

Policy Position Statement

Regulation of Water Resources Planning in Scotland

Purpose

The purpose of this Policy Position Statement (PPS) is to identify the procedures that apply to the planning, the protection, the equitable allocation and the sustainable use of water resources within Scotland taking account of legislation, regulation, water users, the public and other stakeholders.

CIWEM calls for

1. Scotland to continue with the integration of water resource planning activities with the River Basin Management Planning process through the development of appropriate Programmes of Measures. This single approach for water resources will fully incorporate the needs of customers and the environment whilst taking cognisance of costs.
2. The continuation of comprehensive drought planning through the development of Scotland's Water Scarcity Plan setting out how water resources will be managed prior to and during periods of prolonged dry weather.
3. Integration of Resilience into the water resource planning process through the development of a more interconnected supply network offering greater operational flexibility and resilience to extreme events.
4. The Scottish Government, SEPA, Scottish Water and other stakeholders to work together to implement a major programme of public awareness to encourage a better understanding of the intrinsic value of water resources and methods for water efficiency.
5. Scottish Water alongside the Scottish Government and all other stakeholders to continue to play its part in reducing carbon emissions which should include further reductions in water use by all water users.
6. Continued Climate Change research that specifically addresses the impacts on water resources during drought events and thereby will improve understanding of the range of uncertainty that needs to be taken into account in water resources planning.
7. Investment in research and development into the area of sustainable rural communities.

CIWEM is the leading independent Chartered professional body for water and environmental professionals, promoting excellence within the sector.

Definitions

'Water Resources' are defined here as all naturally occurring and artificially created water bodies for different uses according to purpose

'Water resources planning' is defined as the process by which existing water resources and demands are assessed and future water demand and resource needs are identified, managed and developed as needs may be for whatever purpose (e.g. through demand management, abstraction licensing, transfers, in river needs etc.).

Context

Water has always been central to Scotland's national identity and has been critical in the development of our environment, the origins of our industries, the energy we use, and the food and drink on our tables. Managing our water resource imaginatively is seen as crucial to our future success and a key component of the transition to a sustainable low carbon economy.

There are major challenges ahead, here and worldwide, including: providing adequate supplies for the projected growth in population and housing predicted for the drier east coast of Scotland, taking action to make water abstraction more sustainable and compliant with EU legislation, and adapting to and mitigating the effects of climate change which potentially could be substantial in terms of both quantity and quality. In addition Scotland has some more unique challenges; a high number of remote public supplies which have little or no storage making them vulnerable to short drought events, many large hydro generation schemes which aim to maximise generation but can have significant environmental impacts and a high percentage of designated and protected areas.

Regulation of Water Resources in Scotland

Comprehensive water resources management in Scotland is, compared with many other countries a relatively new regime. Historically, piecemeal controls on abstractions and impoundments existed in the form of Water Orders and site- or scheme-specific Acts. These existed for major water supply and hydro power schemes but often had few conditions which did little to protect the environment, were supported by minimal monitoring and had no incentive for promoting efficiency.

The Scottish Government used the EU Water Framework Directive 2000/60/EC (WFD) as an opportunity to introduce an integrated framework for the management of water resources and the demand on them within Scotland. WFD was transposed into Scots Law through The Water Environment and Water Services Act (Scotland) Act 2003. This Act gave Scottish Ministers powers to introduce regulatory controls over water activities in order to protect, improve and promote sustainable use of Scotland's Water Environment in order to:

- Prevent deterioration and enhance the status of all aquatic ecosystems including groundwater.
- Promote sustainable water use
- Reduce pollution
- Contribute to the mitigation of floods and droughts

In Scotland, this work was taken forward by The Scottish Environment Protection Agency (SEPA) and is regulated by The Water Environment (Controlled Activity) (Scotland) Regulations 2011. These are commonly known as the CAR.

CAR made changes to the way the existing, limited, abstraction licensing regime worked in Scotland. This brought previously unregulated abstractions (such as abstractions from groundwater, abstraction for power generation, irrigation, navigation and industrial abstraction) under regulation for the first time.

The Scottish Environment Protection Agency (SEPA) is responsible for the implementation of the WFD in Scotland. The WFD, in the context of Water Resource Management, seeks to regulate the abstraction of water from the environment and sets acceptable limits of what we are able to take, and also what needs to be returned to the environment by way of compensation flows from reservoirs. The WFD provides for derogation from its objectives under certain circumstances. This is designed to allow for developments where the benefits to one or more of human health, human safety and sustainable development would outweigh the adverse environmental impacts. Derogations require extensive justification and primarily exist for public water supply and hydro generation.

SEPA has identified activities, including abstractions which are having a negative impact on the environment and will seek step-wise improvements through the River Basin management planning process. For Scottish Water (SW) these improvements are included in its Business Plan.

The WFD also affords protection of raw water sources through the designation of Drinking Water Protected Areas (DWPA's). In line with the WFD, SW, SEPA, farmers and landowners are working together to achieve sustainable land management practices to help reduce these pollution threats.

Scottish Water (SW) is responsible for the provision of wholesome drinking water for domestic purposes; in Scotland that duty falls to a single operator. SW is a public corporation which operates within a statutory framework. Powers to enable Scottish Water to provide drinking water are principally contained in the Water Scotland Act 1980 with the provisions for the abstraction of water subject to authorisation by SEPA in accordance with CAR.

SW has a statutory duty to provide adequate and wholesome water supplies and to secure efficient and sustainable water use. SW do not have a statutory duty to produce one but in, line with industry best practice, produce a Water Resource Plan (WRP). The WRP sets out, over a 25 year planning horizon, how SW intends to balance available water supply to meet demand, identifying areas that require improvement to ensure it can deliver a continuous supply of water to customers. The WRP is subject to public consultation and it informs SW's Business Plan.

Threats to drinking water quantity and quality due to the impacts of climate are of concern, and to some extent are the most unknown of the many lurking pressures. It is acknowledged that the challenges of climate change and population growth may increase the likelihood of interruptions to customer's water supply. SW is currently working to understand this and as a result is looking to improve the resilience in its water supply network.

Scottish Ministers recognise the valuable contribution that hydropower generation makes to Scotland's renewable energy targets. At the same time they wish to take appropriate measures

to protect the environment. In seeking to balance the benefits of renewable energy generation and protection of the water environment, schemes with a generation capacity of 100KW or more are considered as making an important contribution to the renewable targets and ministers accept that in supporting such schemes some deterioration of the water environment may be necessary. Deterioration must be justifiable in terms of costs and benefits.

The Water Industry Commission for Scotland is the statutory body for economic regulation of the Scottish water and sewerage industry. It has a statutory duty to promote the interests of customers. Scottish Ministers set the frequency and timetable for each Strategic Review, and determine the high level environmental, quality and customer service objectives that SW must deliver. SW's Business Plan includes proposals to maintain the supply-demand balance, improvements identified through the river basin management planning process and improvements required to enable sustainable growth.

Water Efficiency

A key requirement for minimising the actual or potential environmental impact of abstraction is to ensure that water is used efficiently and not wasted and, whenever possible, returned to the environment in the right place and with the right quality after it has been used.

SW's Water Efficiency Plan, which was approved by ministers in October 2011, sets out the work that SW will carry out to improve the water efficiency of SW as a business, the water efficiency of SW employees and the water efficiency of Scotland as a whole over the short, medium and long term.

SW is working with Stakeholders such as the Energy Saving Trust, Building Standards and Waterwise to help customers maximise the benefits of water efficiency by understanding the knock-on effects of not wasting heated water.

SW and SEPA are working with planning authorities and developers to encourage development in locations with existing capacity to supply water (and waste water) services.

Planning for Water Scarcity

Scotland's has developed its first national water scarcity plan, setting out how water resources will be managed prior to and during periods of prolonged dry weather. This is to ensure the correct balance is struck between protecting the environment and providing resource for human and economic activity. It sets out the responsibilities of all stakeholders.

SEPA has a role to protect the environment, but can also allow temporary deterioration to protect key abstractors such as public water supply, provided the circumstances are a result of prolonged water scarcity and all practicable steps are taken to prevent environmental impact and do not compromise the recovery of the environment. SEPA will work with the UK Meteorological Office and other partners to forecast the onset, duration, and likely termination characteristics of prolonged periods of dry weather.

The Scottish Ministers have a key role in setting the policy and legislative framework to provide for Water Orders where needed to protect public supplies. The new Water Resources (Scotland) Act 2013 came into force in June 2013 and deals with a number of water related issues, including Water Shortages. It allows SW to apply to Scottish Ministers to obtain powers

via Water Shortage Orders (WSO's) to implement activities that were historically covered by hosepipe bans and drought orders under the Natural Heritage (Scotland) Act (1991). These types of measures are an absolute last resort and SW will do everything possible to prevent having to implement any sort of supply restrictions to customers.

Scottish Water monitors its water supply sources throughout the year to make sure sufficient resource is available to meet (suitably managed) customer demand. During prolonged dry weather when supply levels drop, drought contingency plans are put in place to maintain a constant drinking water supply. Plans have been developed for key supply sources and further prioritised plans are being developed. Scottish Water works closely with SEPA and the Scottish Government to ensure that any changes to operating practice and new abstractions minimise the impacts on the environment and other users.

In managing water scarcity, SEPA, Scottish Water and the Scottish Government take advice from other bodies, such as Scottish Natural Heritage (SNH), UK Met Office, fisheries boards and trusts.

CIWEM supports the many improvements in water resources planning that have occurred in recent years, such as:

The introduction of regulation to all abstraction activities through the Controlled Activities Regulations

The use of the River Basin management planning process to address the impacts of water resources having a detrimental impact on the environment.

The linking of River Basin Management Plans and Water Resource Plans with the Strategic Review thereby providing a holistic and sustainable approach to water resources planning.

The introduction of comprehensive drought planning through the development of a Water Scarcity plan for Scotland.

However, there are other further challenges that also need to be addressed:

- **Climate Change:** ongoing research suggest that future summers could become hotter and drier, while winters become warmer and wetter. It is possible that climate change will have severe effects on surface water flows, groundwater, winter snow melt, and hence on aquatic ecology and also upon the demand for water by people and the environment. Targeted research to support water resources planning under climate change needs to continue to allow an understanding of any potential impact to quality as well as quantity.
- **Carbon Targets:** The Water industry is a significant energy user and carbon emitter, and whole life carbon accounting will need to become increasingly important in the water resource plan as it is in the River Basin Management plans.
- **Resilience:** The challenges of climate change and population growth may increase the likelihood of a long term interruption to a customer's water supply therefore the water industry should consider the appropriate level of investment to be made to improve the resilience of supplies.

- Leakage: Whilst it is not technically viable, or indeed economically sound, to achieve zero leakage, more needs to be done by the water industry to understand the full benefits of leakage reduction, noting that research has identified that leakage is an issue of concern to customers.
- Rural Communities: A high number of remote public supplies have little or no storage making them vulnerable to short drought events. Climate change and environmental restoration will continue to add pressure to these supplies. Further consideration needs to be given to both supply and demand side options to ensure these communities have a sustainable supply.
- Water Efficient Appliances: Ministers should strengthen regulations to require all new homes to have water efficient appliances and investigate incentives to encourage retrofitting of efficient appliances in the existing housing stock.

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Note: CIWEM Policy Position Statements (PPS) represents the Institution's views on issues at a particular point in time. It is accepted that situations change as research provides new evidence. It should be understood, therefore, that CIWEM PPS's are under constant review and that previously held views may alter and lead to revised PPS's. PPSs are produced as a consensus report and do not represent the view of individual members of CIWEM.