration of salmonids, but should not be considered in isolation as its effects are often modified by other factors.

6.8.1 Flow

The residual patterns of flow at Restormel in 2011/12 (Appendix 2 - Figures 5 and 6) have been analysed over the period March 2011 to February 2012 (inclusive), which is considered to be a complete run year.

97 per cent of upstream migrating salmonids utilised daily mean flows of 1 to 10 cumecs to move up into freshwater. This flow range accounted for 86 per cent of the total salmon run and 97 per cent of the sea trout run in 2011/2012.

Flow data for 2011/12 indicated that suitable flows for upstream migration on the side channels i.e. greater than or equal to 1.16 cumecs were available for 83 per cent of the year.

Short periods of elevated flows (greater than 10 cumecs) prevailed for 6 per cent of the year and were predominant during December 2011 and January 2012. These periods of flow accounted for only 2 per cent of salmonid movements overall.

6.8.2 Water temperature

The average monthly water temperatures over the period March 2011 to February 2012 inclusive (Appendix 3 - Figures 7 and 8) are generally consistent with previous years (based on comparisons with the 10-year monthly averages). However, it must be noted that water temperatures over the spring, autumn and winter were, on average, 1°C higher than the historical mean.

The average monthly temperatures were above the 10-year monthly averages for all months apart from June and July which were both less than 0.3°C lower than the 10-year average.

It is generally accepted that salmonids tend to move within an optimum temperature band of between 5°C and 21.5°C (Alabaster, 1970). Daily mean water temperatures over the period March 2010 to February 2011 inclusive, did not exceed 21.5°C and only dropped below 5°C on one day (3 February 2012).

7 Data processing

The data presented in this report represents the final adjusted counts, which takes into account maintenance work on the fish pass and non-target species.

Any data contained within the original monthly summary reports has been superseded by this report.

8 Update

- Continued validation of the counter's performance and efficiency will be carried out in 2012.
- Continued assessment of the presence and abundance of non-target species (such as otters and eels) traversing the fish pass .
- Broadband was installed at the site in early 2011 and it is hoped that further telemetry upgrades will be carried out in 2012.
- Continued analysis of downstream event data in combination with video to estimate silver eel escapement will take place in 2012 if resources allow.

9 Downtime

The counter was out of operation for 457 hours out of a possible 8,760. This equates to approximately nineteen days out of a possible total of 365 days. The majority of the downtime can be attributed to six separate counter faults (444 hours) the remainder (13 hours) was due to routine weir cleaning.

Fish counts were estimated for periods of downtime due to counter faults using the average daily count for the past three years. Counts were not estimated for the periods of downtime due to weir cleaning due to the small numbers of fish involved.

10 References

01. Alabaster, J.S. (1970). River flow and upstream movement and catch of migratory salmonids. *J. Fish. Biol.* 2, 1-13.
02. Banks, J.W. (1969). A review of the literature on the upstream migration of adult salmonids. *J. Fish Biol.* 1, 85-136.
03. Environment Agency (1997). Design and Use of Open Channel Resistivity Fish Counters (Advisory Manual). Fisheries Technical Manual No. 2. Environment Agency North West Region. R & D Technical Report W23.
04. Environment Agency (1997). Salmon and Sea Trout Movements Recorded at Restormel Fish Counting Station on the River Fowey during 1996. Environment Agency. Annual Report 1997.
05. Environment Agency (1998). "A Preliminary Assessment of the Buy-back of licensed Migratory Salmonid Netting Time on the River Fowey in 1997 and 1998. Environment Agency. Restormel Fish Counter Data Report - July 1998.
06. Environment Agency (2010). Restormel Fish Counter. Annual Report 2010 Environment Agency 2011.
07. Environment Agency (2010). Freshwater fisheries statistics for England, Wales and the Border Esk, 2010 (Declared catches of salmon and sea trout by rods, nets and other instruments). Environment Agency 2010.
08. Milner, N. J. (1989). Fish movement in relation to freshwater flow and quality. Workshop proceedings of The Atlantic Salmon Trust 6 April 1989.

11 Appendices

Appendix 1 - Video validation protocol and methodology

Overview

- The overall objective of video validation is to assess the:
 - **sizing ability of the counter**
 - **detection efficiency of the counter**
- The following strategy is valid for counter data auditing purposes.
- The strategy provides a method of assessing the performance of the fish counter and aims to set realistic and obtainable targets for video reviewing.

Video collection

- Video footage of fish movements is collected over all three channels of the gauging weir at Restormel between May and August inclusive. This is when the greatest numbers of fish are moving upstream and the widest ranges of river flows are available. Additional footage may be taken over the period November to December where conditions allow.

Video reviewing

- The aim is to carry out an initial review of the available video footage within 7 to 14 days of collection.
- The video footage is reviewed twice. Initially the footage is watched 'blind' i.e. without referring to the counter data. The footage is then reviewed a second time using the data from the counter, to highlight fish that may have been missed during the first review. Any fish seen are measured and then the video data is then matched to the corresponding counter data and recorded as one of the following:

Upstream Fish - Salmon, Sea Trout or other species.
Downstream Fish - Salmon, Sea Trout or other species.
Upstream Event
Downstream Event

- This ensures an unbiased video count and an accurate video record of fish passage.

Sizing efficiency

- Sizing efficiency is used to assess the ability of the counter to correctly classify fish based on their deflection size.

- Fish recorded and measured for the video footage is used to assess the sizing efficiency of the counter.
- Each fish seen on video is measured (mm) on the monitor screen and given a “true” fish size (cm) using a conversion factor. The conversion factor can be determined from the relationship between the inter-electrode spacing on the video image and on the counter structure itself.
- To get a representative sample a minimum of 100 randomly selected fish need to be measured per month.
- If the counter has mis-classified 10% or more of the fish in any of the months then an additional 50 fish should be reviewed.
- To arrive at the sizing efficiencies it is important that the counter and video validation data is matched i.e. counter events are matched to video events.

Table 1 - Fish counter sizing efficiencies (2011)

Month	Species split	Deflection/Screen size	Counter	Video	Multiplying factor
May	Large ST	>=70	76	5	0.07
	Small ST	<70	80	80	1.00
Jun	Large ST	>=70	45	9	0.20
	Small ST	<70	238	238	1.00
Jul	SL	>=70	7	1	0.14
	ST	<70	172	172	1.00
Aug	SL	>=70	31	4	0.13
	ST	<70	130	130	1.00

- To calculate the sizing efficiencies: divide the number of salmon sized on video by the number of salmon sized by the counter to arrive at the multiplication factor for the counter sizing efficiency.
- Multiply the counter figure for each species and month by the multiplication factor that has been calculated for that species and month (Table 1) to arrive at the count adjusted for sizing efficiency.
- It is important that any fish that have been mis-classified due to a counter sizing error should be reallocated i.e. subtracted from the count for that species and added onto the other species.

For example:

Table 3 shows the July salmon count as 47 fish (Column 3), which after applying the sizing adjustment becomes 6.71 salmon ($0.1428 \times 47 = 6.71$). The remainder ($47 - 6.71 = 40.29$) must be therefore be sea trout so should be added to the sea trout count (Table 5, Column 7 [$2656 + 40.29 = 2696$]).

Detection efficiency

- The detection efficiency is used to assess the ability of the counter to detect fish of different sizes. A counter used for the stock discrimination of salmonids should be assessed for its ability to count salmon and sea trout independently.
- To assess the counter detection efficiency a review of around 10 hours per month over the period May to August and, if time allows, November and December should be undertaken. **A total of 50 fish must be recorded per month**, if this total is not reached additional hours must be reviewed.
- If the counter has missed 10 per cent or more of the fish recorded on the video in any one month then an additional 5 hours of the remaining video for that month should be reviewed. The hours for review should again be randomly selected to provide an un-biased assessment.
- If visibility within any of the randomly selected hours is poor then another hour from the same month should be randomly selected and reviewed.
- Dividing the number of fish detected by the counter by the video count gives the overall detection efficiency. This figure can be further split down into detection efficiencies for salmon and sea trout if the fish species can be identified from video footage or by other means.

Table 2 - Fish counter detection efficiency

Month	Species split	Counter	Video	Adjustment factor
May	Large ST	0	0	1.00
	Small ST	55	55	1.00
Jun	Large ST	0	0	1.00
	Small ST	166	175	1.05
Jul	SL	0	0	1.00
	ST	79	104	1.32
Aug	SL	0	0	1.00
	ST	56	74	1.32

- Multiply the count adjusted for sizing efficiency (Tables 3,4 and 5, Column 7) by the multiplication factor that has been calculated for detection efficiency for that species and month to arrive at the count figure adjusted for sizing and detection efficiency. This will give the final adjusted count.

Table 3 - Adjustments for sizing and detection efficiencies applied to trace verified (raw) salmon counts

Month	Counter	Raw count minus deflections <70 (July and August only)	Sizing Adjusted	Counter * size adjust	Counter- (counter * size adjust)	Size adjust total for SL	Detection adjusted	Count adjusted for sizing and detection efficiency
Jul	170.00	47.00	0.14	6.71	40.29	6.71	1.00	7
Aug	80.00	67.00	0.13	8.65	58.35	8.65	1.00	9
Sep	91.00		1.00	91.00	0.00	91.00	1.00	91
Oct	194.00		1.00	194.00	0.00	194.00	1.00	194
Nov	192.00		1.00	192.00	0.00	192.00	1.00	192
Dec	128.00		1.00	128.00	0.00	128.00	1.00	128
Jan	50.00		1.00	50.00	0.00	50.00	1.00	50
Feb	5.00		1.00	5.00	0.00	5.00	1.00	5
Total								675

Table 4 - Adjustments for sizing and detection efficiencies applied to trace verified (raw) large sea trout counts

Month	Counter	Raw count minus deflections <70 (July and August only)	Sizing Adjusted	Counter * size adjust	Counter- (counter * size adjust)	Size adjust total for SL	Detection adjusted	Count adjusted for sizing and detection efficiency
Mar	40		1.00			40.00	1.00	40.00
Apr	242		1.00			242.00	1.00	242.00
May	373		0.07	24.54	348.46	24.54	1.00	24.54
Jun	283		0.20	56.60	226.40	56.60	1.00	56.60
Total								363.14

Table 5 - Adjustments for sizing and detection efficiencies applied to trace verified (raw) small sea trout counts

Month	Counter	Raw count plus deflections <70 from SL count (July and August only)	Sizing Adjusted	Counter x size adjust	Counter- (counter x size adjust)	size adjust total for ST	Detection adjusted	Count adjusted for sizing and detection efficiency
Mar	60		1.00			60	1.00	60
Apr	235		1.00			235	1.00	235
May	561		1.00	561.00	0.00	909	1.00	909
Jun	2599		1.00	2599.00	0.00	2825	1.05	2979
Jul	2533	2656	1.00	2656.00	0.00	2696	1.32	3550
Aug	688	701	1.00	701.00	0.00	759	1.32	1003
Sep	144		1.00			144	1.00	144
Oct	319		1.00			319	1.00	319
Nov	278		1.00			278	1.00	278
Dec	138		1.00			138	1.00	138
Jan	38		1.00			38	1.00	38
Feb	6		1.00			6	1.00	6
Total								9659

Appendix 2 - Daily upstream counts in relation to flow at Restormel Weir 2011/2012.

Figure 5 - Daily upstream counts of salmon in relation to flow (cumecs) at Restormel Weir (July 2011 to February 2012 inclusive)

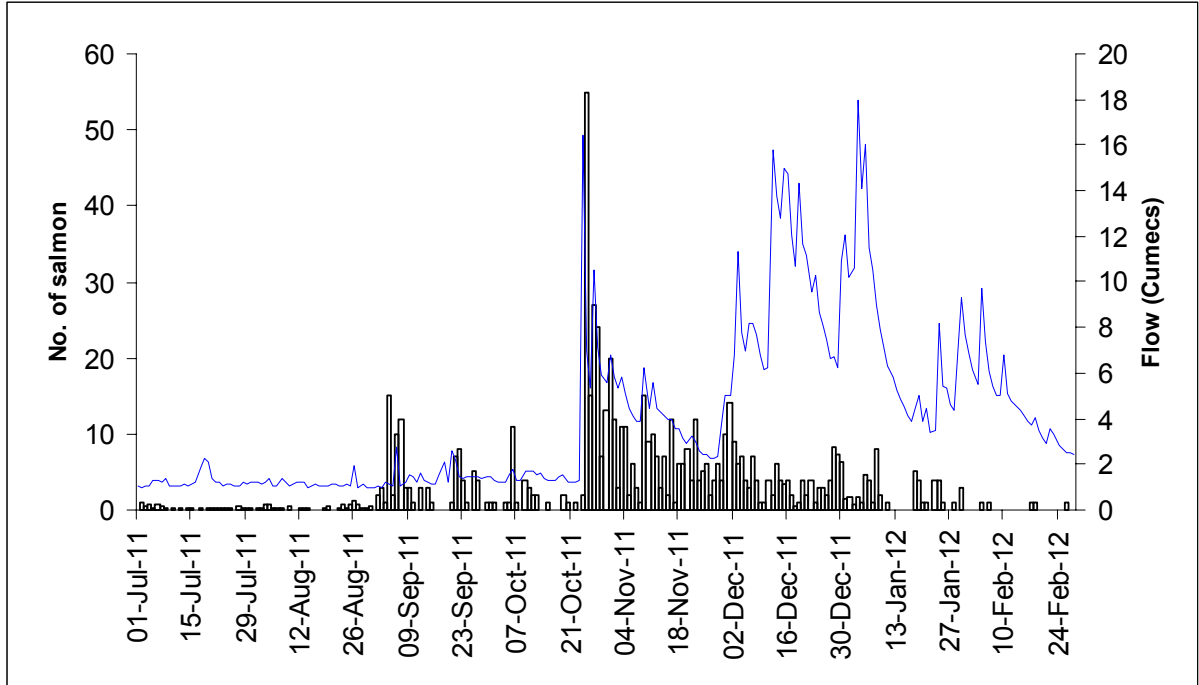
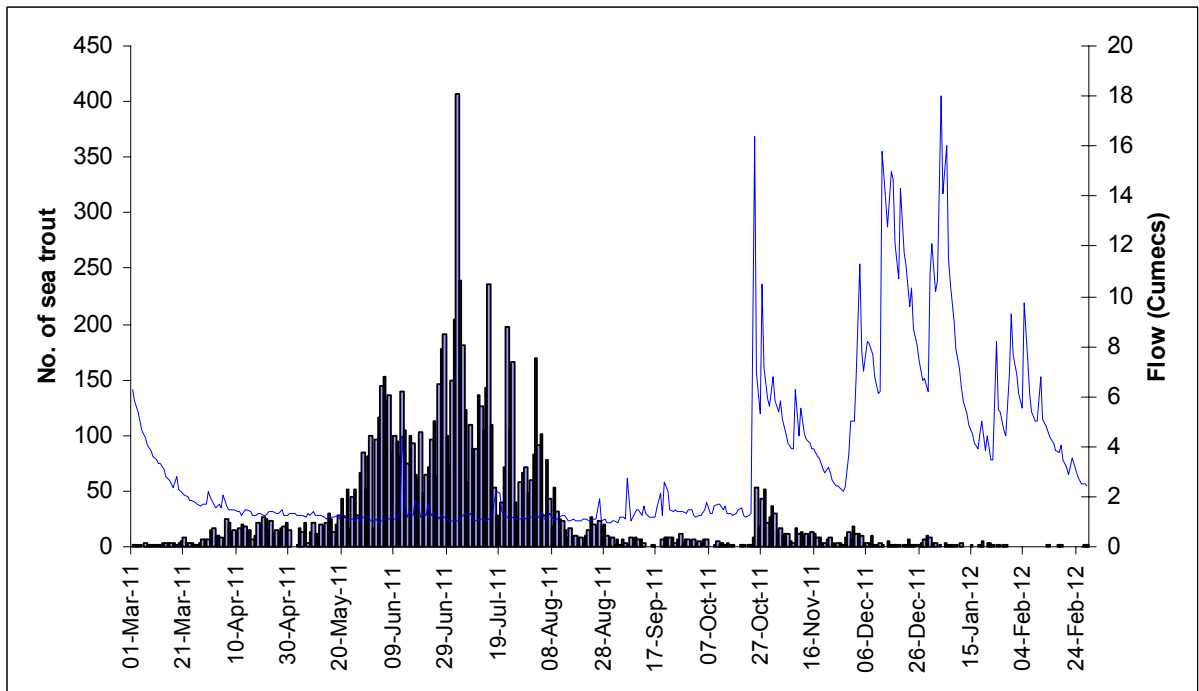
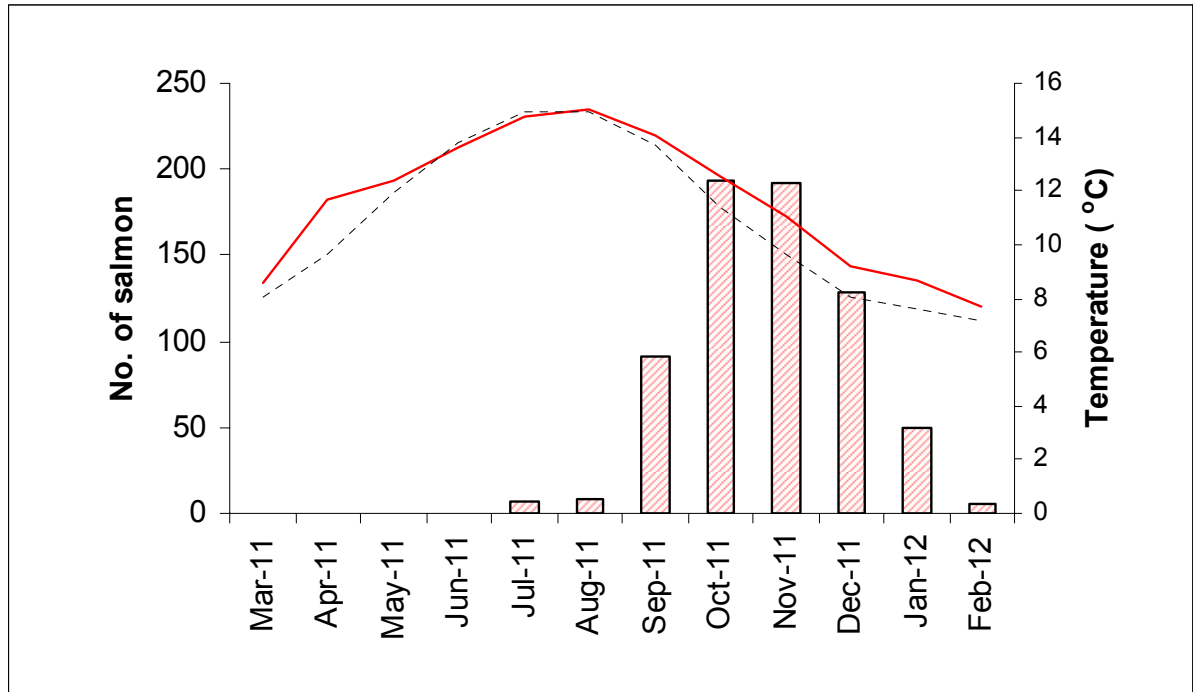


Figure 6 - Daily upstream counts of sea trout in relation to flow (cumecs) at Restormel Weir (March 2011 to February 2012 inclusive)



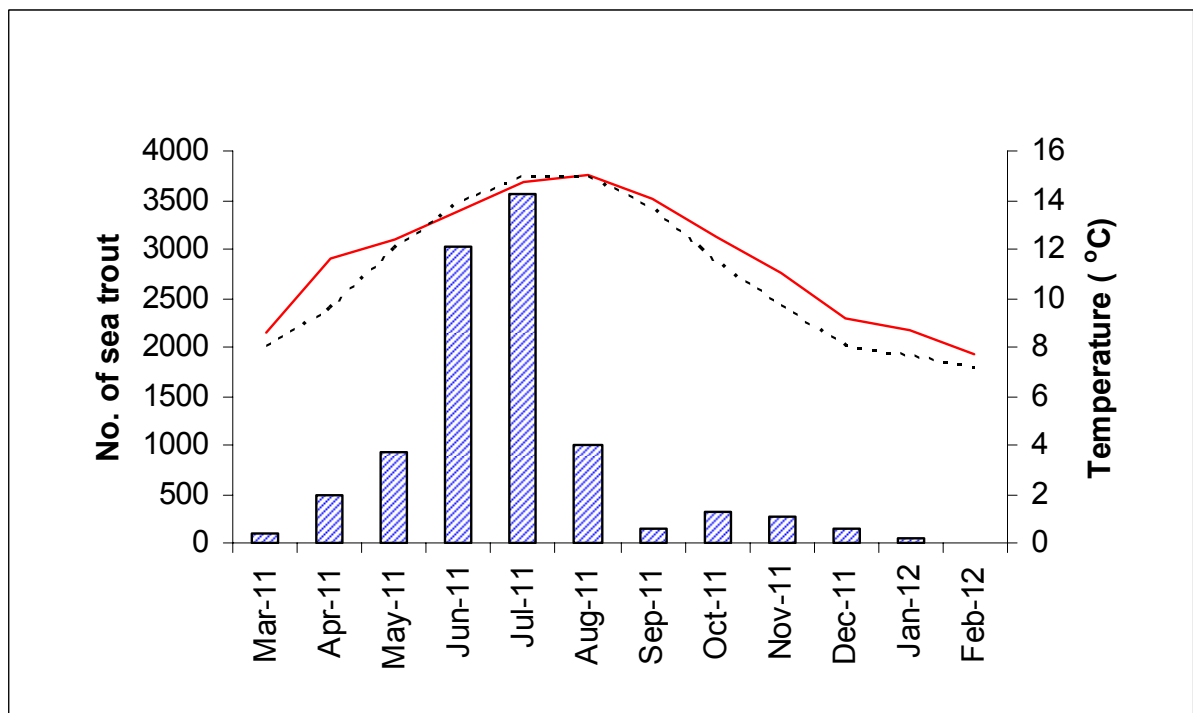
Appendix 3 - Monthly upstream counts in relation to temperature (°C) at Restormel Weir 2011/2012.

Figure 7 – Monthly upstream counts of salmon in relation to temperature (°C) at Restormel Weir (March 2011 to February 2012 inclusive)



*Dotted line indicates the 10-year monthly average.

Figure 8 - Monthly upstream counts of sea trout in relation to temperature (°C) at Restormel Weir (March 2011 to February 2012 inclusive)



*Dotted line indicates the 10-year monthly average.

Appendix 4 – Monthly upstream counts for salmon and sea trout on the River Fowey 2011/12**Table 6 - Monthly upstream counts (minimum estimates) for salmon on the River Fowey July to February 1995 – 2011/12**

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Jul	51	70	50	57	71	193	116	80	81	122	86	60	15	89	65	76	7
Aug	17	48	52	32	66	120	71	107	85	206	132	69	77	248	27	63	9
Sep	56	59	54	71	53	99	39	53	28	66	106	102	81	88	101	284	91
Oct	108	177	51	152	82	83	219	300	85	251	357	284	103	145	244	284	194
Nov	220	112	94	84	210	62	126	211	228	211	79	246	217	153	179	243	192
Dec	136	61	91	49	145	63	64	116	139	267	166	103	191	103	59	130	128
Jan	159	69	44	46	47	75	76	39	77	152	101	38	69	78	24	119	50
Feb	10	73	29	30	39	50	7	28	19	27	19	28	42	34	18	21	5
Totals	756	669	467	521	713	745	717	935	741	1301	1046	930	796	938	717	1220	675

Table 7 - Monthly upstream counts for sea trout at Restormel 1995 – 2011/12

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Mar	66	30	7	48	168	230	128	31	108	128	158	89	45	98	118	141	100
Apr	357	451	382	347	335	632	791	852	602	770	574	420	711	607	767	482	477
May	582	867	724	1282	926	1239	1069	1297	1295	1503	971	877	1266	1103	851	956	934
Jun	1993	1353	1819	1266	3194	2696	2589	2629	4135	2986	3049	3501	1518	1258	2467	3993	3035
Jul	1734	2938	1424	916	2433	2107	3593	3496	2747	2177	4286	3571	3060	2956	3839	6101	3550
Aug	418	569	147	262	491	240	1072	416	858	1137	403	480	645	223	1112	565	1003
Sep	292	102	23	40	130	111	96	62	94	133	84	106	64	124	127	206	144
Oct	344	139	40	119	138	189	331	390	106	407	497	338	161	196	498	519	319
Nov	409	93	126	91	296	101	142	419	377	236	225	335	266	242	410	411	278
Dec	109	20	33	22	126	88	91	99	86	86	162	101	227	63	70	166	138
Jan	173	14	51	21	16	42	42	34	43	36	27	26	37	30	27	77	38
Feb	11	4	7	10	13	29	4	8	17	11	13	17	22	26	16	31	6
Total	6489	6581	4783	4423	8267	7704	9949	9732	10468	9608	10448	9861	8022	6927	10301	13648	10022

**Note: Totals in tables may be subject to rounding errors*

**Appendix 5 - Daily movements of salmon and sea trout recorded at
Restormel fish counter in 2011/12**

Restormel Fish Counter

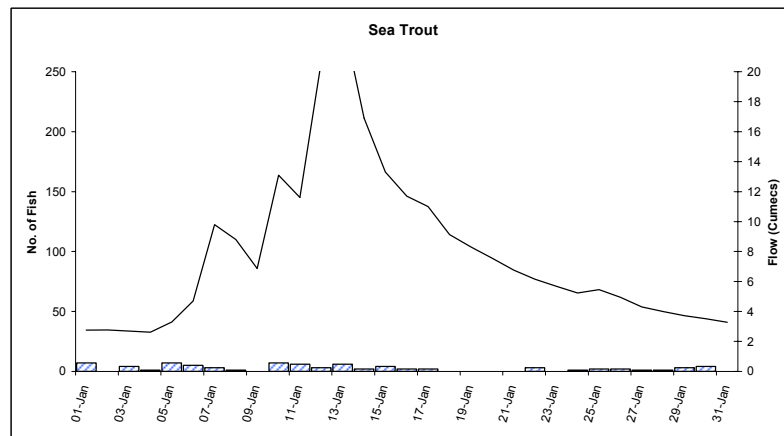
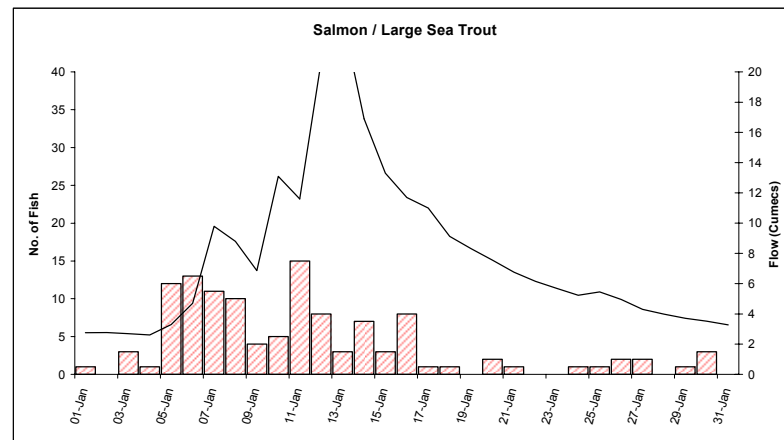
January 2011

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Jan	1	7	2.75
02-Jan	0	0	2.76
03-Jan	3	4	2.69
04-Jan	1	1	2.61
05-Jan	12	7	3.30
06-Jan	13	5	4.70
07-Jan	11	3	9.79
08-Jan	10	1	8.79
09-Jan	4	0	6.86
10-Jan	5	7	13.10
11-Jan	15	6	11.60
12-Jan	8	3	20.70
13-Jan	3	6	23.60
14-Jan	7	2	16.90
15-Jan	3	4	13.30
16-Jan	8	2	11.70
17-Jan	1	2	11.00
18-Jan	1	0	9.12
19-Jan	0	0	8.31
20-Jan	2	0	7.55
21-Jan	1	0	6.76
22-Jan	0	3	6.15
23-Jan	0	0	5.68
24-Jan	1	1	5.23
25-Jan	1	2	5.45
26-Jan	2	2	4.95
27-Jan	2	1	4.30
28-Jan	0	1	3.99
29-Jan	1	3	3.71
30-Jan	3	4	3.51
31-Jan	0	0	3.28

	Counter	Counter
Monthly Total 2011	119	77
Monthly Total 2010	24	27

Cumulative 2011	119	77
2010	24	27

10 - Year Average	69	31
-------------------	----	----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

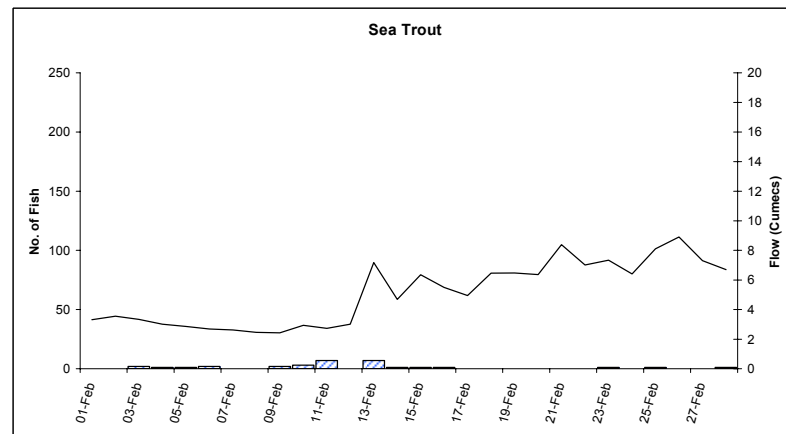
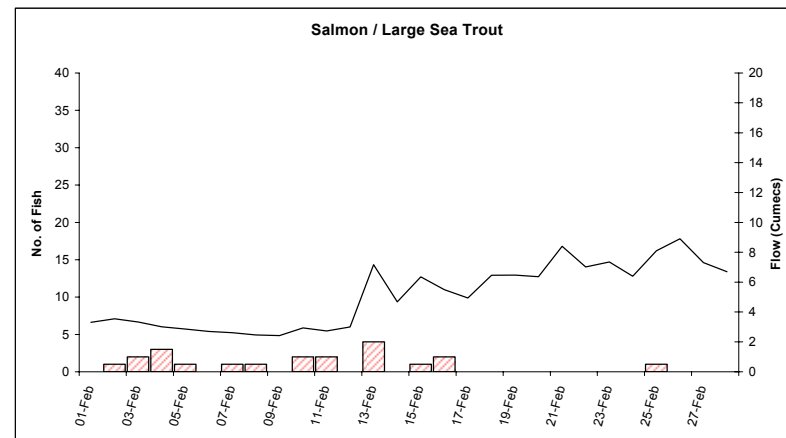
February 2011

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Feb	0	0	3.31
02-Feb	1	0	3.55
03-Feb	2	2	3.33
04-Feb	3	1	3.01
05-Feb	1	1	2.86
06-Feb	0	2	2.69
07-Feb	1	0	2.61
08-Feb	1	0	2.46
09-Feb	0	2	2.42
10-Feb	2	3	2.93
11-Feb	2	7	2.73
12-Feb	0	0	3.00
13-Feb	4	7	7.17
14-Feb	0	1	4.68
15-Feb	1	1	6.35
16-Feb	2	1	5.49
17-Feb	0	0	4.94
18-Feb	0	0	6.46
19-Feb	0	0	6.47
20-Feb	0	0	6.36
21-Feb	0	0	8.39
22-Feb	0	0	7.01
23-Feb	0	1	7.34
24-Feb	0	0	6.40
25-Feb	1	1	8.10
26-Feb	0	0	8.90
27-Feb	0	0	7.30
28-Feb	0	1	6.70

	Counter	Counter
Monthly Total 2011	21	31
Monthly Total 2010	18	16

Cumulative 2011	140	108
2010	42	43

10 - Year Average	26	15
-------------------	----	----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

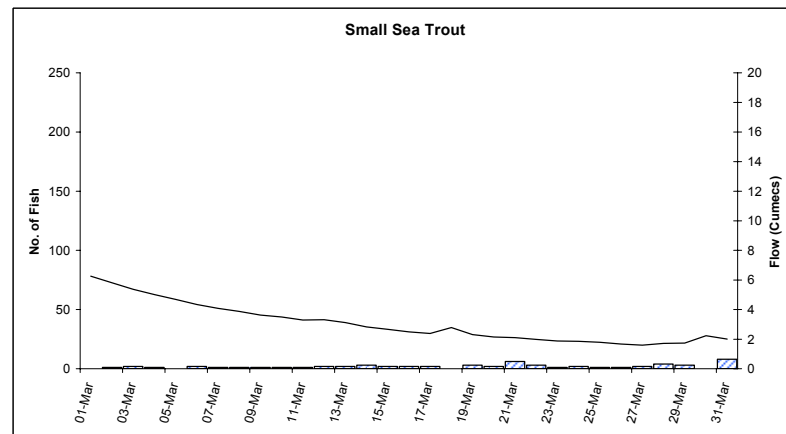
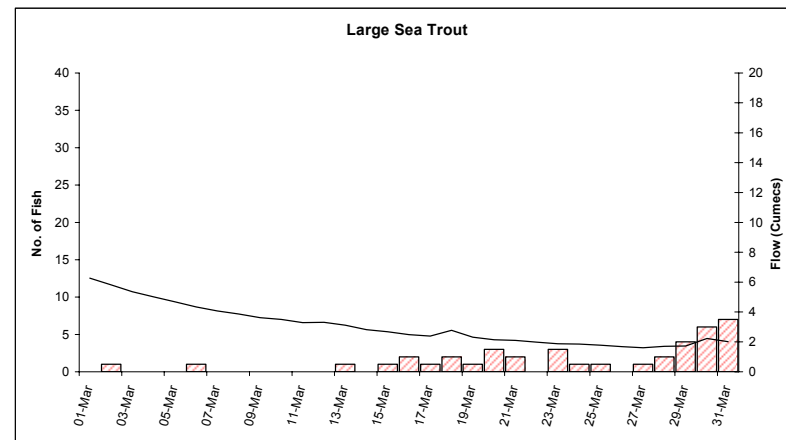
March 2011

Date	Large Sea Trout Deflections > 70	Upstream Sea Trout Deflections < 70	Daily Mean Flow (cumecs)
01-Mar	0	0	6.26
02-Mar	1	1	5.81
03-Mar	0	2	5.36
04-Mar	0	1	5.01
05-Mar	0	0	4.68
06-Mar	1	2	4.34
07-Mar	0	1	4.07
08-Mar	0	1	3.87
09-Mar	0	1	3.62
10-Mar	0	1	3.50
11-Mar	0	1	3.29
12-Mar	0	2	3.31
13-Mar	1	2	3.12
14-Mar	0	3	2.82
15-Mar	1	2	2.67
16-Mar	2	2	2.49
17-Mar	1	2	2.38
18-Mar	2	0	2.78
19-Mar	1	3	2.31
20-Mar	3	2	2.14
21-Mar	2	6	2.10
22-Mar	0	3	1.98
23-Mar	3	1	1.87
24-Mar	1	2	1.85
25-Mar	1	1	1.78
26-Mar	0	1	1.67
27-Mar	1	2	1.60
28-Mar	2	4	1.71
29-Mar	4	3	1.73
30-Mar	6	0	2.23
31-Mar	7	8	2.01

	Counter	Counter
Monthly Total 2011	40	60
Monthly Total 2010	59	82

Cumulative 2011	180	168
2010	101	125

10 - Year Average	33	68
-------------------	----	----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

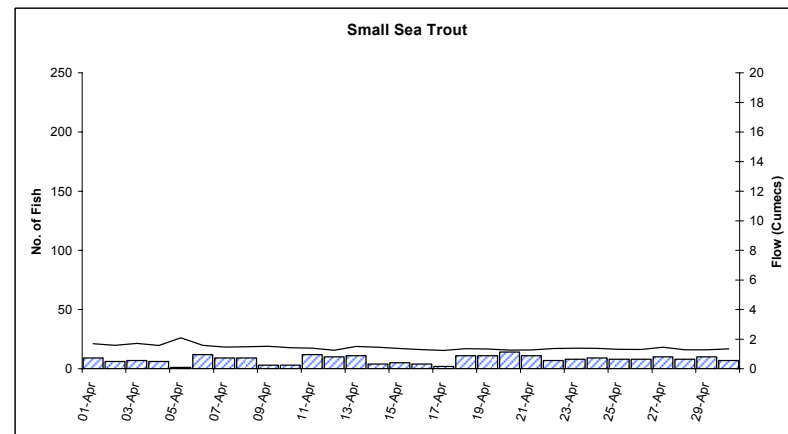
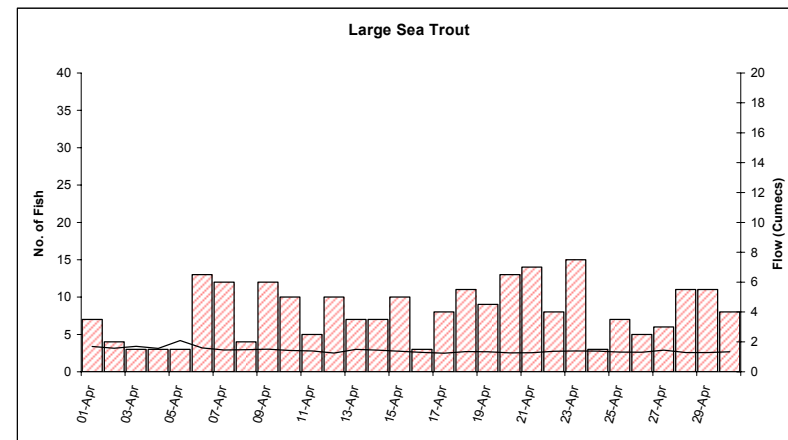
April 2011

Date	Large Sea Trout	Upstream Sea Trout Deflections < 70	Daily Mean Flow (cumecs)
01-Apr	7	9	1.69
02-Apr	4	6	1.57
03-Apr	3	7	1.71
04-Apr	3	6	1.56
05-Apr	3	1	2.09
06-Apr	13	12	1.59
07-Apr	12	9	1.46
08-Apr	4	9	1.48
09-Apr	12	3	1.51
10-Apr	10	3	1.42
11-Apr	5	12	1.39
12-Apr	10	10	1.25
13-Apr	7	11	1.50
14-Apr	7	4	1.45
15-Apr	10	5	1.37
16-Apr	3	4	1.29
17-Apr	8	2	1.24
18-Apr	11	11	1.35
19-Apr	9	11	1.33
20-Apr	13	14	1.26
21-Apr	14	11	1.27
22-Apr	8	7	1.37
23-Apr	15	8	1.39
24-Apr	3	9	1.38
25-Apr	7	8	1.31
26-Apr	5	8	1.30
27-Apr	6	10	1.45
28-Apr	11	8	1.28
29-Apr	11	10	1.28
30-Apr	8	7	1.34

	Counter	Counter
Monthly Total 2011	242	235
Monthly Total 2010	210	272

Cumulative 2011	422	403
2010	311	397

10 - Year Average	231	377
-------------------	-----	-----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

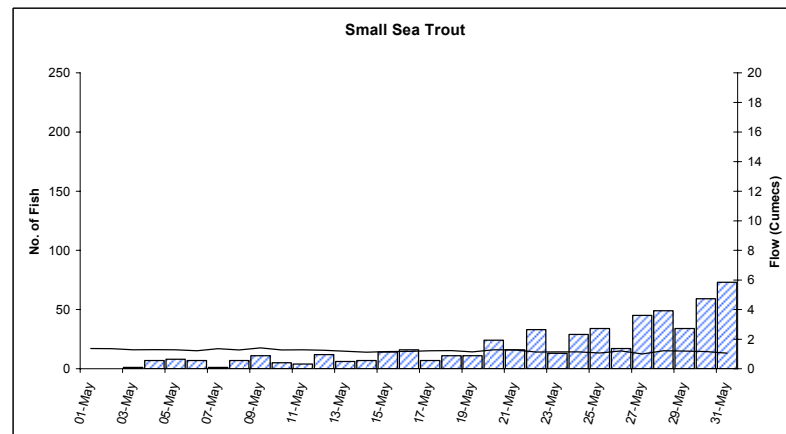
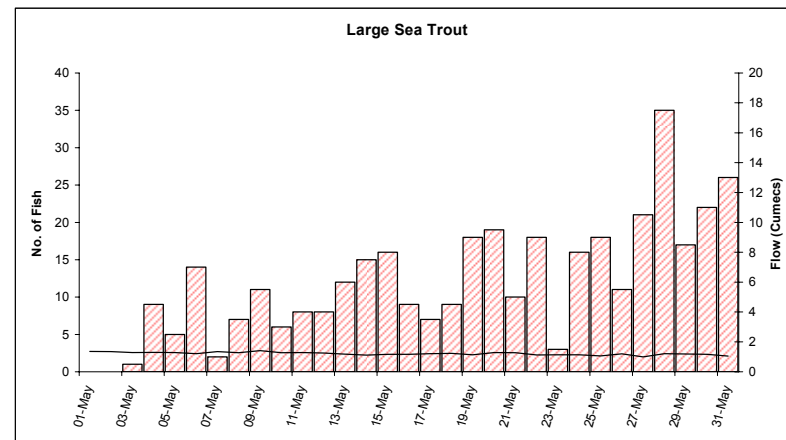
May 2011

Date	Large Sea Trout	Upstream Small Sea Trout Deflections < 70	Daily Mean Flow (cumecs)
01-May	0	0	1.36
02-May	0	0	1.35
03-May	1	1	1.28
04-May	9	7	1.29
05-May	5	8	1.28
06-May	14	7	1.21
07-May	2	1	1.35
08-May	7	7	1.27
09-May	11	11	1.41
10-May	6	5	1.27
11-May	8	4	1.28
12-May	8	12	1.25
13-May	12	6	1.18
14-May	15	7	1.11
15-May	16	14	1.16
16-May	9	16	1.17
17-May	7	7	1.21
18-May	9	11	1.23
19-May	18	11	1.13
20-May	19	24	1.28
21-May	10	16	1.27
22-May	18	33	1.12
23-May	3	13	1.13
24-May	16	29	1.13
25-May	18	34	1.06
26-May	11	17	1.20
27-May	21	45	1.00
28-May	35	49	1.21
29-May	17	34	1.19
30-May	22	59	1.16
31-May	26	73	1.05

	Counter	Counter
Monthly Total 2011	373	561
Monthly Total 2010	348	594

Cumulative 2011	795	964
2010	659	991

10 - Year Average	355	689
-------------------	-----	-----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

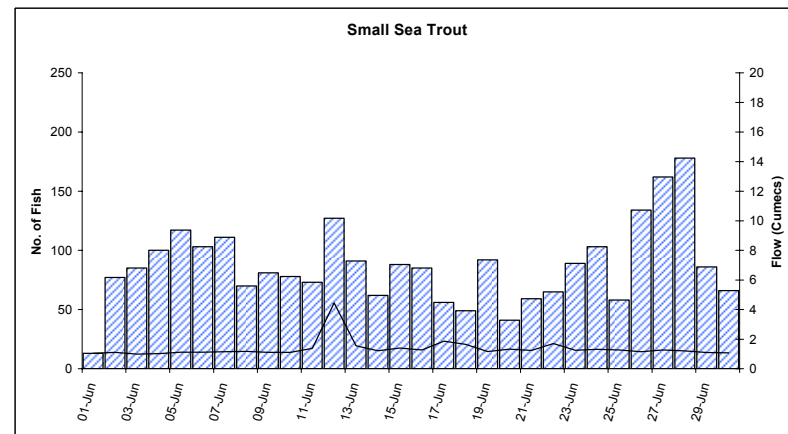
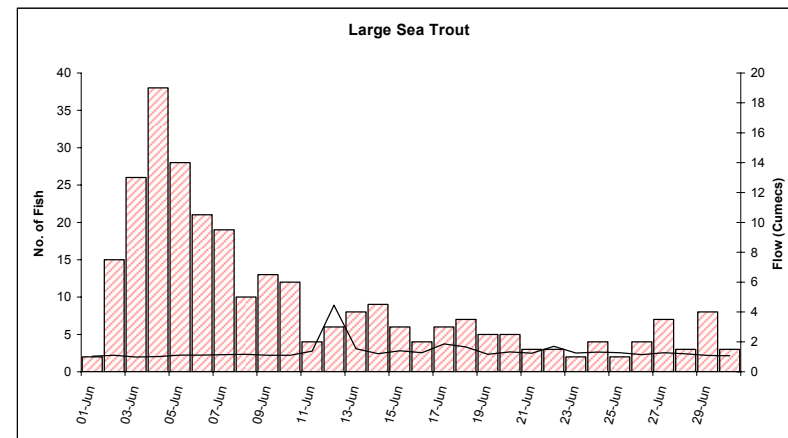
June 2011

Date	Large Sea Trout	Upstream Small Sea Trout Deflections < 70	Daily Mean Flow (cumecs)
01-Jun	2	13	1.04
02-Jun	15	77	1.10
03-Jun	26	85	0.99
04-Jun	38	100	1.02
05-Jun	28	117	1.11
06-Jun	21	103	1.11
07-Jun	19	111	1.14
08-Jun	10	70	1.17
09-Jun	13	81	1.10
10-Jun	12	78	1.10
11-Jun	4	73	1.38
12-Jun	6	127	4.45
13-Jun	8	91	1.54
14-Jun	9	62	1.21
15-Jun	6	88	1.40
16-Jun	4	85	1.27
17-Jun	6	56	1.86
18-Jun	7	49	1.65
19-Jun	5	92	1.16
20-Jun	5	41	1.32
21-Jun	3	59	1.24
22-Jun	3	65	1.70
23-Jun	2	89	1.25
24-Jun	4	103	1.31
25-Jun	2	58	1.27
26-Jun	4	134	1.14
27-Jun	7	162	1.27
28-Jun	3	178	1.20
29-Jun	8	86	1.09
30-Jun	3	66	1.07

	Counter	Counter
Monthly Total 2011	283	2599
Monthly Total 2010	224	3547

Cumulative 2011	1078	3563
2010	883	4538

10 - Year Average	237	2443
-------------------	-----	------



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

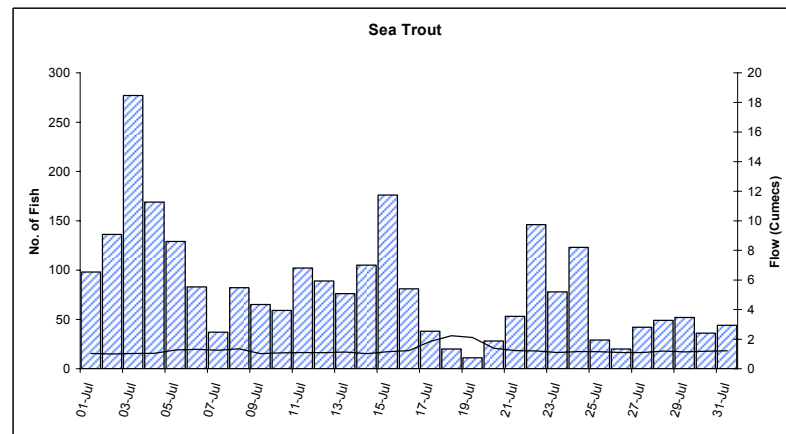
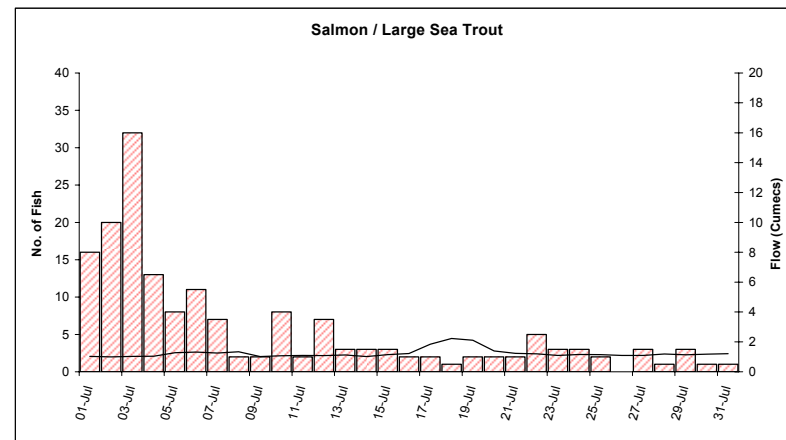
July 2011

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Jul	16	98	1.03
02-Jul	20	136	1.00
03-Jul	32	277	1.03
04-Jul	13	169	1.04
05-Jul	8	129	1.27
06-Jul	11	83	1.31
07-Jul	7	37	1.25
08-Jul	2	82	1.34
09-Jul	2	65	1.02
10-Jul	8	59	1.07
11-Jul	2	102	1.09
12-Jul	7	89	1.08
13-Jul	3	76	1.12
14-Jul	3	105	1.02
15-Jul	3	176	1.14
16-Jul	2	81	1.22
17-Jul	2	38	1.84
18-Jul	1	20	2.23
19-Jul	2	11	2.11
20-Jul	2	28	1.39
21-Jul	2	53	1.23
22-Jul	5	146	1.20
23-Jul	3	78	1.09
24-Jul	3	123	1.15
25-Jul	2	29	1.14
26-Jul	0	20	1.09
27-Jul	3	42	1.09
28-Jul	1	49	1.19
29-Jul	3	52	1.13
30-Jul	1	36	1.18
31-Jul	1	44	1.21

	Counter	Counter
Monthly Total 2011	170	2533
Monthly Total 2010	176	4150

Cumulative 2011	1248	6096
2010	1059	8688

10 - Year Average	173	2907
-------------------	-----	------



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

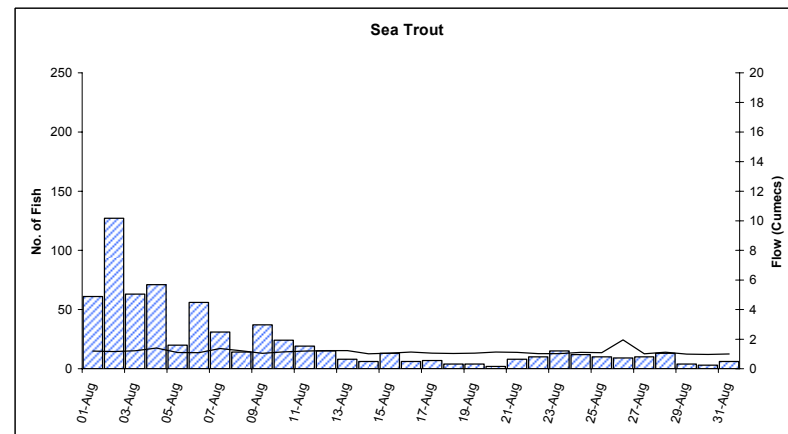
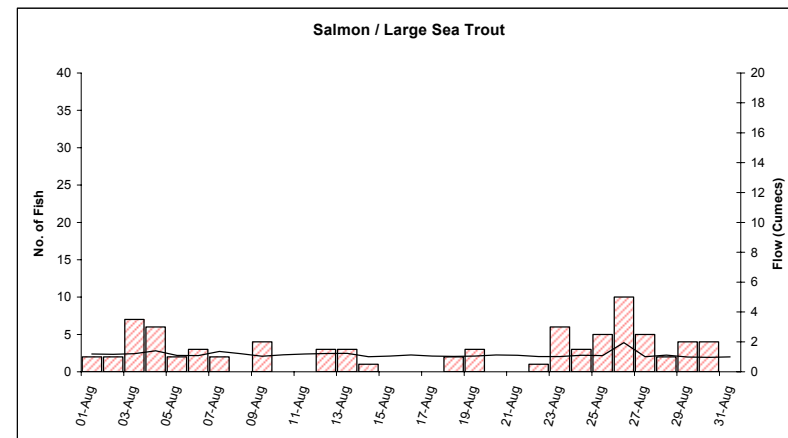
August 2011

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Aug	2	61	1.19
02-Aug	2	127	1.16
03-Aug	7	63	1.21
04-Aug	6	71	1.40
05-Aug	2	20	1.09
06-Aug	3	56	1.08
07-Aug	2	31	1.36
08-Aug	0	14	1.21
09-Aug	4	37	1.04
10-Aug	0	24	1.13
11-Aug	0	19	1.19
12-Aug	3	15	1.22
13-Aug	3	8	1.23
14-Aug	1	6	1.01
15-Aug	0	13	1.05
16-Aug	0	6	1.12
17-Aug	0	7	1.05
18-Aug	2	4	1.03
19-Aug	3	4	1.05
20-Aug	0	2	1.12
21-Aug	0	8	1.10
22-Aug	1	10	1.02
23-Aug	6	15	1.02
24-Aug	3	12	1.10
25-Aug	5	10	1.08
26-Aug	10	9	1.95
27-Aug	5	10	1.01
28-Aug	2	13	1.11
29-Aug	4	4	0.99
30-Aug	4	3	0.96
31-Aug	0	6	1.00

	Counter	Counter
Monthly Total 2011	80	688
Monthly Total 2010	153	368

Cumulative 2011	1328	6784
2010	1212	9056

10 - Year Average	117	526
-------------------	-----	-----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

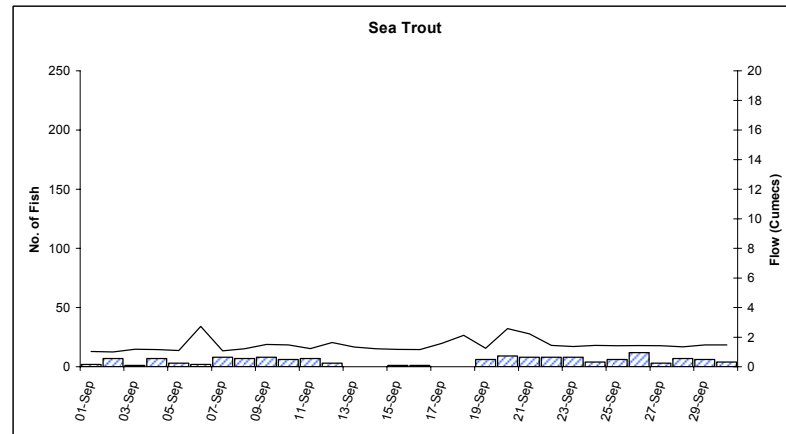
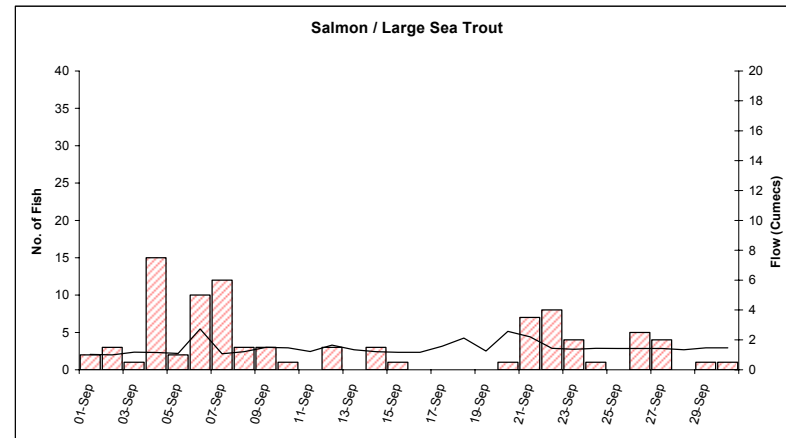
September 2011

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Sep	2	2	1.03
02-Sep	3	7	1.00
03-Sep	1	1	1.18
04-Sep	15	7	1.15
05-Sep	2	3	1.09
06-Sep	10	2	2.73
07-Sep	12	8	1.07
08-Sep	3	7	1.21
09-Sep	3	8	1.50
10-Sep	1	6	1.47
11-Sep	0	7	1.22
12-Sep	3	3	1.64
13-Sep	0	0	1.33
14-Sep	3	0	1.21
15-Sep	1	1	1.17
16-Sep	0	1	1.16
17-Sep	0	0	1.57
18-Sep	0	0	2.12
19-Sep	0	6	1.25
20-Sep	1	9	2.57
21-Sep	7	8	2.21
22-Sep	8	8	1.44
23-Sep	4	8	1.37
24-Sep	1	4	1.44
25-Sep	0	6	1.42
26-Sep	5	12	1.43
27-Sep	4	3	1.42
28-Sep	0	7	1.34
29-Sep	1	6	1.47
30-Sep	1	4	1.47

	Counter	Counter
Monthly Total 2011	91	144
Monthly Total 2010	284	206

Cumulative	2011	2010
2011	1419	6928
2010	1496	9262

10 - Year Monthly Average	93	106
----------------------------------	-----------	------------



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

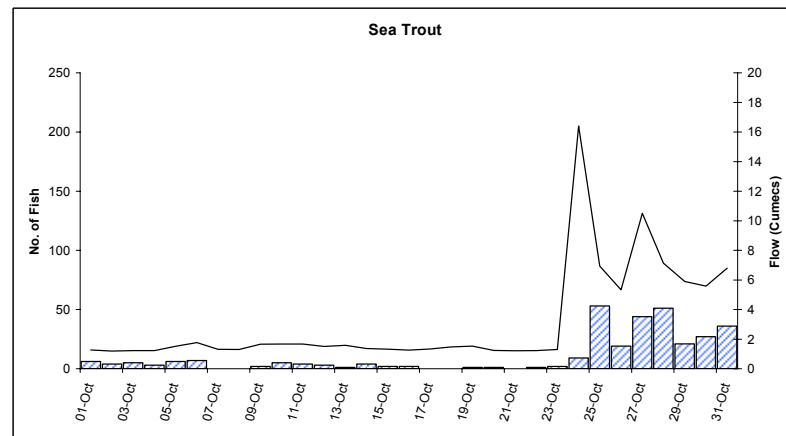
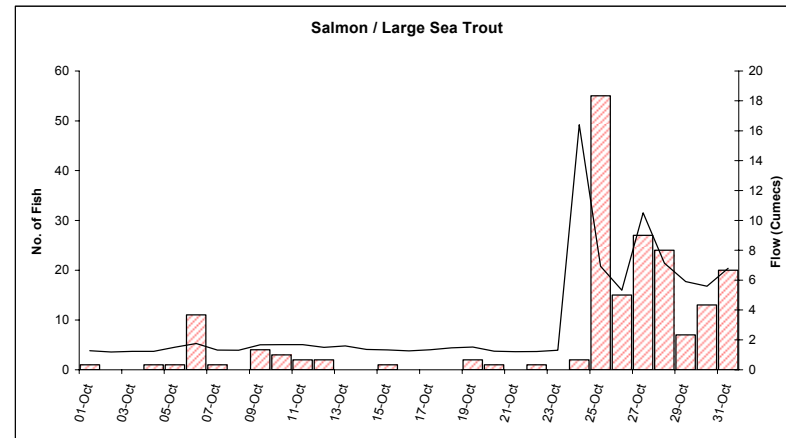
October 2011

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Oct	1	6	1.27
02-Oct	0	4	1.19
03-Oct	0	5	1.23
04-Oct	1	3	1.23
05-Oct	1	6	1.51
06-Oct	11	7	1.76
07-Oct	1	0	1.31
08-Oct	0	0	1.30
09-Oct	4	2	1.66
10-Oct	3	5	1.67
11-Oct	2	4	1.67
12-Oct	2	3	1.50
13-Oct	0	1	1.59
14-Oct	0	4	1.36
15-Oct	1	2	1.32
16-Oct	0	2	1.26
17-Oct	0	0	1.33
18-Oct	0	0	1.47
19-Oct	2	1	1.52
20-Oct	1	1	1.24
21-Oct	0	0	1.21
22-Oct	1	1	1.22
23-Oct	0	2	1.30
24-Oct	2	9	16.40
25-Oct	55	53	6.93
26-Oct	15	19	5.33
27-Oct	27	44	10.50
28-Oct	24	51	7.13
29-Oct	7	21	5.90
30-Oct	13	27	5.59
31-Oct	20	36	6.79

	Counter	Counter
Monthly Total 2011	194	319
Monthly Total 2010	284	519

Cumulative 2011	1613	7247
2010	1780	9781

10 - Year Average	220	309
-------------------	-----	-----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

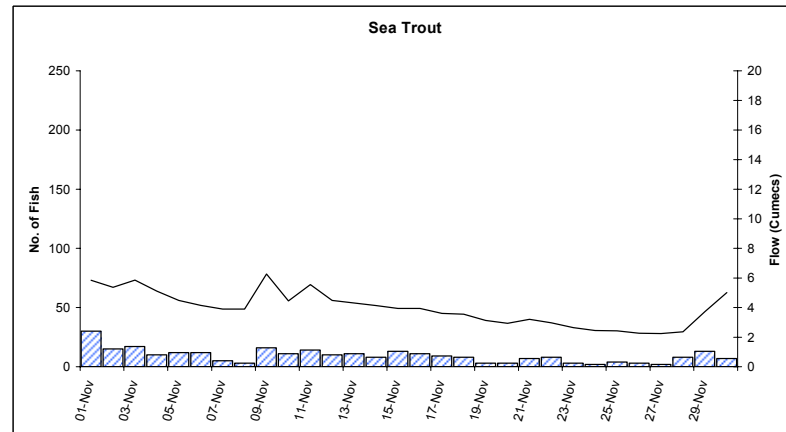
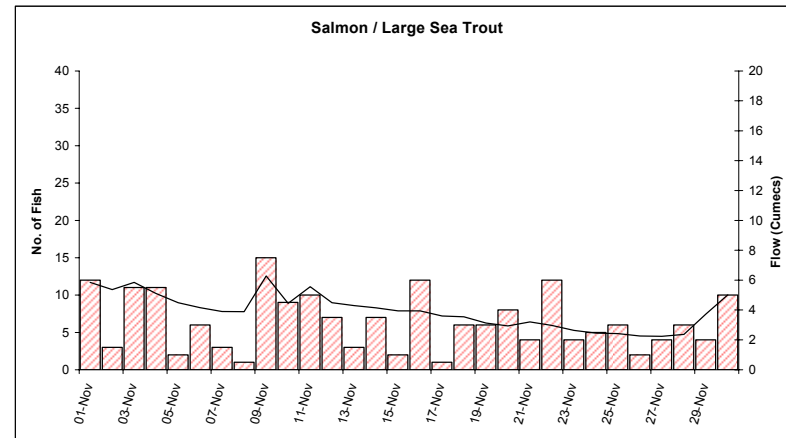
November 2011

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Nov	12	30	5.84
02-Nov	3	15	5.37
03-Nov	11	17	5.85
04-Nov	11	10	5.10
05-Nov	2	12	4.48
06-Nov	6	12	4.15
07-Nov	3	5	3.90
08-Nov	1	3	3.89
09-Nov	15	16	6.27
10-Nov	9	11	4.44
11-Nov	10	14	5.55
12-Nov	7	10	4.48
13-Nov	3	11	4.30
14-Nov	7	8	4.14
15-Nov	2	13	3.94
16-Nov	12	11	3.94
17-Nov	1	9	3.60
18-Nov	6	8	3.55
19-Nov	6	3	3.13
20-Nov	8	3	2.93
21-Nov	4	7	3.20
22-Nov	12	8	2.96
23-Nov	4	3	2.63
24-Nov	5	2	2.45
25-Nov	6	4	2.42
26-Nov	2	3	2.26
27-Nov	4	2	2.24
28-Nov	6	8	2.36
29-Nov	4	13	3.72
30-Nov	10	7	5.01

	Counter	Counter
Monthly Total 2011	192	278
Monthly Total 2010	243	411

Cumulative	2011	2010
2011	1805	7525
2010	2023	10192

10 - Year Average	188	304
-------------------	-----	-----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.

Restormel Fish Counter

December 2011

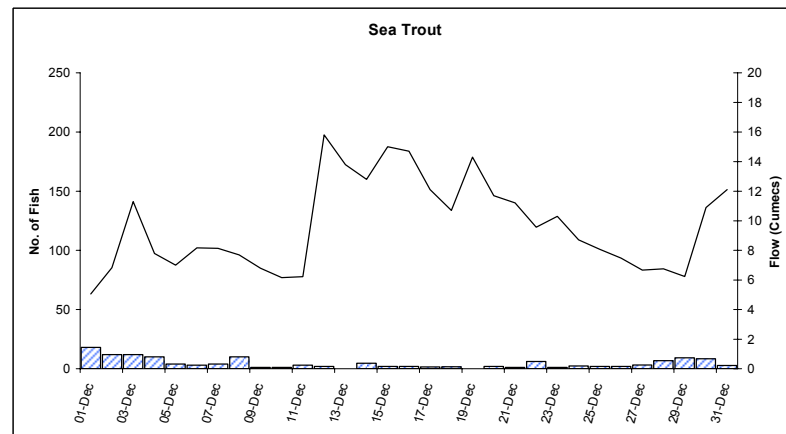
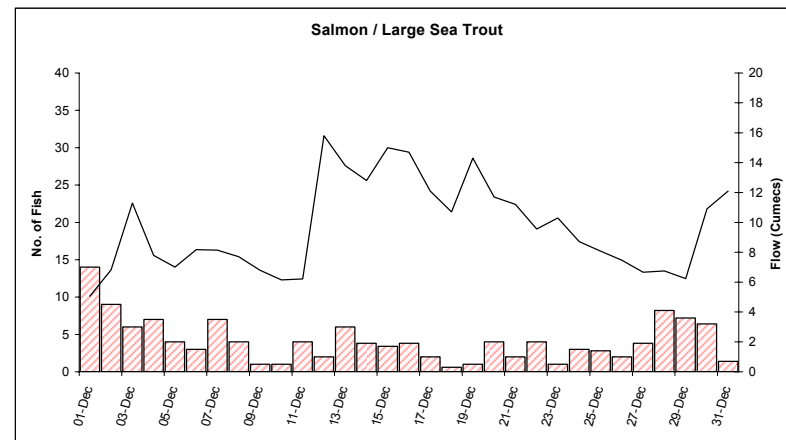
Data loss - figures in red are estimates based on the 5 year daily averages (2006 - 2010).

Date	Upstream Salmon / Large Sea Trout Deflections > 50	Upstream Sea Trout Deflections < 50	Daily Mean Flow (cumecs)
01-Dec	14	18	5.05
02-Dec	9	12	6.82
03-Dec	6	12	11.30
04-Dec	7	10	7.79
05-Dec	4	4	7.00
06-Dec	3	3	8.17
07-Dec	7	4	8.14
08-Dec	4	10	7.70
09-Dec	1	1	6.79
10-Dec	1	1	6.15
11-Dec	4	3	6.21
12-Dec	2	2	15.80
13-Dec	6	0	13.80
14-Dec	4	5	12.80
15-Dec	3	2	15.00
16-Dec	4	2	14.70
17-Dec	2	1	12.10
18-Dec	1	2	10.70
19-Dec	1	0	14.30
20-Dec	4	2	11.70
21-Dec	2	1	11.20
22-Dec	4	6	9.56
23-Dec	1	1	10.30
24-Dec	3	2	8.70
25-Dec	3	2	8.07
26-Dec	2	2	7.47
27-Dec	4	3	6.67
28-Dec	8	7	6.75
29-Dec	7	9	6.23
30-Dec	6	8	10.90
31-Dec	1	3	12.10

	Counter	Counter
Monthly Total 2011	128	138
Monthly Total 2010	130	166

Cumulative 2011	1933	7663
2010	2153	10358

10 - Year Average	128	115
-------------------	-----	-----



The fish counter figures provided in this summary are provisional and may be subject to change due to adjustments made for fish counter detection and sizing efficiencies. Final adjusted figures will be released in the annual fish counter report. The information provided is based on that currently available to the Environment Agency. The Agency accepts no liability for any loss, damage, costs or claims arising either directly or indirectly from its use or interpretation.