

**PE1558/C**

**Minister for Environment, Climate Change and Land Reform**

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John Pentland MSP  
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Edinburgh  
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Dear John

**Petition 1558**

Thank you for your letter to the Cabinet Secretary for Rural Affairs and the Environment, Richard Lochhead MSP, of 26 February. I am responding as the subject matter of this petition falls within my responsibilities.

The petition calls on the Scottish Parliament to urge the Scottish Government to amend the existing licensing regime to allow for the commercial trapping of American Signal Crayfish in Scotland. I have addressed the issues raised by the petition in the attached annex.

In summary, the position of the Scottish Government is that the risks associated with establishing a fishery for North American Signal Crayfish are significant and far outweigh any potential benefits. Experience from England and other parts of Europe shows that giving a commercial value to crayfish encourages further deliberate introductions to other catchments, with major environmental and economic consequences. In contrast the potential economic and environmental benefits from crayfish trapping are low.

I am of course aware of the problems associated with the North American Signal Crayfish infestation of Loch Ken. My predecessor Paul Wheelhouse MSP held a meeting in New Galloway last July, to which all interested parties were invited. Two particular actions are being taken forward as a result of that meeting. The first aims to restore angler confidence in Loch Ken as a coarse fishing destination. The original plan was for a fish survey, however expert advice is that a surveys using standard methods is likely to prove too difficult to apply in Loch Ken, because of the physical characteristics of the loch and the presence of the crayfish. As an alternative, SNH and SEPA are exploring options for a citizen science approach using catch data submitted by anglers.

The second action was for Scottish Water, SEPA, SNH and Galloway Fisheries Trust to examine options to eradicate or contain a new population of signal crayfish in a small reservoir near Dalbeattie. This work is being costed and assessed.

More widely work is going on to prevent further spread of North American Signal Crayfish. SEPA and SNH have been working with a wide range of water sports and fishing groups to promote the 'Check, Clean, Dry' campaign across Scotland. These include: Rivers and Fisheries Trusts of Scotland; Scottish Federation of Coarse Anglers; Scottish Angling National Association; Scottish Canoe Association; Royal Yachting Association. Since November 2012, over 380 fixed signs have been installed across Scotland, more than 8000 leaflets and 380 posters have been distributed. The campaign calls on recreational water users to check, clean and dry their equipment to prevent the inadvertent spread of invasive non-native organisms, including North American Signal Crayfish and their larvae.

With kind regards.

**AILEEN MCLEOD**

## Annex

### Public Petition 1558

#### Commercial Trapping of American Signal Crayfish in Scotland.

Signal crayfish are currently known to occupy less than 0.1% of total river length in Scotland. They are also present in Loch Ken and a small number of smaller lochs and ponds. This is in sharp contrast to the situation in parts of England and Wales where signal crayfish are now widespread. Crayfish are restricted to freshwater habitats and, whilst they are able to remain out of the water for short periods, they have no known impact on terrestrial plants or animals. A map of their known distribution in Great Britain is provided in Figure 1.

Figure 1 - Distribution of signal crayfish in Great Britain updated with confirmed Scottish records



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Data sources: Biological Records Centre, Environment Agency, Scottish Natural Heritage

In Scotland, signal crayfish populations have been confirmed in the catchments of major rivers including Clyde, Tweed, Forth and Tay, as well as several rivers in the south west. Eradication of this species in rivers is currently impossible and further spread within these catchments is inevitable. However, the majority of Scotland's rivers and lochs are still free from signal crayfish. In most cases, signal crayfish are highly unlikely to spread between river systems without the help of humans, therefore, the key issue is to limit further deliberate, or accidental, introductions to other catchments. The scattered nature of the signal crayfish distribution in Scotland (Figure 1) clearly indicates that humans are the key vector for this species.

## **Risks**

By allowing a fishery to develop, the risk of encouraging deliberate introductions of crayfish to other catchments in Scotland is very high. This is supported by evidence from elsewhere. Giving a commercial value to crayfish will inevitably result in further introductions of this species into previously un-invaded areas. Studies in Sweden and Spain have demonstrated that the establishment of crayfish fisheries has led to increased dispersal of these animals to new areas, often to develop a new fishery in other waters. In England and Wales, the general licence allowing trade in signal crayfish for human consumption is a significant loop-hole in legislation designed to prevent the spread of this species. MPs have called on Westminster to emulate Scotland and ban the live transport and sale of alien crayfish species in England and Wales.

In Scotland, strategic gains can still be made by preventing signal crayfish from spreading to new areas. Further spread could have massive and irreversible impacts on freshwater ecosystems and native wildlife, including species of European importance, such as freshwater pearl mussel and Atlantic salmon. This could affect the delivery of Scottish Government targets for the water environment and protected nature sites. The spread of signal crayfish to the rest of Scotland could also have a major impact on freshwater angling, which was estimated to generate over £112 million annually and support around 2,800 FTE jobs in 2004. The irreversible environmental and economic consequences of encouraging further deliberate introductions of signal crayfish to other catchments in Scotland are therefore very high.

## **Benefits**

There is a clear benefit in preventing the movement or introduction of signal crayfish to new areas because the permanent, and in most cases irreversible, damage caused by this species. Studies have shown that trapping does not eradicate or prevent the spread of signal crayfish, and it is ineffective as means of long-term control. There are no examples in Great Britain where trapping has been shown to have significantly reduced the ecological impact caused by signal crayfish.

In 2009, the Scottish Government agreed to support a large-scale trapping programme for signal crayfish on Loch Ken, on the grounds that such a scale of operation had not been tried in Scotland. More than 700,000 crayfish weighing over 18 tonnes were caught and killed during the five-month study at a cost of approximately £90,000. However, the vast majority of crayfish in the population were below the minimum size that can be caught in traps. An independent reviewer concluded that it was unlikely that the project reduced the ecological impact caused by signal crayfish, or reduced their spread.

The perceived benefit of establishing a fishery for signal crayfish relate to an improvement in angling potential and as a source of employment. Anglers reported a reduction in crayfish interfering with their bait following intensive trapping on Loch Ken. However, this does not mean that crayfish were eliminated from angling areas; smaller individuals persisted and larger crayfish would have quickly re-invaded from un-trapped areas. The benefits to anglers from establishing a crayfish fishery are, therefore, far from certain. Factors other than the presence of signal crayfish, such as the economic downturn and higher fuel costs, may have contributed to the drop in numbers of anglers visiting Loch Ken.

It has been suggested that establishing a crayfish fishery on Loch Ken would provide local jobs and boost the local economy. However, no evidence has been provided to support this. For example, it is not clear what level of commercial harvesting the crayfish population in Loch Ken would sustain. Any potential economic benefits from harvesting crayfish need to be weighed against the major, and permanent, environmental and economic consequences of encouraging the spread of signal crayfish to other catchments.