Tay District Salmon Fisheries Board



Annual Report
2011 / 12

ANNUAL REPORT 2011/ 12

CONTENTS **PAGE**

Tay District Salmon Fisheries Board Members and Staff	2
Chairman's Report	3
2012 Report	6
Long Term Strategy	26
How much electricity generation needs to be cut to restore Scotland's rivers?	28
Aquaculture and Fisheries (Scotland) Bill	30
Fish Counter Results 2012	31
Minutes of the Annual Meeting of Proprietors 2011	34
Triennial Election of The Tay District Salmon Fisheries Board 2011	37
Report of the Auditors to the Proprietors of Salmon Fisheries in the Tay District	39
Tay Salmon Catch Graphs 1952 – 2012	45
Board Members Attendance	46
Acknowledgements	46

TAY DISTRICT SALMON FISHERIES BOARD

Chairman

William Jack (Mandatory for Viscount Stormont)

Members Elected by Upper Proprietors

W. Lindsay (Mandatory for Taymount Timeshare)
A. Riddell
T. Steuart-Fothringham
W. Jackson (Mandatory for Derculich (Strathtay) Ltd)

Members Elected by Lower Proprietors

D. Godfrey (Mandatory for Tay Salmon Fishing Company Ltd)

Co-opted Members

Representatives of Salmon Anglers
J. Wood
S. Mannion
D. Brown
S. Furniss
J. Young (Tay Ghillies Association)

Clerk
Callum Towns, Strathtay M. S. Ltd, 5 Strathalmond Green, Edinburgh, EH4 8AG (Tel: 0131 4670092)

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www.tdsfb.org

CHAIRMAN'S REPORT 2012

The 2012 fishing season was once again severely affected by extremely wet conditions during the prime fishing months of July to October with the river running at very high levels throughout.

Surprisingly therefore, although the catch returns are not yet collated, it is likely that they will show a number around, or perhaps even a little above, the five year average and I am delighted to report that support for our catch and release policy has once again been very well maintained with the voluntary release rates among the highest in the country.

2012 saw the election of a new Board. The outgoing Board recommended an overhaul of both its size and membership makeup. This suggestion was carried at last year's AGM and accordingly, we now have a substantially smaller Board with membership representing a wider range of angling interests.

As I indicated last year, a long term strategy was to be put to the incoming Board for approval.

This was done and is now published. It will shape the activities of the Board and its employees for some time to come.

Integral to that strategy is the kelt reconditioning programme. Great progress has been made in the development of this hatchery. The capacity has been doubled and the facilities for eggs and young fish are now as good as anything that can be seen in the UK.

This has been achieved as a result of John Apthorp's continued generosity and the hard work of Steve Keay, its Manager, with considerable help from the Bailiff team and from Ghillies, Tony Black and Gary McErlain, in particular. My thanks are due to them all.

Now that our long term strategy and our approach to restocking are published, we would like to ensure that the activities of the Board and its staff are as transparent as possible. In order to assist in this aim, we propose to instigate an annual open meeting where anyone with an interest in the Tay catchment can attend and question the Board on any of its activities. The first of these meetings will be held in March 2013. Details of date and venue will be publicised and I hope that many will attend.

The trial season extension has one more year to run, at which point results will be made available and recommendations put to an EGM of all proprietors to determine whether an application for permanent change should be made or not.

There is a new Aquaculture Bill currently making its way through the Scottish Parliament. There are some significant implications contained within it which will impact upon all Fisheries Boards. We have made representations both directly to Government and through our Association and we continue to discuss with all parties in the hope that we can influence the final outcome.

Callum Towns, Clerk to the Board, has decided to stand down from that position after the coming AGM. We will be sorry to see Callum go, his assistance in the running of the Board

over many years, has been invaluable. We wish him well for the future and thank him for his contribution.

Finally, I would like to thank the new Board for their efforts on behalf of the river and all staff and management for what has been achieved in 2012.

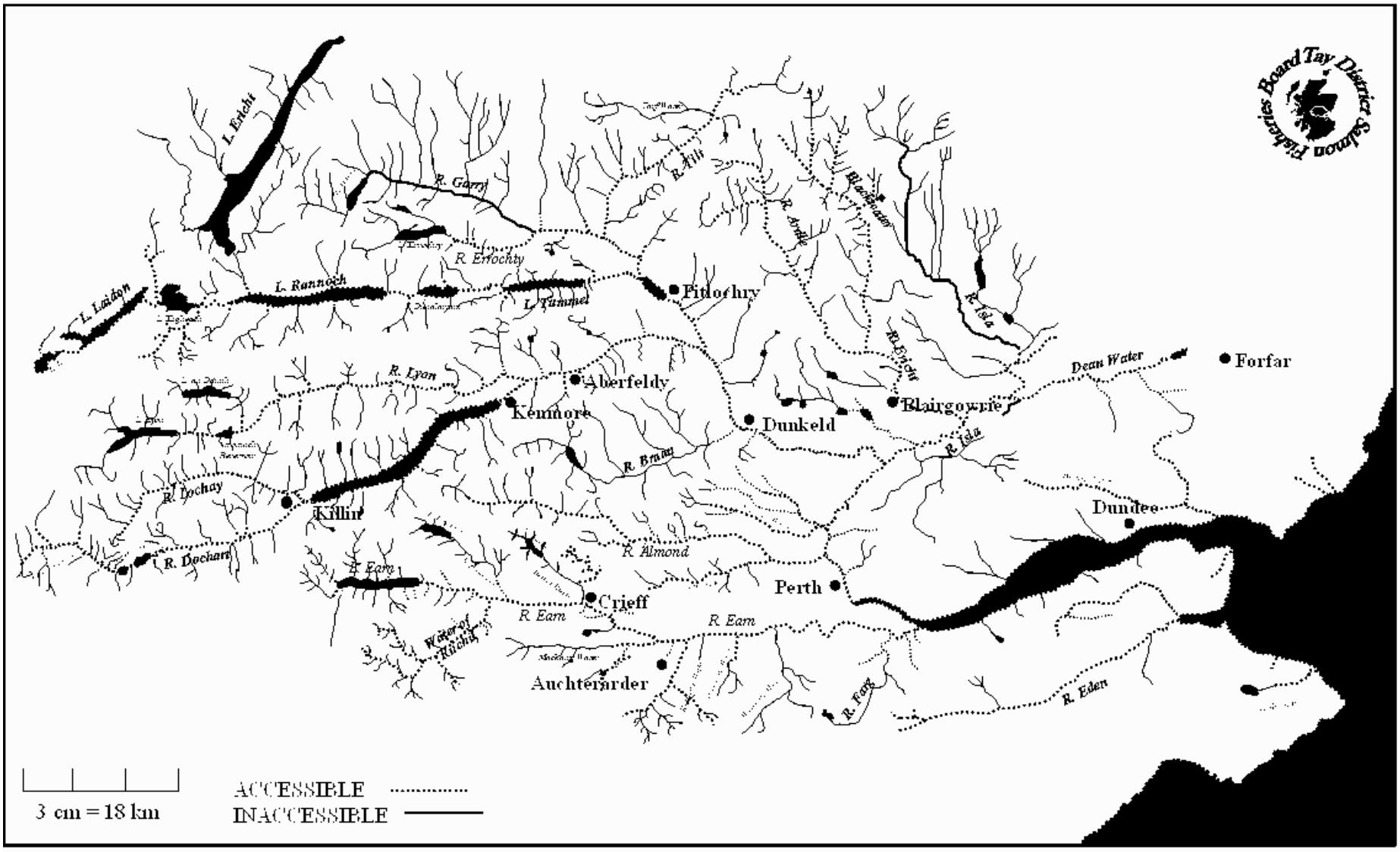
I hope that 2013 is a safe and successful one for all involved in fishing the Tay.

Yours sincerely



W H JACK
Chairman

Salmon Distribution within the Tay District



2012 REPORT

Season 2012

The 2012 season was, as is often the case, something of a mixed bag.

Unlike 2011, the weeks immediately preceding the start of the season on Monday 16 January were very wet and flows were very high. Conditions were rather better in the second half of the month and February was relatively dry until the second half of the month. Catches reported on the fishtay website were around average in January but a bit above average in February (97 opposed to 73). Better catches were also made on Loch Tay at that time, almost all larger 3SW fish. March saw some unseasonably warm weather and water levels fell away all month, but catches on the fishtay website again exceeded the recent average (275 against 231). During this period there were notably higher numbers of 3SW salmon in the higher teens of pounds and low 20s than has perhaps been the case for some years. The improvement in numbers of such fish, which has been evident for several years, though still low relative to historic abundance, may have masked relatively poor numbers of 2SW fish at that time.

April was also a relatively dry month, particularly the first half, although flows were higher thereafter. However, catches reported on fishtay were slightly below average. At the time, it was feared there was going to be a poor 2SW run, after the relatively poor grilse run in 2011. However, in May, which started and ended with low water, 483 salmon were reported on fishtay as opposed to an average of 385. This seemed to reflect a strengthening of the 2SW run, which ended up being much stronger than first feared.

June saw low flows persist until almost the end of the month when the relatively dry spring gave way to yet another very wet summer. On the fishtay website, at least, June catches far exceeded the recent average (586 opposed to 388), but it remains to be seen whether this is offset by a reduction in catches from tributary beats that do not report on the website. The Islamouth beat, for example, did particularly well during this period. Thus, by the end of June, the overall total for the season was looking very promising.

In terms of conditions, July was far from ideal for the main stem of the Tay, with higher and much more variable flows. However, despite this, the number of salmon and grilse reported on fishtay was the best for some years. 767 were reported on the website as opposed to an average of 504. Despite the higher water, even the Islamouth beat continued to fish particularly well. One of the factors which may have contributed to this was that the summer grilse run seemed to peak in July, as it did a decade ago. However, when they arrived the grilse did not appear to hang around and took advantage of higher flows to race upriver. Many of the fish caught in the main river did in fact appear to be salmon.

August was another month of unsettled water, particularly the second half which concluded with a very large spate. Much of the rain fell in the east and this produced more coloured water from tributaries like the Isla than would have been the case with more widespread rain. This, combined with the fact that there appeared to be no big quantity of grilse in August, saw only 873 fish reported on fishtay as opposed to a recent average of 1217.

After the large spate at the end of August, September was less wet. Although there were some rises, levels did generally fall away and were not as high as in July or August. It was a much better fishing month than September 2011, for example. Consequently, catches were

better than in 2011, but the 1569 reported on fishtay is considerably less than the recent average (1808). Quite a number of the fish caught even in the lower Tay in the early part of the month had even been in the river for some weeks.

October again saw several rises and a large spate in the middle of the month. However, it was a much better fishing month than October 2011. Nevertheless, despite often decent conditions and the trial season extension, many beats did not achieve in a whole month what they might normally might have expected in the first half only. Although it is true that some beats were not hard fished during the extension period, the fact that only 1423 salmon and grilse were reported on fishtay in October as opposed to a five year average of 1261 further indicates a relatively poor autumn run. This was not, however, unique to the Tay, but also occurred on the River Earn and more generally throughout Scotland, including Solway rivers.

Therefore, in summary, after a faltering start, the Tay did quite well to the end of July but thereafter was rather disappointing. But again a major plus was a much increased average weight of fish caught (salmon as opposed to grilse) and much higher numbers of larger fish caught than was the case only a few years ago.

Catch and release – spring salmon

In 2010, the Board introduced a policy of 100% catch-and-release of salmon up to the end of May. That had an immediate effect in increasing the proportion of spring fish returned to over 90% (Table 1). However, for the 2012 season, the Board asked proprietors to make the catch and release code a condition of let in the spring because it was felt that some small pockets of resistance remained during the 2011 season. That this was indeed the case was confirmed by a slight decrease in the proportion returned when the 2011 figures became available (Table 1).

While a massive turn around on 10 years ago, the proportion of spring fish killed in the Tay in 2011, the most recent year for which figures are available, was slightly greater than most of the other major Scottish spring rivers. The Tay also reported the highest number of spring salmon killed, from the second highest spring salmon catch (Figure 1).

Year	Number released	Number killed	Total caught	% released
1998	41	540	581	7
1999	108	831	939	12
2000	193	637	830	23
2001	415	739	1154	36
2002	271	524	795	34
2003	199	281	480	42
2004	301	684	985	31
2005	446	669	1115	40
2006	739	854	1593	46
2007	349	339	688	51
2008	861	247	1108	78
2009	667	179	846	80
2010	689	55	744	93
2011	953	118	1071	89

Table 1. Numbers and percentage of rod-caught salmon released and killed before 30 April. Data from Marine Scotland's Statistical Bulletins of Scottish Salmon and Sea Trout Catches.

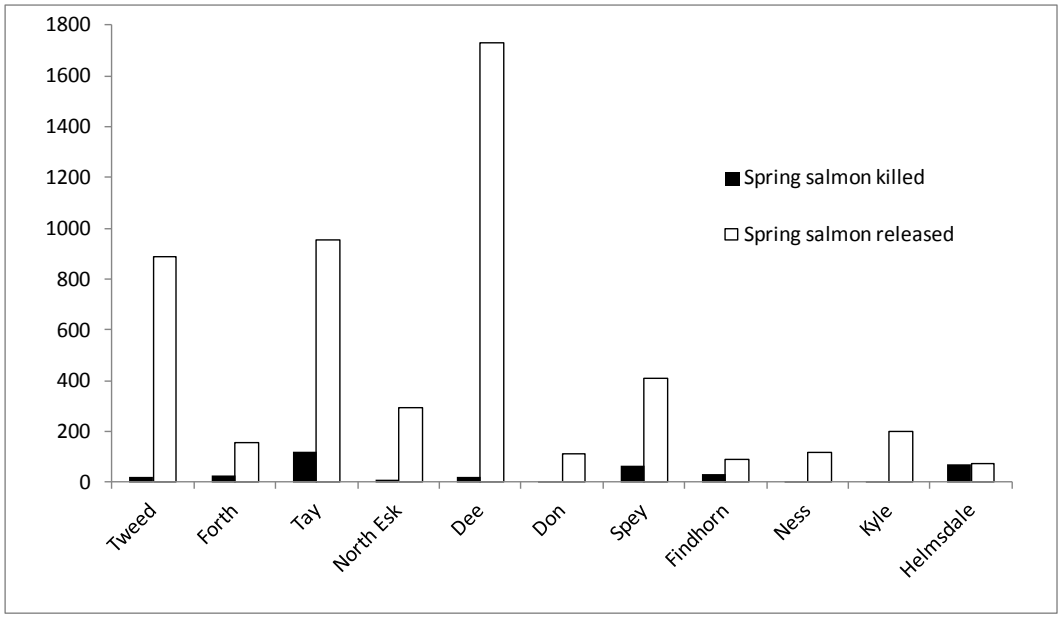


Figure 1. Numbers of salmon killed and released by anglers to 30 April 2011 on Scotland's major spring salmon rivers. Data from Marine Scotland Science.

Catch and release – summer

In addition to continuing the spring salmon policy, in 2012 the Board continued the policy that, after May, all female fish should be released and no more than one male fish should be retained per day, which should be clean and, where possible, weigh less than 10 pounds (i.e. clean male grilse). While 2012 data are not yet available, it is clear that the introduction of this policy in 2010 had a clear impact on increasing the proportion of fish released compared to 2009 (Figure 2). 2011 saw the highest return rates yet in the latter part of the season, although as already noted, that was not the case in the early spring.

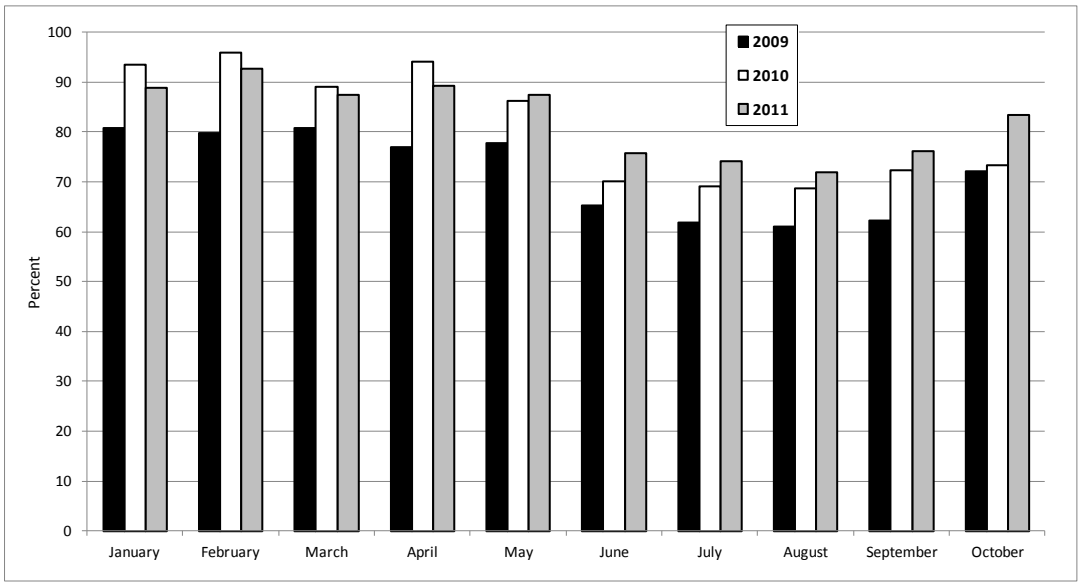


Figure 2. Percentage of the salmon and grilse catch released by month in 2009, 2010 and 2011. The data used in this graph are Crown copyright, used with the permission of Marine Scotland Science. Marine Scotland is not responsible for interpretation of these data by third parties.

Catch and release rates in different parts of the district

While the statistics shown above are based on the long standing Scottish Government catch returns, the Board has also collected catch statistics for the last few years. This has proved particularly valuable in providing a breakdown of catches within the district, which was not available formerly. Consequently, this now permits us to identify how catch and release rates vary within the district.

It can be seen that, in 2011, the lowest rates of catch and release up to end April were in the River Dochart and Loch Tay with the Lyon and Upper Tay just behind (Figure 3). Some of the smaller tributaries did not produce any spring fish and are blank therefore. The best spring release rate was on the middle Tay. Of course, these are just percentages. Catch numbers also varied between these areas. In practice, the largest absolute numbers of spring salmon were killed on Loch Tay and the lower and upper Tay (Figure 4). But, bearing in mind the lower Tay produced much larger catches overall, then the most significant problems occurred in Loch Tay and the upper Tay. This assumes, of course, that all proprietors and tenants submit accurate returns.

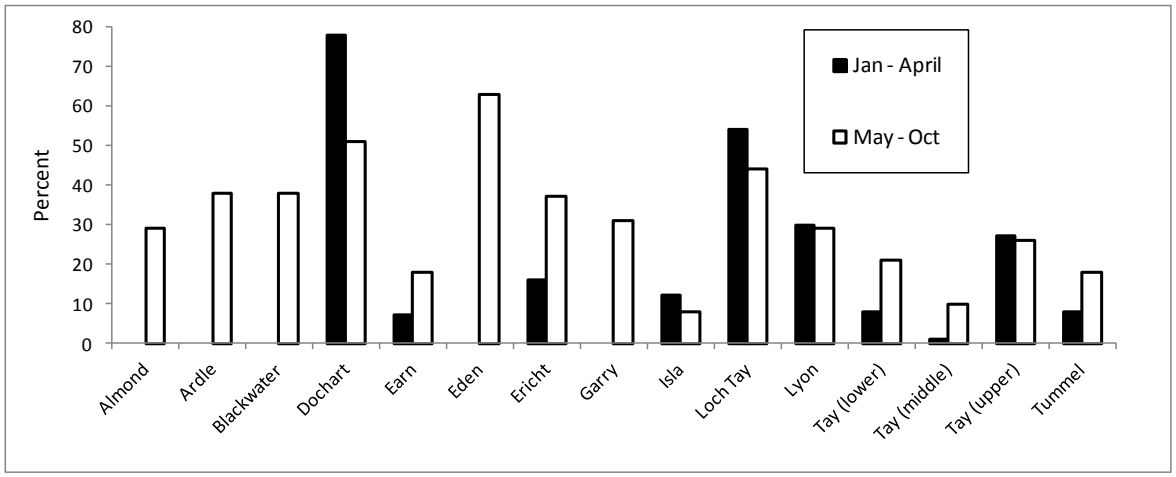


Figure 3. Percentages of salmon retained in different parts of the Tay district during the periods January – April 2011 and May – October 2011.

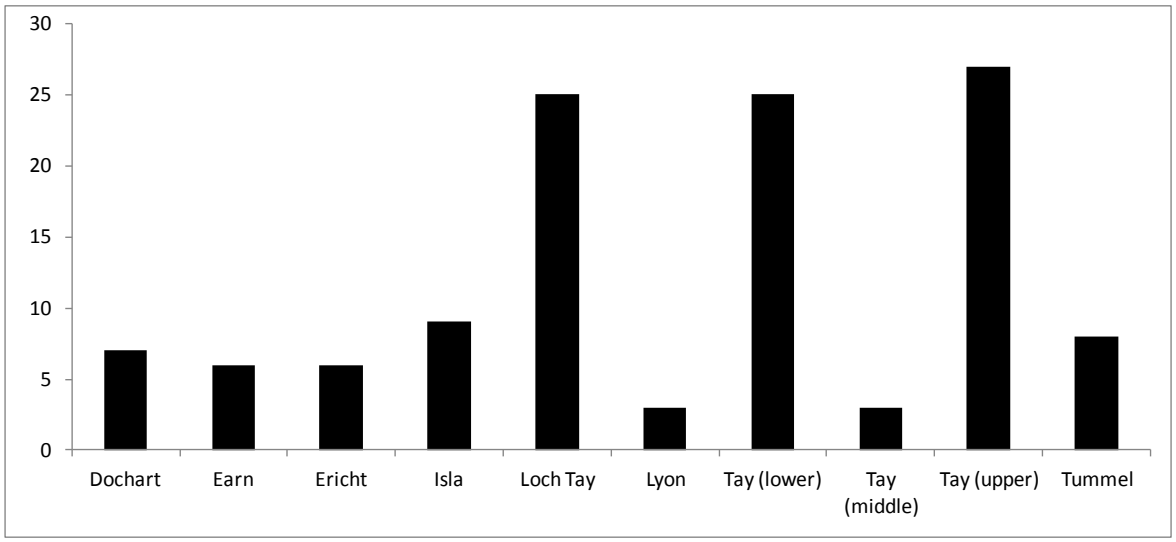


Figure 4. Numbers of reported retained salmon from different parts of the Tay district, Jan – April 2011.

Sea trout conservation

In 2009 the Board first recommended that, following a long decline in their numbers, all sea trout should be released without exception. This policy has been maintained thereafter. Since the introduction of the policy the great majority of the catch has been released. 2011 saw the highest proportion returned to date and was a better year overall (Figure 5). While recent reported catches are higher than they were a few years ago, the Board considers that problems may still continue to occur and that catch and release of sea trout should continue until there is a sustained recovery.

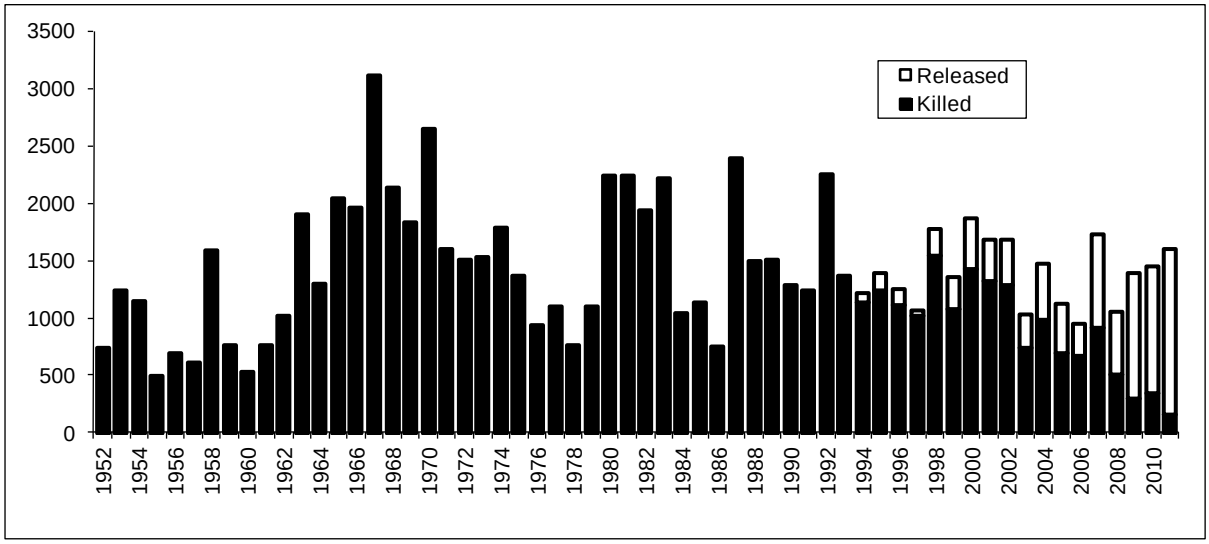


Figure 5. Tay District rod & line catch of sea trout, 1952 – 2011. (Data obtained from Marine Scotland's Statistical Bulletins of Scottish Salmon and Sea Trout Catches)

Staff Changes

2012 saw the resignation of Rob Mitchell, the Tay Foundation's biologist, to take up another post with the Rivers and Fisheries Trusts of Scotland (RAFTS). While not a Board employee, his post was partly funded by the Board and he worked closely with Board staff.

Because of the greatly increased commitment to the Kelt Reconditioning Project the decision was taken to recruit instead a trainee Hatchery and Monitoring Manager to work in the Kelt Reconditioning Unit and assess the success of the work done there. At the time of writing the post has yet to be filled.

The Board's existing Head Bailiff role has been redefined and Lee Fisher was promoted to Operations Manager.

Finally, at the end of the year the Board's administrator, Callum Towns, moves on to a new challenge. While Callum was self employed, the Board has replaced him with a part time administrator Inga McGown, who unlike Callum, will be based at the Board's office.

Enforcement

A number of outstanding court cases from 2011 were concluded in 2012. Two of these resulted in successful convictions. At an incident at Cargill's Leap on the River Ericht, Blairgowrie man, Thomas Mullen received community service and Daryl Mullen was fined and had his car forfeited. Two men were fined for fishing illegally in the River Tilt.

There did not appear to as much illegal fishing activity in 2012 as there had been in 2011. However, three cases involving TDSFB bailiff staff have been submitted to the Procurator Fiscal by Tayside Police and the outcomes are awaited. Two involved incidents in the River Ericht catchment and one on the upper Tay. Once again, the Board wishes to express its thanks to local Police forces, in particular Tayside Police, who have, as always, been extremely helpful.

Health and Safety at Work

Health and safety at work is a major consideration for the Board. The Board's staff are frequently required to work in situations where potential hazards are present. Therefore the Board is insistent that health and safety provision is of the highest standard. As the Board has now taken over new premises with the Kelt Reconditioning facility, it is necessary to review the Board's health and safety policy again. This exercise is currently underway using Health and Safety consultants, Greens of Haddington.

One incident was reported to the HSE under RIDDOR in 2012. This involved a member of staff damaging a knee while climbing over a fence. This is, however, the only instance where an incident has had to be reported in over ten years.

2012 WORK PLAN

The 2012 work plan was part of a three year plan produced as part of the Board's long term strategy (described on page 26).

The three year plan, which will be reviewed in 2013, can be obtained at http://www.tdsfb.org/scientific-reports.htm.

Good progress was made with most, but not all, of the proposed projects and issues. The work done is detailed in the following sections. However, the proposed easing of a weir on the Alyth Burn has not yet been pursued to a conclusion. Quotations have been received for improvement works to weirs on the River Almond, but the Board has not felt able to pursue these at the present time on grounds of cost.

Kelt Reconditioning Project

As explained in the last *Annual Report*, on 1 April 2011, the Board took over the former Marine Scotland Science experimental fish rearing unit at Almondbank to prevent the joint Kelt Reconditioning Project from closure.

Over the remainder of 2011 the Board occupied the facility on a trial basis. It was decided on the basis of that experience that the Board should not only continue to try to run this facility, but to expand it. As also explained in the 2011 report, it was considered to be most appropriate that this facility should become the central part of the Board's hatchery policy.

Therefore, the Board has continued to occupy the facility in 2012 and is in the process of negotiating a longer term lease. Significant alterations to the facility have already been made during the course of 2012.

Previously, most of the facility had been geared to a mixture of fish rearing / experimental work. The reconditioned kelts were housed in four large diameter circular tanks. Most of the other equipment has now been removed and replaced with another four large holding tanks which will double the number of reconditioned salmon kelts that can be accommodated. In addition, smaller broodstock holding tanks have been added to allow better management of wild caught adult salmon in preparation for the reconditioning process. The installation work was largely carried out by the Board's own staff, particularly Steve Keay and the bailiff team. Significant input was also made by ghillies, Tony Black and Garry McErlain, who gave up spare time to make platforms for accessing the tanks. The tanks and other equipment could not have been purchased without a generous donation from Mr John Apthorp.



Four new five metre diameter holding tanks have been installed, doubling the kelt reconditioning capacity of the former Marine Scotland Science facility.

In recent years, the Kelt Reconditioning Project has produced approximately 750,000 eggs per year from the most important spring populations. The expansion of this facility will allow this to be increased to 1.5 million in a few years. There are, however, significant costs associated with this facility, e.g. in terms of rent, rates, water supply etc, which are additional to the Board's existing commitments. These are the subject of fundraising and are being supported through funds donated through the trial season extension. Owing to the novel nature of the project, food is being donated by fish feed manufacturers EWOS and antibiotic medicines are being donated by Novartis. It will also require another dedicated member of staff but the cost of this has been offset by redefining roles of existing staff.

Hatchery report 2011/12

In 2011 the Board's stocking policy was revised, as described in last year's Annual Report. The Board wishes to concentrate on a more targeted stocking programme rather than attempts at general enhancement. Stocking is to be concentrated on areas which are being opened up to salmon through the removal of man-made obstructions or where there is good reason to believe that stocking will aid the recovery of populations that have been demonstrated to be failing. Such areas will be stocked using the progeny of reconditioned kelts. The stocking effort in spring 2012 largely reflected this new emphasis. This resulted in a reduction in numbers stocked in 2012 compared to recent years, but this number will rise again in future as the Kelt Recondtioning Project is expanded (see above).

The fish stocked were a mixture of eyed ova and unfed fry. For the second time some 30,000 were stocked experimentally as fed-on parr. Ova and fry were stocked out into areas close to where the broodstock were sourced, i.e. either the same tributary or smaller tributaries close to the source area.

The following numbers were released in different areas in 2012:

River Tilt	50,000
River Garry	245,000
Banvie Burn (Garry tributary)	55,000
Fincastle Burn	6,000
River Lochay (Corrycharmaig to Kenknock)	70,000
Fillan tributaries	50,000
Cononish	50,000
Milton Burn (Lyon tributary)	40,000
Invervar Burn (Lyon tributary)	20000
Innerwick Burn (Lyon tributary)	30,000
Cochill Burn (Braan tributary)	40,000
River Braan	8,000
Tullimet Burn (Tay tributary)	45,000
Errochty Water	50,000
Ruchill Water (Earn tributary)	20,000
Total	**779,000**

Trial Extension of the Tay Salmon Angling Season

2012 was the second year of the three year trial Tay salmon season extension.

This trial extension is being run under a licence from the Scottish Government and is subject to the following conditions.

- Participating beats are on the Tay from Perth to Dalguise only. No tributary beats are included.
- All fish must be released.
- Only barbless hooks are to be used.
- Worm is not allowed.

Furthermore the Board has agreed that

- One third of the income generated by participating beats, averaged over the three years, is to be donated to the Tay Foundation. The money generated will help meet the increased costs incurred by the Kelt Reconditioning Project.

Anglers were requested to record hours fished with each fishing method, estimated weights of each fish caught, sex of fish and an assessment of colouration. A selection of beats also photographed each fish caught and provided samples of scales for ageing purposes.

In 2011, catches were generally poor, partly because of very poor conditions and relatively low fishing effort. While, at the time of writing, the detailed catch returns for 2012 have yet to be analysed, the catches reported on the fishtay website during the 2012 trial were generally considerably higher than in 2011 (Figure 6). However, some of the very lowest beats in the river did less well in 2012 than in 2011. The highest catches in both years occurred between Stanley and the Isla. Compared to the weekly average catch during the normal main autumn period (September and first half of October), the catch in the two main weeks of the 2012 extension was above average for most beats (i.e. over 100% in Figure 7), again apart from those few beats very close to the tidal limit.

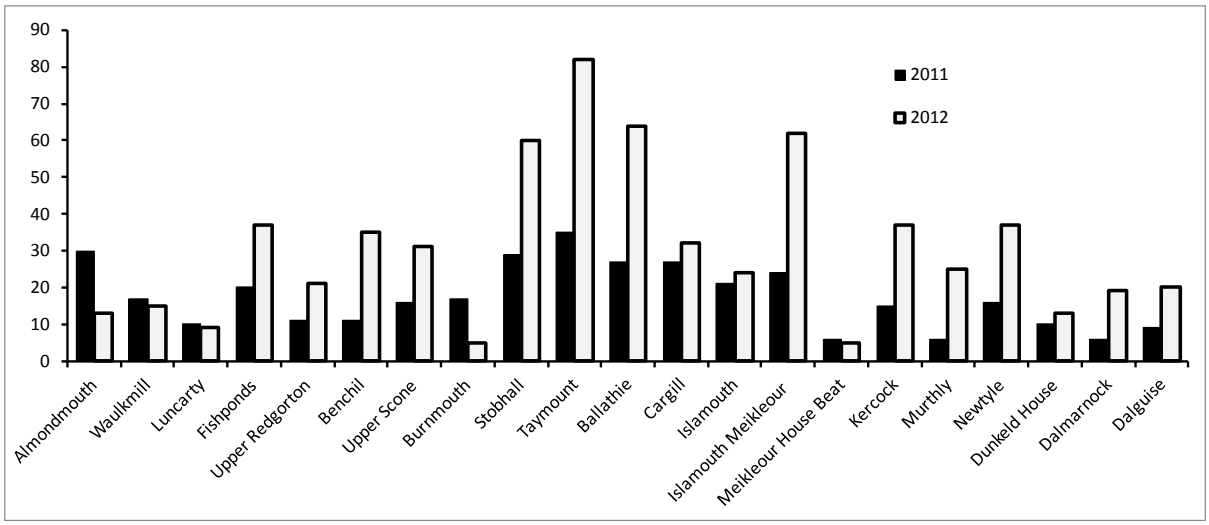


Figure 6. Number of salmon reported on fishtay website during the 2012 trial extension period compared to 2011 trial extension catch for those beats that use fishtay.

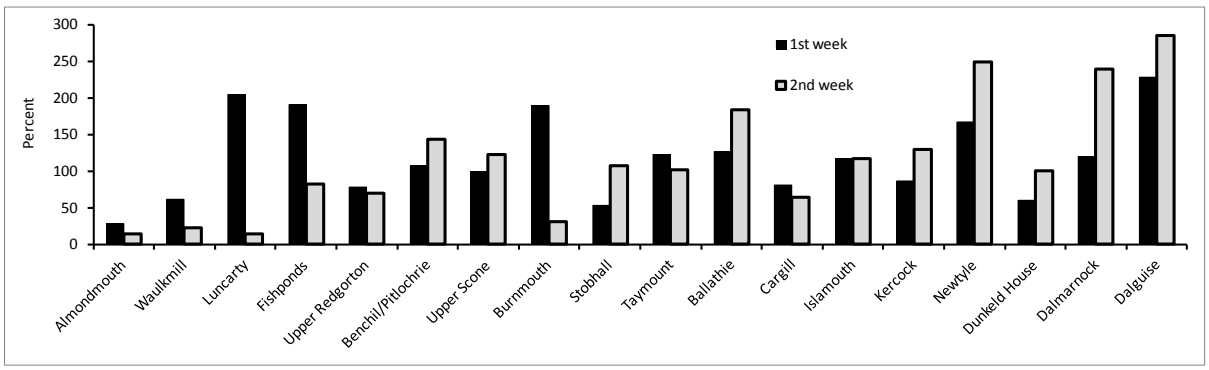


Figure 7. For most beats that participated in the 2012 trial extension, catches in the first and second full weeks of the extension expressed as percentages of each beat's average weekly catch during the period 1 September 2012 to 13 October 2012.

An interim report providing more detailed results from the first two years will be published on the Board's website once completed. At the end of the three year trial a final report on the findings will be compiled and the Board will put it to an EGM of all proprietors to decide whether it is appropriate to seek permanent changes to the Tay salmon season or not. This will also include consideration of the start date of the season as well as the end.

Prioritising hydro improvements

As described in previous Annual Reports, the EU Water Framework Directive provides an opportunity to remedy some of the historic damage caused by hydro schemes in the Tay and other districts. The 2008/09 *Annual Report* report listed 24 waterbodies in the Tay district that had been identified by SEPA, who lead on this issue, that fail to meet the necessary standards. The most prominent of these is the River Garry which has been identified as one of the three immediate national priorities. However, in the first Scotland River Basin Plan (see p.27 of our 2008/09 *Annual Report*), SEPA initially said that all but four of those 24 waterbodies would not require restoration until 2027, the latest date allowed by the WFD.

The Board has long been of the opinion that there should be a prioritization of these issues, not just within the Tay district, but nationally, so that the most important issues can be identified and work hopefully speeded up.

A major opportunity arose in 2011/12 to do this. In late 2011, SEPA issued a consultation document on the degree to which it felt that overall national hydro electricity production might be cut to meet WFD objectives and by when. It proposed a cut by up to 2% of generation by 2027.

The Board has long recognized that to answer that question it would be necessary to work out how much generation would actually need to be cut to restore the identified waterbodies. It is a matter of surprise that such an exercise had never actually been conducted.

Therefore, for all of the waterbodies in Scotland that had been identified as failing the ecological potential standards because of hydro abstraction, this is exactly what we worked out. This exercise proved that, depending on some of the assumptions used, and if efforts were concentrated on the more important sites, then only a very small cut in generation would in fact be required. For more details see page 28.

The Board is now working with the Association of Fishery Boards to help formulate a whole Scotland plan of hydro priorities, which will include issues such as fish passage as well as abstraction, which can be presented to SEPA as the fisheries sectors view of priority actions in terms of level of benefit and cost. This, it is hoped might speed up the process of improvement works being carried out at last.

Earn Weirs

A number of weirs have been identified within the Earn catchment which are believed to pose problem for migrating salmon.

Previous *Annual Reports* have described an impassable weir on the Cloan Burn. It was hoped that, as a condition of approval for a small hydro scheme, a fish pass should be installed. However, SEPA decided that the length of watercourse upstream of the weir did not justify this expense. This is unfortunate because, although it is true the extra habitat would be insignificant for salmon, it would still have been of significance for sea trout which is very much a species that spawns in smaller burns.

Lack of time has, so far, prevented pursuance of the easing of an impassable weir in the upper Ruthven Water.

However, a number of Earn tributaries were electrofished in 2012 and this revealed some significant findings. For example, juvenile salmon were completely dominant in the Ruthven Water from Auchterarder downstream, but upstream of the A9 crossing, where there is another weir with a fishpass, juvenile sea trout dominated.

Electrofishing above and below a low weir on the Dunning Burn also showed a very good juvenile sea trout population upstream but almost total replacement by salmon in the lower reaches.

A similar pattern was found on the Turret Water where upstream of a weir, trout were more numerous and salmon less numerous than below, even though there is a fish pass.

It may be that the presence of some weirs with imperfect fish passes is actually benefiting sea trout by reducing competition from salmon.

River Tummel Smolt Tagging Project

In the past, the Freshwater Laboratory at Faskally performed a lot of research into the survival of salmon smolts passing through various dams in the Tummel catchment. This research indicated the existence of some problems which have been addressed in part at least. However, salmon tagging technology has moved on greatly since the 1960s / 70s and more reliable information is likely to be obtainable now. The Board has for some time had an aspiration to see some of this work updated.

In 2012 the possibility of such work took an unexpected but welcome step forward. The Freshwater Laboratory are keen to establish a smolt tagging programme within the Tummel system in conjunction with the Board, Tay Foundation and SSE. Discussions are underway between the FL and SSE to install a PIT tag detector at Pitlochry Dam and Scottish Government have provided funds to the Tay Foundation for required equipment. This project is still at a very early stage of conception, but should provide information for better management of smolt passage in the Tummel system in the long run.

Comparison of performance between stocked unfed fry and stocked fed-on parr

One of the questions often asked is whether it is better to feed on fry in the hatchery for a period rather than stock them out as unfed fry or eyed ova. While there are many opinions on this subject, there appear to be few reliable comparisons between the different approaches and even these have provided equivocal results.

Previously, from the Board's hatchery, stocking has only been conducted with eyed ova or unfed fry. But, in order to help inform the debate, in 2011 80,000 fed-on parr were reared in the facility at Almondbank which the Board took over from Marine Scotland Science. The fry were released in October 2011 in three areas of the River Braan catchment where naturally spawned salmon are not present. In two of the areas, the Cochill Burn and the Girron Burn, unfed fry had been stocked previously in the early summer. In the third area, the mainstem of the Braan, only fed parr were stocked.

Electrofishing surveys were conducted in 2012 to compare growth and survival rates of the different types of fish stocked.

In the main stem of the Braan, the fed parr were introduced to two sections, each several hundred metres long, but 2.5 km apart, at a density of approximately 2 to 3 per square metre of river. These fish were then sampled by electrofishing in autumn 2012. Electrofishing was conducted at one site in the upper stocking area and at two sites in the lower stocking area. Owing to time constraints, the electrofishing surveys consisted of single pass "semi-quantitative" surveys, thus the figures obtained are minimum estimates of the true numbers of fish present. The minimum density of salmon parr found at the upper stocked section was 0.185 per m^2 and in the two lower stocked sites 0.14 and 0.204 per m^2. This might roughly equate to a survival of between 5% and 10% over the first year since stocking out. However, a site was also fished 2.5 km downstream from the lowest point at which any fed-parr were stocked. Salmon parr were also found there, albeit at a lower density (0.03 per m^2). Therefore, because some fish had clearly dispersed out of the stocking areas and survived, the real survival rate may be considerably higher than that apparent from the stocked areas alone. As time did not permit ascertaining the full length of river over which these fish had spread and their densities, it is not possible to say what the true survival rate might be, but it could conservatively add another 5%.

Another notable feature was that, while the average lengths of the parr caught at the three mainstem stocked sites were similar, the parr caught at the downstream site, Ballinloan, were much bigger, indicating that those fish which moved away from the stocked sites into areas with fewer fish grew much faster (Figure 8). The density, i.e. competition, of fish at the locations stocked must therefore have been sufficient to limit growth.

In the Girron Burn, unfed fry were stocked at an even density over 1 km of the stream in June 2011. In October 2011, fed parr stocking commenced some way below the upper limit of unfed stocking leaving an area only stocked with unfed fry. Thereafter, fed parr were stocked at an increasing density along the length of the stream on top of existing fish that had been stocked as unfed. An electrofishing survey in the autumn of 2011 showed that those fish that had been stocked as unfed fry were still much smaller than the fed parr when the fed parr were stocked.

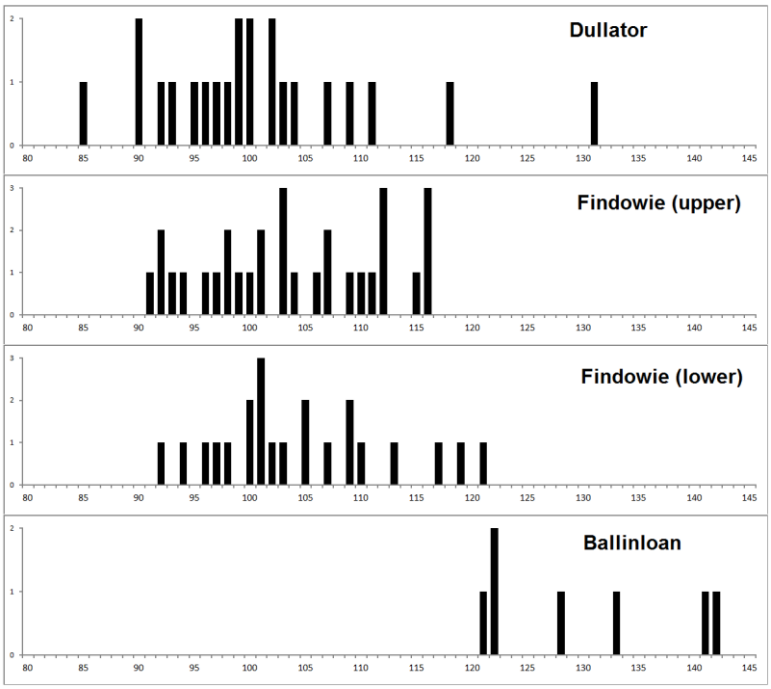


Figure 8. Length frequency of salmon parr caught at various locations, River Braan, 24 September 2012. The top three sites were stocked in 2011, Ballinloan was not.

Despite that being the case, it was found in October 2012 that the largest fish on average were found at the unfed only site (Girron 1, Figure 9). Moving downstream, the average length of fish decreased, particularly in the lowest site, but the overall variation in size increased (Figure 9). This coincided with increasing stocking density and Girron 4 had the highest autumn 2012 density too. It had been hoped initially that it would be possible to tell those fish stocked in as unfed fry or fed parr apart because of differences in their size, but this clearly was not possible. At Girron 1, for example, the unfed fry would seem to have made remarkable compensatory growth. Scales were, therefore, taken from all of these fish and it is hoped that analysis of these will allow unfed fish to be distinguished from fed fish. Should this not prove possible, then there is perhaps little that can be inferred from this initial trial regarding differences between the two types. As a result, in stocking trials repeated in 2012, fed parr were fin clipped for future identification.

In the Cochill Burn, unfed fry were stocked in over a 2 km stretch in June 2011. In October 2011 some fed parr were stocked into a stretch some way upstream of the upper limit of unfed stocking. The lower two thirds of the area stocked with unfed fry was also stocked with fed parr.

In October 2012, electrofishing was conducted in the upper area (fed parr only), the central area (unfed only) and the lower area (mixture). The minimum densities of parr found were 0.176 per m^2 (upper), 0.173 per m^2 (central) and 0.378 per m^2 (lower). At the upper site, where only fed parr had been stocked, the average length of the parr was larger than elsewhere (Figure 10), but as in the Girron and the mainstem of the Braan, this may be a reflection of lower density and thus reduced competition. In the area where only unfed fish had been stocked (although of course fed fish could have moved into it) the parr were larger than in the lowest site (Cochill 3, Figure 10) which had received the greatest level of stocking and had a very large final density.

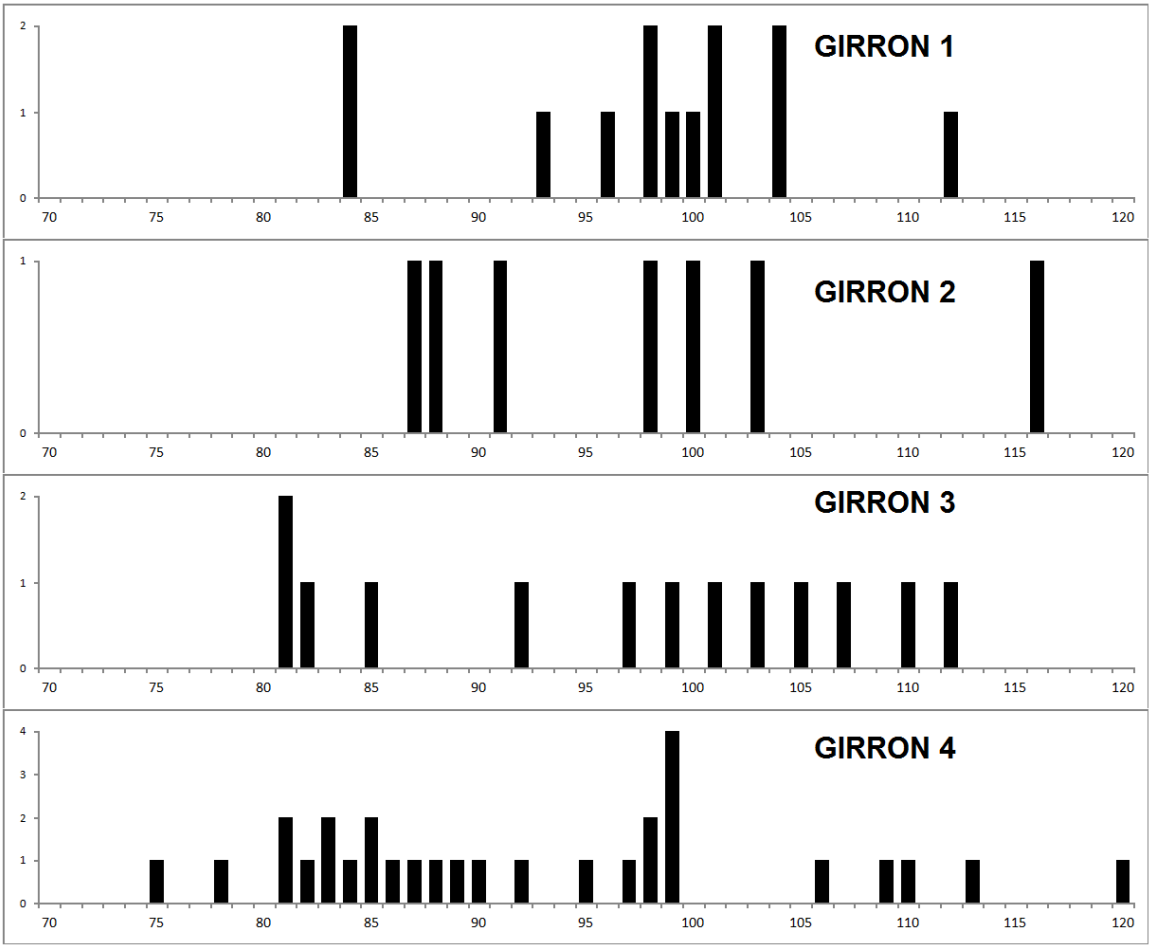


Figure 9. Length frequency of salmon parr caught at four sites in the Girron Burn 5 October 2012. Girron 1 was originally only stocked with unfed fry. The others were stocked with both unfed fry in June 2011 and fed parr in October 2011. Stocking density increased from 2 to 4.

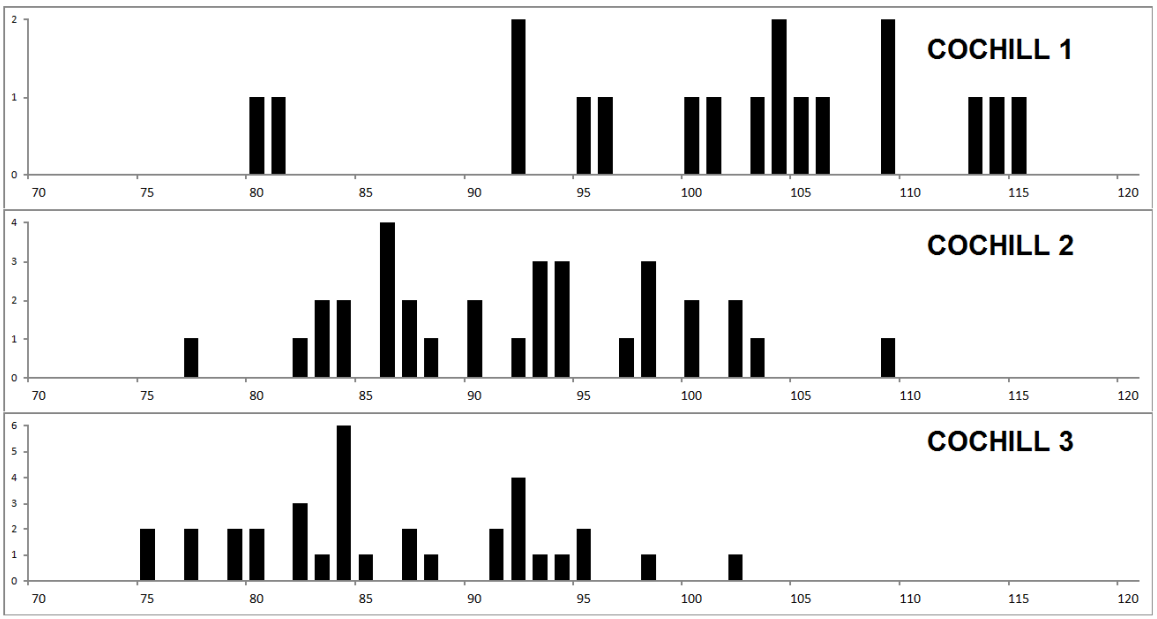


Figure 10. Length frequency of salmon parr caught at three sites in the Cochill Burn, October 2012. 1 was originally only stocked with fed parr, 2 was originally only stocked with unfed fry and 3 was stocked with both types.

Again, as in the Girron Burn, scale samples are being analysed to try to identify fish stocked in as unfed fry from those stocked in as fed parr. Therefore, at the time of writing, it is not possible to tell whether the unfed fry or fed parr survived or grew better where they are mixed. However, if it is assumed that only fish that had been stocked as fed-on parr were present at the upper site, then the survival may have been over 9% for the year. If it is assumed that all fish in Cochill 2 were from the unfed stocking, then the survival over the 18 months from stocking would have been at least 3.5%.

In conclusion, this first attempt at stocking with fed parr has proved several things.

1. It has not proved straightforward to differentiate parr of different origin. Analysis of scales is underway to try to answer this question, but even if this works, it is a time consuming process. Trials with unfed fry and fed parr have been repeated in 2012 but fed parr have been adipose fin clipped for easy identification.
2. Where fed parr were stocked on their own in the main stem of the Braan, they survived sufficiently well perhaps to saturate the river's carrying capacity. However, the survival rate over the first year, from the density stocked, appears to be among the higher rates of survival reported in such experiments.
3. The subsequent growth rate of fish stocked as both unfed fry and fed parr is related to the density of fish present. Both types grew well in the absence of competition. Indeed, in the absence of competition, unfed fish may be able to make up for their lower initial growth.
4. Unless scale analyses prove successful, it has not proved possible in the first year to say which of the two techniques is the best. However, with these lessons learned and having proven that the Board can now produce such fish, clearer results will be forthcoming in the next two years.
5. It is perhaps also worth noting that the density at which the parr were reared in tanks may have been significantly less than in some hatcheries. It was also found that stocking fed parr by spreading out at low densities where a road is not immediately adjacent poses a challenge and might prove arduous if very large numbers were being reared.

Japanese knotweed spraying

In 2010 and 2011, contractors were engaged by the Tay Foundation to spray Japanese knotweed on the River Earn. Over these two years, most of the knotweed between St Fillans and Auchterarder was sprayed once. In 2012, part of this area was then resprayed, which can apparently be required several times in order to eliminate this extremely tenacious invasive plant. As the Tay Foundation's original grant from Esme Fairbairn Foundation had been used up, in 2012 the spraying was paid for jointly between the Tay Foundation and the River Earn Improvement Association.

Recently, Rivers and Fisheries Trusts of Scotland (RAFTS), the umbrella body for Scottish fishery trusts, has submitted an application for EU funding for a national five year project for the removal of selected freshwater and aquatic invasive species. This is being backed by significant matched funding from SEPA and SNH. If successful, this project will deliver significant resources to control Japanese knotweed and some other invasive species between 2013 and 2018. As far as the Tay district is concerned, the Board rather than the Tay Foundation will lead on this. It is proposed that a dedicated officer will also be employed by RAFTS to coordinate work in the Tay district, which will give this issue the true

degree of focus it requires. Therefore, building on the work that has already started, it is hoped that, by 2018, Japanese knotweed will be entirely eliminated from the riparian zone of the River Earn and indeed from other parts of the district where it is, as yet, less prolific.

Re-watering of the River Garry

There is not much to report on this issue since the previous *Annual Report*. As previously described, SSE have made a formal application to restore flow and SEPA have been considering this and the responses of the Board and others for **two and a half years**.

SEPA had indicated that they intended to determine the application by the end of 2012. That deadline is now very close.

River Tay EU Special Area of Conservation – site condition monitoring

The River Tay and its accessible tributaries (but not the Earn) is an EU Special Area of Conservation (SAC) for Atlantic salmon. There is a requirement for SAC rivers to be monitored every six years to check on the health of designated species. This is known as Site Condition Monitoring (SCM). The first SCM exercise took place in 2004/05 and the second in 2011.

The 2011 SCM exercise was headed by RAFTS and took the form of an analysis of catch trends which was conducted by RAFTS with Tay Foundation and TDSFB input and an extensive juvenile electrofishing survey. The results of this exercise showed that the juvenile salmon population is in "favourable status". For almost all sites, the density of salmon parr was in the top 20% of the range of salmon parr densities generally found in this part of Scotland.

The analysis of catches also determined that the Tay has improved since it was designated an SAC, but that owes much to the fact that catches around the time of designation, particularly in 2002 and 2003, were particularly low.

Salmon in the Classroom

Salmon in the classroom is a joint project which is now headed by the Tay Foundation and funded by Scottish Natural Heritage. Other partners include Perth and Kinross Council Ranger Services, Angus Council Ranger Services, Loch Lomond and Trossachs National Park Ranger Services, Atholl Estates Ranger Services and the Esk and Tay district salmon fisheries boards.

In 2012, salmon eggs were provided from the Board's hatchery at Almondbank to seven primary schools (Letham (Perth), Methven, Aberfeldy, Killin, Burnside, Newhill (Blairgowrie) and Coupar Angus). In the spring, the participating classes visited the Board's hatchery and were given talks and demonstrations on the salmon life cycle and its conservation, the process of the hatchery and the fisheries on the River Tay. Schools were invited to submit a project record to a competition. The entries again were of a very high standard, proving that the pupils had found this a particularly engaging topic. Letham and Methven schools were judged to be joint winners and each awarded a prize of £100 from the Tay Foundation.

Upper Tay Rafting Issues

As reported in last year's *Annual Report*, Fishlegal had lodged a formal complaint with Perth and Kinross Council over the way an application for a byelaw to regulate commercial rafting on the upper Tay had been handled. However, because the Upper Tay Riparian Owners Association (UTROA) have separately taken out legal proceedings regarding a separate part of the Land Reform (Scotland) Act 2003 which is still ongoing, fishlegal have decided it appropriate to await this decision before further pursuing the byelaw issue.

Lows Weir, River Almond

Over the course of summer 2012, Low's Weir, a large weir on the River Almond situated just below Almondbank, was rebuilt. The weir, which diverts water into the Perth Town Lade, had been breached for some time and the Lade dry. The reconstructed sloping weir now incorporates a fish pass, which it did not have historically.

Construction was complete before the main Almond salmon run arrived, although repairs had later to be made to the drystone structure. Based on the presence of salmon upstream, the rebuilt weir did not appear to be a significant problem for ascending salmon.

It is also understood that the water abstraction regime for the Lade which will prevail in future will differ from the practices of the past. A preferential low flow will be maintained in the mainstem of the River Almond below the weir, whereas, in the past, almost the full flow of the Almond could be taken by the Lade in droughts.





The historic listed Low's Works Weir was rebuilt with dry stone over a concrete core. A deeper sinuous passage was made through the weir to make it easier for fish to ascend than had been the case historically. The work was completed in later summer (right), but some repairs have already been necessary.

Beavers

As reported in the last *Annual Report*, there have been increasing reports of beavers in the Tay catchment over the last few years. In 2012 the issue became more pressing and the Scottish Government announced that it would not seek the removal of these beavers, at least in the short term. Instead, the Tayside beavers would be monitored for a three year

period in parallel with the ongoing official beaver reintroduction trial in Knapdale. A decision on their future will be taken in 2015.

Accordingly a group was set up to oversee the monitoring programme. The Tayside Beaver Study group is chaired by SNH but has representatives from a broad range of "stakeholder" interests, including the Board.

Proposed Archimedes Screw Turbine at Pitcastle

An application was made to install an Archimedes screw type turbine in an old lade on the upper Tay at Pitcastle. The location is immediately upstream of the road bridge at Strathtay / Grandtully.

The Board objected to this application because, at a certain level of flow, the turbine might abstract almost as much as 30% of the flow of the river. This is a concern because, at the point at which the flow would be returned (just upstream of Grandtully Bridge), the Tay's flow is split by rocks. By reducing the flow in the main river and introducing a new flow from the side, the individual split channels in the Tay might become less attractive to ascending salmon. There must be some danger that, under such conditions, salmon may congregate below the tailrace and their upstream migration be delayed. The Board felt confident in this objection because this level of abstraction is high enough to breach something called the Flow Standard for Good Ecological Status. However, in an unforeseen twist, SEPA have decided that such flow standards should only be applied to the theoretical natural flow regime of a river. As the flow in the upper Tay has been modified by hydro operations (current low flows are higher than they would have been pre-hydro), the flow standards must be applied to "natural" flows estimated by computer model rather than the actual flow in the river. Under this scenario the proposed abstraction does not breach the flow standards and thus will presumably be deemed permissible by SEPA.

Abandonment of proposed hydro station on the River Isla

As mentioned in the 2011 report, SSE had been scoping the construction of a new hydro scheme which would affect some 9.5 km of the River Isla, about half of which is accessible to salmon. The Board and other organizations and individuals had made their opposition to that proposal very clear. It was a relief, therefore, that SSE have since decided to shelve this proposal, hopefully indefinitely.

Estuary tagging experiment to determine angling capture rates of autumn salmon

An attempt was made again by the Tay Salmon Fisheries Company, with the permission of the Tay Foundation, to net adult salmon for tagging purposes in the upper estuary. However, again as in 2011, it did not prove easy to catch fish under the conditions (higher flows and degraded stone filled netting stations), therefore the project was abandoned after a few attempts.

Review of North East England Net Limitation Order

In England, coastal salmon netting is not, as in Scotland, a private right, but is licensed. The number of licences issued for any given fishery is regulated by something called a Net Limitation Order (NLO). NLOs are reviewed every ten years. The NLO for the Northumbrian drift net fishery was up for review in 2012. The Board was invited by the Environment Agency to provide comments.

Previous studies have shown that the Northumbrian fisheries do catch a proportion of salmon heading for the Tay, but following the buyout of most of the licences in 2002 the rump of this fishery has been somewhat below the radar. However, it transpires that in 2010 the remaining 14 boats and inshore T and J nets caught nearly 20,000 salmon and in 2011 nearly 25,000 salmon. A genetic analysis of the 2011 catch by Marine Scotland Science proved that about 70% of it consisted of Scottish origin fish, although it was not possible to refine this to individual Scottish rivers. Thus, the remaining nets may still be taking a significant number of returning Tay salmon, for which they contribute nothing.

Although these nets are subject to a very gradual reduction and eventual phase out, the Environment Agency proposed no new further restrictions on the drift net fishery. The Board made substantial comments on the evidence the EA used to support this case and asked that DEFRA should seek to accelerate the phase out of this fishery. Representations were also made on our behalf to Richard Benyon MP, the English fisheries minister, by Sir Menzies Campbell MP (North East Fife) and Gordon Banks MP (Ochil and South Perthshire). Representation was also made by the ASFB, Tweed Commission and others. The ASFB, Atlantic Salmon Trust and Salmon and Trout Association succeeded in making direct representation at a meeting with DEFRA in London.

At the time of writing DEFRA's decision on the EA's proposal is still awaited.

The main thrust of the Board's representation to DEFRA was not on the effect on the Tay itself, as that is not easy to quantify, but on rivers in NE England. The Environment Agency produced copious information on their own rivers (although almost nothing on Scotland from where most of the fish originate) and this largely seemed to indicate that NE English salmon populations were in good heart, meaning that their fisheries were "sustainable". However, the Board was able to cite other reports that cast doubts on the methods used and argued that most of the NE English post-industrial "recovering" salmon rivers have quite some way to go before their populations are fully recovered. Exploitation of those stocks by the drift net fishery cannot be justified.

Whatever the outcome of the immediate NLO review, the EA have apparently committed to a five year scientific review. Hopefully, if not beforehand, that process will take a more independent line and the true effects of this fishery, both present and past, will be identified.

Offshore Wind Farm Application

Following a lead provided by the ASFB, the Board objected to an application by Mainstream Renewables for a large windfarm off Fifeness. The objection was based on the fact that insufficient information had been provided (the necessary research has not been conducted) to determine whether construction noise (e.g. piling which might go on for years

as this and successive wind farms are built) will affect salmon migration or whether migrating salmon will be affected by electromagnetic fields from cables once up and running.

Opening Day celebrations at Dunkeld

In 2012, the Board once again lent its support to the opening day celebration organized by the Dunkeld and Birnam Tourist Association. Following a well attended breakfast reception with members of Perthshire Chamber of Commerce at the Dunkeld Hilton House Hotel, the first cast of the day was made by the guest of honour, Steve Lomas, the manager of St Johnstone FC.







The first cast of the 2012 season was made by Steve Lomas, manager of St Johnstone FC on Monday 16 January. Mr Lomas is pictured above right with the Board's Chairman William Jack during the customary blessing of the boat ceremony.

River Tay Dinner 2012

The Annual River Tay Dinner and Auction was held at the Dunkeld Hilton House Hotel on Saturday 13 October 2012. At the dinner, long service awards were presented to retiring ghillies Bill Sutherland (Baldarroch), Jock Tait (Upper Redgorton) and Jim Last (Waulkmill). The auction, silent auction and prize draw raised, between them, in excess of £20,000 which was donated to the Tay Foundation.

LONG TERM STRATEGY

Introduction

As described in recent *Annual Reports*, the Board has, since 2010, tried to work to agreed annual work plans. In 2011 / 12 it was agreed to elucidate the strategy showing what the Board hopes to achieve in the long term. From this, annual work plans will flow. Such a document will clearly define work the Board wishes to do in future, allow better planning of the resources required and improve communication of what the Board hopes to achieve.

Such a strategy will also demonstrate that the Board meets the expectations of the Scottish Government with regard to transparency and has a "commitment to modern, evidence-based management of the fisheries."

The process commenced in 2011 under the previous Board and was accepted by the new Board in 2012 for implementation.

General aims and concepts

The overall aim of the strategy is to improve salmon fishing in the Tay district. This is to be achieved through two means

1. By optimising use of the existing resource
2. By increasing the number of fish returning to the rivers within the district.

It is recognised that marine mortality of post-smolts is largely out of our control and is now at concerning levels with estimated survival of 5% in some years. The strategy with regard to (2) is therefore to maximise the number of smolts going to sea consistent with what the catchment can support.

That is to be achieved by

1. Increasing the amount of catchment available to spawners, where possible
2. Improving areas that are already accessible to salmon
3. Protecting the juvenile salmon and returning adults to ensure their survival is maximised

Where the exact nature of problems affecting salmon are not known or where solutions are not clear, there may also be a requirement to conduct research. However, it is made clear that any research conducted is to inform and support the primary aims of the strategy and is not done as an end in itself. Allied with this, it is vital that any works conducted are adequately monitored and measured. It is essential that we demonstrate what works and what does not and whether value for money is being obtained or not.

While the Board would rather seek to continually improve the fisheries, it is recognised that the Board must also consider many factors which can damage the fisheries. Therefore we have also identified risks, both to juvenile salmon production and to the strategy itself. A major element of the strategy is therefore to ensure that measures are put in place to mitigate these risks

These main concepts are summarized in Figure 11 below. Also shown are some of the major issues we have identified under the various headings.

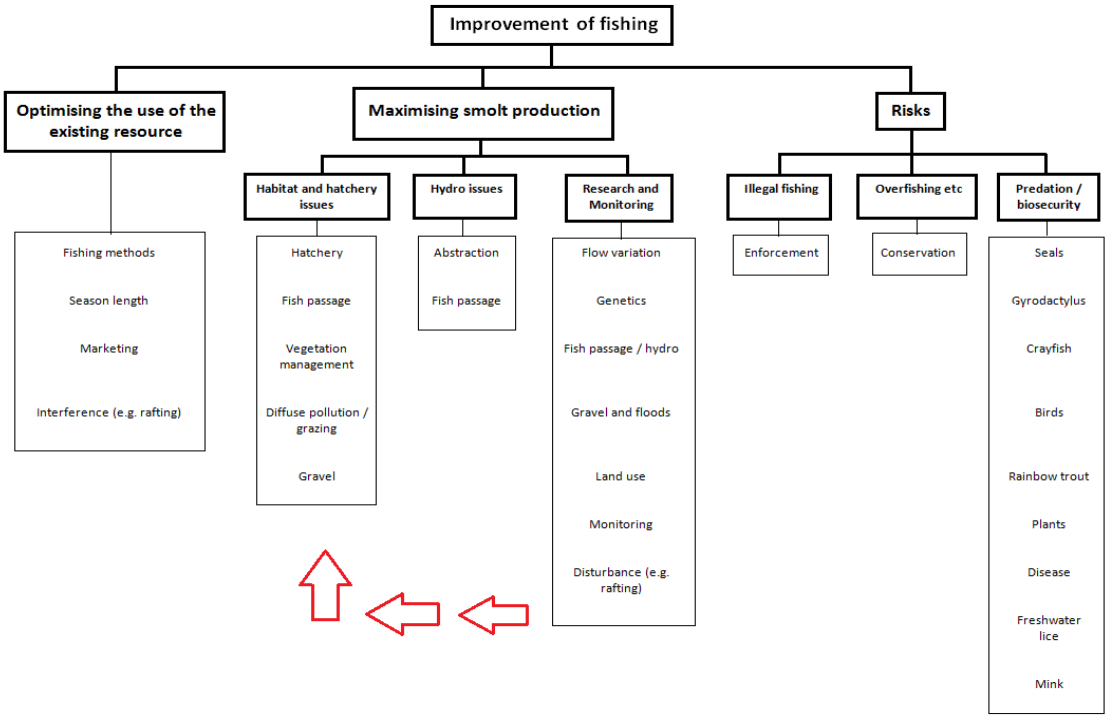


Figure 11. Conceptual diagram of the main elements within the Board's long term strategy

Having agreed the approach to the strategy it was necessary to prioritise the tasks and issues under the various headings. This was done by identifying and listing measures that would help improve salmon production and listing risks and threats. Each issue was weighted according to its estimated effect on smolt production, certainty of outcome, costs and likelihood of being permitted. From these prioritised lists, a plan of work was produced for the next three years, the lifetime of the present Board, based on best estimates of resources available. These plans will be reviewed annually.

The initial three year plan can be found on the Board's website at www.tdsfb.org/scientific-reports.htm.

HOW MUCH ELECTRICTY GENERATION WOULD NEED TO BE "LOST" IN ORDER TO RESTORE FLOWS TO SCOTLAND'S OVERABSTRACTED SALMON RIVERS?

In the Board's view, this was a fundamentally important question that had to be answered before a meaningful plan of restoration of Scotland's overabstracted rivers could be formulated, as required by the Water Framework Directive. Surprisingly, this basic question had not been answered or perhaps even attempted. Therefore, as part of a response to a SEPA consultation, this is exactly the question the Board attempted to answer.

In order to do this the following approach was adopted.

1. All waterbodies in Scotland that SEPA had identified as being at less than Good Ecological Potential because of hydro abstraction were identified.
2. For each of these waterbodies, and there were many, the locations of hydro intakes were identified and their abstraction regimes.
3. For each intake location a theoretical low summer flow – the so called Q95 flow, the flow that is exceeded on average for 95% of the time, or put another way, the flow that would be expected on the 18th driest day of the average year – was estimated using a specialist software package (Low Flows 2). The Q95 flow, though perhaps less than we might wish for, is the UK accepted standard flow that should be restored to such systems.
4. Using published information on the "heads" for the relevant power stations, these flows were translated into power. Then by assuming such a flow would be sustained all year, this information was translated into annual energy "loss".

The results of this large and challenging exercise were that SSE would "lose" 197.5 Giga Watt hours (GWh) per annum, nearly 7% of their total annual production from hydro. Alcan would "lose" 14.1 GWh and Scottish Power would "lose" 12.4 GWh per annum, about 5% of its annual production in Galloway. However, it was found that rivers flowing out of large natural lochs had very high estimated flows for the size of their catchments. If, instead, the "natural" flow of such waterbodies was estimated on the basis of no natural loch being present, then SSE's "loss" would only be 119.5 GWh, around 4% of its annual hydro production. However, if those waterbodies for which there was considered to be no interest for migratory fish were excluded, the SSE total fell even further to 84.9 GWh or only 2.9% of its annual hydro output.

Another element of the exercise was to estimate the amount of new river habitat that might be created by restoring such flows. Although dependent on some very broad assumptions, it was found that most of the new salmon habitat that might be created was in fact very small (Figure 12). By far and away the most significant river is the River Garry.

If it were to be considered that some of these waterbodies are really not worth restoring, then the larger rivers could be restored comfortably without significant loss in generation. There would be no need for any compensatory increase in abstraction levels elsewhere, as some have proposed.

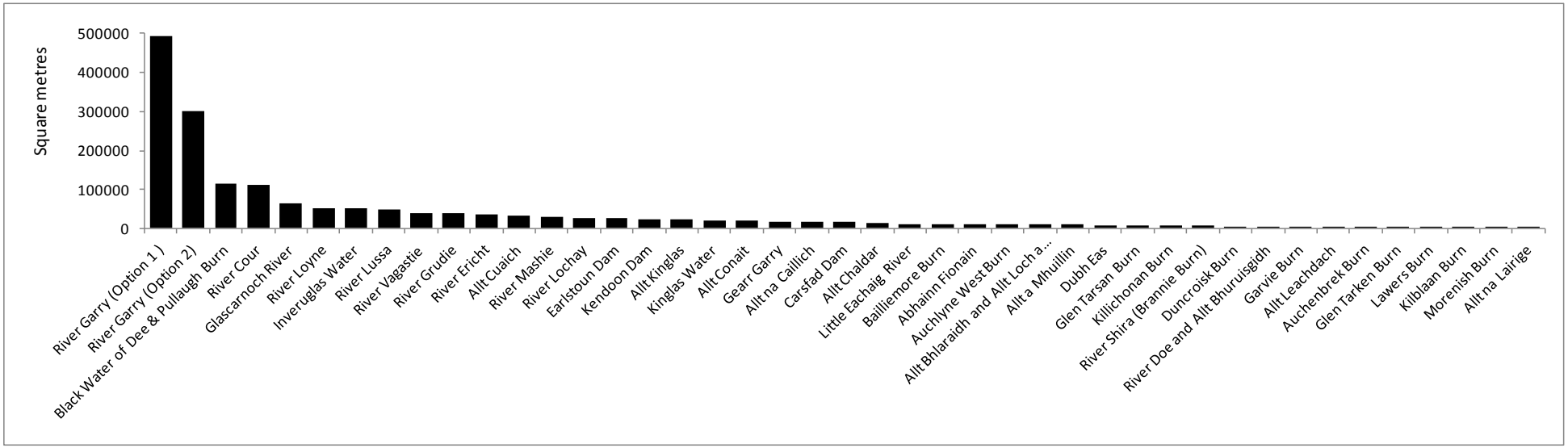


Figure 12. Areas of new habitat accessible to salmon that would be created by restoring Q95 flows in those Scottish heavily modified water bodies that are failing because of hydro water abstraction. Note: River Garry option 1 assumed the Garry is opened right to Loch Garry, while option 2 assumes salmon do not get past Garry Offtake.

AQUACULTURE AND FISHERIES (SCOTLAND) BILL

On 3 October 2012 an Aquaculture and Fisheries (Scotland) Bill was introduced to the Scottish Parliament. The bill is mainly concerned with fish farming and marine issues, but there is included a section principally devoted to the governance of district salmon fisheries boards.

Among other things, the bill proposes to make it a duty:

- for boards to publish and copy to Scottish Ministers the annual report and audited accounts.
- for Boards to hold one public meeting each year. All other meetings should be held in public, unless there is a good reason to conduct the meeting in private.
- to maintain and keep under review arrangements for dealing with complaints about the way in which the board has carried out, or propose to carry out their functions.
- A duty to maintain, and keep under review, arrangements for the registration and declaration of relevant financial interests of board members. Members would be excluded from taking part in the consideration of any business in which they had a relevant financial interest.
- Where a DSFB has persistently failed to comply with good governance requirements or contravened the Act, there is a power to dissolve the committee constituting a board.
- A duty to consult and report before making applications seeking regulations as to baits and lures, close seasons etc.

It also proposes:

- An enabling power for Scottish Ministers to introduce a statutory salmon carcass tagging system.
- A reserve power for persons authorised by Scottish Ministers to take fish samples for analysis etc.
- A reserve power for Scottish Ministers to conduct inquiries and obtain information for the protection and development of salmon stocks.
- To give Scottish Ministers the power to change fishing season dates as conservation measures.
- Powers for Scottish Ministers to impose requirements on DSFBs relating to monitoring and evaluation of the effect of close time changes, salmon conservation regulations and baits and lures regulations. Contravention of such monitoring and evaluation requirements will be a criminal offence.
- An enabling power for Scottish Ministers to be able to revoke a DSFB's right to consent the stocking of salmon in its district.
- An enabling power for Scottish Ministers to impose charges in connection with the carrying out of fisheries functions.

The Scottish Government has also stated that this is the first stage in the "modernisation" of fisheries management in Scotland, with another bill to appear later in this Parliamentary term. It is not known what that is likely to contain.

While the Board is already compliant with some of these proposed duties – e.g. the publication of this *Annual Report* and Accounts – and welcomes others, we do have concerns over some of the provisions, for example making a board criminally liable for failure to adequately monitor various orders. The effect of this is likely to deter volunteers from standing for board membership. The issue of what constitutes a financial interest also must be defined.

More information on the progress of the bill can be found at http://www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/55865.aspx.

FISH COUNTER RESULTS 2012

Pitlochry Dam

Though not as good as 2011, 2012 again saw one of the best counts since the late 1970s (Figure 13). Relatively good counts to the end of May and again to end June, are suggestive of a good run of 2SW and 3SW fish, which was mirrored by catches during that period. The overall summer count was not unreasonable, but it is not known whether this was aided by continuing numbers of salmon rather than a good grilse run.

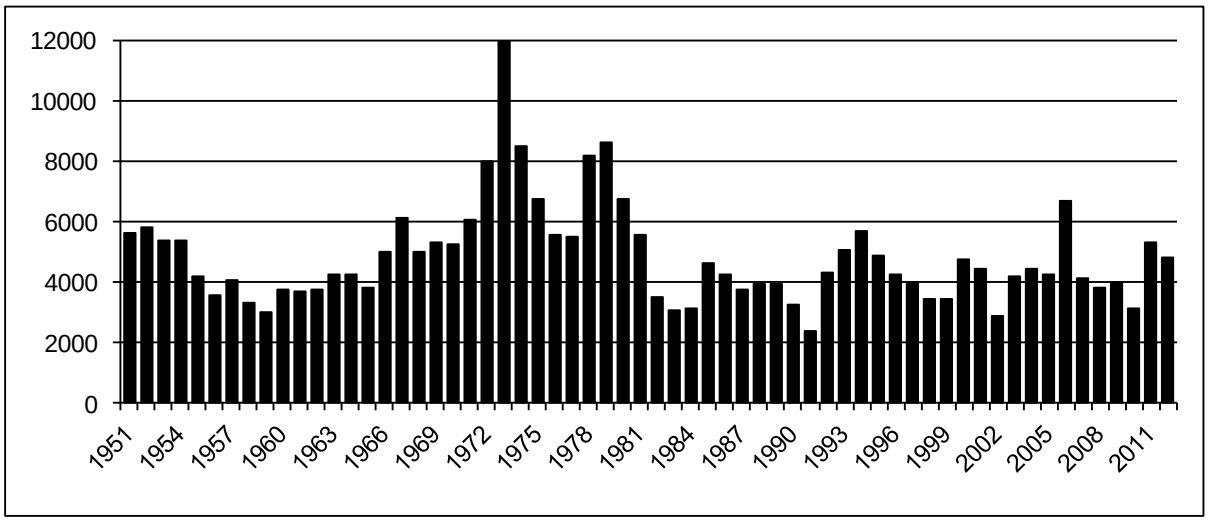


Figure 13. Annual net upstream counts (that is down counts are subtracted from up-counts on a daily basis) through Pitlochry Dam fish ladder, 1953 – 2012. (Data courtesy of SSE)

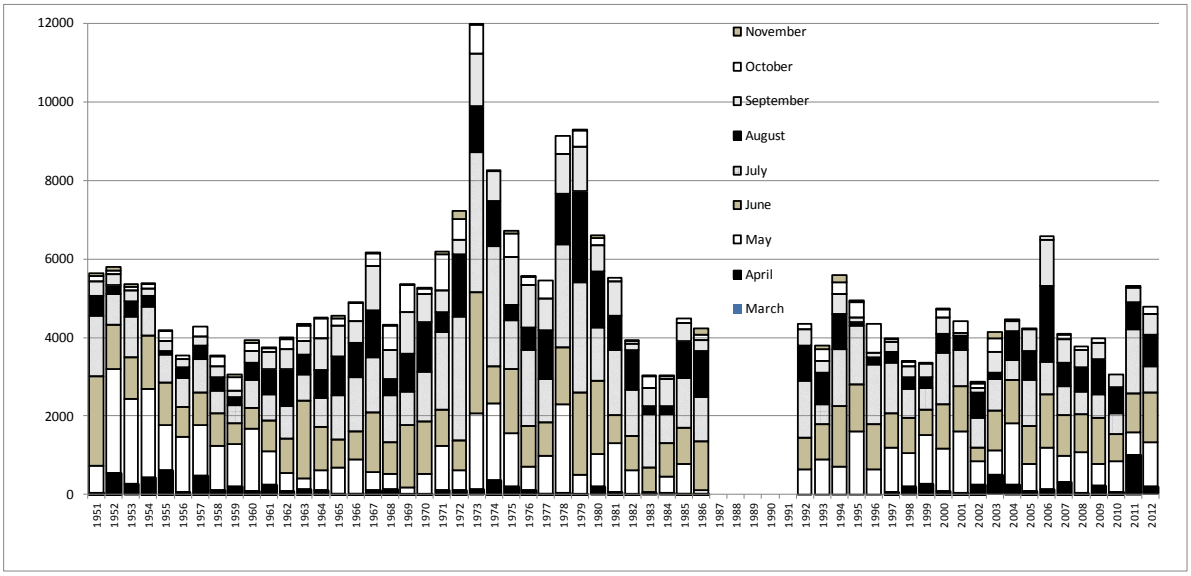


Figure 14. Monthly net upstream counts, Pitlochry Dam, 1951 to 2012. (Data courtesy of Michael Gardner, David Stewart, Ross Gardiner and SSE)

Clunie Dam

The overall count at Clunie Dam on the River Tummel for 2012 was around the average for recent times (Figure 15), despite the count downstream at Pitlochry being relatively good. In keeping with the last few years, notably fewer fish ascended before the beginning of July than was the case a few years ago (Figure 16). As was the case in 2011, it is speculated that cool temperatures may again have prevented fish running in numbers in June, particularly given the Pitlochry counts show there were plenty of fish available to run at that time.

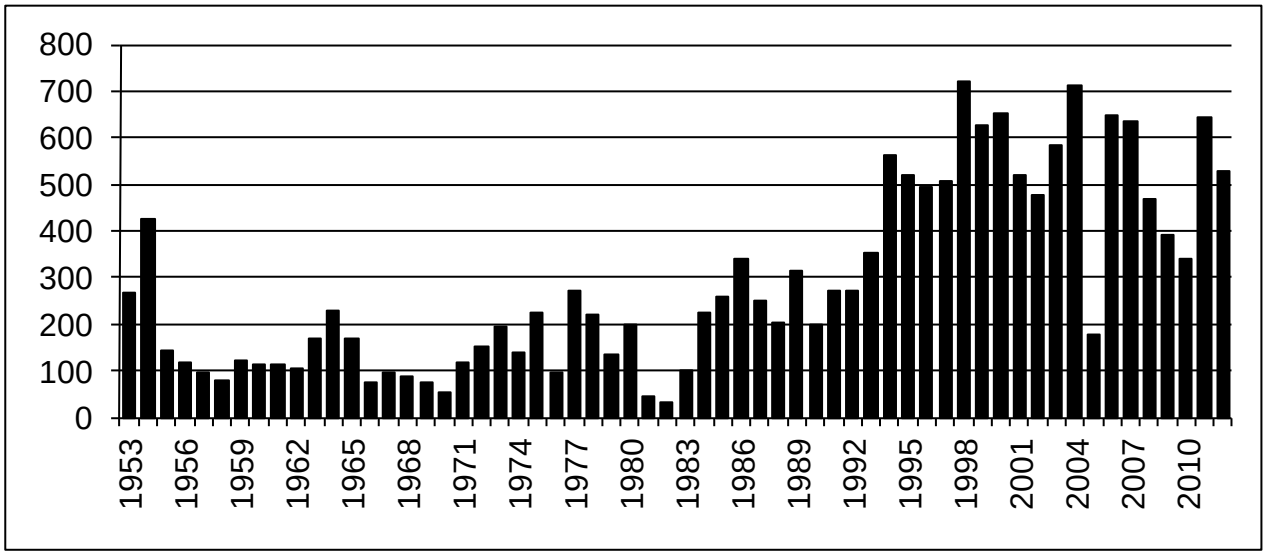


Figure 15. Net annual upstream counts through Clunie Dam fish ladder, 1953 to 2012. (Note: there was a malfunction in 2005). (Data courtesy of SSE)

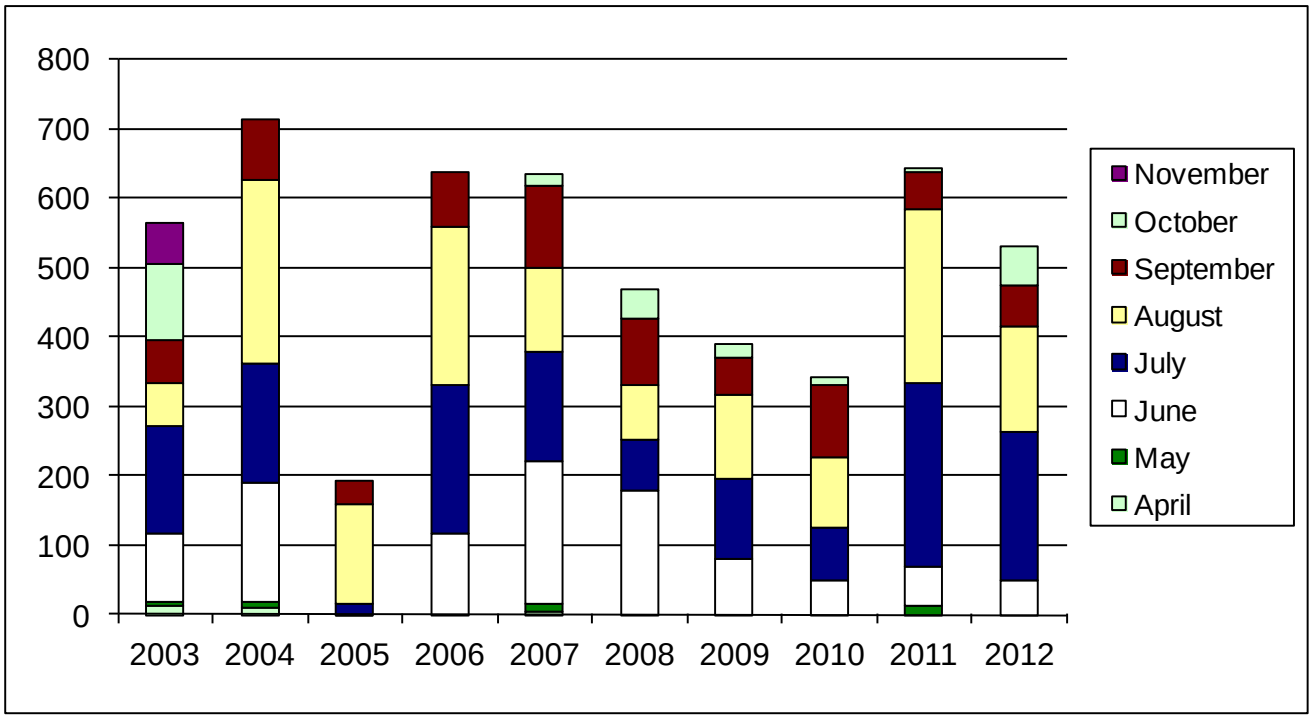


Figure 16. Monthly net upstream counts, Clunie Dam fish ladder, 2003 – 2012. (Data courtesy of SSE)

Lochay Falls and Stronuich Dam

Unfortunately, no counts are available from SSE's counters at Stronuich Dam (River Lyon) or Lochay Falls for 2012, due to technical problems.

Shochie Burn Fish Counter

In mid September 2011, the Board installed a resistivity fish counter in a fish pass around a weir on the Shochie Burn, Luncarty. The counter had previously been installed in the River Ericht but was redeployed when the weir housing it breached.

The Shochie Burn is a spawning stream and would only be expected to see fish late in the year. However, by mid January when it was decided to switch off the counter, there had been a net upstream count of 793 fish, although few ascended after the end of November (Figure 17). That number was indeed a surprise.

It is not known whether a proportion of these counts might have been larger sea trout or whether some fish might have been washed over the weir and ascended a second time. However, fish movements largely coincided with rises in water, as shown in Figure 17 (water levels from the River Braan are shown as they were available and it is an adjacent catchment to the Shochie so should experience similar weather). That, of course, is not unexpected in a stream of this size but gives comfort that the counts registered are likely to have been real rather than spurious counts. Had the latter been the case then a random distribution of counts might have been more likely.

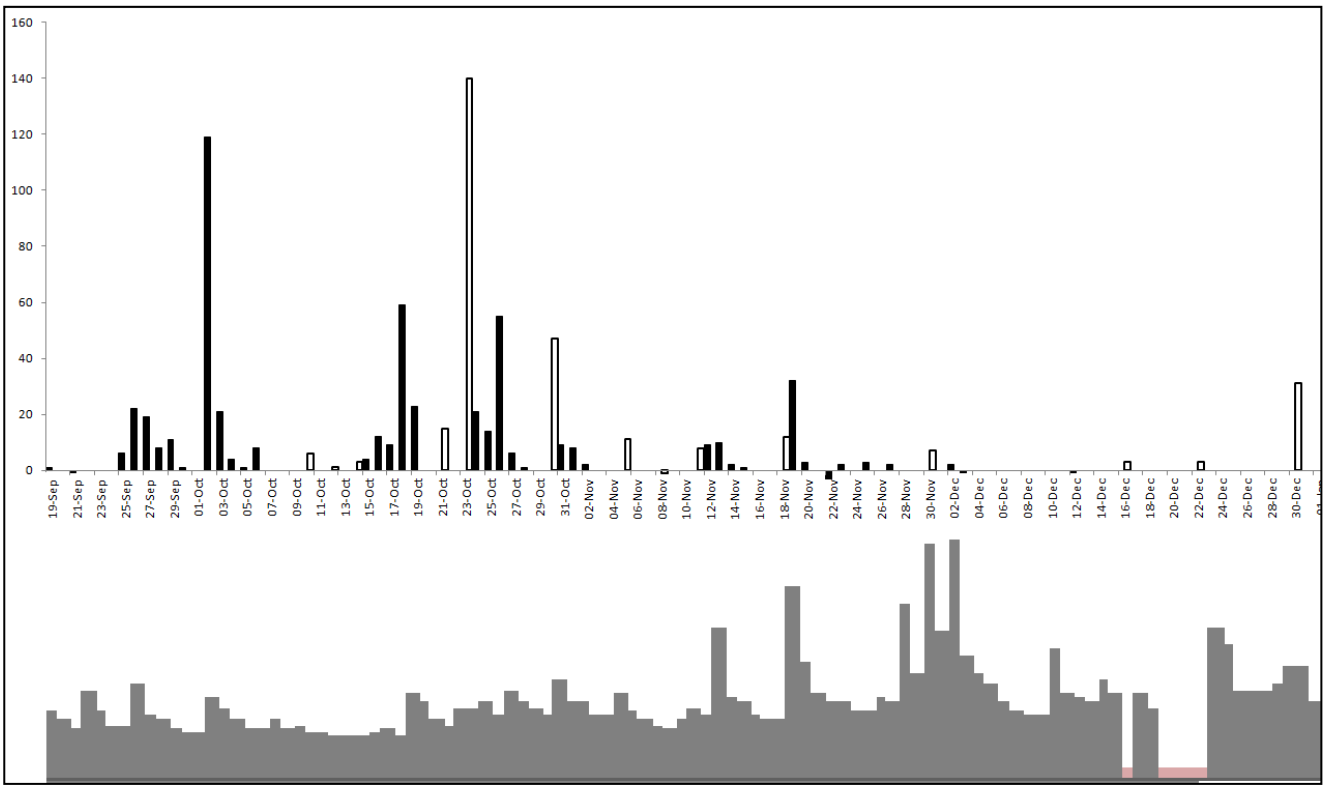


Figure 17. Black bars - daily net upstream counts of fish over 50cm through the Luncarty Weir Fish Pass, Shochie Burn, mid September – end December 2011. Unfilled bars – where the counter was not read every day, these represent total net count since previous reading. Shown underneath, daily water heights at SEPA's gauging station at Inver on the River Braan over the same period.

TAY DISTRICT SALMON FISHERIES BOARD

Minute of the Annual Meeting of the Proprietors within the Tay District held in terms of Section 44(1) of the Salmon & Freshwater Fisheries (Consolidation) (Scotland) Act 2003 held at the Birnam Institute, Birnam, Dunkeld at 11am on 6th December, 2011.

Present:
Bill Jack (Chairman)
Bob White
Simon Furniss
William Lindsay
David Godfrey
Thomas Steuart Fothringham
John Young
Alex Stewart
Sam Mercer-Nairne
Michael Wedderburn
John Wood
Alastair Riddell
David Barwick
Bruce Reid
Elaine Whewell
Alan Dunnet
M C Smith
Peter Macdonald
Alastair Gillespie
Toby Metcalfe
William Jackson
Ricky Wilson
Malcolm Taylor
Yvonne Learmonth
Ian Dalglish
Richard Dickson
Edward Eadie
Robert La Terriere
Donald Skene

In Attendance:
Dr. David Summers, Fisheries Director
Rob Mitchell, Tay Foundation Biologist
Callum Towns, Clerk
Lee Fisher, Head Bailiff
Victor Clements
Bob Thomson
Glyn Thomas
G Stewart
Mike Hay

Apologies:
Colin Lowson
Viscount Stormont
Gavin Jack
Pitlochry AC
Tim Atkinson

Minutes of the Annual Meeting held on 7th December, 2010.

The Minutes of the 2010 Annual Meeting were taken as read and, on a proposal by William Lindsay and seconded by Sam Mercer Nairne, were approved.

Accounts for the Year Ended 31st December, 2010

The Accounts for the year ended 31st December, 2010 which were incorporated in the Annual Report had been circulated and were taken as read.

The Chairman referred to the improvement in the cash position over the 3 years of the current Board.

There were no questions and on a proposal by Alastair Riddell, seconded by Alex Stewart, the Accounts were approved.

Annual Report 2010/11

The Chairman spoke about the acquisition of the Government Hatchery at Almondbank and the subsequent doubling in size of capacity which would generate 1.5 million eggs per year. It was anticipated that the running costs of the new hatchery would be of the order of £250k over the 3 years of the lease.

Over and above an extremely generous donation by John Apthorp towards these costs, it was the intention that the cash generated by the Trial Season extension would also contribute. He recommended those present to go and see the Hatchery. It would hold 200-250 fish with each fish expected to recondition for 7 years. All were spring fish whose eggs would be returned to the top of the system. The Chairman suggested that 100-200 million eggs were naturally spawned in the system and that the 3 million eggs from the TDSFB hatchery would make little difference unless they were returned to sites where there was low natural spawning. We would require to measure the results to ensure that what was a large financial commitment by the Board was cost effective.

The Chairman then went on to discuss the structure of the current Board and the outgoing Board's recommendation for its successor. The 2008 election had resulted in a Board of 23 members. Whilst this had resulted in good and comprehensive input, it had been fragmented and there had been a tendency to concentrate on local issues rather than the big picture.

There will be a new Aquaculture Bill in 2012 which will scrutinise the activities of boards to ensure that they are fit for purpose and we must ensure that our house is in order.

The outgoing Board was therefore recommending a Board of 6 elected members, 1 from Lower beats and 5 from Upper beats, and 5 co-optees. The meeting agreed to this proposal unanimously.
The Chairman added that he was currently Chairman of TDSFB and Tay Foundation which he thought was inappropriate and he therefore planned to step down from the TF role at its next meeting.

The issue of the season extension had proved divisive but the Chairman stressed that it was a trial and should not be seen as a permanent change. It would run its full 3 year course and the results would then be analysed before any decision was taken. Any proposal to make the change permanent would require an EGM with a full vote. During the course of the experiment, a third of

gross income raised would be payable to Tay Foundation and this would be used to benefit all parts of the system.

Victor Clements asked how much had been made this year from last day only. There was not a final figure yet because a number of beats still had to remit, but this was not critical because of the requirement that a third of income over the three years was payable.

Alan Dunnet and Michael Smith both suggested that the season start be moved to February 1 because of the high numbers of baggots present during the second half of January. The Chairman proposed that a decision on this should be deferred pending the results of the season extension. We had to bear in mind that there were Timeshare owners of these January weeks.

On a proposal by David Godfrey, seconded by Thomas Steuart Fothringham, the Annual Report was approved.

Presentation by David Summers

David Summers gave a presentation on "Long Term Strategy" which had been developed and approved by the outgoing Board and which it now wished to pass on to its successor Board.

The overall aim of the strategy was to improve salmon fishing on the Tay. Within this, the strategy sought to optimise the use of the existing resource, maximise smolt production and to minimise risk to the fishery. Each of these areas was broken down into specific activities and projects which were then prioritised. These would require to be researched, monitored and measured and their likelihood of getting permission and cost effectiveness examined.

Richard Dickson referred to the Welsh situation where access rights favoured the angler. David Summers referred to the Land Reform Act which had provided right of access for recreational use. There were major problems on the Upper Tay and the Stanley area in respect of rafters and canoeists. Efforts to resolve this issue involving UTROA, PKC, Local Access Forum, FishLegal and the rafting/canoeing bodies were continuing but were not easy and there was no agreement in sight.

Any Other Business

No further items were raised and the meeting was closed.

THE TAY DISTRICT SALMON FISHERIES BOARD

Triennial Election of The Tay District Salmon Fisheries Board held under the Salmon & Freshwater Fisheries (Consolidation) (Scotland) Act 2003 on 6th December, 2011 at The Birnam Institute, Dunkeld.

Present: Those proprietors present at the earlier Annual Meeting together with Mandatories.

In Attendance: Callum Towns as Clerk
Dr. David Summers, Fisheries Director
Rob Mitchell, Tay Foundation Biologist
Lee Fisher, Head Bailiff
David Barwick
Bob White
Victor Clements
Bob Thomson
G Stewart
M Hay

1. The Chairman of the outgoing Board, Bill Jack, opened the meeting by intimating that he and the outgoing Board resigned. He then handed over the meeting to the Clerk.

2. The Clerk welcomed the proprietors present to the Election under the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003. He said that the only business to be conducted at the meeting of proprietors was the election of representatives of proprietors. There was no maximum number of Board members but the outgoing Board had recommended a maximum of 1 Lower Proprietor and 5 Upper Proprietors. The meeting agreed to this proposal unanimously.

3. The outgoing Board had served 3 years. In terms of Section 43 of the 2003 Act the meeting of Upper and Lower Proprietors had been called for the purpose of forming an Association of Proprietors of Salmon Fisheries within the Tay District and for the purpose of electing a Committee to act on behalf of the Association, which Committee would then become the District Salmon Fisheries Board for the Tay District.

4. The Clerk said that Notice had been given to each proprietor on the roll of proprietors in terms of the 2003 Act and also by advertisement in the press.

5. The meeting unanimously agreed that the Clerk should conduct the Election.

6. The Clerk then called for the Election in terms of the 2003 Act and called for nominations from those qualified proprietors present for representatives of Lower and Upper Proprietors.

   The following nomination was received for Lower Proprietors:-

   David Godfrey as Mandatory for Tay Salmon Fishing Co Ltd proposed by The River Earn Angling Improvement Association (Mandatory John Young) and seconded by the Tay Foundation (Mandatory Bill Jack).

The following nominations were received for Upper Proprietors:-

1. Simon Furniss as Mandatory for Hilton Dunkeld House Hotel proposed by Bill Jack (Mandatory for Viscount Stormont) and seconded by Bruce Reid (Mandatory for William Reid).

2. William Jackson as Mandatory for Derculich (Strathtay) Ltd proposed by R P P Wilson and seconded by Richard Dickson.

3. Bill Jack as Mandatory for Viscount Stormont proposed by Simon Furniss (Mandatory for Hilton Dunkeld House Hotel) and seconded by Alastair Riddell.

4. Thomas Steuart Fothringham proposed by Sam Mercer Nairne (Mandatory for Meikleour Hotels & Fishings Partnership) and seconded by William Lindsay (Mandatory for Taymount Timeshare).

5. Alastair Riddell proposed by Alex Stewart (Mandatory for Killin Angling Club) and seconded by Elaine Whewell (Mandatory for Innerwick).

6. Michael Smith as Mandatory for R&H Trust Co. (Bermuda) Ltd proposed by Alastair Gillespie (Mandatory for Upper Farleyer) and seconded by Yvonne Learmonth (Mandatory for Edradynate).

7. William Lindsay as Mandatory for Taymount Timeshare proposed by Bill Jack (Mandatory for Viscount Stormont)and seconded by John Wood (Mandatory for Strathmore Estates).

There being no further nominations the Clerk called for a vote among the Upper representatives. The result of the vote was that the following nominees were elected as representatives of the proprietors to serve on the Committee as follows:-

Upper Proprietors:-

Bill Jack, William Jackson, William Lindsay, Thomas Steuart Fothringham and Alastair Riddell

Lower Proprietor:-

David Godfrey

The Clerk said that the formal business of the meeting was now concluded and asked the elected representatives to remain behind for the first meeting of the new District Salmon Fisheries Board. The Clerk thanked those proprietors who had attended.

Report of the Auditors to the proprietors of Salmon Fisheries in the Tay District

In accordance with the Salmon and Freshwater Fisheries (Consolidation)(Scotland) Act 2003, section 44, we have audited the financial statements on pages 40 to 44. These financial statements have been prepared in accordance with the Financial Reporting Standard for Smaller Entities (effective January 2007), under the historical cost convention and the accounting policies set out on page 42.

This report is made solely to the proprietors of Salmon Fisheries in the Tay District. Our audit work has been undertaken so that we might state to the proprietors those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the proprietors for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of duly elected and duly co-opted board members and auditors
Section 44 of the Salmon and Freshwater Fisheries (Consolidation)(Scotland) Act 2003 requires the Board to prepare a statement of accounts for each financial year which give a true and fair view of the state of affairs of the Board and of the surplus or deficit for that period. In preparing those accounts, the Board members are required to:

- select suitable accounting policies and apply them consistently;

- make judgements and estimates that are reasonable and prudent;

- prepare the accounts on the going concern basis unless it is inappropriate to presume that the Board will continue in operation.

The Board members are responsible for keeping proper accounting records which disclose with reasonable accuracy the financial position of the Board. They are also responsible for safeguarding the assets of the Board and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Our responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements and International Standards on Auditing (UK and Ireland). We report to you our opinion as to whether the financial statements give a true and fair view and are properly prepared in accordance with the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003. We also report to you whether in our opinion the information given in the Annual Report is consistent with the financial statements.

In addition, we report to you if, in our opinion, the company has not kept proper accounting records, if we have not received all the information and explanations we require for our audit, or if information specified by law is not disclosed.

Basis of Opinion
We conducted our audit in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the Board members in the preparation of the financial statements, and of whether the accounting policies are appropriate to the Board's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the accounts are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

Opinion
In our opinion:

- the financial statements give a true and fair view, in accordance with United Kingdom Generally Accepted Accounting Practice applicable to Smaller Entities of the state of the Board's affairs as at 31 December 2011, and of its surplus for the year then ended;
- the financial statements have been properly prepared in accordance with the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003; and
- the information given in the Annual Report is consistent with the financial statements.

Campbell Dallas LLP
Chartered Accountants and Registered Auditors
Perth
11 May 2012

TAY DISTRICT SALMON FISHERIES BOARD
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER 2011

	NOTES	£	2011 £	2010 £
INCOME				
Fishery assessments	2		439,701	438,791
Revaluation Appeals			(43,970)	-
Bad debts, changes to provision for doubtful debts etc			-	(823)
			395,731	437,968
Compensation Received (SSE)			6,121	5,843
Contributions from Tay Foundation(Hatchery)			17,110	21,755
Contributions from TGA(Hatchery)			5,357	-
Contribution from SEPA			-	2,000
Rent			2700	-
Consultancy			360	2,600
Opening Day			270	-
			427,649	470,166
EXPENDITURE				
Salaries and National Insurance		188,611		208,125
Contribution to TF Salaries		35,097		32,307
Pension plus Death in Service- Board's contribution		7,891		11,465
Training		541		1,501
Employee Expenses		532		889
Motor cars and boats running costs, incl insurance		36,337		34,146
Rent, rates and general insurance		20,148		23,105
Heat & light		6,244		5,753
Repairs&maintenance - General		2,998		3,544
Repairs&maintenance - Hatchery		7,022		12,678
Telephone & Communications		9,177		6,775
Printing, Stationery & Advertising		2,983		4,358
Annual Report Costs		577		577
Meetings and other statutory costs		3,316		2,878
Ghillies lunch and meeting		-		1,787
Administration costs		18,360		18,000
Legal fees		1,480		-
Audit and accounts fees		2,310		2,512
Depreciation		20,852		26,024
Subscriptions and levies		14,036		12,524
I T costs		1,229		1,158
Health & Safety implementation incl clothing		2,673		5,340
New Hatchery		33,712		16,500
Sweatshirts		-		2,288
Project Work		3,218		15,504
Websites		7,779		7,166
Conservation Dinner		565		560
Gifts & Presentations		-		136
			427,688	457,600
			(39)	12,566
Gain on sale of fixed assets			580	-
			541	12,566
Interest received	3		1,232	4
			1,773	12,570
Transfers to reserves: NASF(UK)	5		-	-
(Deficit)/Surplus for the year			1,773	12,570

The notes on pages 42 to 44 form part of these accounts.

TAY DISTRICT SALMON FISHERIES BOARD

BALANCE SHEET
AS AT 31 DECEMBER 2011

	NOTES	£	2011 £	2010 £
FIXED ASSETS				
Tangible assets	4		110,437	130,746
			110,437	130,746
CURRENT ASSETS				
Debtors & prepayments		30,846		21,370
Cash at Bank and in Hand		250,752		190,401
		281,598		211,770
CURRENT LIABILITIES				
Other creditors & accruals		77,942		30,196
Net current assets			203,656	181,574
NET ASSETS			314,093	312,320
Representing:				
Reserves	5		83,434	83,434
General Fund	6		230,659	228,886
			314,093	312,320

These accounts were approved on 10th May 2012

William Jack WILLIAM JACK
..... BOARD MEMBER

William Lindsay WILLIAM LINDSAY
..... BOARD MEMBER

The notes on pages 42 to 44 form part of these accounts.

NOTES TO THE ACCOUNTS
AT 31 DECEMBER 2011

1 ACCOUNTING POLICIES

The accounts have been prepared under the historical cost convention and are in accordance with applicable accounting standards. The following accounting policies have been applied:

Fixed assets and depreciation

The cost of fixed assets is stated at the net amount after deducting grants available. Donations relating to expenditure on fixed assets are credited to the Profit and Loss Account in the year of receipt, where there are no conditions attaching to the donation.
Depreciation is provided on all fixed assets, at rates calculated to write off the cost over the expected useful lives of the assets concerned as follows:

Hatchery	Over term of the lease
Motor vehicles	25% per annum straight line
Boats	25% per annum reducing balance
Plant and Equipment	25% per annum reducing balance
Computer equipment	33.3 % straight line

Taxation

No taxation is provided due to the fact that HM Revenue and Customs has agreed that the Board is not liable for corporation tax.

Death in service scheme

Contributions to the Board's scheme are charged to the Income and Expenditure account in the year in which they become payable.

2 FISHERY ASSESSMENTS

	2011		2010	
	Rateable Value	Assessment	Rateable Value	Assessment
	£	£	£	£
Upper proprietors	921,611	437,765	715,751	436,608
Lower proprietors	10,025	4,762	13,630	8,314
	931,636	442,527	729,381	444,922
Less River Shee		(166)		(183)
Estuarial netting stations		(2,660)		(5,948)
		439,701		438,971

The assessments are based on 47.5% of Rateable Value (2010 - 61%)

3 INTEREST RECEIVED	2011	2010
	£	£
Bank interest	1,232	4
	1,232	4

NOTES TO THE ACCOUNTS (cont'd)
AT 31DECEMBER 2011

4 FIXED ASSETS

	Leasehold Property	Motor VehiclesBoats	Equipment	Plant & Equipment	Office and Computer Total	
	£	£	£	£	£	£
Cost:						
At 1 January 2011	139,981	78,403	42,671	186,517	19485	467,057
Additions	-	-	-	-	543	543
Disposals	-	(19,335)	-	-	-	(19,335)
At 31 December 2011	139,981	59,068	42,671	186,517	20,028	448,265
Depreciation:						
At 1 January 2011	38,877	67,226	41,902	170,337	17,969	336,311
Charge for year	9,190	6,323	193	4,087	1,059	20,852
Eliminated for disposals	-	(19,335)	-	-	-	(19,335)
At 31 December 2011	48,067	54,214	42,095	174,424	19,028	337,828
Net book amounts:						
At 31 December 2011	91,914	4,854	576	12,093	1,000	110,437
At 31 December 2010	101,104	11,177	769	16,180	1,516	130,746

5 RESERVES

	GENERAL	NASF(UK)	TOTAL
	£	£	£
At 1 January 2011	83,434	-	83,434
Provision in year	-	-	-
	83,434	-	83,434
Expenditure in year	-	-	-
At 31 December 2011	83,434	-	83,434

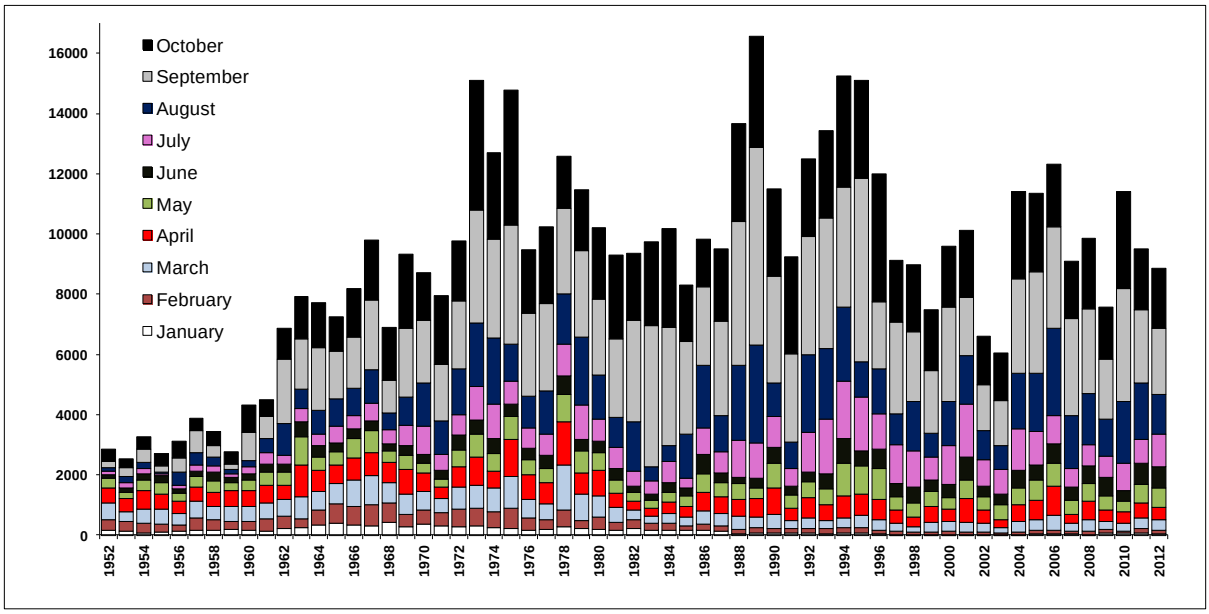
NOTES TO THE ACCOUNTS (cont'd)
AT 31 DECEMBER 2011

6 GENERAL FUND

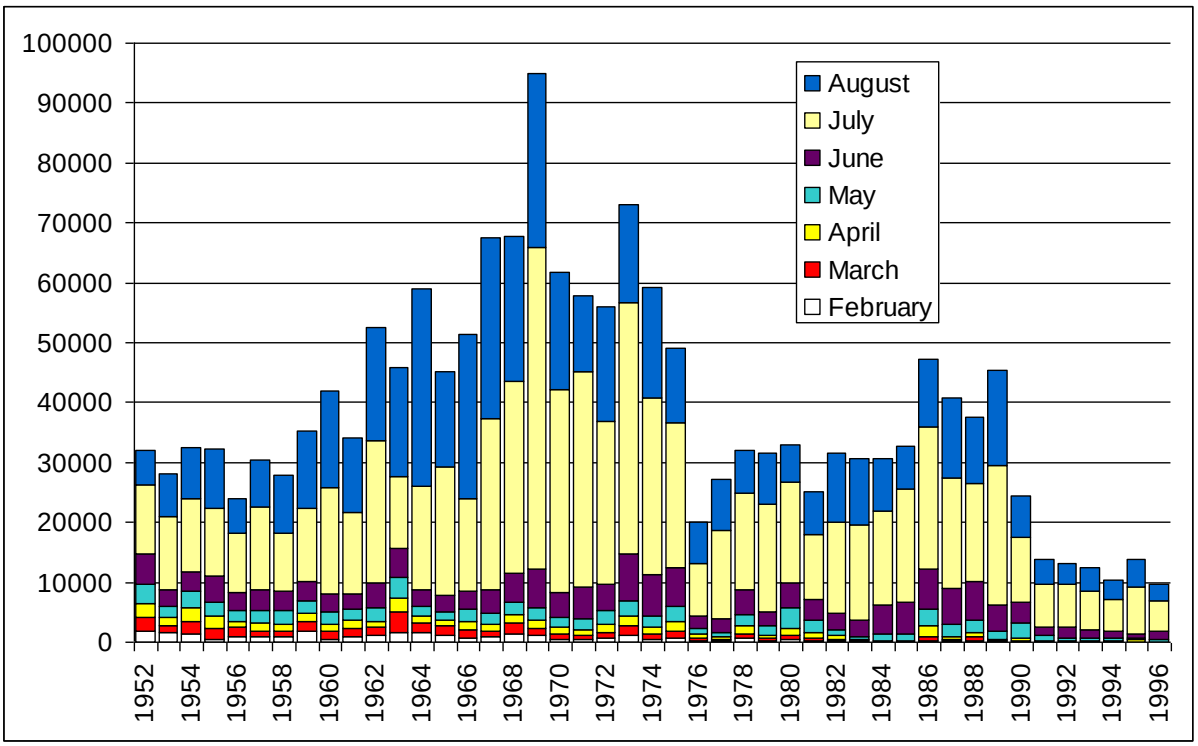
	2011	2010
	£	£
At 1 January 2011	228,886	216,316
(Deficit)/Surplus for year	1,773	12,570
At 31 December 2011	230,659	228,886

7. CAPITAL COMMITMENT

There were no capital commitments as at 31st December 2011.



Monthly angling catch for the Tay District 1952 – 2012 (including released fish). The 1952 – 2010 data used in this graph are Crown copyright, used with the permission of Marine Scotland Science, Aberdeen. Marine Scotland is not responsible for interpretation of these data by third parties. 2011 data were collected by the Board and 2012 is based on a preliminary analysis of www.fishtay.co.uk catches.



Monthly net and coble catch, Tay District 1952 – 1996 (netting largely ceased in 1996). The data used in this graph are Crown copyright, used with the permission of Marine Scotland Science, Aberdeen. Marine Scotland is not responsible for interpretation of these data by third parties.

BOARD MEMBERS ATTENDANCE FOR 2011

	8 February	12 April	21 June	16 August	1 November	6 December
W. Jack	X	X	X	X	X	X
D. Barwick	-	X	X	X	-	X
S. Furniss	X	X	X	X	X	X
D. Godfrey	X	X	X	X	X	X
W. Lindsay	X	X	X	X	X	X
C. Lowson	X	X	-	-	X	-
I. Massie	X	X	-	-	Resigned	
S. Mercer-Nairne	X	X	X	X	X	X
B. Reid	X	X		-	X	X
A. Riddell	X	-	X	X	-	X
T. Steuart Fothringham	X	-	X	X	X	X
A. Stewart	-	X	X	X	X	X
Lord Stormont	X	-	-	-	X	-
M. Wedderburn	-	X	X	X	X	X
R. White	X	X	X	X	X	X
J. M. Wood	X	X	-	-	X	X
J. Young	X	-	X	X	X	X

X Present
\- Apologised for non-attendance

ACKNOWLEDGEMENTS

The Tay District Salmon Fisheries Board wishes to acknowledge the following people, organisations and companies for their very kind assistance and support throughout 2011 and 2012.

All Proprietors within the Tay District
River Tay Dinner Committee
Callum Towns
Andrew Graham-Stewart
All Honorary Bailiffs
All Ghillies and Boatmen
All Tay Board staff
The Tay Ghillies Association
The Tay Foundation
Scottish Environment Protection Agency
The staff of Marine Scotland at:
    Victorian Quay, Edinburgh
    Freshwater Fisheries Laboratory, Pitlochry
    Montrose Research Station
The Association of Salmon Fishery Boards
The River and Fisheries Trusts of Scotland
Scottish Natural Heritage
Scottish and Southern Energy plc



The Dalmore "Tay Dram". Dalmore will make a donation to the Tay Foundation for every bottle sold.

For more information see http://www.onlinespirits.co.uk/dalmore-tay-dram