Title: The Private Water Supplies (England) (Amendment) Regulations 2017 **IA No:** Defra2079 **RPC Reference No: RPC17-DEFRA-3960(1)** **Lead department or agency:** Defra **Other departments or agencies: Drinking Water Inspectorate (DWI)**	**Impact Assessment (IA)** **Date:** 03/03/2017 **Stage:** Consultation **Source of intervention:** EU **Type of measure:** Secondary legislation **Contact for enquiries:** Louise Hunt - Defra Policy

Summary: Intervention and Options

RPC Opinion: GREEN

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANDCB in 2014 prices)	**One-In, Three-Out**	**Business Impact Target Status**
-£3.13m	-£10.59m	£1.1m	Not in scope	Non qualifying provision

What is the problem under consideration? Why is government intervention necessary?

In light of scientific and technical progress, the World Health Organisation (WHO) has updated their guidelines for drinking water supply which lays down internationally recognised principles on which the production, distribution, monitoring and analysis of parameters in drinking water is based. Council Directive 98/83/EC (the Drinking Water Directive (DWD)) has been amended to align with the WHO principles. To safeguard the quality of drinking water in England, it should be monitored and analysed in line with the WHO principles. Current principles for monitoring and analysis are laid down in the Private Water Supplies (England) Regulations 2016. The legislation will therefore require amendment.

What are the policy objectives and the intended effects?

- Update legislation to reflect the amendments made to the DWD by Commission Directive (EU) 2015/1787 (Directive 2015/1787) which will safeguard the quality of drinking water and ensure a consistent risk based approach is applied across England. Standardising the risk based sampling and analysis of private water supplies (PWS) will allow local authorities (LAs) to identify and concentrate on higher risk supplies whilst ensuring that public health protection is not compromised.
- Examine and, where necessary, revise the level fees LAs can charge for monitoring PWS which will enable full cost recovery and ensure LAs fulfil their regulatory duties.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

To introduce the changes, current legislation will require amendment. As there are no alternatives to regulation, the viable policy options are:
0. Do nothing - this is counter to UK preferred policy and if we fail to transpose by the deadline set in Directive 2015/1787 of 27 October 2017 we will be in breach of our obligations under EU law, thus giving rise to some risk that the Commission will bring infraction proceedings for non-transposition; or,
1.Transpose Directive 2015/1787 in full with no further amendments; or,
2. (Preferred) Transpose Directive 2015/1787, incorporating wording/clarification amendments, including revising the level of fees LAs charge.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 06/2021

Does implementation go beyond minimum EU requirements?		No		
Are any of these organisations in scope?	**Micro** Yes	**Small** Yes	**Medium** Yes	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)		**Traded:** N/A	**Non-traded:** N/A	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible SELECT SIGNATORY: ..... Date: .....

Summary: Analysis & Evidence

Policy Option 1

Description: Transpose Commission Directive (EU) 2015/1787 in full with no further amendments

FULL ECONOMIC ASSESSMENT

Price Base Year 2017	PV Base Year 2017	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -4.66	**High:** -1.59	**Best Estimate:** -3.13

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.3		0.5	**4.7**
High	0.3	1	0.5	**4.7**
Best Estimate	0.3		0.5	**4.7**

Description and scale of key monetised costs by 'main affected groups'

LAs need to collate 3 years' worth of data to support a risk based approach with the costs involved being charged to PWS owners/users of £1.5m per year for 3 years of which £1.25m is to businesses and £0.25m is to operators of public bulidings (households are exempt from the monitoring regime to which the risk assessment is applied so, unless they have requested monitoring of their supply, will not incur any costs). LAs and DWI will incur costs of £0.3m in year 1 to establish the new process.

Other key non-monetised costs by 'main affected groups'

PWS owners/users may want to familiarise themselves with the changes in requirements during the first year of implementation. The amount of time needed for familiarisation has not yet been explored.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0		0.0	**0.0**
High	0		0.4	**3.1**
Best Estimate	0		0.2	**1.5**

Description and scale of key monetised benefits by 'main affected groups'

Following the new risk assessment we estimate a reduced level of monitoring being required. A reduction in monitoring means a reduction in LA charges, leading to savings of about £0.27m a year (in the years after the transition period) to PWS owners/users, of which £0.22m to business and £0.05m to public sector.

Other key non-monetised benefits by 'main affected groups'

Updating the regulation will ensure a consistent risk based approach is applied across England.

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5

We assume LAs will choose to collate 3 years' worth of data to support a cost-effective risk based approach and that the extra samples will be taken during regulatory site visits. The costs for performing a full suite of parameter tests have been estimated. There is a risk that, as this option does not revise the level of fees to enable full cost recovery, the quality of service provided by LAs could be effected with an increased risk to public health.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: 0.4	**Benefits:** 0.1	**Net:** -0.2	

Summary: Analysis & Evidence

Policy Option 2

Description: Transpose Commission Directive (EU) 2015/1787, incorporating wording/clarification amendments, including revising the level of fees charged by LAs.

FULL ECONOMIC ASSESSMENT

Price Base Year 2017	PV Base Year 2017	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -4.66	**High:** -1.59	**Best Estimate:** -3.13

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.3	1	1.4	**13.0**
High	0.3		2.4	**21.3**
Best Estimate	0.3		1.4	**13.0**

Description and scale of key monetised costs by 'main affected groups'

As Option 1 plus additional LA fees, to allow full cost recovery, for owners/users of PWS of £1m (£0.8m for businesses and £0.2m for public buildings).

Other key non-monetised costs by 'main affected groups'

Maximum of 5 lines

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0.0		1.0	**8.3**
High	0.0		2.3	**19.7**
Best Estimate	0.0		1.2	**9.9**

Description and scale of key monetised benefits by 'main affected groups'

Removing the maximum level of fees LAs can charge for monitoring and analysing PWS will allow LAs to fully recover the costs incurred. The cost to PWS owners/users shown above would be revenue to LAs. (N.B. The high and low benefit figures from the table above have been explained in section 6).

Other key non-monetised benefits by 'main affected groups'

As with Option 1 plus public health protection will be maintained with more certainty if LAs are better able to recover full costs. Other amendments to the Regulations will provide accuracy and clarification and incorporate legislative changes which are already included in guidance. They will also provide LAs with the powers to perform corrective work in the interest of protecting public health.

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5

As with Option 1, although the risk to service quality and public health, from absence of full cost recovery, will no longer remain.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: 1.2	**Benefits:** 0.1	**Net:** -1.1	

Evidence Base

1. Introduction

A private water supply (PWS) is any water supply which is supplied to a property that is not provided directly by a water company. About 1% of the population of England use a PWS. Most of these supplies are situated in remote, rural parts of the country and can originate from a range of sources including; boreholes, natural springs, and watercourses.

Role of Local Authorities (LAs) in regulating PWS

LAs act as the regulators for PWS and have a number of statutory duties under the Private Water Supplies (England) Regulations 2016. These Regulations place a duty on LAs to maintain a record of PWS in their area then conduct a risk assessment of each PWS in their area to determine compliance with drinking water standards. PWS are categorised into three groups:

- Regulation 8 supplies are where the water is ultimately supplied by the water company (water undertaker) and is then further distributed by a person other than the licensed water company. These are generally lower risk supplies. LAs only need to monitor the parameters identified as a risk in the risk assessment;
- Regulation 9 supplies are generally large PWS distributing more than $10m^3$ per day or supplies that are part of a commercial or public activity. They need to be reported to the European Commission and have a more comprehensive monitoring requirement than Regulation 8 or 10 supplies. They are monitored at a frequency dependent on the volume supplied by the PWS in m^3/day and for a limited suite of parameters ('check monitoring') and less frequently for all other parameters ('audit monitoring'). At the moment, parameters within the check monitoring suite can be reduced but to no less than once per year based on risk whilst parameters within the audit monitoring suite can be completely omitted from monitoring based on risk. Advice from the Secretary of State is that this should be based on results from the last two years and show levels to be 50% or 75% of the standard (depending on the parameter). However, some LAs are not taking this advice into account and are reducing monitoring where standards are either constant or significantly lower or if it considers that the parameter is unlikely to be present. This provides for differing criteria between LAs.
  Regulation 9 supplies also include single (domestic) supplies i.e. household, but these are only monitored at the request of the PWS owners/users; and
- Regulation 10 supplies are any that are not covered by regulation 8 or 9 supplies e.g. small, shared domestic supplies. LAs must monitor 5 parameters at least every 5 years, plus anything extra identified as part of a site risk assessment. If the supply is identified as a risk, the sample frequency for specific parameters may be increased.

The LA has powers under the Regulations to require that a supply is improved by the person(s) who control the supply. The Regulations also require LAs to provide PWS monitoring data to the Drinking Water Inspectorate (DWI).

Role of DWI in regulating PWS

The DWI is the competent authority for ensuring drinking water quality in England is maintained. The DWI provides independent reassurance that private water supplies in England are safe and drinking water quality is acceptable to consumers. The DWI also has a statutory role to act as technical advisors to LAs in relation to the implementation of the Private Water Supplies Regulations. This includes the provision of technical and scientific advice on all aspects of drinking water quality, including on PWS.

Regulations governing PWS

Council Directive 98/83/EC (the Drinking Water Directive (DWD)) concerns water intended for human consumption and sets out the standards and requirements for drinking water. This Directive is transposed into national regulations and enforced in respect of PWS in England through the Private Water Supplies (England) Regulations 2016.

The Water Industry Act 1991, the primary national legislation, defines the powers and responsibilities of LAs in relation to PWS.

2. Problem under consideration

The World Health Organisation (WHO) has developed the water safety plan approach which is based on risk assessment and risk management principles, laid down in its Guidelines for Drinking Water Quality. Those Guidelines, together with standard EN 15975-2 concerning security of drinking water supply, are internationally recognised principles. The specific conditions to perform the monitoring of parameters at appropriate frequencies and the range of monitoring techniques has been reviewed in light of scientific progress and the DWD amended accordingly by Commission Directive (EU) 2015/1787 (Directive 2015/1787). To safeguard the quality of private drinking water supplies, the Private Water Supplies (England) Regulations 2016 should be amended.

Introducing a new approach to risk assessment

Directive 2015/1787 updates the monitoring programme in the DWD by introducing a new approach to risk assessment. Where a water supply needs to conform to a monitoring programme, if the new approach is applied, it allows the frequency of sampling and analysis to be reduced or stopped. As Regulation 9 supplies (large supply, commercial activity or public building) are the only supplies which need to conform to a monitoring programme, the changes relating to risk assessment will only apply to them. This equates to about 6,300 of the total 39,400 PWS in England (as single (domestic) supplies, i.e. household, Regulation 9 supplies are also exempt).

Once the amendments relating to risk assessment in Directive 2015/1787 come into force, the only way to reduce/cease monitoring of certain parameters within the monitoring regime is by collating a minimum of three years' worth of sampling data the results of which must show levels to be <60% of the standard for a reduction in monitoring and <30% of the standard for cessation of monitoring. As this is different to the current risk standards being applied (explained in the 'introduction' section), LAs will need to increase their monitoring, to gather three years' worth of comprehensive data, to justify future lower level routine monitoring. If they don't, the full monitoring programme will always need to be performed. However, there will be a cost involved in introducing the new risk based approach as well as gathering the 3 years' worth of sampling data.

Fees LAs can charge for monitoring PWS

LAs charge fees to owners or users of PWS to recover the costs for the monitoring and analysis of their PWS. The activities they can charge for include: risk assessment, sampling, investigating (when a sample fails) and analysing the sample for both 'check' and 'audit' monitoring parameters. LAs set their charging policies which are capped at a maximum. During a previous consultation, and subsequent stakeholder engagement which included email communication, workshops and use of a Dialogue App* (summarised in annex 2), it was established that the current maximum levels of fees, set in 2010 for each activity, are in some instances insufficient to cover costs for undertaking mandatory monitoring and analysis.

LAs budgets and resources are stretched in this area therefore there is a risk that, if fees were not revised, work in this area could be de-prioritised. De-prioritising this work could result in staff reductions. This, in turn, could have a detrimental impact on the quality of the safeguarding function delivered by LAs. Therefore, the risk to public health for consumers of PWS would increase. This is a concern that LAs articulated during stakeholder engagement.

* Dialogue App is an online discussion and crowd sourcing tool that allows you to engage with stakeholders to shape early policy development, obtain evidence and discuss ideas).

3. Rationale for intervention

The quality of private drinking water is monitored by LAs in order to protect public health and safeguard the welfare of individual consumers. The economic case for this intervention is based partly on the positive externalities (benefits for the general population) of preventing water-borne illness reaching any individual. In addition there is the equity or "merit good" consideration that every individual deserves to receive wholesome water as a basic necessity and right, whether or not they are in a position to appreciate what that involves and demand it from their supplier. A public system provides assurance to water consumers about the safety of water supplied to them both in their own home and in other commercial or public premises. Particular characteristics or parameters of the supply are monitored, for

example specified bacteria and metals within the water that are potentially harmful in high concentrations.

Introducing a new approach to risk assessment

The revised Annex II of the DWD provides for standards setting by establishing the criteria under which risk assessed decisions are made. As explained in the 'problems under consideration' section, the approach being introduced is different to the current approach. As explained in the 'introduction' section the advice available for applying the current risk approach is being applied inconsistently which has resulted in a monitoring variation from one LA to another. Setting standards that establish the criteria under which risk assessed decisions are made will enhance confidence in the protection of public health through further assurance for the quality of PWS. In providing for a consistent approach, it will also enhance confidence at national level (DWI and the Secretary of State for Environment, Food and Rural Affairs) in the robust nature of the risk assessments being undertaken.

Comprehensive monitoring and analysis incurs significant costs, especially where a large number of parameters need to be considered. Flexible monitoring presents potential cost-saving opportunities. For example, it will reduce the collection of data (that provides little or no information on the quality of drinking water) but protects public health by targeting high risk supplies. Adopting the new risk assessment will allow for more effective use of LA resources which will ultimately reduce LAs costs.

Improvements in the method of analysis and characteristics of different parameters

The revised Annex III of the DWD provides the specifications for the method of analysis of different parameters in light of scientific and technical progress. To provide laboratories with sufficient time to adapt to the proposed changes (which is to an "uncertainty of measurement" (UoM) approach) the methodology under the amendments for Annex III will not come into force until 1 January 2020. The current method of analysis of different parameters can continue to be used until 31 December 2019.

Fees LAs can charge for monitoring PWS

Revising the level of fees that can be charged for activities undertaken by LAs e.g. risk assessment, investigating where a sample fails, etc, will ensure that LAs continue to fulfil their regulatory duties.

Section 77(4)(d) of the primary legislation (The Water Industry Act 1991) provides for the recovery by a LA of the expenses reasonably incurred by the authority whilst carrying out their regulatory duty. The secondary legislation (Private Water Supplies (England) Regulations 2016) imposes a maximum charge, which originally would have allowed full cost recovery, therefore to revise the level of fees the regulation will require amendment to align to that intent.

LAs possess a general power of competence which stipulates that they should only charge the necessary amount to recover expenses incurred and apply rigour when establishing the charges for the activities involved. They are subject to external annual audits that will check their charging policies and within each authority Chief Finance Officers are responsible for the proper administration of financial affairs. This should therefore instil confidence in PWS owners/users that LAs will only charge for the expenses incurred.

4. Policy objectives

The objectives are to:

- Update legislation to be aligned with the updates of the latest WHO principles for the sampling and analysis of PWS and ensure a consistent risk based approach is applied across England; and
- Examine and, where necessary, revise the level of fees LAs can charge which will ensure that LA costs are recovered appropriately from beneficiaries of their monitoring service.

5. Description of options considered

The suggested options are as follows:

Option 0 - Do nothing. This is counter to UK preferred policy and would be a missed opportunity to update our drinking water legislation in the light of scientific and technical progress. Failure to transpose by the deadline set in Directive 2015/1787 of 27 October 2017 would also be in breach of our obligations under EU law, thus giving rise to some risk that the Commission will bring infraction proceedings for non-transposition.

Option 1 - Transpose Commission Directive (EU) 2015/1787 in full with no further amendments. This would meet the main objective of updating legislation to be aligned with the latest WHO principles for the sampling and analysis of private drinking water supplies and ensure a consistent risk based approach is applied across England.

Option 2 - Transpose Commission Directive (EU) 2015/1787, incorporating wording/clarification amendments, including revising the level of fees LAs can charge. As for Option 1, this would meet the main objective of updating legislation to be aligned with the latest WHO principles for the sampling and analysis of private drinking water supplies and ensure a consistent risk based approach is applied across England. In addition, it would revise the regulatory scale of fees, allowing LAs to recover their costs in full from the owners and users of PWS. It would also incorporate other wording/clarification amendments, including:

- Updating out of date references to other Regulations;
- Including an option to reduce the monitoring frequency where a radioactive substance is naturally occurring and stable;
- Revising the wording of Regulation 18(2)(d) to clarify what 'restore the quality of the water supply' actually means e.g. provide and maintain a wholesome water supply at all times; and
- Add the power for LAs to carry out remedial works in default to the notices in Regulation 18 which is an option available in Section 80 of the Water Industry Act 1991.

6. Costs and benefits of each option

Throughout this section, where the numbers of supplies, sampling visits, parameters being tested, etc, have been quantified, the figures/data has been extracted from the Chief Inspector of Drinking Water - Private Water Supplies in England 2015 annual report which can be found here.

Option 0 – Do Nothing (Baseline).

The costs and benefits of this option have not been assessed but it provides the reference case for assessing the costs and benefits of other options.

Option 1 - Transpose Commission Directive (EU) 2015/1787 in full with no further amendments.

Monetised costs to owners/users of Regulation 9 PWS (for introducing a new approach to risk assessment)

As mentioned in the 'problems under consideration' section, unless LAs implement the risk based approach introduced by Directive 2015/1787, for Regulation 9 supplies (large supply, commercial activity or public buildings), they will need to revert to a comprehensive monitoring programme. We have therefore assumed all LAs will want to monitor based on risk and collate the necessary three years' worth of sampling and analysis data.

The data needed to move to the new risk based approach has to be based on the requirements of the DWD (pre Directive 2015/1787), therefore, the number of samples being taken during each visit needs to be increased and a full suite of parameters tested. The expenses incurred to gather the data will only relate to having to test the full suite of parameters which will be offset against a saving on the number of site visits. LAs are currently performing a greater number of PWS site visits than required. This may be due to the LA performing a site visit for check monitoring and another site visit for audit monitoring when in fact they can be performed at the same time.

DWI calculates that the monitoring programme required during the three year risk assessment period would consist of 6,029 sampling visits a year, each providing samples for analysis of the full suite of 59 parameters. This compares with 8,091 visits a year currently, each testing for 19 parameters on average. Annex 1 gives further detail of the pattern of parameter numbers currently assessed and the required

increases. Based on DWI information, the typical cost of analysing a full suite of parameters is £500, with analysis being performed by qualified laboratories who charge LAs for the services used. The cost for testing particular parameters separately is not known, so it is assumed that the current analysis cost is £8.47 per parameter on average (£500 divided by 59). There is no reason to believe that analysis for those parameters currently tested is more or less complex or expensive than the average for the suite. The current average analysis cost is therefore estimated at £161 (£8.47 times 19). The average cost of a sampling visit, which is performed by LAs and is the time taken to collect the sample for the laboratory plus any overhead costs, is estimated at £100. This gives a baseline cost per year under current practice of £2.11m (8,091 visits times £261 total visit plus analysis cost). The monitoring cost under option 1 would rise to £3.62m (6,029 visits times £600 total visit plus analysis cost), a net increase of £1.5m.

As LAs are obliged to recover the expenses incurred this will cost owners/users of PWS £1.5m per year for three years. The charge is made as defined in section 80 of The Water Industry Act 1991 to either the owner or occupier of the premises supplied or the person on whose land the source arises.

Of the £1.5m, approximately £1.25m will be charged to businesses and £0.25m to public buildings. The percentage split has been calculated using the number of commercial and public Regulation 9 supplies as detailed in Annex 1.

Changing the number of parameters tested involves no time or activity for the PWS owner/user. The time and activity required is by laboratories so there will be no other costs other than the LA charges outlined above. Reducing the number of visits would involve a very minor time saving for the owner/user in some cases (to agree the sample date and allow the LA inspector access) but this is considered a negligible benefit and not costed here.

Monetised costs to LAs

To embed and familiarise themselves with the new risk based approach in year 1 it is estimated that one person for five days per LA will be required at an average full economic cost of £45,000 a year (210 effective days). The average was derived from information provided by LAs during engagement on the level of fees. As there are approximately 260 LAs involved in PWS sampling in England, the total cost to LAs will be £0.28m.

Monetised costs to technical advisors (DWI)

The DWI will be involved in a number of tasks throughout year 1 which will include attendance at project management meetings and updating guidance for LAs. It is envisaged a G7 FTE at a full economic cost of £75,000 a year (210 effective days) will be required for about 60 days at a total cost of £20,000.

Non-monetised costs to owners/users of Regulation 9 PWS

PWS owners and/or users may want to familiarise themselves with the changes in requirements during the first year of implementation. The amount of time needed for familiarisation has not been calculated at this stage but will be explored during consultation.

Monetised benefits to owners/users of Regulation 9 PWS

We expect that the collation of the three years' worth of data for moving to the new risk based approach should demonstrate that the risk based approach currently used by LAs (although not consistently applied across England) is broadly appropriate if not always fully cost effective. Although the current regime may prove to be fairly accurate, once Directive 2015/1787 is transposed, LAs will be required to comply with the new risk based approach in line with the latest WHO principles.

Therefore, in year 4, a "worst case" assessment would be that LAs revert to current sampling and monitoring levels with no long term costs savings. At the other end of the range, a realistic "high savings" estimate would be that the lower monitoring frequencies in the Directive would prove to be adequate involving the smaller suite of parameters currently sampled. The cost saving would be 2,062 visits at £261 (the extra site visits LAs are performing compared to the number required multiplied by the cost of current sampling (£100) and smaller suite of tests (£161)). This equates to £0.54m a year which owners/users of PWS would not be charged of which about 80% would fall to businesses (as before). We do not have enough information to determine what the most likely situation (the best estimate) is, and therefore estimate that it falls between the low (£0) and high scenarios (£0.54m), at around £0.27m a year.

Non-monetised benefits to all main affected groups
Updating the regulation to be aligned with the latest WHO principles for the sampling and analysis of private drinking water supplies will safeguard the quality of drinking water and ensure a consistent risk based approach is applied across England.

Summary of impacts for option 1 compared to baseline

Summary of impacts £million undiscounted		% on business	Year									
			1	2	3	4	5	6	7	8	9	10
Costs												
Cost to LAs and DWI		0%	0.30									
Additional monitoring		80%	1.50	1.50	1.50							
Benefits												
Reduction in annual monitoring	Best Est.	80%				0.27	0.27	0.27	0.27	0.27	0.27	0.27
	Low					0.00	0.00	0.00	0.00	0.00	0.00	0.00
	High					0.54	0.54	0.54	0.54	0.54	0.54	0.54

Option 2 - Transpose Commission Directive (EU) 2015/1787, incorporating wording/clarification amendments, including revising the level of fees LAs can charge.

The costs and benefits outlined in option 1 will also apply to option 2 with the addition of:

Monetised costs to all owners/users of PWS (for fees LAs can charge for monitoring PWS)
The maximum fee threshold LAs can charge for a variety of PWS activities will be removed. Primary legislation (The Water Industry Act 1991) permits the recovery of the expenses reasonably incurred by the LA, therefore maximum fees do not need to be set in secondary legislation (the Private Water Supplies (England) Regulation 2016). This will allow LAs, in all instances, to fully recover the cost incurred of monitoring PWS and guard against regular revision to the fees due to rising laboratory costs, inflation, etc. Her Majesty's Treasury (HMT) are content with this legal basis.

LAs set their charging policies for each activity they perform, which can be less but, at the moment, no more than the maximum fee. As LAs have not evaluated their charging policies based on the removal of the maximum fee and as it was not feasible to complete a granular assessment per LA, we've used data gathered via Dialogue App to help quantify what we anticipate the increases in costs to be. The Dialogue App asked LAs to indicate a preferred maximum (see Annex 3). An option for removing the cap was not provided at the time although, as part of the consultation, we will be asking LAs how accurate the estimate is and whether there is any capacity to flex budgets between areas of activity.

The high cost case assumes that PWS fees (in all cases) would be required to be raised to the higher rate to cover full LA costs. As indicated in Annex 3 this would be £1.93m per year. For the best estimate (which is the same as the low cost case), we have assumed that for around 50% of cases LAs costs would not exceed the current rates, and therefore there would be no additional charges incurred. For the other 50% of cases LAs would charge rates higher than what they charge now, based on full cost recovery. In these cases, PWS owners/users will incur additional charges. It is therefore estimated that PWS owners/users will incur an additional cost of approximately £1m per year.

Using the same business/public split as detailed in Annex 1, this breaks down into an approximate cost of £0.8m to business and £0.2m to public organisations (although all types of supplies will be affected, not just Regulation 9 supplies). These are not new economic costs but represent a transfer between owners/users and the LAs, so the cost here exactly equals the benefit to LAs below.

Breaking that down individual PWS owners/users could see an increase/decrease of:

Regulation 8 supplies

Service/activity	**Current maximum**	**Estimated higher**	**Difference**

	fee (£)	fee (£)	(£)
Risk assessment	500	500	0
Sampling	100	100	0
Investigation	100	250	150
Analysing a sample taken during check monitoring	100	100	0
Analysing a sample taken during audit monitoring and monitoring for radioactive substances	500	500	0

Regulation 9 supplies

Service/activity	Current maximum fee (£)	Estimated higher fee (£)	Difference (£)
Risk assessment	500	700	200
Sampling	100	100	0
Investigation	100	250	150
Analysing a sample taken during check monitoring	100	110	10
Analysing a sample taken during audit monitoring and monitoring for radioactive substances*	500	600	100
*Monitoring radioactive substances will cost £1000 but as this is estimated to only effect 1% of Regulation 9 supplies it has not been included.			

Regulation 10 supplies

Service/activity	Current maximum fee (£)	Estimated higher fee (£)	Difference (£)
Risk assessment	500	300	-200
Sampling	100	100	0
Investigation	100	250	150
Analysing a sample taken under Regulation 10	25	25	0

Monetised benefits to LAs

Removing the maximum level of fees that LAs can charge for monitoring and analysing PWS will allow LAs to fully recover the costs incurred. This will provide revenues to LAs of around £1m a year (£1.93m a year in the high cost rate).

Non-monetised benefits to all main affected groups

Allowing LAs to fully recover the costs incurred will maintain service quality, thereby maintaining protection to public health. LAs have indicated (see Annex 2) that should they continue to lose money for monitoring and analysing PWS, the activity could be marginalised due to budget/resource constraints, although the ability to flex between budgets for areas of activity will be explored during the consultation.

Other amendments that will be incorporated into the Regulations, for the most part, will provide accuracy and clarification. Requirements of another directive (2013/15/EURATOM) are being included to allow a monitoring frequency reduction if a radioactive substance is naturally occurring and stable. This is already included in guidance and will therefore not achieve any savings. The amendment to Regulation 18, concerning notices, has been considered following a response to the Drinking Water Regulations 2016 consultation undertaken last year. The change will give LAs powers to perform corrective work in the interest of protecting public health. LAs currently serve other notices that contain these powers, therefore, time is not required for familiarisation and there are no other additional costs to any party.

Summary of impacts for option 2 compared to baseline

Summary of impacts £million undiscounted		% on business	Year 1	2	3	4	5	6	7	8	9	10
Costs												
Cost to LAs and DWI		0%	0.30									
Additional monitoring		80%	1.50	1.50	1.50							
Increase in fees	Best Est.	80%	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
	Low		0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
	High *		1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
Benefits												
Reduction in annual monitoring	Best Est.	80%				0.27	0.27	0.27	0.27	0.27	0.27	0.27
	Low					0.00	0.00	0.00	0.00	0.00	0.00	0.00
	High					0.54	0.54	0.54	0.54	0.54	0.54	0.54
Increase in fees	Best Est.		0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
	High *		1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
	Low		0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97

* Under option 2, the High estimate of LA fees as a cost (80% of which is to business) corresponds to the High estimate of LA fees as a benefit to LAs, as this item is a transfer of funds from one to the other. Both High estimates are therefore used to calculate the High estimate of NPV. This is different from the more common situation in other impact assessments, where the costs and benefits are independent so the High NPV combines the High benefits and the Low costs.

7. Risks and assumptions

To save on costs in the long term, it is assumed that LAs will adopt the new risk assessment approach and collate the regulatory three years' worth of data, rather than having to revert to a comprehensive monitoring programme.

As mentioned within the 'rationale for invention' section, the revision to methods of analysis (which is to an "uncertainty of measurement" (UoM) methodology) will not come into force until 1 January 2020. It is expected that the costs to laboratories for changing the performance characteristics the samples are assessed against will be minimal, having time to familiarise themselves with new the process and perform some minor rewrites to procedures. However, this new method will also need to be adopted by laboratories for public water supply, which accounts for 99% of drinking water supply in England. It is therefore expected that laboratories will either absorb these costs themselves or they'll be absorbed into the charges for public supply.

The costs to undertake a full suite of tests (£500) and that the parameters tested are of equal cost (£8.47) have been estimated. The actual costs are not available and would vary depending on laboratory. The extra samples that will have the full suite of tests performed are expected to be taken whilst out on regulatory (and not additional) site visits, therefore minimising the costs to PWS owners/users.

Should the level of fees that LAs can charge for undertaking the monitoring of PWS not be revised, there is a risk that the quality of service provided will be affected thereby increasing the risk to public health for consumers of PWS.

All assumptions/estimations made throughout this Impact Assessment will be tested during consultation and, where necessary, amendments made to this document to reflect the responses provided.

8. Direct costs and benefits to business calculations (following BIT methodology)

This is a non qualifying regulatory provision and will therefore not contribute towards the Business Impact Target. In transposing Directive 2015/1787 we are meeting the minimum requirements and the amendments to fees charged by LAs do not change the scope of the activity, just allow full cost recovery.

9. Wider impacts

Small and Micro Business Assessment

The majority (80%) of the costs involved in transitioning to the new risk based approach will be borne by businesses in the form of increased analysis costs charged by LAs. Information on the size of businesses is not available. However, it is likely that many of them are small or micro businesses given that they are normally remote from mains supplies and a proportion are classed as B&Bs, camp sites and food premises (which could include micro ventures such as tea rooms or bakeries). The table in annex 1 provides a breakdown between commercial and public activities. The revision of fees to enable LAs to make a full cost recovery will also be borne largely by those same businesses. However, in the interests of public health and because their customers' health is as important as those of large and small to medium sized businesses, it would not be acceptable to exempt the small and micro sized businesses. The resulting longer term benefits of reduced monitoring costs will also fall largely to the same businesses.

10. Summary and preferred option with description of implementation plan

Option 2 is the Government's preferred option (subject to consultation) as we support the principle of the proposals made under Directive 2015/1787 in standardising the risk assessed approach for monitoring and analysis and changing the performance characteristics of certain parameters via the UoM methodology. It will also correlate with a number of initiatives that DWI are currently undertaking relating to risk assessment tools, sampling frequency and geographical parameters (see below for further information).

Revising Schedule 5 of the Private Water Supplies (England) Regulations 2016 and removing the maximum fee rate will allow LAs to fully cost recover. Other amendments to the Regulations will provide accuracy and clarification and incorporate legislative changes which are already included in guidance. They will also provide LAs with the powers to perform corrective work in the interest of protecting public health.

The implementation plan is as follows:

July/August 2017	Pre-consultation clearance
August 2017	Formal consultation (6 weeks)
September/October 2017	Collate and issue summary of responses from Consultation and Government response
September/October 2017	If necessary, update Impact Assessments and draft Statutory Instrument following consultation responses
October 2017	Final clearance
By 6 October 2017	Lay regulations
October 2017	Publish guidance
27 October 2017	Notify the Commission of implementation
27 October 2017	UK legislation enters into force
27 October 2017	Final transposition deadline (from the EU legislation)

In parallel to the plan the DWI has either completed or is currently carrying out a number of initiatives which will inform the proposed amendments to the Private Water Supplies (England) Regulations 2016. They have/are:

- Carried out a check of regularity and frequency of sampling with a view to determine whether the new frequencies in Annex II require a change in our tables (which was no);
- Looked at whether they needed to include any other parameters along with E coli, in the exemption from the risk based approach;
- Produced a risk assessment tool that they have self certified as appropriate for use by LAs to carry out site risk assessment in order to prioritise sampling of 'at risk' parameters at each site and avoid unnecessary sampling. This complies with EN 15975-2 as required;
- Providing access to other available raw water data such as Environment Agency data and Water Framework Directive in the form of heat maps to show high risk areas. This is now a research project;

- DWI have looked at samples taken over the past 3 years to see how many visits have been carried out and what sampling shortfall there is in order to reduce frequency of sampling;
- DWI are working on a Water Supply Zone project to group PWSs into zones to potentially enable supplies to be grouped and monitoring frequencies applied to zones.

Annex 1

Assuming all LAs will want to monitor Regulation 9 supplies based on risk, they will need to collate 3 years' worth of sampling and analysis data. Therefore, the number of samples being taken during each visit needs to be increased and a full suite of parameters tested. As LAs are currently performing a greater number of PWS site visits than required, the expenses incurred to gather the data will only relate to having to test the full suite of parameters with a saving on the number of site visits being offset against it.

For the calculation we assume:

- Full audit monitoring suite costs £500;
- Based on reported volumes, 6,029 audit samples are required; and
- An equal cost of analysis for each parameter of £8.47 across the 59 parameters, in absence of detail on individual cost of parameters (£500 / 59 = £8.47).

Number of extra samples and analyses required to collate risk assessment data

Number of parameters analysed	Shortfall of samples with those numbers of parameters*		Gap between that and full suite	Number of parameters required		Cost (£)
0-5	970	x	5	4,850		41,079.50
6-10	1,493	x	9	13,437		113,811.40
11-20	1,735	x	9	15,615		132,259.10
21-30	4,976	x	9	44,784		379,320.50
31-40	5,815	x	9	52,335		443,277.50
41-50	5,985	x	9	53,865		456,236.60
50-59	6,029	x	9	54,261		459,590.70
TOTAL				239,147	x £8.47	£2,025,575.10
* This includes the mandatory, non variation, testing of E-coli introduced by Directive 2015/1787.						

Regulation 9 supplies

The number or private supplies reported in 2015, by region, that are used for commercial (business) and public activity is indicated in the below table. Although Regulation 9 also includes single supplies i.e. household, as their monitoring is not regulatory and is only performed at the request of the PWS owners/users, they have not been included in this calculation.

Region	**Educational and training establishments**	**Hospitals/care facilities**	**Food premises**	**B&B/ hotels/camp sites/hostels**	**Public buildings**
East Midlands	1	4	88	167	83
West Midlands	8	4	118	377	130
East of England	8	8	188	311	129
North East England	0	1	101	305	66

North West England	5	4	338	727	121
Yorkshire and Humberside	5	4	205	636	223
London and South East	7	8	162	239	83
South West England	12	7	429	1,807	321
England total	**46**	**40**	**1,629**	**4,569**	**1,156**
Some supplies have more than one type of activity, therefore one private water supply may have been counted twice. The actual number of PWS is 6,295.					

Food premises and B&B/hotels/camp sites/hostels are classed as commercial activities with educational and training establishments and hospital/care facilities being added to the number of public buildings. Of the 7,440 listed in the table, there will be an approximate split of 80% (1,629 + 4,569 = 6,198) that are used for commercial activity and 20% (46 + 40 + 1,156 = 1242) for public activity.

Annex 2

Before implementing The Private Water Supplies (England) Regulations 2016 (2016/618), Defra undertook a public consultation (1 February to 14 March 2016). The consultation included a question on the level of fees charged by LAs to owners/users for the monitoring and analysis of their PWS. In answer to this question, there was significant concern raised by LAs that the current maximum levels of fees, which were set in 2010, were insufficient to cover costs for undertaking mandatory monitoring and analysis. During this time hourly rates, laboratory costs and fuel/courier costs have increased. LAs have a right under primary legislation to recover costs as reasonably incurred under Water Industry Act 1991 Section 77 4(d) and Schedule 5 of the Private Water Supplies (England) Regulations 2010 and 2016.

To ascertain the status of cost recovery the DWI carried out 3 phases of data gathering:

1. Email
   An email was sent to all LAs in June 2016 to ascertain what laboratory charges were being incurred by different LAs. The costs charged by laboratories was variable and, in most cases, returns showed the current fees maximum was insufficient.

2. Workshop
   6 workshops were carried out across England with between 40 and 60 people attending each workshop. A place was offered to every LA and with approximately 300 individuals attending, covered the majority of sites and authorities. Breakout sessions were held at each workshop to specifically discuss the maximum allowable fees for each of the PWS activities, from laboratory costs to site investigations and risk assessments. The overwhelming feedback was a frustration that LAs could not cover their regulatory duties without making a revenue loss. Many LAs were actually cutting staff as they could not fund continued PWS functions.

3. Dialogue App
   Following the workshops, a list of options for proposed fee increases was put to LAs via a Dialogue App. They were asked to provide comments and indicate their favoured options (the results of which are at Annex 3). There were areas where current costs were agreed sufficient, but key activities where the LAs spend considerable time on site, were deemed totally inadequate and LAs were not recovering their actual costs.

It was articulated that should increases not be forthcoming, there was a risk of severe impact on service quality from LAs, an increased risk to public health for consumers of PWS, and a concern that the role of LAs in fulfilling their regulatory duties would be severely compromised due to lack of budget. LAs voiced very strongly that the maximum ceiling on fees should be removed totally. This would enable them to fully recover their costs (as defined under primary legislation), to spend appropriate time on site to adequately risk assess PWS, (instead of rushing this process due to time constraints) and it would future proof on any cost increases (from laboratories, inflation, etc). Feedback from LAs at workshops made clear that any costs they incur are transparent for audit purposes and they have a duty to not overcharge for services. They felt strongly that this was the only sure way of ensuring full cost recovery.

Annex 3

To help quantify the 'monetised costs to all owners/users of PWS (for fees LAs can charge for monitoring PWS)' we have used LAs favoured options for each activity from the Dialogue App. The options were developed following feedback from regional workshops and, although LAs had suggested removing the maximum ceiling, it was not included as an option as it has not yet been explored internally.

a) Risk assessment

Option 1 was do nothing and leave current maximum at £500.

Option 2 was have a new Regulation 10 supplies maximum of £300, which includes cost for risk assessment (now in the form of a review, travel time and costs to and from site). If there are 6,777 Regulation 10 supplies in England the maximum saving would be £1,355,400.

Option 3 was to combine all Regulation 10 supplies activities (risk assessment, sampling and analysis of parameters in Regulation 10 a – e) plus anything identified in the risk assessment within the current £500 maximum. This was not a popular option at the workshops nor in Dialogue App responses.

In addition to the Options above, there was a proposal for a new Regulation 9 supplies maximum of £700 to include risk assessment (now in the form of a review, travel time and costs to and from site). If there are 6,295 Regulation 9 supplies in England the maximum cost incurred would be £1,259,000.

The preferred option from workshop and Dialogue App responses was to keep Regulation 9 and Regulation 10 fees separate and change the maximum to £300 for Regulation 10 and to £700 for Regulation 9. LAs noted that several Regulation 9 supplies are large and complex therefore the current maximum is inadequate, many small commercial enterprises and public buildings are simple supplies.

The overall net cost of this option would therefore be **-£96,400** (A cost of £1,259,000 minus a saving of £1,355,400).

b) Investigations

The current maximum is £100 which includes desktop investigation of failures and revisits for resampling. Feedback from the workshops was this was too low and only covers 2-3 hrs of an officers time and so is either being carried out at a loss to LAs or not being carried out at all.

The favoured proposal was to increase this fee to £250 which, based on 7,565 failures of the standard and assuming each failure required an investigation, would mean a cost of **£1,134,750** (£150 x 7,565).

c) Sampling

The current maximum is £100, which represents 2-3 hrs of an officers time, and is deemed adequate for the majority of supplies with opportunities existing for LAs to maximise efficiency of sampling (although this would be limited by courier times). Dialogue App responses generally concurred with this although some expressed concern that courier times and laboratory availability may impact on future total cost recovery.

Cost impact is therefore **£0**.

However, 1 LA reported that they subcontracted sampling to laboratory services which reduced costs and therefore they encountered no issues with courier limitations or accredited samplers. In 2017, LA staff that carry out sampling will require certification under the ISO 17024 scheme. Estimates are £300 per person every 3 years with approximately 3 LA staff needing certification which equates to £900 per LA every 3 years. This can be reflected in charges made for sampling, but should be within the current maximum.

d) Granting an authorisation

The current maximum is £100 but this is very unlikely to be used.

Cost impact is therefore **£0**.

e) Analysing a sample taken under Regulation 10

The current maximum is £25 which relates only to the statutory suite of 5 parameters and NOT the additional parameters identified during risk assessment. Following this clarification at the workshops, LAs believed they could obtain laboratory services that would deliver within the maximum.

Through the Dialogue App, some LAs expressed concern that in some areas accredited laboratories are closing which may make competitive pricing difficult. However, no change is suggested so cost impact is **£0**.

f) Analysing a sample taken during check monitoring (Regulation 9 supplies)

The current maximum is £100 and feedback from laboratories and LAs at workshops was that this was broadly appropriate. The suite comprises between 10 and 17 parameters depending on the nature of the source water and any treatment chemicals used. However, there was an option to increase the maximum to £110 to account for laboratory analytical costs which have increased by 8% since 2010. Although, some Las indicated that £110 is still too low and quoted £160 for the suite.

If there are 6,295 Regulation 9 supplies in England, based on their volume they would require 9,141 check samples. Therefore, the cost impact would be **£91,410** per year (£10 x 9,141).

g) Analysing a sample taken during audit monitoring (Regulation 9 supplies)

Option 1 was to do nothing but this was not favoured as the current maximum of £500 was currently not covering costs.

Option 2 would increase the maximum cost to £600 which would cover the vast majority of circumstances. The additional costs would include sampling accreditation (over 3 years as indicated at point c), inflation and radioactive substances (where a risk is identified). There would be opportunities to reduce costs in the future, using information from risk assessments of 5 years data, risk based monitoring and use of DWI heatmaps (as mentioned in section 11 of the Evidence Base).

Option 3 would introduce a separate charge of £200 for any additional radioactive substance monitoring.

Option 4 (addition to option 3) an additional fee of £1000 to cover cost of calculation of ID where required.

Assuming 10% of Regulation 9 supplies (6,295 / 10 = 629.5) are at risk of radioactivity and of those a maximum of 1% require ID calculations the total cost impact would be **£6,295** (£1000 x (629.5 / 100)).

The Dialogue App responses favoured Option 2 (increase cost of Regulation 9 audit monitoring to a maximum of £600) which would have a cost impact of **£798,200** per year (£100 x 7,982).

The overall impact of the preferred options was therefore:

a) -£96,400
b) £1,134,750
c) £0
d) £0
e) £0
f) £91,410
g) £6,295 + £798,200

Total cost of **£1,934,255** per year if the estimated maximum costs are incurred in 100% of cases.