SEPA
Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

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Roger Knight
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Dear Roger

SEPA USE OF THIRD PARTY ELECTROFISHING DATA

At a recent meeting of the Spey Fishery Board SEPA were asked about the importance of collecting data on juvenile fish populations by electrofishing. This note is intended to present a summary of how SEPA use such data from the Spey and other rivers around Scotland in order to classify their status and to identify areas where action is required.

SEPA is required, as part of its statutory purpose, to protect and improve the environment of Scotland. In order to decide where improvements are required we need to identify areas which are currently impacted. As a consequence, SEPA has established a system, as part of the River Basin Management Planning (RBMP) required under the Water Framework Directive (WFD), to classify the water environment according to a number of parameters - chemical, ecological and physical. The classification system which SEPA uses categorises waterbodies into High, Good, Moderate, Poor or Bad status. Any waterbodies which are classified as being at less than good are required to be restored within a defined time period, normally by 2021 or 2027. SEPA also uses its regulatory powers to prevent waterbodies from deteriorating in their classified status.

The classification system is dependent on monitoring data and SEPA maintains a network of chemical and ecological sampling stations as well as our river gauging stations. In addition to our own monitoring data we depend on other organisations to share their data with us to improve our classification process. Key to this process is the use of data on fish populations, such as juvenile densities as measured by electrofishing. These data can be used by SEPA to identify areas where the juvenile production is lower than expected and may result in a classification of less than good. Another key area where data helps to classify waters and identify pressures which can affect fish populations is the identification of artificial barriers which affect fish migration.

Where an area or stretch of water has been classified as being less than good, SEPA is required to identify the pressure, or pressures, which are causing the impact. This leads on to a process which identifies a measure to improve the water environment back to good and importantly who should deliver this improvement.

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Clearly this RBMP process is only as good as the data which it is based on and we are constantly striving to improve the quality and range of data which we use in our classification process. SEPA has limited resources, especially in the area of fish ecology and we are therefore largely dependent on data provided by third parties such as the Spey Foundation.

An example of where this process has been applied in the Spey catchment is in relation to Spey Dam. There has been debate about the potential impact of Spey Dam for many years, particularly in relation to the operation of the fish pass for upstream adult migration. Electrofishing data from the upper catchment demonstrated that the juvenile fish populations are currently less than good status. As a consequence of this data SEPA downgraded the river above the Dam as less than good and identified Spey Dam as a barrier to migration. This has led SEPA to work with the owners of the Dam, Liberty SIMEC, and the Spey Board to find a solution which will resolve the fish passage issues in the future.

Electrofishing data also provides an indication of long term trends and fluctuations in juvenile densities which result from natural events such as storm Frank. These data help to provide a context or background to any new data provided. For example, where natural conditions result in an impact in one area of the catchment this may help explain anomalous results elsewhere in the catchment or in nearby catchments. Data on poor fish populations can also be correlated with other data collected by SEPA or others or may target further monitoring of water chemistry.

In conclusion, the electrofishing data collected by organisations such as the Spey Fishery Board provides an invaluable resource for SEPA to target improvements to the water environment. It also helps to identify where third parties should make improvements to the water environment.

Yours sincerely

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