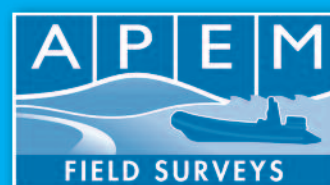
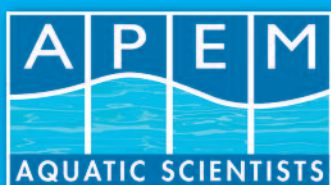


The Eels (England and Wales) Regulations 2009



What they mean for you and how APEM can help



building reputation through excellence



The new regulations:

- Afford new powers to the Environment Agency (EA) to implement measures for the recovery of European eel stock
- Apply to all freshwater and estuarine waters in England and Wales
- Aim to achieve 40% escapement of adult eels relative to escapement levels under pristine conditions
- Will implement measures to reduce fishing pressure, improve access and habitat quality and reduce impacts of entrainment
- Provide guidance through the 'The Eel Manual' (EA April 2011) including 'Screening at intakes & outfalls'

The requirements and timeframes:

- You may be served a notice by the EA between June and August 2011
- If served a notice you may have a legal obligation to screen intakes and outfalls for eel
- You may be able to object to the screening obligation on the grounds of exemption
- Where screens are required you will need to fulfil obligations by 2015

Who is affected?

- Potentially anyone abstracting water
 - Water companies
 - Power stations
 - Agriculture practitioners
 - Industrial operators
 - Hydro power companies
- Over 300 high priority and over 1,200 medium upper abstraction sites have been identified by the EA as potentially requiring screening

Sites are exempt where:

- It can be satisfactorily proven eel are absent from the water course
- Flow or intake configuration is such that 'not many eels will be entrained' (Defra, 2009)
- Abstraction rates are less than 20m³ per day
- Current screening provides adequate protection

What are the screening requirements?

- All life stages must be protected depending on position in catchment and screen angle
- Mesh size is dependent on life stage of eel
- Low screen approach velocities will need to be maintained dependent upon life stage and angle and length of screen

Eel life stages to be protected and mesh size/bar spacing

>30 Km upstream of tidal limit
Adult eel >30cm
9 - 20mm

Tidal limit to 30 Km upstream
Elver and yellow eel
2 - 3mm

Estuary to tidal limit
Glass eel
1mm

What are the implications?

- Defra estimates that screens will cost industry £84.8 million by 2031, with retrofit costs of £32.8 million by 2015
- Public water supply and electricity industry to bear 95% of estimated cost
- Increased energy, carbon, infrastructure and maintenance costs
- Technical infeasibility for some sites, resulting in potential requirement to relocate/rebuild abstractions
- Timescale does not fit with the AMP funding periods
- Operational difficulties especially where there is high debris loading
- Potential for construction and outage requirements

The Bigger Picture

Data indicate that the stock of European eel, *Anguilla anguilla*, is currently outside safe biological limits. To enable the recovery of the stock, the EU has adopted Council Regulation No. 1100/2007/EC which requires Member States to develop national Eel Management Plans. These are aimed at improving the escapement of silver eels, ultimately leading to recovery of the stocks. This Regulation has been transposed into UK law through The Eels (England & Wales) Regulations 2009.



APEM can help!

We offer a range of services including:

- Exemption advice
- Long and short term entrainment/impingement investigations
- Surveys to determine presence/absence and life stages of eel
- Assessment of current screening to ensure adequate protection
- Risk assessment of intake configuration
- Screening design and advice
- Fish handling and return system design and development
- Experimental trials of screening solutions
- Development of behavioural deterrents
- Injury/mortality modelling for hydropower turbine passage



Why choose APEM?

We are Europe's largest independent specialist aquatic science consultancy with more than two decades' experience of fish entrainment/impingement and intake screening for riverine, estuarine & coastal intakes. We have specialist physical and behavioural screening experts and an extensive potable water and power station project portfolio.

Contact us

Contact our dedicated team at **fishscreening@apemltd.co.uk** to discuss how we can help you, or contact one of our regional offices:

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