

## Not significant and minor drinking water quality events

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Air in water (white)	IWN (1)	Greenwich, London (175)
	SEW (1)	Maidenhead (155,000)
	SSE (1)	Bromley Common, Kent (1,500)
	SST (1)	Sutton Coldfield, West Midlands (46,558)
	WSX (1)	Upton Scudamore, Wiltshire (11,166)
Chemical	AFW (3)	Denham, Ickenham, Uxbridge and North Hillingdon, Buckinghamshire/Middlesex (40,415) Hayes, Middlesex (3) Hertsmere, Hertfordshire (3)
	ANG (13)	Barton Turf, Norfolk (2) Bedford (3) Brixworth, Northants (2) Cheveley, Cambridgeshire (3) Corby, Northants (5) Ipswich, Suffolk (3) North Cockerington, Lincolnshire (3) Scrooby, Lincolnshire (3) Scunthorpe, Lincolnshire (1) Norwich (5) Southburgh, Norfolk (8) Stanton, Suffolk (58) Stradishall, Suffolk (3)
	BRL (1)	Writhlington, Somerset (3)
	DWR (3)	Narberth, Pembrokeshire (3) Cardigan, Pembrokeshire (3) River Towy catchment (200,000)
	IWN (1)	Brooklands, Milton Keynes (1)
	SES (1)	Epsom Downs, Surrey (3)
	SRN (2)	Chatham, Kent (3) Timsbury, Hampshire (3)

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Chemical	SVT (3)	Leicester (3) Telford, Shropshire (3) Worcester (2)
	TMS (5)	Aldsworth, Gloucestershire (3) Newbury, Berkshire (150) Southgate, North London (3) Wallingford, Oxfordshire (3) Willesden, North West London (5)
	UUT (2)	Knutsford, Cheshire (5) Liverpool (3)
	WSX (2)	Poole, Dorset (3) Yeovil, Somerset (3)
	YKS (1)	Thurlstone, South Yorkshire (3)
Discolouration	ANG (4)	Colchester, Essex (3) Ipswich, Suffolk (45) Peterborough (3) Scunthorpe, Lincolnshire (2,500)
	BRL (1)	Henbury, Bristol (11,750)
	HPL (1)	Hartlepool (425)
	SEW (4)	Sevenoaks, Kent (8,750) Burgess Hill, Sussex (3,390) Petersfield, Hampshire (4,500) Farnham Town, Surrey (7,500)
	SRN (2)	Horsham, Surrey (8,185) Isle of Wight (23)
	SVT (3)	Butterfield, Staffordshire (4,539) Leicester (14,750) Sheffield (8,057)
	TMS (1)	Swindon, Wiltshire (28,424)
	UUT (1)	Blackburn, Lancaster (24,152)
	YKS (1)	Leeds (3)

<b>Nature</b>	<b>Number of not significant and minor events</b>	<b>Area affected (estimate of population affected)</b>
Health concern	AFW (1)	Hampstead, North London (491)
	ANG (1)	Langham, Suffolk (3)
	DWR (1)	Margam, South West Wales (30)
	IWN (1)	Kings Cross, Central London (1,377)
	NNE (1)	Otterburn, Northumberland (947)
	SRN (2)	Isle of Wight (3) Large area of East Sussex (368,867)
	SSE (1)	Inset appointments in London (2,000)
	SVT (1)	Kidsgrove, Staffordshire (3)
	YKS (1)	Bradford, West Yorkshire (3)
Inadequate treatment	IWN (3)	Dartford, Kent (1,238) Kings Cross and Greenwich, London (1,128) Inset appointments in London (1,377)
	NNE (1)	Wooler, Northumberland (4,882)
	SRN (1)	Isle of Wight (37,198)
	SSE (2)*	Inset appointments in London (2,800) Inset appointments in London (2,000)
	UUT (2)	Buttermere, Cumbria (27) Cockermouth, Cumbria (63,007)
Loss of supplies/ poor pressure	AFW (1)	Stansted Mountfitchet, Essex (12,998)
	ANG (8)	Peterborough (2,208) Bedford (22,500) Fakenham, Norfolk (11,813) Northampton (15) Peterborough (13,500) Potter Heigham, Norfolk (35) Sandy, Bedfordshire (168) Wellingborough, Northamptonshire (12,500)

\*For SSE events, these were inadequate treatment of the bulk supply to the company.

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Loss of supplies/ poor pressure	BRL (3)	Bristol (10,000) Long Ashton, Bristol (5,688) Wells, Somerset (8,250)
	DVW (1)	Wrexham and surrounding areas (15,000)
	DWR (1)	Llanelli, South West Wales (6,250)
	HPL (2)	Hartlepool (910) Hartlepool (3)
	IWN (3)	Brooklands, Milton Keynes (12) Brooklands, Milton Keynes (3) North Milton, Milton Keynes (3)
	PRT (1)	Bishops Waltham, Hampshire (8,260)
	SRN (1)	Crawley, West Sussex (2,669)
	SST (2)	Burntwood, Staffordshire (21,250) Lichfield and Tamworth, Staffordshire (100,000)
	SVT (5)	East Leicestershire (13,750) Rutland (2,160) Oswestry, Shropshire (3,635) Sheffield (4,500) Toddingon, Gloucestershire (1,675)
	SWT (1)	Plymouth, Devon (7,000)
	TMS (3)	Shepherd's Bush, West London (43,233) Enfield, Greater London (25,000) Westminster, Central London (52,840)
	UUT (3)	Areas of Lancaster and Morecambe, Lancashire (220) Langwathby, Cumbria (500) Patterdale and Glenridding, Cumbria (645)
	WSX (2)	Swanage, Dorset (4,000) Toller Porcorum, Dorset (325)
	YKS (1)	Pocklington, Yorkshire (12,500)

<b>Nature</b>	<b>Number of not significant and minor events</b>	<b>Area affected (estimate of population affected)</b>
Microbiological	AFW (3)	Hampstead, North London (491) Paddlesworth, Kent (13,000) Shepperton, Surrey (1)
	ALB (1)	Upper Rissington, Gloucestershire (1,200)
	ANG (13)	Alford, Lincolnshire (5) Bedford (3) on three separate occasions Bures, Essex (8,560) Corby, Northamptonshire (3) Donnington, Lincolnshire (3) Grimsby, Lincolnshire (80,323) Huntingdon (3) Northampton (5) Norwich, Norfolk (3) on two separate occasions Wouton on the Green, Milton Keynes (3)
	BRL (1)	Backwell, North Somerset (3)
	DWR (2)	Monmouth, South East Wales (3) Newport, Gwent (3)
	HPL (1)	Hartlepool (3)
	IWN (1)	Kings Cross, Central London (1,046)
	SES (1)	Cheam, Surrey (3)
	SEW (4)	Burgess Hill, West Sussex (3) Farnborough, Hampshire (3) Hale, Hampshire (17,394) Eastbourne, East Sussex (3)
	SSE (3)	Croydon, Surrey (500) Didcot, Oxfordshire (1,750) Inset appointments in London (2,000)
	SST (2)	Barr Beacon, West Midlands (33) Cannock, West Midlands (3)
	SVT (2)	Mackworth, Derbyshire (4,800) Cleeve, Gloucestershire (541)
	SWT (3)	Wadebridge, Cornwall (7,000) Plymouth, Devon (3) St Just, Cornwall (3,500)

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Microbiological	TMS (13)	Abingdon, Oxfordshire (3) Bedwyn, Wiltshire (3) Brent Cross, North West London (3) Bromley, Kent (3) Chiddingfold, Surrey (7,015) Cirencester, Gloucestershire (38,866) Croydon, Surrey (130,000) Kentish Town, North London (3) Oxford (3) Stoke Newington, North London (3) Twyford, Berkshire (3) Wandsworth, South West London (3) Watlington, Oxfordshire (14,429)
	WSX (1)	Bridgwater, Somerset (3)
	YKS (1)	Skipton, North Yorkshire (1,700)
	Other	AFW (1)
HPL (2)		Hartlepool (3) Hartlepool (1)
SEW (1)		Wych Cross, East Sussex (48,988)
SRN (4)		Rye, East Sussex (3,161) Hove, East Sussex (3) Thanet, Kent (3) Laboratory issue (N/A)
SVT (2)		Leamington Spa, Warwickshire (74,660) Laboratory issues (N/A)
SWT (2)		Exeter, Devon (1) East Budleigh and surrounding areas, Devon (5,000)
TMS (2)		Bromley, Kent (95) Laboratory issue (N/A)
UUT (1)		Severe flooding, North Lancashire (N/A)

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Public concern	ANG (12)	Bourne, Lincolnshire (20) Ely, Cambridgeshire (3) Grimsby, Lincolnshire (3) Ipswich, Suffolk (3) King's Cliffe, Peterborough (3) Kirby Cane, Norfolk (5) Northampton (3) on two separate occasions Kings Lynn (3) March, Cambridgeshire (3) Stanway, Essex (2) Wither Marsh Green, Suffolk (3)
	BRL (2)	Bedminster, Bristol (3,370) Glastonbury, Somerset (3)
	CAM (1)	Orwell, Cambridgeshire (10)
	DVW (1)	Holt and surrounding areas, Flintshire (9,578)
	DWR (2)	Abercrave, Swansea (3) Tidenham, Gloucestershire (8)
	ESK (2)	Hornchurch, Essex (3) Tolleshunt Knights, Essex (8)
	HPL (1)	Hartlepool (2)
	IWN (2)	Aylesbury, Buckinghamshire (3) Rutland (3)
	NNE (3)	Gateshead, Tyne and Wear (1) Great Ayton, North Yorkshire (3) Wallsend, Tyne and Wear (3)
	SES (1)	Reigate, Surrey (3)
	SRN (5)	Andover, Hampshire (1) Horsham, West Sussex (3) Meopham, Kent (3) Northfleet, Kent (96) Brighton (15)
	SST (3)	Stourbridge, West Midlands (3) Tamworth, Staffordshire (10) Tividale, West Midlands (10)

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Public concern	SVT (34)	Broadway, Worcestershire (3) Castle Bromwich, West Midlands (3) Cinderford, Gloucestershire (5) Coalville, Leicestershire (30) Coven, Staffordshire (28) Coventry (3) Derby (3) on two separate occasions Eccleshall, Staffordshire (13) Glenfield, Leicestershire (3) Hucknall, Nottinghamshire (3) Leicester (2) Leicester (8) Leicester (15) Loughborough, Leicestershire (3) Lydney, Gloucestershire (6) Machynlleth (103) Mackworth, Derbyshire (1) Malvern, Worcestershire (3) Mansfield, Nottinghamshire (15) Newtown (13) Nottingham (8) Selly Park, Birmingham (3) Sheffield (3) Shirland, Derbyshire (3) Shrewsbury, Shropshire (3) Stoke on Trent, Staffordshire (3) Stoke on Trent, Staffordshire (4) Stourbridge, West Midlands (3) Warwick (3) Wellington, Shropshire (1) Welshpool (15) Westbury, Shropshire (13) Wolverhampton (3)
	SWT (5)	Kingsbridge, Devon (6,250) Okehampton, Devon (3) Sidmouth, Devon (3) Salcombe Regis, Devon (3) Torpoint, Cornwall (3)

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Public concern	TMS (12)	Battersea, South West London (50) Bermondsey, South East London (3) Deddington, Oxfordshire (3) Farringdon, Oxfordshire (3) Hackney, East London (75) Hungerford, Berkshire (3) Kilburn, North West London (3) Newbury, Berkshire (3) Shoreham, Kent (1) Sparsholt, Oxfordshire (3) Streatham, South London (3) Whitley Wood, Berkshire (3)
	UUT (3)	Aughton, Lancashire (3) Malpas, Cheshire (3) Millom, Cumbria (3)
	WSX (5)	Broadstone, Dorset (3) Crewkerne, Somerset (3) Poole, Dorset (3) Salisbury, Wiltshire (5) Stubhampton (5)
	YKS (5)	Beverley and Hull, north Yorkshire (3) Harrogate, North Yorkshire (5) Marsden, West Yorkshire (3) Twitter message (N/A) Yeadon, West Yorkshire (3)
Taste or odour	AFW (3)	Amersham, Buckinghamshire (8) Uxbridge, Middlesex (2) Uxbridge, Middlesex (3)
	ANG (4)	Holbeach St Matthew, Lincolnshire (3) Holt, Norfolk (3) Elmswell, Suffolk (3) Walcott, Norfolk (3)
	BRL (3)	Bristol (3) Milton, Somerset (1) Pilning, Gloucestershire (3)
	DWR (3)	Barry, South Wales (3) Ross on Wye, Herefordshire (5) Talsarnau, Gwynedd (3)
	ESK (2)	Barking, Essex (53) Westleton, Suffolk (18)

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Taste or odour	HPL (1)	Hartlepool (2)
	IWN (2)	Kings Cross, Central London (3) Kings Cross, Central London (1,046)
	NNE (1)	Peterlee, Durham (3)
	SVT (8)	Birmingham (38) Caunton, Nottinghamshire (3) Newtown (3) Nottingham (3) Rugby, Warwickshire (3) on two separate occasions Sheffield (3) Whitchurch, Shropshire (3)
	SWT (4)	Millbrook, Cornwall (3) Penzance, Cornwall (3) Port Isaac, Cornwall (3) South Milton, Devon (3)
	TMS (1)	Ickford Village, Buckinghamshire (3)
	UUT (5)	Audlem, Cheshire (3) Manchester (3) Nantwich, Cheshire (3) Preston, Lancashire (3) Thurstonfield, Cumbria (3)
	WSX (1)	Warminster, Wiltshire (3)
	YKS (1)	Swinton, South Yorkshire (3)

## Significant, serious and major drinking water quality events

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
04 Jan 2015 For 22 hours (SVT)	Melbourne works, Leicester, Loughborough, Ashby de la Zouch	1,200,000	Repeat detections of <i>E.coli</i> in samples from the works due to structural failure.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals at treatment works.</li> <li>• Review of procedures.</li> <li>• Sampled affected area.</li> <li>• Identified points of ingress caused by poorly maintained tanks.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• The company failed to conduct satisfactory investigations of the failures, which were belatedly found to be due to poorly maintained contact tank and high-lift pump sump tank.</li> <li>• The disinfection process was also found to be inappropriate, with a post contact tank emergency dosing system used to maintain a chlorine residual during a prolonged restarting period of the works.</li> <li>• A technical audit was conducted in November following further events involving the detection of <i>E.coli</i> (14 Jan 2015) and consumer complaints of larvae in supply (25 Sept 2015).</li> <li>• The company were criticised for the time taken to carry out remedial work, taking up to five months while a significant risk existed and their subsequent failure to demonstrate the benefits of action taken a year after the event.</li> <li>• A Notice was issued requiring the company to carry out further investigations and necessary remedial works, including refurbishing the rapid gravity filters before 31 March 2020.</li> </ul> <p>This is linked to the event at Melbourne works on 12 January.</p> <p>Risk classification: Serious</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
05 Jan 2015 For 12 hours (CAM)	Coton, Cambridgeshire	16,250	Loss of supplies due to burst main on the outlet of Madingley tower.	<p><b>Cambridge Water action:</b></p> <ul style="list-style-type: none"> <li>• Bypassed service reservoir.</li> <li>• Sampled affected area.</li> <li>• Rezoned area (brought in water from different source).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Recommended that investigational sampling is extended to include distribution metals following a burst main.</li> </ul> <p>Risk classification: Significant</p>
07 Jan 2015 For 2 days (SEW)	Crowthorne, Bracknell	140,000	Air in water (white) due to failure of a compressor at Bray Gravels works.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment.</li> <li>• Flushed distribution system.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The risk of compressor failure was not considered in the company's risk assessment for Bray Gravels works and was required to be updated.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
11 Jan 2015 For 1.5 hours (UUT)	Poaka Beck works, Barrow and Cumbria	100,043	Improperly disinfected water due to failure of pH control equipment.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Repaired pH control equipment.</li> <li>• Installed new chlorine analysers.</li> <li>• Installed additional process alarms for automated treatment controls.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Lack of maintenance of critical pH control equipment led to improperly disinfected water leaving the works. The company failed to adequately assess the risk of such failures and also failed to ensure that robust response and recovery plans were in place. A number of recommendations were made that the company should take steps to address the root causes of this and similar events, including: <ul style="list-style-type: none"> <li>– Review risk assessments and mitigation for deficiencies in chemical dosing systems and treatment systems that are not operating correctly.</li> <li>– Develop effective contingencies and safeguards to prevent compromised water treatment.</li> <li>– Respond and rectify issues expediently.</li> <li>– Include immediate downstream assets in the company’s response to treatment and disinfection failure events.</li> </ul> </li> </ul> <p>Risk classification: Significant</p>
12 Jan 2015 For 1 hour (AFW)	Piccotts End works, Hemel Hempstead and Kings Langley	29,102	High turbidity on final water.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Shut down works.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company carried out valve operations which resulted in chalk deposits being scoured from pipework.</li> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
12 Jan 2015 For 24 hours (SVT)	Melbourne works, Leicester, Loughborough, Ashby de la Zouch	1,200,000	Repeat detections of <i>E.coli</i> in samples from the works due to structural failure.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals at treatment works.</li> <li>• Review of procedures.</li> <li>• Sampled affected area.</li> <li>• Identified points of ingress caused by poorly maintained tanks.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Supplied unwholesome water in breach of Regulations.</li> <li>• The company failed to conduct satisfactory investigations of the failures, which were belatedly found to be due to poorly maintained contact tank and high-lift pump sump tank.</li> <li>• The disinfection process was also found to be inappropriate, with a post contact tank emergency dosing system used to maintain a chlorine residual during a prolonged restarting period of the works.</li> <li>• A technical audit was conducted in November following further events involving the detection of <i>E.coli</i> (14 Jan 2015) and consumer complaints of larvae in supply (25 Sept 2015).</li> <li>• The company were criticised for the time taken to carry out remedial work, taking up to five months while a significant risk existed and their subsequent failure to demonstrate the benefits of action taken a year after the event.</li> <li>• A Notice was issued requiring the company to carry out further investigations and necessary remedial works, including refurbishing the rapid gravity filters before 31 March 2020.</li> </ul> <p>This is linked to the event at Melbourne works on 4 January.</p> <p>Risk classification: Serious</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
12 Jan 2015 For 3 days (WSX)	Curry Rivel, Somerset	500	Loss of supplies/poor pressure due to burst main.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired main.</li> <li>• Rezoned area (brought in water from different source).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Main repaired and network returned to original configuration.</li> </ul> <p>Risk classification: Significant</p>
16 Jan 2015 For 1 day (DWR)	Cilfor works, Llyn peninsular	6,598	Treatment failure: high turbidity from supernatant wash-water return.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Replaced faulty equipment.</li> <li>• Retrained staff.</li> <li>• Review of procedures.</li> <li>• Sampled affected area.</li> <li>• The company has made changes to procedures and equipment to reduce the likelihood of a recurrence.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to maintain critical equipment adequately which permitted supernatant with elevated turbidity being returned to the inlet of the works. This brings into focus the wider inadequacy of the company in its protocols, training and competency to ensure similar events do not occur.</li> <li>• Actions have been taken to prevent a recurrence of the event.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
16 Jan 2015 For 5 hours (UUT)	Oswestry works, Shropshire	100,000	Chlorination failure at the works due to plant failure.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• No actions taken.</li> <li>• Review of procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed in their duty to notify this event which was identified by the Inspectorate following a compliance failure.</li> <li>• The company failed to adequately monitor, maintain or identify failures in the disinfection process.</li> <li>• Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
17 Jan 2015 For 3 days (YKS)	North Leeds	700,000	Brown discolouration following planned work.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Flushing considered but not thought to be effective.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The event was caused by disturbance of deposits following a bypass main being left open after work on an upstream service reservoir.</li> <li>• The company: <ul style="list-style-type: none"> <li>– failed to carry out a robust risk assessment prior to undertaking this planned work.</li> <li>– was required to amend its procedures to ensure that risk assessments for water supply zones are updated after changes to the network.</li> </ul> </li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
17 Jan 2015 For 3 days (YKS)	Keighley, Yorkshire	23	Do not drink notice due to company contractors damaging a water main while repairing a burst sewer.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Flushed and disinfected the main.</li> <li>• Issued a do not drink notice to eight commercial properties.</li> <li>• Provided bottled water on request.</li> <li>• Increased chlorine levels in the distribution system.</li> <li>• The company briefed all service partner teams to alert them to the risks associated with the cause of this event.</li> <li>• Associated procedures were reviewed.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
18 Jan 2015 For 3 days (SRN)	Martin Mill service reservoir, Eastry, Kent	5,760	Loss of supplies/poor pressure due to unplanned emptying of a service reservoir caused by loss of telecommunications for reservoir level.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company telecommunication links to the reservoir level probe were lost and in response the company initiated manual control. The control was insufficient and loss of supplies resulted. Alternative supplies were then switched from Martin Gorse works.</li> <li>• Bottled water was provided on request.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to conduct adequate risk assessments and had poor contingency planning. The event was wholly avoidable as the company did not consider the extent to which they could rezone. The company has been required to update its risk assessments and to improve event reporting processes.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
21 Jan 2015 For 12 hours (UUT)	Whitehaven	4,000	Brown discolouration following planned work to recommission a repaired main.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate was critical of the company's response to commence investigational sampling.</li> <li>• Insufficient supervision of contractors who were operating valves.</li> <li>• The company's records of water mains in the area were inaccurate and further valving work by the company exacerbated the problem.</li> <li>• Evidence was obtained from consumers which demonstrated that consumers had rejected the water on aesthetic grounds.</li> </ul> <p>Risk classification: Significant</p>
21 Jan 2015 For 30 days (WSX)	Chippenham, Wiltshire	3	Do not drink notice due to water fittings contraventions.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice to a school in Chippenham.</li> <li>• Carried out a fittings inspection.</li> <li>• Belatedly issued a Notice requiring the contraventions identified to be rectified.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate training/competence of staff.</li> <li>• Sampling was not timely enough.</li> <li>• Inadequate communication caused delay in response.</li> <li>• Inadequate procedures.</li> <li>• Recommendation to improve procedures for escalation and understanding of sample exceedances.</li> <li>• Ensure procedures and training of staff sufficiently robust to understand company obligations when failures occur in public buildings.</li> <li>• Company to serve Section 75 Notices.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
22 Jan 2015 For 3 days (SRN)	Crawley, East Sussex	32,500	Potential loss of supplies/poor pressure from Turners Hill reservoir.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company initiated contingency plans, which included the use of vehicle tankers to support depleted service reservoir levels in response to the loss of power at Hardham works and a treatment issue at Weirwood works, both supplying Turners Hill service reservoir.</li> <li>• Restarted supplying works.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
23 Jan 2015 For 5 hours (SVT)	Kingstanding, Birmingham	85,906	Brown discolouration following loss of supplies caused by a faulty pressure reducing valve.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Rezoned the area to restore supplies.</li> <li>• Sampled affected area.</li> <li>• Repaired the valve.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory.</li> <li>• The Inspectorate recommended the company update its risk assessment regarding discolouration in the zone.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
23 Jan 2015 For 10 days (TMS)	Farringdon Station	385	Media interest following a burst main flooding Farringdon station.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Retrained staff.</li> <li>• Review of procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A number of recommendations were made in respect of the failure to notify the Inspectorate, not following the company's own procedures, returning the supply pre-emptively and prior to appropriate quality clearance and failure to carry out an adequate risk assessment.</li> </ul> <p>Risk classification: Significant</p>
28 Jan 2015 For 24 hours (HPL)	Owton Manor, Hartlepool	3,750	Brown discolouration caused by flow changes as a result of a leaking main which led to disturbance of deposits.	<p><b>Hartlepool Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Provided bottled water on request.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
30 Jan 2015 For 12 hours (WSX)	Alton Pancras works, Dorset	7,592	Turbidity of 1.0NTU in the treated water due to pipe corrosion.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Replaced a deteriorating section of pipe within the treatment works.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• No further action to be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
01 Feb 2015 For 9 hours (SVT)	Leicester	15,000	Brown discolouration following loss of supplies caused by a burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired the main and flushed the system.</li> <li>• Identified one discrete area for mains cleaning.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
04 Feb 2015 For 4 hours (DWR)	Elan Valley, Powys	40,000	Treatment failure: High turbidity due to tank sediments, affecting disinfection.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Review of procedures.</li> <li>• Retrained staff.</li> <li>• Shut down treatment works.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to identify faulty equipment critical for controlling the treatment process.</li> </ul> <p>Risk classification: Significant</p>
05 Feb 2015 For 12 hours (NNE)	Darras Hall, nr Newcastle, Northumberland	7,248	Brown discolouration due to burst main.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
06 Feb 2015 For 1 week (DWR)	Glaslyn Laboratory	N/A	Under recovery of <i>Cryptosporidium</i> oocysts due to a suspect batch of laboratory testing product.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>Review of procedures.</li> <li>Facilitation of national working group for <i>Cryptosporidium</i> laboratories.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Company did not identify a deterioration in the methodology rapidly enough.</li> </ul> <p>Risk classification: Significant</p>
06 Feb 2015 For 4 days (SES)	Coulston, Surrey	500	Taste or odour due to mains lining material.	<p><b>Sutton And East Surrey Water Plc action:</b></p> <ul style="list-style-type: none"> <li>The company carried out planned mains rehabilitation to remove chalk deposits, using a technique known as ice pigging, The company investigated and identified elevated levels of organic chemicals associated with coal tar pipe lining material following consumer complaints of an unusual taste to their supply. A do not drink notice was issued, while the company flushed the mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Recommended that the company reviews its procedures for investigating water quality events to ensure that events are thoroughly investigated and that the company regulatory risk assessments are reviewed company-wide in light of this event.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
06 Feb 2015 For 3 days (UUT)	Skelmersdale	27,875	Brown discolouration due to burst main.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired main.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A large diameter main was damaged by contractors during a repair operation. The company caused further discolouration when a pumping station was switched on.</li> <li>• There was no evidence that the company carried out a risk assessment for the initial mains repair.</li> <li>• The risk assessment did not take into account risks associated with operation of the pumping station.</li> <li>• Recommended that risk assessments are carried out by the company prior to work being undertaken on the distribution system and to include all critical operations.</li> </ul> <p>Risk classification: Significant</p>
07 Feb 2015 For 5 hours (HPL)	Hartlepool	13,578	Brown discolouration due to burst main.	<p><b>Hartlepool Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Provided bottled water on request.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Retrained staff on sampling arrangements.</li> <li>• Dedicated bottle sets now set aside for any future events.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Sample bottles available for the event were inappropriate for the required analysis.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
09 Feb 2015 For 1 hour (UUT)	Appleby, Cumbria	65	Discoloured water in school due to localised disturbance of deposits.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• The company identified the unauthorised use of a hydrant by a cleaning contractor and updated its associated procedures.</li> <li>• Do not drink advice issued to a school.</li> <li>• The company carried out a water fittings inspection in the school and required it to correct fittings which did not meet the necessary standards.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
11 Feb 2015 For 2 days (ANG)	Walsingham, Norfolk	625	Brown discolouration due to flow reversal following a burst main.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The area was flushed and the burst repaired.</li> <li>• The company identified that discoloured water had entered a Gunthorpe reservoir which was removed from supply and inspected.</li> <li>• The company identified sediment in the service reservoir and ingress points which was subsequently cleaned and repaired.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The burst was due to poor workmanship of a recently installed pipe fitting, which failed.</li> <li>• The company were slow to identify discoloured water had entered the reservoir.</li> <li>• The consequent reversals of flow led to discoloured supplies.</li> <li>• The company supplied unwholesome water in breach of regulations and were required to assess the need to clean the reservoir following the event.</li> <li>• A suggestion was made for the company to ensure that risks in the network configuration should be identified.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
11 Feb 2015 For 1 day (SST)	Seedy Mill works, Walsall and West Midlands	75,000	Repeat detections of <i>E.coli</i> from works.	<p><b>South Staffordshire Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• <i>E.coli</i> was detected in a large-volume investigational sample at Seedy Mill works.</li> <li>• Review of procedures.</li> <li>• Sampled affected area.</li> <li>• Increased chlorine concentrations at service reservoirs.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Despite a number of repeat detections of <i>E.coli</i> the company has not been able to identify a root cause.</li> <li>• Enforcement action was taken, with a Notice issued requiring the company to take action to prevent further failures. The company has commissioned a comprehensive study to derive a long-term asset plan in response to the Notice.</li> </ul> <p>Risk classification: Significant</p>
17 Feb 2015 For 3 days (AFW)	South Hatfield	13	Taste or odour due to uncontrolled valving operations during planned work on the distribution system.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Company valving operations while assessing the position of valves within the distribution network caused stagnant water to enter a live main resulting in consumer contacts of an unusual taste to the supply.</li> <li>• Flushed the affected mains resolved the issue.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate was highly critical of the company in respect of: <ul style="list-style-type: none"> <li>– its handling of this event;</li> <li>– failure to fully risk assess planned operations;</li> <li>– failure to take sufficient and appropriate samples in response.</li> </ul> </li> <li>• Recommend that for similar events, the company collect samples after flushing to confirm whether or not it has been successful.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
17 Feb 2015 For 2 days (SVT)	Cropston works, Leicestershire and Warwickshire	816,000	Compromised disinfection due to power loss and failure of emergency back-up disinfection.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Review of procedures. Installed a contact tank recirculation system to overcome disinfection failure.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to mitigate through an adequate risk assessment the consequence of a power failure and subsequent unmitigated risk of loss of disinfection. This was compounded by an excessive shutdown period of 20 minutes increasing the risk of supplying undisinfectated water.</li> <li>• A recommendation was additionally made that the company should establish why the emergency disinfection system failed to operate.</li> </ul> <p>Risk classification: Significant</p>
17 Feb 2015 For 3 weeks (SWT)	Chumleigh, Devon	5	Contamination of private tank supplying two properties.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued a boil water notice.</li> <li>• Sampled affected area.</li> <li>• Backflow protection installed to prevent contamination of the public supply.</li> <li>• Tank was disconnected and new supply main installed.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• No further action to be taken.</li> </ul> <p>Risk classification: Significant</p>
18 Feb 2015 For 2 days (SWT)	Plymouth	3,750	Burst main causing flooding of local shops and subsequent discolouration.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired main.</li> <li>• All samples were satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• No further action to be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
19 Feb 2015 For 104 weeks (SEW)	Company-wide, Bournemouth and some local authorities	N/A	Laboratory error due to incorrect calculation.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• The company introduced an error into the nitrate/nitrite calculation and reported this error for two years. It also affected data from Bournemouth Water.</li> <li>• The company compounded the problem when it introduced new software with the error embedded which was not properly validated.</li> <li>• The company has implemented procedural updates and ongoing checks.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate was highly critical of the company because this error was undetected for two years and new laboratory computer software was introduced without full validation.</li> <li>• Recommendations were made in respect of the failure to notify the Inspectorate and the failure to inform their customers including a local authority.</li> </ul> <p>Risk classification: Significant</p>
19 Feb 2015 For 3 weeks (SVT)	Mansfield, Nottinghamshire	4	Do not drink notice due to lead uptake from service pipe.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A sample taken in response to a consumer complaint of illness and discolouration was found to contain a high concentration of lead (53µg/l). The property was served by a lead supply pipe.</li> <li>• Issued a do not drink notice.</li> <li>• Provided bottled water.</li> <li>• Sampled neighbouring properties.</li> <li>• Replaced the company's own lead pipework.</li> <li>• Samples taken following the replacement of the lead supply pipe to two homes were satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
20 Feb 2015 For 3 days (ANG)	Swanton Morly, Norfolk	3	Boil water notice.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Boil water notice issued due to a leaking service joint and potential ingress.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
20 Feb 2015 For 4 days (SRN)	Sittingbourne, Kent	53	Issue of boil water notice due to microbiological contamination following a burst main.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Sampled affected area.</li> <li>• Issued a boil water notice.</li> <li>• Flushed mains.</li> <li>• Provided bottled water on request.</li> <li>• Boil water notice lifted following a clear set of samples.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
24 Feb 2015 For 24 hours (AFW)	Doddinghurst, Essex	3,781	Brown discolouration due to burst main, caused by planned work to isolate a water tower.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company closed a valve in an attempt to isolate a burst main. This caused depressurisation of the wider network leading to calls of no water. The valve was then closed and the changes in flow and pressure mobilised mains deposits resulting in discolouration of supplies.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Repaired main.</li> <li>• Resamples satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> <li>• The company carried out an appropriate risk assessment for the planned stage of the work, but failed to have adequate contingency measures to address the burst main.</li> </ul> <p>Risk classification: Significant</p>
24 Feb 2015 For 4 days (SWT)	Tiverton, Devon	3	Brown discolouration affecting Tiverton Hospital, due to burst main by third party.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Provided bottled water on request.</li> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Samples not analysed for appropriate parameters.</li> <li>• Recommendation to review and revise sampling procedures for sensitive customers.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
26 Feb 2015 For 2 days (TMS)	Kempton works, Hanworth, Middlesex	480,000	Evidence of microbiological contamination due to flow change within treatment works.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company detected two separate instances of <i>Clostridium perfringens</i> in the final water. The first was after a reduction of flow following a burst on a delivery main from the works. The second was the following day after a power fluctuation at the works. An enhanced sampling regime was employed within the affected area.</li> <li>• The company has implemented continuous monitoring for <i>Cryptosporidium</i>, because of the possibility that these failures are associated with operation of the slow sand filters.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
27 Feb 2015 For 2 days (SVT)	Sutton in Ashfield, Nottinghamshire	28	Consumer complaints of taste and odour following a burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• This was a repeat event for the company.</li> <li>• Precautionary do not drink advice issued to 11 properties.</li> <li>• The main was flushed and the affected area was sampled, The area was rezoned (brought in water from different source).</li> <li>• The company concluded that the taste and odours were caused by deposits from old coal tar lined mains, but failed to identify any main with a deteriorating coal tar lining in the local distribution network.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Critical that the company was unable to identify the cause of the taste and odours, especially since this was a repeat of a previous similar event in 2014 (see <i>Drinking water 2014 – Central and Eastern region</i>). The company should ensure that its mains records are accurate.</li> <li>• Regulation 28 report to be updated.</li> </ul> <p>Risk classification: Significant</p>
04 Mar 2015 For 4 days (DWR)	Llandogo, Monmouthshire	24	Boil water notice due to ingress of surface water following mains damage by a third party.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Issued a boil water notice.</li> <li>• Sampled affected area.</li> <li>• Repaired main.</li> <li>• Flushed mains.</li> <li>• Resamples were satisfactory and boil water notice rescinded.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
05 Mar 2015 For 2 days (ANG)	Pulham Market tower, Norfolk	18,145	Evidence of microbiological contamination following repair of a main supplying the tower.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company found <i>E.coli</i> in a routine sample taken from Pulham Market water tower.</li> <li>• The company removed the water tower from supply and rezoned the supply area (brought in water from different source).</li> <li>• Increased chlorine levels at the supplying works.</li> <li>• The area affected was sampled.</li> <li>• The company concluded that the most likely cause was ingress during a recent repair to the water tower's inlet main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigated the mains repair team following the discovery of vegetation in the reservoir which matched the repair site. The company were criticised for competency of their team and inadequate sampling. Company has reviewed their procedures and training.</li> <li>• The company had inadequately trained or ensured ongoing competence of staff to ensure sufficient appropriate sampling following the repair. Procedures and training have been reviewed.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
05 Mar 2015 For 2 days (SST)	Sutton Coldfield	42,500	Black discolouration (manganese) due to flow reversal in main, caused by operational issues at Bourne Vale works.	<p><b>South Staffordshire Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• The affected mains were flushed and bottled water was provided on request.</li> <li>• The faulty equipment was repaired and risk assessment updated.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Critical that chemical dosing and valve operation control systems had been left in manual mode following maintenance which resulted in flow disturbance of manganese deposits in the outlet main and the downstream system.</li> <li>• The company was required to prevent manual modes being left inappropriately and to retrain staff.</li> </ul> <p>Risk classification: Significant</p>
05 Mar 2015 For 4 days (TMS)	Walthamstow, North East London	58	Loss of supplies and media interest due to burst main flooding the North Circular Road.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• All samples satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
07 Mar 2015 For 5 days (HPL)	Dalton Piercy works, Wynyard	1,115	Loss of supplies and discolouration following planned work.	<p><b>Hartlepool Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Provided bottled water on request.</li> <li>• Repaired faulty equipment.</li> <li>• Sampled affected area.</li> <li>• The company restored supplies quickly and acted diligently.</li> <li>• The company has improved timely delivery of analytical results.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate sampling and investigation, which further emphasised inadequacies seen previously during the event in Hartlepool on 7 February 2015 and similar occurrences at Throston works in 2014.</li> <li>• The company has provided assurances to improve its procedures and approach to investigating events. A further similar event is likely to result in enforcement.</li> </ul> <p>Risk classification: Significant</p>
09 Mar 2015 For 7 hours (AFW)	Iver works, North London	750,000	Treatment failure – inadvertent return to supply of an out of service filter.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A works shutdown closed all the valves on 12 carbon filters. Upon restart of the works all valves opened automatically, however, one filter had been out of service and contained no carbon filter media. The works was shut down again and sampling conducted throughout the affected supply area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to ensure adequate protection for such a situation in its risk assessment. The company also failed to take sufficient and appropriate samples in their investigation of the problem.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
10 Mar 2015 For 8 hours (SVT)	Alfreton	11,250	Loss of supplies/poor pressure due to burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>Repaired main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company's response to this event was satisfactory.</li> <li>The Inspectorate recommended the company update its risk assessment regarding discolouration in the zone.</li> </ul> <p>Risk classification: Significant</p>
12 Mar 2015 For 1 day (AFW)	Northmoor works, South Buckinghamshire	73,934	Treatment failure – high turbidity due to suspension of chalk deposits.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>The company were changing borehole use and valve operations caused a flow surge which suspended chalk deposits. The elevated turbidity shut the works down. The affected area was sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
13 Mar 2015 For 4 weeks (WSX)	Cattistock works, Dorchester	1,387	Microbiological contamination.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>Shut down treatment works but with some delay.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Inadequate investigations into root cause.</li> <li>Recommendation made that company should respond more promptly to the detection of microbial indicators associated with the deterioration of raw water quality.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
15 Mar 2015 For 3 days (TMS)	Moreton- in- Marsh, Gloucestershire	6,250	Loss of supplies/poor pressure due to burst main.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Rezoned area (brought in water from different source).</li> <li>• Provided bottled water on request.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> </ul> <p>The company restored supplies with minimal impact on water quality.</p> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
18 Mar 2015 For 1 day (TMS)	Walton works, South West London	2,500,000	Treatment failure – elevated turbidity in the final water following plant start up.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company identified that a statutory sample collected from the final water contained high turbidity. The company concluded that sediments in the sample tap pipework was the most likely cause. The pipework was flushed and a new operational regime established, together with new online monitoring.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
18 Mar 2015 For 3 days (TMS)	Abingdon, Oxfordshire	22,000	Taste or odour following rezoning after a burst main.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company rezoned the network following a burst main and the valve operations resulted in resuspension of mains deposits including coal-tar mains lining material.</li> <li>• In response the company: <ul style="list-style-type: none"> <li>– flushed the mains;</li> <li>– provided bottled water on request; and</li> <li>– reviewed their procedures.</li> </ul> </li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was criticised for compounding the situation with inaccurate valve position records and lack of knowledge about the location of coal-tar lined mains.</li> <li>• Recommendations were made in respect of inadequate risk assessment and were required to identify the location of coal-tar lined mains.</li> </ul> <p>Risk classification: Significant</p>
22 Mar 2015 For 48 hours (DWR)	Denbighshire and Flintshire	8,253	Loss of supplies due to burst main.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Blended supply with another source.</li> <li>• Repaired main.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Provided bottled water on request.</li> <li>• Satisfactory outcome.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company response was satisfactory and actions have been taken to prevent a recurrence of this event.</li> <li>• As there was an unacceptable delay in notifying the Inspectorate, the company were asked to review its procedures.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
25 Mar 2015 For 1 day (SVT)	Mackworth and Belper, Derbyshire	6,800	Brown discolouration due to burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Review of procedures.</li> <li>• Provided bottled water on request.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was required to amend some procedures to better understand the risk and ensure geographical coverage of response sampling.</li> </ul> <p>Risk classification: Significant</p>
25 Mar 2015 For 1 day (YKS)	Kingston on Hull	365,000	Loss of supplies/poor pressure due to loss of telecommunications to pumps.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired faulty equipment.</li> <li>• The company quickly identified the issue and restored supplies.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>
26 Mar 2015 For 1 day (BRL)	Barrow works, South Bristol, North Somerset and South Gloucester	346,915	Microbiological contamination.	<p><b>Bristol Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Replaced sampling facility.</li> <li>• Review of procedures.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's final report was not sufficiently detailed requiring further questions to be answered to complete the event's assessment.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
27 Mar 2015 For 52 weeks (SRN)	Company-wide	N/A	Errors and shortfalls in data reporting.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>Inadequate regulatory data submission.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company was criticised for its poor quality assurance procedures in the submission of data to the Inspectorate which contained significant errors and shortfalls.</li> <li>The company was required to review its systems and improve self-governance.</li> </ul> <p>Risk classification: Significant</p>
27 Mar 2015 For 1 week (SVT)	Trimpley works, Ludlow, Trimpley, Redditch, Droitwich, Worcester, Kidderminster and Evesham	408,860	High turbidity in Trimpley final water.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>The company sampled the affected area but the event was not escalated or investigated further as the company mistakenly believed the turbidity was due to lime deposits within the contact tank pumping sump.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company was criticised as it failed to employ good practice to manage this event. The company had previous recommendations to improve event management.</li> <li>Enforcement action was initiated for: works operation; competency of staff; control of processes; and inadequate investigations.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
30 Mar 2015 For 13 hours (UUT)	Ellesmere Port	29,292	Brown discolouration due to planned work.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Review of procedures.</li> <li>• Introduced new risk assessment process.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• An Undertaking is in place to clean the large diameter mains within the area.</li> <li>• The company were criticised for an inadequate risk assessment, which did not take account of flushing and alternative supply operations while mains recharge was being conducted, resulting in discoloured supplies.</li> <li>• Inadequate procedures.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
31 Mar 2015 For 15 days (BRL)	South Bristol, North Somerset and South Gloucester	244,325	Taste and odour due to raw water deterioration at Barrow works.	<p><b>Bristol Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Initiated powdered activated carbon dosing at the supplying treatment works (Barrow).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate contingency planning.</li> <li>• Company acted promptly to customer contacts, but recommended that adequate measures are in place to prevent water which is aesthetically unappealing being supplied to customers.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
31 Mar 2015 For 12 hours (UUT)	Sweetloves works, Bolton, Greater Manchester	180,291	Improperly disinfected water due to failure of pH control.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Blended supply with another source.</li> <li>• Sampled affected area.</li> <li>• Reviewed alarm response procedures and made improvements to treatment control systems, in particular control of pH.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• An audit of the works was carried out. Key findings included: <ul style="list-style-type: none"> <li>– Failure to maintain equipment.</li> <li>– Inadequate disinfection treatment process.</li> <li>– Inadequate procedures.</li> </ul> </li> <li>• Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> <li>• The Inspectorate is additionally considering the offence of failing to adequately treat or disinfect water.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
01 Apr 2015 For 24 hours (YKS)	Brind, East Yorkshire	10	Do not drink notice due to possible contamination following damage to a water main by a third party.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Increased chlorine residuals in the distribution system.</li> <li>• Issued a do not drink notice to five properties in Brind, Wressle, near Howden.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
02 Apr 2015 For 6 weeks (SWT)	Plymouth, Devon	8	Ground contamination due to spillage, affecting industrial site.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Issued a do not drink notice to the affected premises.</li> <li>• Replaced service with barrier pipe.</li> <li>• Provided an alternative supply by tanker/bowser.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Remedial works were completed, the do not drink notice was lifted and satisfactory samples obtained.</li> </ul> <p>Risk classification: Significant</p>
05 Apr 2015 For 3 days (TMS)	Kempton Park works, North and West London	360,000	<i>Cryptosporidium.</i>	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company increased the frequency of <i>Cryptosporidium</i> monitoring at Kempton Park works following a number of <i>Clostridium perfringens</i> detections (see the event at Kempton works on 26 February 2015). Investigations identified suboptimal operation of a slow sand filter, which was removed from operation.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• It was identified that at this time the associated turbidity data failed to be archived because new online turbidity analysers were being installed and the company were required to make improvements to the manner in which instrumentation archived data.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
05 Apr 2015 For 2 days (WSX)	Yeovil	25	Loss of supplies and risk of microbiological contamination due to burst main.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Issued a boil water notice.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Provided bottled water on request.</li> <li>• Repaired main.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Critical of communications between the repair team and the supervisor, however the company has briefed staff on the importance of health and safety for future scenarios.</li> </ul> <p>Risk classification: Significant</p>
07 Apr 2015 For 6 weeks (WSX)	Poole, Dorset	3	Ground contamination due to spillage.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice to industrial premises in Poole.</li> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> <li>• Replaced main with barrier material.</li> <li>• Samples taken and results satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• No further action to be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
10 Apr 2015 For 20 hours (UUT)	Stockton Heath, Warrington, Cheshire	30,196	Brown discolouration due to mains damage by third party.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Contractors damaged an air valve while contravening company policy. The air valve was not on company records.</li> <li>• The contractor failed to have adequate procedures for excavation and failed to observe the requirement not to use mechanical excavation in an area where it was prohibited to protect fragile mains.</li> <li>• The company failed to adequately supervise the activities of their contractors on site.</li> <li>• The company failed to learn from previous events and subsequent intervention in the network to isolate and later return the main resulted in discolouration.</li> </ul> <p>Risk classification: Significant</p>
10 Apr 2015 For 3 weeks (UUT)	Wrenbury, Nantwich, Cheshire	15	Boil water notice issued following the discovery a third party had damaged and repaired a main without proper authorisation.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Issued a boil water notice.</li> <li>• Sampled the affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
13 Apr 2015 For 4 days (UUT)	Hazel Grove, Stockport	13,200	Brown discolouration due to burst main.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Flushed mains.</li> <li>• Initiated an engineering review of their trunk mains.</li> <li>• Updated the risk assessment for the supply zone.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Recommended to notify events in a timely manner.</li> <li>• Investigation and sampling were inadequate, including failure to identify subsequent risks at a public building.</li> <li>• Required the company to report on the engineering review and any associated risk and mitigation.</li> </ul> <p>Risk classification: Significant</p>
15 Apr 2015 For 1 week (WSX)	Ford, Salisbury, Wiltshire	5	Risk of contamination from a private supply due to illegal cross connection.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Company carried out a fittings inspection.</li> <li>• Notice served on private supply owner for remedial work.</li> <li>• Fitted a backflow valve to protect the supply.</li> <li>• Sampled affected area.</li> <li>• The company responded diligently to the issues presented.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Boil water advice issued to properties by local authority.</li> <li>• Wiltshire Council is working with the owner of the private supply to resolve issues.</li> <li>• The owner has been given two months to complete the necessary works to comply with regulations, if works have not commenced within this time they will seek to serve a Regulation 18 Notice.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
15 Apr 2015 For 1 hour (YKS)	Rivelin works, Sheffield, South Yorkshire	236,000	Microbiological contamination ( <i>C.perfringens</i> ).	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled the affected area.</li> <li>• Investigated treatment processes.</li> <li>• Repaired potential points of ingress in the final water tank.</li> <li>• Made changes to the on-site flow control system.</li> <li>• <i>Clostridium perfringens</i> was detected in a routine sample. Extensive investigations by the company failed to establish the root cause.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
16 Apr 2015 For 1 hour (SRN)	Wingham works, near Canterbury	153,431	Treatment failure due to elevated turbidity on final water.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A routine compliance sample failed for turbidity. It was later established that the sample had been taken after the works had shutdown automatically because of elevated turbidity.</li> <li>• Company identified deposits within the contact tank were disturbed due to operating the tank at a low level.</li> <li>• Reviewed procedures for the alarm and shutdown levels of water in the contact tank.</li> <li>• Staff were retrained.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company did not notify Inspectorate of the event and were recommended to review its event notification procedure and to clean the contact tank to prevent a recurrence.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
16 Apr 2015 For 4 days (UUT)	Cockermouth	107,500	Brown discolouration due to third party main damage and depletion of treated water tank at Cornhow works.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Repaired faulty turbidity monitor.</li> <li>• Repaired main.</li> <li>• Conducted staff briefing of a new risk assessment procedure.</li> <li>• Cleaned and inspected the service reservoir affected during the event.</li> <li>• Implemented enhanced monitoring at the works.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate risk assessment, lack of maintenance of equipment and a poor response to the event. The company investigation and sampling contributed to the severity and duration of this event.</li> <li>• Recommended that online instruments at works should be regularly checked in order to ensure that the effectiveness of operation and disinfection at all times and appropriate investigational sampling is undertaken in response to events.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
17 Apr 2015 For 4 days (NNE)	Byker, Heaton, Wallsend and Walker areas of Newcastle	100,000	Loss of supplies and brown discolouration due to planned work on a large diameter main.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Replaced faulty equipment.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Rezoned area (brought in water from different source).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Critical equipment used by contractors failed during cleaning and subsequent network changes in response led to the discolouration of supplies.</li> <li>• The event was exacerbated by shortcomings in competency, communication and delays in response.</li> <li>• The company were reminded of their duty to provide all information in a timely manner under the Act as this cannot be deferred by any legal action intended by the company against its' contractors.</li> <li>• Recommended that the company reviews the competency of its contractors and the integrity of apparatus used during the isolation of mains.</li> </ul> <p>Risk classification: Significant</p>
20 Apr 2015 For 3 weeks (SVT)	Nottingham	3	Do not drink notice due to supply stagnation within a large diameter main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The affected property was reconnected to a more appropriate distribution main. Call handling procedures were also reviewed and updated.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
21 Apr 2015 For 6 days (WSX)	Washpool works, Bath	102,260	Accidental overdosing of phosphoric acid due to back siphonage.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment.</li> <li>• Review of procedures.</li> <li>• Replaced solenoid valve.</li> <li>• Installed loading valve to prevent dosing of chemical when no water flow.</li> <li>• Reviewed reporting procedures from the laboratory to ensure a timely response.</li> <li>• Carried out a wider review of chemical dosing and made any necessary improvements.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate risk assessment.</li> <li>• Inadequate procedures.</li> <li>• Inadequate contingency planning.</li> <li>• No mitigation for failure of valves.</li> <li>• Update risk assessment.</li> <li>• Recommend that chemical dosing tanks are isolated before planned work is carried out on treatment works.</li> <li>• Recommend that the company review its Process Risk Assessment and ensures water quality risks are adequately considered and mitigated.</li> </ul> <p>Risk classification: Significant</p>
22 Apr 2015 For 48 hours (BRL)	Eastville, Bristol	1,548	Loss of supply and media interest following a burst main.	<p><b>Bristol Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Provided bottled water on request.</li> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> <li>• Samples were satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Main was repaired and burst again on recharge.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
22 Apr 2015 For 9 hours (YKS)	Baildon, West Yorkshire	6,250	Brown discolouration due to burst main.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Resamples were satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
23 Apr 2015 For 3 days (SVT)	Little Eaton, Derby	4,474	Loss of supplies with elevated iron on supply restoration due to mains damage by a third party.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The area was rezoned (brought in water from different source) and supplies were also provided by tanker to augment areas experiencing low pressures.</li> <li>• The area was sampled to demonstrate satisfactory iron results.</li> <li>• The main was repaired flushed and sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
23 Apr 2015 For 1 day (YKS)	Beauchief and Totley area of Sheffield, South Yorkshire	14,118	Brown discolouration due to planned work.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Review of procedures.</li> <li>• Retrained staff.</li> <li>• Undertook modelling studies to identify reasons for the increase in flow.</li> <li>• Used this event as a development tool for its operational staff.</li> <li>• Updated the risk assessment process to ensure greater scope during planned work.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate risk assessment prior to the planned work being carried out resulting in failure to adequately notify consumers of likely discolouration.</li> </ul> <p>Risk classification: Significant</p>
24 Apr 2015 For 3 days (SVT)	Central and north Birmingham	81,500	Loss of supplies and discolouration due to burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The area was rezoned (brought in water from different source) and supplies were also provided by tanker to augment areas experiencing low pressures.</li> <li>• The area was sampled to demonstrate satisfactory iron results.</li> <li>• The main was repaired flushed and sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory.</li> <li>• The Inspectorate is initiating enforcement action to ensure that the company's strategy to reduce ongoing risks of discolouration appropriately targets areas with a known risk.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
25 Apr 2015 For 72 hours (YKS)	Skelmenthorpe, West Yorks	4,110	Brown discolouration following planned work on Skelmenthorpe service reservoir.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Review of procedures.</li> <li>• Bypassed service reservoir.</li> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to adequately risk assess planned work.</li> <li>• The event was exacerbated through poor communication and misinformation of the work in hand and subsequently poor investigational response, sampling and liaison with local health professionals.</li> <li>• Recommend the company to review valve operation procedures, investigatory criteria for sampling in response to events, and procedures for notifying local authorities and Public Health England.</li> </ul> <p>Risk classification: Significant</p>
28 Apr 2015 For 3 days (TMS)	Swindon area, North Wiltshire	40,000	Loss of supplies/poor pressure due to burst main on the inlet to Flaxlands service reservoir.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Repaired main.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
28 Apr 2015 For 3 weeks (WSX)	Weymouth, Dorset	5	Consumer concern due to cross connections and back siphonage.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Fittings inspection carried out which identified backflow from a cistern.</li> <li>• Check valves installed.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Three properties had connected water supplies, one of these was a commercial food outlet.</li> </ul> <p>Risk classification: Significant</p>
01 May 2015 For 1 day (BRL)	Littleton works, South Gloucestershire	258,503	Microbiological contamination.	<p><b>Bristol Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Review of procedures.</li> <li>• A root cause was not identified.</li> <li>• Data provided suggest that there was no loss in disinfection.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Required company to confirm disinfection arrangements.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
07 May 2015 For 46 days (UUT)	Kearsley, Bolton	150	Chemical contamination: Copper levels in the supply at a public house.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice.</li> <li>• Sampled affected area.</li> <li>• Inspected the private plumbing system in the public house and worked with the owner to resolve plumbing defects.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Following a consumer complaint, the company found dangerously high levels of copper in the tap water in the private domestic system of a public house.</li> <li>• The company were criticised for:               <ul style="list-style-type: none"> <li>– the time taken to identify the root cause of the contamination;</li> <li>– its failure to carry out an urgent fittings inspection;</li> <li>– failure to serve a legal Notice to ensure prompt rectification of the plumbing defects identified.</li> </ul> </li> <li>• Recommendations were made that the company should improve its investigational sampling and analysis for events of this nature where drinking water is made available to members of the public.</li> </ul> <p>Risk classification: Significant</p>
08 May 2015 For 1 week (SRN)	Cooks Castle service reservoir, near Sandown, Isle of Wight	1,890	Evidence of microbiological contamination.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The sample was collected from an overland main which was being used as a temporary means of bypassing Cooks Castle service reservoir. The main and sampling equipment were replaced. Subsequent samples were satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
10 May 2015 For 3 days (SEW)	Hailsham, Polegate and Pevensy, West Sussex	7,500	Loss of supplies/poor pressure due to burst main.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>The company rezoned the area (brought in water from a different source) and increased output from other works to supply Folkington service reservoir. Network valve operations to isolate the burst were hampered by inaccurate records, inoperable valves and lack of confined space trained staff. The company provided an alternative supply by tanker/bowser, as well as invoking their emergency bottled water supply contract.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company was criticised for inadequate procedures; and inadequate training/competence of staff and were required to improve. A recommendation was made to update the Emergency Plan to ensure adequate alternative supplies are requested from the outset.</li> </ul> <p>Risk classification: Significant</p>
14 May 2015 For 3 days (ANG)	Hamilton Hill service reservoir, Louth, Lincolnshire	5,756	Evidence of microbiological contamination.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>The company found coliform bacteria in a routine sample at Hamilton Hill service reservoir. Isolation of the service reservoir subsequently caused two burst mains in the distribution system.</li> <li>The service reservoir was bypassed and chlorine residuals were increased at the supplying treatment works.</li> <li>The affected area was sampled.</li> <li>The sample point was replaced and pipework flushed and sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
15 May 2015 For 3 days (DVW)	North Wrexham and East Wales	54,120	Discolouration due to burst main.	<p><b>Dee Valley Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Replaced main.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Satisfactory company response.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's investigation, response to the repair of a difficult lateral split and the provision of information and assistance requires no further DWI action to be taken.</li> </ul> <p>Risk classification: Significant</p>
15 May 2015 For 52 weeks (SRN)	Company-wide	N/A	Bypassing turbidity meters at works.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Review of procedures.</li> <li>• Retrained staff.</li> <li>• The company made improvements to the Control and Shutdown software and raised access control for turbidity monitors.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company were criticised and warned for the routine practice and the ability for operators to bypass turbidity meters disabling a critical control point intended to protect consumers from inadequately disinfected water. Furthermore, the company was criticised for: <ul style="list-style-type: none"> <li>– not notifying the Inspectorate.</li> <li>– Inadequate procedures.</li> <li>– Inadequate investigations into root cause.</li> <li>– Inadequate risk assessment.</li> <li>– Inadequate treatment process – disinfection.</li> </ul> </li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Serious</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
15 May 2015 For 7 days (TMS)	Hackney, London.	385	Taste or odour due to contamination of private water storage tank.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• In response to consumer complaints in a block of flats, the company: <ul style="list-style-type: none"> <li>– Sampled affected area.</li> <li>– Issued a do not drink notice.</li> <li>– Carried out plumbing inspections.</li> </ul> </li> <li>• The company investigation indicated the likely cause of the taste and odour was as a result of the room housing the communal water tank for a block of flats had been painted with epoxy paint. WRc toxicological information suggests this is the likely source of the compounds detected.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
18 May 2015 For 4 weeks (ANG)	Stoke Goldington, Northamptonshire	43	Evidence of chemical contamination due to planned mains rehabilitation.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Planned cleaning of the distribution network using a technique known as ice pigging caused exceedances of the PAH (coal tar related) parameters in water supplied to consumers.</li> <li>• Issued a do not drink notice.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Replaced main, flushed and sampled.</li> <li>• Procedures were reviewed.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was criticised for planning to rehabilitate a main using an aggressive cleaning method without an appropriate risk assessment and poor management of the operation. The poor work resulted in coal tar compounds entering the supply from mains lining material. The monitoring of the process was poor. The event was considered wholly avoidable.</li> <li>• An Enforcement Notice was served requiring a risk assessment be conducted for organic lining materials for any main subjected to aggressive cleaning methods, e.g. ice pigging or air scouring.</li> </ul> <p>Risk classification: Serious</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
19 May 2015 For 1 day (SVT)	Shrewsbury	3,374	Brown discolouration due to burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>This was the third burst on this section of the Shrewsbury ring main in 12 months. The area was rezoned (brought in water from different source), the main was flushed and the affected area sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company was unable to demonstrate that this main would not burst again, and has designed a long-term scheme for both operability and resilience, due for completion in July 2016.</li> <li>The Inspectorate has put in place a legally-binding programme of work to ensure that the company's strategy to reduce ongoing risks of discolouration appropriately targets areas with a known risk.</li> </ul> <p>Risk classification: Significant</p>
19 May 2015 For 1 week (UUT)	Lightshaw works, near Warrington, Cheshire	115,606	Chemical contamination: Bromate exceedances due to treatment failings.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>Shut down treatment works.</li> <li>Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Detection of bromate in final water due to inadequate mitigation of known risks identified through company commissioned research.</li> <li>Problem compounded by a series of avoidable issues including: <ul style="list-style-type: none"> <li>Poor control of UV system;</li> <li>Poor process control of a source;</li> <li>Failure of key equipment;</li> <li>Poor control of chlorination.</li> </ul> </li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
21 May 2015 For 132 weeks (DWR)	Glaslyn laboratory	N/A	Conductivity meter incorrectly validated by manufacturer.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Replaced faulty equipment.</li> <li>• Review of procedures.</li> <li>• Company proactively committed to review all validation data, including automated calculations and calibrations. Review found no major issues.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Recommended company review all method validation data, calculations and calibrations.</li> <li>• The company proactively notified other water company laboratories of the event.</li> </ul> <p>Risk classification: Significant</p>
22 May 2015 For 25 hours (SEW)	Pluckley, Kent	1,298	Brown discolouration following repair of a leaking main.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• The company in response to a straightforward repair to a leaking main supplied discoloured water after the failure of a pressure reducing valve. The company then: <ul style="list-style-type: none"> <li>– Repaired main.</li> <li>– Flushed mains</li> <li>– Sampled affected area</li> <li>– Reviewed procedures.</li> </ul> </li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to carry out an adequate risk assessment for the work carried out. Recommendations requiring the company to update procedures to risk assess and review the status of PRV valves before commencing work on mains.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
25 May 2015 For 7 weeks (SVT)	Ruddington, Nottinghamshire	3	Do not drink notice due to ingress to a damaged service pipe.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice.</li> <li>• Sampled affected area.</li> <li>• Provided bottled water on request.</li> <li>• The service pipe was repaired, flushed and sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
02 Jun 2015 For 6 weeks (WSX)	Lytchett Matravers	3	Taste or odour due to ground contamination.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice to a school in Lytchett Matravers.</li> <li>• Sampled affected area.</li> <li>• Provided bottled water on request.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Private pipework was renewed.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The do not drink notice was lifted following installation of new pipework to the centre and satisfactory sample results.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
02 Jun 2015 For 2 days (SRN)	Weirwood works, Sussex	32,000	Treatment failure due to excessive pH.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The final water pH monitor developed a fault, which resulted in excessive sodium hydroxide being dosed and the works shut down.</li> <li>• The affected area was sampled but results were satisfactory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A technical audit of the site was carried out in response to this event.</li> <li>• Recommendations were made in response to findings of very poor control by the company resulting in an escalation of a series of problems leading to the event. These include instances where samples were not analysed for appropriate parameters and where:               <ul style="list-style-type: none"> <li>– Sampling was not timely enough.</li> <li>– Lack of maintenance of equipment.</li> <li>– Inadequate number of samples taken.</li> <li>– Inadequate investigations into root cause.</li> </ul> </li> </ul> <p>Risk classification: Significant</p>
03 Jun 2015 For 78 days (UUT)	Altrincham	13	Taste and odour due to ground contamination following a fuel spillage.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not use notice to a farm and industrial units. Supplied bottled water.</li> <li>• Protected the public supply.</li> <li>• Replaced the service pipe to the premises.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
05 Jun 2015 For 6 days (SVT)	North Derbyshire	39,000	Brown discolouration due to planned work.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company received complaints of illness from a school that had received discoloured water.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Provided bottled water on request, but the quantity and timing was inconsistent.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company unsuccessfully installed a mains fitment, which leaked. The repair operation was not adequately risk assessed, and resulted in a surge within the main and consequent discoloured supplies. The company did not keep consumers informed and provided inconsistent advice.</li> <li>• Investigation ongoing</li> </ul> <p>Risk classification: Significant</p>
06 Jun 2015 For 12 weeks (SEW)	Frimley	N/A	Failure to report a regulatory standard exceedance.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• The company failed to report a regulatory taste result.</li> <li>• Company investigations identified that this was caused by a laboratory analyst failing to follow internal procedures and also a computer error and retrained the staff involved.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• No further action was taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
06 Jun 2015 For 1 day (UUT)	Oldham	64,829	Loss of supply and brown discolouration due to planned reservoir drain down.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Restored supply.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Modification was made to raise the reservoir outlet pipework. Recommended to update records appropriately.</li> <li>• Supplied unwholesome water in breach of regulations, enforcement considered.</li> <li>• Recommended to review consumer advice regarding safety of discoloured supplies.</li> </ul> <p>Risk classification: Significant</p>
09 Jun 2015 For 5 days (DWR)	Tredegar Blaeneu, Gwent	32,500	Brown discolouration due to poorly planned equipment replacement.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Review of procedures.</li> <li>• Retrained staff.</li> <li>• Replaced faulty equipment.</li> <li>• Company rebriefed operational staff on risk assessments and procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company relied on outdated information to undertake planned work on a reservoir outlet and failed to follow its own procedures resulting in and inadequate risk assessment.</li> <li>• The company must ensure that its risk assessments are up to date and accurate before planned work is carried out.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
11 Jun 2015 For 6 weeks (SWT)	Sidmouth	10	Boil water notice to three properties due to leaking service joint situated inside a sewer chamber.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Issued a boil water notice.</li> <li>• Fittings inspection carried out.</li> <li>• Elevated lead detected, residents advised to replace lead pipework.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Remedial work completed satisfactorily and the boil water notice was lifted.</li> </ul> <p>Risk classification: Significant</p>
11 Jun 2015 For 3 days (TMS)	South East London	38,112	Air in water (white) due to compressor fault.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A solenoid valve on a surge vessel compressor system failed resulting in air entrainment in the distributed water.</li> <li>• The company replaced faulty equipment and sampled the affected area.</li> <li>• Routine maintenance schedules were amended to incorporate full function tests.</li> <li>• Sampling inadequacies unlikely to recur (resource difficulties).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was criticised for not following maintenance procedures; taking insufficient investigational samples; and inadequate procedures to demonstrate the geographical locations of customer contacts.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
12 Jun 2015 For 1 hour (TMS)	Hampton works, West London	417,000	Treatment failure due to elevated turbidity at the point of disinfection.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A slow sand filter was inadvertently returned to service without preconditioning. Water with excessive turbidity entered the contact tank.</li> <li>• Review of procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was criticised for changing valve configurations without communicating with staff and for inadequate labelling of valves. Recommendations were made for the company to review its procedures when making changes on works and removing redundant equipment as well as for inadequate sampling in response.</li> </ul> <p>Risk classification: Significant</p>
12 Jun 2015 For 1 day (TMS)	Speen works, Newbury, Berkshire	59,000	<i>Cryptosporidium.</i>	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The works is continuously sampled for <i>Cryptosporidium</i>. One oocyst was detected in 1,100 litres of sample.</li> <li>• Blended supply with another source.</li> <li>• Review of procedures.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A technical audit of the site was undertaken because this was a repeat of an event in 2013.</li> <li>• The company was unable to provide a definitive root cause for this event and so enforcement action has been initiated with a Regulation 28 Notice requiring that the company takes action to mitigate the risk of <i>Cryptosporidium</i> at this works.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
13 Jun 2015 For 1 day (TMS)	Sundridge works, Westerham, Kent	38,000	Treatment failure due to elevated turbidity.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company took a routine compliance sample which failed for turbidity. Company investigations indicated that the sample was taken after the works had automatically shut down after a high turbidity alarm.</li> <li>• The company attributed the turbidity to a disturbance of deposits in the outlet main following a works shut down.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company were required to carry out regular flushing of the outlet main and to investigate the occurrence of turbidity spikes on the inlet to the contact main.</li> <li>• The investigation identified aeration issues in the turbidity monitor on works start up, which were resolved with the installation of appropriate equipment.</li> </ul> <p>Risk classification: Significant</p>
15 Jun 2015 For 1 day (AFW)	Great Dunmow	30,849	Loss of supplies/poor pressure due to a burst main.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> <li>• Provided bottled water on request.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
17 Jun 2015 For 20 weeks (WSX)	Poole, Dorset	43	Taste and odour due to ground contamination.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice to an industrial estate in Poole.</li> <li>• Protected the public supply.</li> <li>• Sampled affected area.</li> <li>• Company issued a Notice to the landowner to replace the current pipe network with barrier pipe.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• All the services associated with the industrial units have now been replaced with protective lined pipe.</li> </ul> <p>Risk classification: Significant</p>
18 Jun 2015 For 1 day (BRL)	Nailsea	8	Microbiological contamination.	<p><b>Bristol Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Provided bottled water on request.</li> <li>• Replaced service pipes (and removed contaminating ingress point).</li> <li>• Satisfactory samples were obtained.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Company has confirmed that all mitigation work has been completed and supplies have been restored.</li> </ul> <p>Risk classification: Significant</p>
18 Jun 2015 For 12 hours (TMS)	New Malden, Merton, Tooting and Kingston upon Thames	209,039	Loss of supplies/poor pressure and media interest due to burst main.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The burst main caused flooding of New Malden underground station, leading to significant local media coverage.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
19 Jun 2015 For 1 day (WSX)	Down Edge, Bath	3	Consumer concern due to spring water connection.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued a boil water notice. Connected the three properties to a potable supply.</li> <li>• Disconnected spring water supply. Conducted a company-wide scheme to remediate any other properties with similar supply arrangements.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inspectorate provided guidance and advice for the company to resolve the historic supply issues at the properties.</li> </ul> <p>Risk classification: Significant</p>
23 Jun 2015 For 52 weeks (SEW)	Company-wide	N/A	Sampling shortfall in 2014 data returns.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Following a significant shortfall in 2014 (see <i>Drinking water 2014 – London and South East region</i>) compliance data submissions, the company belatedly notified the Inspectorate, following an instruction to do so.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company were criticised for very poor data handling and poor internal communications which caused this issue. Improvements have been made to the company's data systems and management of its sampling programmes. The Inspectorate will continue to monitor the company submissions for errors and data quantity.</li> <li>• A recommendation was made in respect of the absence of appropriate notification.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
26 Jun 2015 For 4 days (DWR)	Dilwyn, Herefordshire	3	Taste or odour due to ground contamination from heating oil.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• The company issued a do not drink notice and provided an alternative supply by tanker/bowser.</li> <li>• The affected area was sampled.</li> <li>• The company replaced the consumer's supply pipe.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
26 Jun 2015 For 28 weeks (WSX)	Trowbridge, Wiltshire	3	Consumer concern, following complaint of illness due to back-siphonage.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Carried out fittings inspection.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Confirmed remedial work satisfactorily completed.</li> </ul> <p>Risk classification: Significant</p>
28 Jun 2015 For 1 hour (NNE)	Fontburn works, Northumberland	122,000	High turbidity on inlet to contact tank following filter washing compromising the disinfection process.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled works and affected area.</li> <li>• Retrained staff.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Loss of control of the treatment flow through the process affecting multiple treatment stages including disinfection.</li> <li>• Turbidity failure also occurred at Murton works and twice at Fontburn works. Collective enforcement was considered.</li> <li>• Recommended to improve maintenance policies and operational procedures across Lartington, Fontburn and Murton.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
29 Jun 2015 For 0.5 hours (NNE)	Lartington works, Teeside	100,000	High turbidity at the outlet of filters, compromising the disinfection process.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Retrained staff.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Loss of control of the treatment flow through the process affecting multiple treatment stages including disinfection.</li> <li>• Turbidity failure also occurred at Murton works and twice at Fontburn works. Collective enforcement was considered.</li> <li>• Recommended to improve maintenance policies and operational procedures across Lartington, Fontburn and Murton.</li> </ul> <p>Risk classification: Significant</p>
29 Jun 2015 For 1 day (TMS)	Lambeth, London	185,000	Loss of supplies/poor pressure due to burst main.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Burst main isolated and repaired, with significant media interest due to local flooding. Bottled water was provided to vulnerable customers.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
29 Jun 2015 For 15 weeks (UUT)	Bury, Greater Manchester	3	Petrol taste or odour due to ground contamination.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice.</li> <li>• Sampled affected area.</li> <li>• Supplied bottled water.</li> <li>• Public supply protected.</li> <li>• Service pipe replaced.</li> <li>• Surveyed neighbouring properties to assess risk.</li> <li>• Reviewed procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Critical of company for inadequate investigations into the root cause, which gave rise to a repeat complaint from a consumer and for failing to notify the Inspectorate. Recommendations were made in respect of the investigation and notification procedures.</li> </ul> <p>Risk classification: Significant</p>
29 Jun 2015 For 3 days (WSX)	Lopcombe, Wiltshire	3	Microbiological contamination.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Carried out fittings inspection.</li> <li>• Issued a boil water notice to the affected property.</li> <li>• Sampled affected area.</li> <li>• Issued advice on tap hygiene.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation did not identify any wider issues.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
30 Jun 2015 For 0.2 hours (NNE)	Murton works, Berwick area	15,000	Treatment failure: turbidity >1NTU in raw water supplying Murton works, with failure of the automatic shutdown system.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Retrained staff.</li> <li>• Sampled affected area.</li> <li>• Rezoned area (brought in water from different source).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Following elevated turbidity in Bleakridge Borehole, one of six boreholes supplying Murton works, the automatic failsafe shutdown system failed to operate. Turbidity in the treated water remained below the limit of 1NTU because of blending with other sources.</li> <li>• Turbidity failure also occurred at Murton works and twice at Fontburn works. Collective enforcement was considered.</li> <li>• Recommended to improve maintenance policies and operational procedures across Lartington, Fontburn and Murton.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
01 Jul 2015 For 3 days (AFW)	Egham works, Egham and Staines	300,000	Loss of supplies due to a burst main within the treatment process.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The single delivery main prior to the filtration stage ruptured and the works shut down. The company put in place contingency plans which maintained supplies to the majority of consumers supplied by the works.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Provided bottled water on request.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A duplicate main has been installed to remove the single point of failure and the company were required to review all their risk assessments and include actions to mitigate against single points of failure.</li> <li>• The company was also required to conduct a desk top exercise of the worst case scenario to ensure actions are identified for future events and to satisfy themselves their alternative water plan is fit for a prolonged event.</li> </ul> <p>Risk classification: Serious</p>
01 Jul 2015 For 2 days (SEW)	Crowthorne	75,000	Loss of bulk import from Affinity Water.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Loss of bulk import from Egham works operated by Affinity Water (see event at Egham works on 1 July 2015).</li> <li>• Rezoned area (brought in water from different source).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company is undertaking work during AMP6 to remove the reliance on the bulk supply. A suggestion was made to ensure the company has the necessary plans in place to deal with a long-term loss of the bulk supply while these works are undertaken.</li> <li>• Regulation 28 risk assessment for Crowthorne zone required to be updated.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
01 Jul 2015 For 3 days (SST)	Sedgely and West Bromwich	60,000	Brown discolouration due to planned work at Hampton Loade works.	<p><b>South Staffordshire Water Plc action:</b></p> <ul style="list-style-type: none"> <li>The company increased the flow of water from Hampton Loade due to summer demand. The surge within the outlet main resulted in discoloured supplies over a significant area, including a bulk supply to Severn Trent Water. The area was sampled and flushed.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company failed to implement lessons learned from a similar event in 2013.</li> <li>Poorly considered company actions caused this event which also affected the bulk supply to Severn Trent. The bulk supply arrangements were not followed and require review, as do the zonal risk assessments for each zone served to reflect new planned measures to prevent a recurrence. The company did not monitor customer contacts appropriately, which compounded the issue.</li> </ul> <p>This is linked to the event in Wolverhampton on 1 July 2015.</p> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
01 Jul 2015 For 2 days (SVT)	Wolverhampton	27,900	Brown discolouration due to planned work by South Staffs water at Hampton Loade works, affecting bulk supply into Wolverhampton.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Review of procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's risk assessment of the supply imported from South Staffs Water should be updated to mitigate all hazards, source to tap.</li> <li>• Advice given to consumers requires revision.</li> <li>• The company's response to contact from a school raising concerns about the discoloured water supply was wholly inadequate.</li> <li>• The Inspectorate recommended the company update its risk assessment regarding discolouration in the zone.</li> </ul> <p>This is linked to the event in Sedgely and West Bromwich on 1 July 2015.</p> <p>Risk classification: Significant</p>
03 Jul 2015 For 72 hours (DWR)	Merthyr, Rhymney, Caerphilly and Rhondda valleys	55,000	Brown discolouration due to burst main.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Rezoned area (brought in water from different source).</li> <li>• Provided bottled and tankered water.</li> <li>• Repaired main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Did not notify Inspectorate in a timely manner.</li> <li>• Reviewed event and identified lessons learnt.</li> <li>• Reviewed asset resilience.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
10 Jul 2015 For 10 days (ANG)	Bedford	8	Consumer concern regarding lead dissolution due to lead pipes/fittings.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company found high levels of lead in samples taken from a consumer's property following an enquiry.</li> <li>• The company issued a do not drink notice. The results necessitated that the company replaced their communication pipe and the consumer was advised to replace private pipework.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate was critical that the advice not to drink the water was provided solely to the property sampled, despite the company's suspicion that neighbouring properties were on a shared supply.</li> <li>• A recommendation was made that the company take a precautionary approach in these instances and ensure that all customers that could be at risk are provided with all necessary advice at the earliest opportunity and until such time that their supplies are confirmed as safe to drink.</li> </ul> <p>Risk classification: Significant</p>
10 Jul 2015 For 0.11 hours (NNE)	Fontburn works, Northumberland	122,200	Disinfection compromised with turbidity greater than 1NTU due to planned work.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Retrained staff.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• This was a repeat event of the previous event at Fontburn works on 28 June 2015.</li> <li>• Loss of control of the treatment flow through the process affecting multiple treatment stages including disinfection.</li> <li>• Similar failures occurred at Lartington and Murton and collective enforcement was considered.</li> <li>• Recommended to improve maintenance policies and operational procedures across Lartington and Fontburn and Murton.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
10 Jul 2015 For 12 hours (TMS)	Swindon and Cricklade	263,451	Loss of supplies/poor pressure due to burst main on inlet to Blunsden service reservoir.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Vehicle tankers were deployed to supplement supplies into the distribution system.</li> <li>• Provided bottled water on request.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
10 Jul 2015 For 5 days (UUT)	Sutton Hall works, Wirral	371,567	<i>Cryptosporidium</i> detected following loss of control of clarification.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired faulty equipment.</li> <li>• Review of procedures to include adequate sampling in response to <i>Cryptosporidium</i> detections.</li> <li>• Prevent wash water with turbidity &gt;10NTU being returned to head of works.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to adequately investigate, sample and react to process failures which resulted in <i>Cryptosporidium</i> detections.</li> <li>• Enforcement considered but recommendations made requiring: <ul style="list-style-type: none"> <li>– procedural changes in response to adverse analytical findings; and</li> <li>– an engineering solution to prevent turbid water returning to the head of the works.</li> </ul> </li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
13 Jul 2015 For 5 days (WSX)	Forston works, Dorset	17,961	Compromised disinfection due to chlorination equipment failure.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Repaired faulty equipment.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Minded to make recommendations regarding failings which led to the event. However, it was noted that the company took steps to prevent a recurrence.</li> </ul> <p>Risk classification: Significant</p>
15 Jul 2015 For 24 hours (SVT)	Alton, Stoke-on-Trent	3	Do not use notice due to possible backflow.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company issued a do not use notice to a bed and breakfast property following detection of a fuel odour and burning sensation to the mouth. Plumbing defects were rectified, but were not considered to be the cause of the problem.</li> <li>• A temporary alternative supply was installed. Investigations into the cause were inconclusive. The main was flushed and area resampled with satisfactory results.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was criticised for a lack of maintenance of network valves, following the discovery that a boundary valve was not fully shut as expected. The company are conducting an ongoing assessment of all shut valves to ensure correct status.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
15 Jul 2015 For 4 hours (SVT)	Castle Bromwich, Birmingham	16,113	Brown discolouration due to planned work which was not controlled appropriately.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>The planned work was to repair a leak on a previously repaired main. The network area was sensitive for discolouration and so the company employed the use of turbidity monitors to assist with the identification of excessive disturbance of mains deposits. Following customer contacts of discoloured supplies, flows in the area were reduced; the mains were flushed; and the affected area sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Despite knowledge of a sensitive area the company failed to adequately assess and monitor the risk to water quality. The company has been required to improve these procedures.</li> <li>The Inspectorate recommended the company update its risk assessment regarding discolouration in the zone.</li> </ul> <p>Risk classification: Significant</p>
15 Jul 2015 For 30 weeks (TMS)	London	N/A	Samples taken from the incorrect address.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>A company employee was avoiding taking regulatory compliance samples from consumers' taps by fraudulently taking all such samples from the same fixed sampling point in the distribution network and deliberately mislabelling them with the addresses of planned consumer's tap samples.</li> <li>Company carried out additional sampling to make up the shortfall in samples.</li> <li>Reviewed procedures.</li> <li>Implemented GPS tracking of samplers' vehicles.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Samples where the sampling location is unknown have been removed from the record.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
17 Jul 2015 For 1 day (SWT)	Winkleigh, Devon.	1,800	Brown discolouration due to emergency work.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Review of procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Lack of maintenance of equipment.</li> <li>• An avoidable event caused primarily by lime dosing equipment failure at the supplying works (Prewley) leading to works shutdown and consequent rezoning to maintain supplies.</li> <li>• Recommended to ensure that turbidity monitors at the supplying works are maintained to provide reliable readings at all times.</li> </ul> <p>Risk classification: Significant</p>
18 Jul 2015 For 10 hours (SVT)	Much Wenlock, service reservoir	1,325	Loss of supplies and discolouration due to unplanned emptying of Much Wenlock service reservoir caused by faulty telemetry equipment.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company started pumps to replenish water within the reservoir and deployed tankers to assist with supplies. The affected area was sampled following restoration of supplies.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company knew about the telemetry link failure in May, and inexcusably had not initiated repairs nor instigated contingency plans to avoid the eventual outcome. Furthermore the company was using the erroneous data to inform operational decisions.</li> <li>• The company was criticised for its lack of control of equipment and planning for demand management decisions and required to review its procedures and to update risk assessments.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
18 Jul 2015 For 3 days (UUT)	Sweetloves works, Bolton, Greater Manchester	79,300	Disinfection compromised due to loss of control of pH correction.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Blended supply with another source.</li> <li>• Issued a boil water notice.</li> <li>• Provided an alternative supply by tanker/bowser.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Due to repeated occurrences of sub-optimal disinfection at sites operated by this company, a works audit was carried out.</li> <li>• Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> <li>• The Inspectorate is additionally considering the offence of failing to adequately treat or disinfect water.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Major</p>
19 Jul 2015 For 8 weeks (SVT)	Newent, Gloucestershire	5	Evidence of microbiological and fuel contamination of customer service pipe.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company initially issued a boil water advice due to the detection of <i>Clostridium perfringens</i> but this was upgraded to a do not use notice because of petrol taste and odour in samples taken as part of the investigation.</li> <li>• The company flushed the private service pipe and collected further samples, which confirmed petrol in the water.</li> <li>• An internal plumbing inspection found no defects. The company recommended that the service pipe is replaced with barrier pipe material. The company installed a new boundary box and non-return valve to protect the public supply network.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's investigation were satisfactory and demonstrated that the root cause was related to service pipe inadequacies.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
21 Jul 2015 For 2 hours (HPL)	Amerston works, village of Wynard	433	Loss of supply following automatic works shutdown due to chlorine dosing failure.	<p><b>Hartlepool Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Provided bottled water on request.</li> <li>• Sampled affected area.</li> <li>• The company responded quickly to restore supplies after shut-down (which activated as designed in response to low chlorine levels).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
23 Jul 2015 For 78 weeks (AFW)	Home Counties and North London	3,375	Potential contamination of supplies due to contractors failing to install water meters hygienically.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company became concerned that meter replacements carried out by a contractor operating in its central region were not being conducted in a hygienic manner. The company investigation confirmed that hand washing facilities and disinfectant solution were not being employed. The contractor carrying out meter exchange work was suspended from carrying out these duties pending review and improvement to procedures.</li> <li>• The company reviewed contracts and ensured that appropriate water quality criteria were specified within them.</li> <li>• The company also communicated with staff and carried out audits on contractor's work.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company did not initially notify the Inspectorate of the situation.</li> <li>• The company report did not provide sufficient evidence to demonstrate actions taken.</li> <li>• Recommendations were made with respect to contractor management; contractor procedures and water supply hygiene.</li> <li>• The company was required to revise its risk assessments and reports to the Inspectorate.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
24 Jul 2015 For 2 days (YKS)	Central and west Sheffield, Yorkshire	56,000	Loss of supplies and brown discolouration following burst main.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Sampling by the company was not proportionate to the event or population affected.</li> <li>• Suggested an increase in the number of samples.</li> </ul> <p>Risk classification: Significant</p>
27 Jul 2015 For 4 days (UUT)	Preston	1,750	Brown discolouration due to planned work.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Planned and modelled for repair of burst main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Valve isolations were incorrect and contributed to increased velocities, which resulted in discoloured supplies.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
28 Jul 2015 For 5 days (NNE)	Hawthorn, County Durham	20	Boil water notice issued following ingress of contaminated water after repair to a burst main.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled the affected area.</li> <li>• Issued a boil water notice after identifying a risk of backsiphonage from a horse trough.</li> <li>• Emergency disinfection of the system.</li> <li>• Boil notice lifted after replacing the damaged main and service connections, and installation of backflow protection on the supply to the horse trough.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
30 Jul 2015 For 3 days (NNE)	Gunnerton works, Hexham	36,250	Atypical <i>Cryptosporidium</i> detection in final water.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Investigation samples taken at the works, in the catchment area and in the distribution system.</li> <li>• Risk assessments were reviewed and sampling frequency increased at Gunnerton works.</li> <li>• The root cause was found to be associated with sheep shearing activities in the catchment.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>
31 Jul 2015 For 3 days (WSX)	Boscombe, Salisbury	5	Taste and odour due to coal tar- lined distribution mains.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Do not drink notice issued to affected properties.</li> <li>• Review of procedures for responding to taste and odour contacts linked to the presence of hydrocarbons.</li> <li>• Water main replaced.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Samples not analysed for appropriate parameters.</li> <li>• Inadequate follow-up sampling.</li> <li>• Recommended to ensure sufficient and timely sampling and analysis is carried out.</li> </ul> <p>Risk classification: Significant</p>
03 Aug 2015 For 2 days (SWT)	Dawlish	13,500	Brown discolouration due to burst main.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Rezoned area.</li> <li>• Sampled affected area.</li> <li>• Repaired main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate risk assessment.</li> <li>• Inadequate investigations into root cause.</li> <li>• Sampling was not timely.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
05 Aug 2015 For 3 months (UUT)	Franklaw works; areas around Blackpool, Preston and Fleetwood	700,000	<i>Cryptosporidium</i> .	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Following the <i>Cryptosporidium</i> detections boil water advice was issued.</li> <li>• The distribution network was rezoned and flushing was conducted.</li> <li>• The Local Resilience Forum was engaged for support.</li> <li>• UV was installed at critical locations.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Major</p>
06 Aug 2015 For 1 day (TMS)	Long Hanborough, Witney, Oxon	2,990	Brown discolouration due to planned work.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company returned a booster station to supply without assessing the impact. Sampled affected area.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company confirmed that procedures were adequate but were not followed. The company issued a technical briefing note to remind staff that risk assessment is part of the required operational standard.</li> </ul> <p>Risk classification: Significant</p>
12 Aug 2015 For 2 weeks (SRN)	Hastings	12,007	Cryptosporidiosis notification from PHE.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company carried out extensive sampling at supplying works which did not identify a link with the drinking water supply.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
13 Aug 2015 For 48 hours (SEW)	Folkington, East Sussex	80,904	Brown discolouration due to burst mains.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Rezoned area (brought in water from different source).</li> <li>• Repaired main.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate was critical that the sampling was carried out after flushing was completed and the water was no longer discoloured. The Inspectorate recommended that investigative samples are taken in a timely manner.</li> </ul> <p>Risk classification: Significant</p>
14 Aug 2015 For 30 hours (NNE)	Bedlington	18,440	Brown discolouration due to planned work.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired burst main.</li> <li>• Flushed mains and returned to supply.</li> <li>• Sampled affected area.</li> <li>• Review of procedures.</li> <li>• Retrained staff.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to flush the main adequately which resulted in discoloured supplies. The failure was as a result of poor risk assessment and the company was strongly criticised for not learning from an earlier event and failing to update risk assessment procedures.</li> <li>• Inadequate training/competence of staff.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
24 Aug 2015 For 1 week (SEW)	Meads service reservoir, Eastbourne	55,000	Microbiological contamination due to ingress.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• <i>E.coli</i> was detected in both reservoir compartments.</li> <li>• The company took a staged approach to cleaning the reservoir compartments.</li> <li>• The affected area was sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate is critical of the company for failure to adequately mitigate the risk of not being able to isolate both compartments. Subsequently the company has prioritised sufficiency of supply over quality and the inherent potential risk to the consumer.</li> </ul> <p>Risk classification: Significant</p>
25 Aug 2015 For 2 days (SVT)	Nottingham	15,719	Brown discolouration and loss of supplies/poor pressure due to a burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Following notification of a burst main, the company isolated the main and then rezoned the area (brought in water from different source). The main was repaired, but discolouration reports were received over two days.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was criticised for an inadequate risk assessment of the impact of rezoning the area. Company actions led to discolouration contacts for both the original rezoning and then returning the system to normal operation. The company were required to review procedures.</li> <li>• The Inspectorate recommended the company update its risk assessment regarding discolouration in the zone.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
26 Aug 2015 For 3 weeks (SWT)	North Devon	237,837	Taste and odour due to raw water deterioration.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Blended supply with another source.</li> <li>• Installed additional treatment (to remain in place until the works is upgraded later in the AMP period).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The event was caused by incorrectly calibrated telemetry which permitted air to be sucked into the main via the suction tank.</li> <li>• The issue of faulty setting of telemetry levels for suction tanks has been incorporated into a revised procedure for planned work on such assets to prevent a recurrence.</li> </ul> <p>Risk classification: Significant</p>
27 Aug 2015 For 29 hours (NNE)	Lartington works, Mickleton area	592,006	Detection of <i>E.coli</i> in final water.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• <i>E.coli</i> detected in a routine sample.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company were criticised for failing to report the isolate as <i>E.coli</i>.</li> <li>• The company failed to identify the cause for this failure.</li> </ul> <p>Risk classification: Significant</p>
27 Aug 2015 For 34 hours (SEW)	Maresfield, Sussex	4,258	Brown discolouration due to planned work.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Discolouration of network following planned mains connection.</li> <li>• The company flushed the mains and sampled the affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
28 Aug 2015 For 24 hours (ESK)	Maldon, Essex	3,500	Loss of supplies due to a burst main.	<p><b>Essex and Suffolk Water action:</b></p> <ul style="list-style-type: none"> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• The company initially failed to successfully rezone the affected area, but the situation was then escalated appropriately and supplies were fully restored.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
28 Aug 2015 For 2 days (SEW)	Birling Farm works and Mill Gap service reservoir, Eastbourne, Sussex	17,000	<i>Cryptosporidium.</i>	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• While investigating the detection of <i>E.coli</i> in Meads service reservoir (see event at Meads service reservoir on 24 August 2015) <i>Cryptosporidium</i> was detected in Birling Farm treated water and Mill Gap service reservoir.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
30 Aug 2015 For 24 hours (SRN)	St Leonards-on-Sea, East Sussex	15,738	Loss of supplies/poor pressure and discolouration due to burst main.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company repaired the main but allowed an associated service reservoir to run low with consequent entrapment of air in the distribution system, which compounded the loss of supplies.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The investigation was satisfactorily completed, with no further action required. However, the company was reminded of the requirement to provide information to the Inspectorate in a timely manner.</li> </ul> <p>Risk classification: Significant</p>
31 Aug 2015 For 2 hours (UUT)	Wicken Hall works, Rochdale, Greater Manchester	34,045	Compromised disinfection due to lime dosing pump malfunction.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Turbidity and chlorine alarms resulted in a manual shut down of the works.</li> <li>• The works was restarted to facilitate investigation of the problem.</li> <li>• High pH final water was confirmed and so the works output was blended with another source.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate assessment of the alarm conditions, prevented early detection of sodium hydroxide dosing for pH correction of the final water, which was also used for process control. High pH resulted in improperly disinfected water.</li> <li>• Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
02 Sep 2015 For 5 days (ESK)	Benfleet, Essex	20	Boil water notice issued due to microbiological contamination following a burst main repair.	<p><b>Essex and Suffolk Water action:</b></p> <ul style="list-style-type: none"> <li>• A check sample taken following a repair to a burst main was found to contain <i>E.coli</i>.</li> <li>• The company issued a boil water notice to eight industrial units downstream of the repair and conducted further sampling. The company attributed the presence of <i>E.coli</i> in the original sample to the condition of the tap. The tap was stripped and disinfected, but the company omitted to collect any swab samples or pre-disinfection samples contrary to their own procedures.</li> <li>• A plumbing inspection was satisfactory as too were all subsequent samples. The boil advice was lifted.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was criticised for failing to follow its own procedures, and it was suggested that a review of those procedures with staff takes place and that the risk assessment for this zone is reviewed.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
02 Sep 2015 For 4 days (ANG)	Desborough	20,000	Evidence of microbiological contamination from Rothwell Tower, following a coliform detection at a property supplied by Rothwell Tower.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>Following the detection of <i>E.coli</i> at the reservoir, it was resampled and then removed from supply. The resample was satisfactory.</li> <li>There had been previous repair work on the tower, therefore the interior and exterior of the tower was in good condition with no signs of ingress.</li> <li>A glove was found inside the tower, which was considered unlikely to have caused the <i>E.coli</i>, but no other cause was found, despite the company undertaking a thorough investigation.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The glove was likely to have been left in by mistake following the previous inspection. Concerns were raised about the amount of sediment within the tower, given that it was only one year since the previous clean.</li> <li>A recommendation was made that the company should review its procedures for returning reservoirs to supply.</li> </ul> <p>Risk classification: Significant</p>
04 Sep 2015 For 5 days (DWR)	Bucknell, Herefordshire	3	Evidence of microbiological contamination due to a cross connection to a private supply.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>Following a complaint of particles in their supply, a sample was collected which contained <i>E.coli</i>. The consumer was issued with a boil water notice and provided with bottled water. Further sampling identified a second property with <i>E.coli</i>. which was also issued with a boil water notice. Following a plumbing inspection it was identified that both properties were illegally connected to a private supply. The cross connection was removed and suitable alternative arrangements were made for both properties.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
04 Sep 2015 For 1 week (DWR)	Llanelli, Carmarthenshire	3	Do not use notice placed on store following the discovery of a pigeon in cold water tank.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Provided bottled water on request.</li> <li>• Sampled affected area.</li> <li>• Issued a do not drink notice.</li> <li>• Issued plumbing fittings infringement Notice.</li> <li>• Satisfactory company response.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation and response in completing a fittings following a taste complaint from the store prevented a continuing risk to health from a poorly maintained domestic system.</li> </ul> <p>Risk classification: Significant</p>
05 Sep 2015 For 1 day (SRN)	Chatham	1,560	Brown discolouration due to Fire Brigade use of a hydrant disturbing mains sediment.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
05 Sep 2015 For 2 days (SVT)	12 properties in Pershore, Worcestershire	30	Do not drink notice due to suspected ingress of trench water into leaking main due to loss of positive pressure.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The main was repaired and flushed, and chlorine concentrations were increased in the distribution system. The affected area was sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further DWI action will be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
08 Sep 2015 For 4 days (WSX)	Bratton Seymour, Somerset	775	Microbiological contamination of Bratton Seymour New service reservoir.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Provided bottled water on request.</li> <li>• Issued a boil water notice.</li> <li>• Removed service reservoir from supply.</li> <li>• Inspected service reservoir and repaired a point of ingress.</li> <li>• Company-wide review to identify defects in other service reservoirs.</li> </ul> <p>Introduced a water quality impacts programme to ensure assets are suitably maintained.</p> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate risk assessment.</li> <li>• Inadequate procedures.</li> <li>• The Inspectorate completed a site visit to see the work already completed by the company.</li> <li>• The frequency of water quality site assessments to be identified using a risk-based approach.</li> <li>• Risk assessments to be resubmitted to the Inspectorate.</li> </ul> <p>Risk classification: Serious</p>
11 Sep 2015 For 7 hours (NNE)	Gateshead, Tyne and Wear	23,250	Brown discolouration due to contractor error.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Review of procedures.</li> </ul> <p>Improved its quality assurance procedures and supervision of contractors.</p> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate supervision of a contractor during planned work permitting the return of an uncleaned main being returned to supply.</li> <li>• Recommendations were made in respect of: <ul style="list-style-type: none"> <li>– management of contractors;</li> <li>– competency and training.</li> </ul> </li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
17 Sep 2015 For 48 hours (NNE)	Town End, Sunderland	9,375	Brown discolouration following planned work.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Provided bottled water on request.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> <li>• Company to update risk assessment and change method for planned works, to reduce rezoning activity, and has implemented measures to prevent a recurrence.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate was satisfied with the company's response.</li> </ul> <p>Risk classification: Significant</p>
17 Sep 2015 For 2 hours (NNE)	Lartington works, Teeside area	592,008	Compromised disinfection due to planned work.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• During the investigation of the <i>E.coli</i> event at Lartington works on 27 August 2015, flows were reduced in one contact tank compartment for inspection. The company was criticised for inadequate pH and chlorine monitoring which failed to identify increasing pH due to overdosing of lime.</li> <li>• Highly critical of the lack of control over the site, enforcement action considered due to inadequate shut down processes.</li> <li>• Recommended to provide comprehensive contingency plans for final water quality assurance, including alarm set points and shut downs.</li> <li>• Additionally critical of and recommended to provide assurance as to appropriate security for access controls on contact tank.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
18 Sep 2015 For 4 hours (DWR)	Cwmystraddlyn works, Llyn Peninsular	26,500	High turbidity in water being presented for disinfection due to plant failure.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Sampled affected area.</li> <li>• Review of procedures.</li> <li>• The works has since been permanently abandoned.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A number of recommendations were made in response to serious failings by the company to maintain critical equipment and processes or ensure adequate alarms to prevent inadequately treated water entering supply. This brings into the wider inadequacy of the company in its protocols, procedures, training and competency, response to ensure similar events do not occur.</li> </ul> <p>Risk classification: Significant</p>
18 Sep 2015 For 3 days (UUT)	Macclesfield area	35,508	Brown discolouration due to planned work.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> <li>• Review of procedures.</li> <li>• Retrained staff.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to follow the risk assessment process and procedures and started up a distribution pumping station.</li> <li>• The outcome was to cause a main to burst and the subsequent discolouration.</li> <li>• The company was criticised for: <ul style="list-style-type: none"> <li>– inadequate communication which caused a delayed response; and</li> <li>– failure to maintain critical equipment.</li> </ul> </li> <li>• Recommendations were made about operational procedures and risk assessments.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
23 Sep 2015 For 24 hours (TMS)	Darenth works, Dartford	275,000	Elevated turbidity on final water.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A statutory sample collected from the final water demonstrated elevated turbidity. The on-line monitoring of the water did not confirm the level, but the works was removed from supply for an inspection. Sand and corrosion deposits were found.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate recommended the company carry out further investigations to confirm the source of the deposits in the contact tank and take the necessary steps to prevent a recurrence.</li> </ul> <p>Risk classification: Significant</p>
23 Sep 2015 For 8 weeks (SRN)	Tenants Hill service reservoir, Worthing	12,701	Evidence of microbiological contamination.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Company removed reservoir from supply for cleaning and inspection as well as replacing the sampling kiosk.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
25 Sep 2015 For 8 weeks (SVT)	Leicester, Loughborough, Ashby de la Zouch		Media interest following consumer complaints of Chironomid larvae in water supplied from Melbourne works.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• An incident management team was convened in order to manage operations, which included an assessment of the extent of the larvae within the mains network and a controlled flushing regime implemented. The company replaced faulty valve.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Critical that this is a repeat of a previous event associated with Melbourne works in 2005, and is, therefore a known risk at this works which the company failed to mitigate.</li> <li>• Prevention of Chironomid larvae entering supply is achieved by conditioning of treatment filters, however, the company failed to seal properly a series of ten filter outlet valves and released water containing Chironomid larvae.</li> <li>• Due to two serious earlier events in the year at this works a technical audit was conducted of the entire treatment process.</li> <li>• It was identified that the assessment of valve functionality was wholly inappropriate and the company were required to improve procedures. In addition, there was an inappropriate procedure for manual monitoring of filter water level; although work had started to install sonic level probes. In general, there was a lack of maintenance of valve equipment to which the company had commissioned a study to assess the status of these valves. Enforcement action has been taken to ensure that necessary improvements are implemented at this works (see event at Melbourne works on 4 Jan 2015).</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
25 Sep 2015 For 36 hours (SVT)	Bilston	7,210	Brown discolouration due to the illegal use of a hydrant.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory.</li> <li>• The Inspectorate recommended the company update its risk assessment regarding discolouration in the zone.</li> </ul> <p>Risk classification: Significant</p>
27 Sep 2015 For 3 days (ANG)	Mereway, Northampton	17,738	Loss of supplies/poor pressure due to a burst main.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The company rezoned the area (brought in water from different source) and provided an alternative supply by tanker/bowser.</li> <li>• The main was repaired, and the affected area sampled.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
28 Sep 2015 For 3 days (DWR)	Halfway, Powys	23	Evidence of microbiological contamination due to plant failure.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Sampled affected area.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Blended supply with another source.</li> <li>• Increased chlorine residuals at service reservoir.</li> <li>• Provided bottled water on request.</li> <li>• Replaced faulty equipment.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A number of recommendations were made following a failure by the company to adequately and safely remove the works from supply in response to the detection of a herbicide in the catchment exposing inadequacies in contingency planning, procedures and investigations to prevent inadequately treated water entering supply.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
29 Sep 2015 For 3 days (SVT)	Bradwell service reservoir	6,960	Evidence of microbiological contamination.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Enterococci were detected in the reservoir while the company was investigating an earlier coliform failure.</li> <li>• Removed service reservoir from supply.</li> <li>• Sampled affected area. The reservoir was inspected and will remain out of service for remediation.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate has issued a Notice covering all of the company's service reservoirs to ensure that the company has a risk-based strategy in place to inspect, clean and carry out necessary remedial works to prevent contamination at all sites.</li> </ul> <p>Risk classification: Significant</p>
29 Sep 2015 For 6 hours (UUT)	Ashworth Moor works, Rochdale, Greater Manchester	21,956	Compromised disinfection due to planned work.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Following the air-locking of the disinfectant dosing system, sodium hypochlorite was manually added to the contact tank.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
01 Oct 2015 For 3 days (AFW)	St Albans, Hertfordshire	133	Media interest in burst main, and subsequent precautionary boil water notice.	<p><b>Affinity Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A sink hole appeared in a road, causing damage to a water main. A temporary overland supply was provided until access to repair the main was obtained. The company issued boil water notice following the damage.</li> <li>• Sampled affected area.</li> <li>• Provided a alternative supply by temporary main.</li> <li>• Provided bottled water.</li> <li>• After restoring supplies, affected consumers were issued a precautionary boil water notice, which was lifted following satisfactory sample results.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
02 Oct 2015 For 6 hours (SVT)	Frankley works, 21 water supply zones in Birmingham and surrounding area	1,000,000	Loss of control of the disinfection system at Frankley works.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Increased chlorine at the works.</li> <li>• Retrained staff.</li> <li>• Reviewed procedures.</li> <li>• Sampled the affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A failure of the disinfection system was compounded by a wholly inadequate emergency disinfection system and other inappropriate back-up procedures of both a technical and managerial nature. There was a lack of training, procedures, competence and communication in response to the event or the subsequent investigation by the company.</li> <li>• There is an existing Notice in place at Frankley works issued in response to previous disinfection failures. The company failed to comply with certain conditions of this Notice, which is potentially a criminal offence.</li> <li>• In recognition of the serious nature of this event, the strategic significance of the works and failure to comply with the Notice conditions, the Inspectorate served, a Provisional Enforcement Order on the company. This was revoked in January 2016, and the Inspectorate will continue to scrutinise the performance and operation of this works. The Notice remains in place.</li> </ul> <p>Risk classification: Serious</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
03 Oct 2015 For 48 hours (SWT)	St Blazey, Cornwall	50,000	Media interest due to burst main.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Bypassed service reservoir.</li> <li>• Flushed mains.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Provided bottled water on request.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> <li>• Reviewed the condition of the mains and considered an ongoing flushing programme.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Suggested that the company reviews its contingency plans for major events which could result in loss of service or unwholesome water.</li> </ul> <p>Risk classification: Significant</p>
07 Oct 2015 For 12 hours (UUT)	Cheadle	39,496	Loss of supplies and brown discolouration due to planned work.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company failed to maintain adequate mains records to permit planned operation of valves without incident.</li> <li>• Recommended to implement an action plan to ensure that geospatial records are up to date and reflect correct configuration of the mains and valves.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
09 Oct 2015 For 5 days (ANG)	Scole, Norfolk	1,185	Evidence of microbiological contamination following burst mains.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>Two bursts on the same main in two days were repaired and sampled. Results indicated the presence of <i>E.coli</i>. The company issued a boil water notice to 474 properties and employed booster chlorination into the village. Two sets of clear samples enabled the cessation of the chlorination and lifting of the boil notice.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company's response to this event was satisfactory and no further action will be taken.</li> </ul> <p>Risk classification: Significant</p>
18 Oct 2015 For 24 hours (ANG)	Norwich, Norfolk	84,000	TCP taste and odour associated with Mousehold works.	<p><b>Anglian Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>The company isolated from supply Mousehold works and Mousehold Ayris service reservoir and rezoned the area. The affected distribution system was flushed and sampling conducted.</li> <li>The company concluded that the root cause was associated with newly regenerated carbon used in a filter at Mousehold works.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
18 Oct 2015 For 15 hours (DVW)	Legacy works, Legacy and Rhos	45,000	Failure of lime dosing control probe, caused excess lime dose, which prevented proper disinfection.	<p><b>Dee Valley Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Blended supply with another source.</li> <li>• Replaced faulty equipment.</li> <li>• Sampled affected area.</li> <li>• The supply was blended with water from Llwyn Onn works, to provide a dilution. The faulty meter was replaced with two new meters, to remove the single point of failure. Company conducted a review to find any other single points of failure. Company updated their notification procedure and risk assessment.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Unacceptable delay in notifying Inspectorate.</li> <li>• A number of recommendations were made following a failure by the company to adequately identify critical controlling equipment which was also being used for alarm monitoring. This exposes inadequacies in inadequate design and risk assessment permitting improperly treated water to enter supply.</li> </ul> <p>Risk classification: Significant</p>
18 Oct 2015 For 6 hours (SES)	Puddledock service reservoir, Edenbridge, Kent	7,500	Loss of supplies/poor pressure due to unplanned emptying of service reservoir.	<p><b>Sutton And East Surrey Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Communications from the reservoir level monitor were lost. Attempts to restore supplies by manual operation of the delivery pumps failed because the company did not ensure that there was sufficient water available in the reservoir.</li> <li>• Provided bottled water.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Repaired faulty equipment.</li> <li>• Sampled affected area.</li> <li>• Reviewed internal procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Suggested the company carry out Fittings Inspections of high risk properties when mains are depressurised.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
19 Oct 2015 For 23 hours (UUT)	Clough Bottom works, Burnley, Lancashire	17,615	Compromised disinfection due to elevated final water pH.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Final water is adjusted for pH with the addition of sodium hydroxide. The dosing control was not configured to stop when final water flow reduced below a set point. Consequently a slug of high pH water compromised disinfection and entered supply when flow returned to normal.</li> <li>• Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
23 Oct 2015 For 3 days (YKS)	Upperthong, Holmfirth	7,500	Brown discolouration due to burst trunk main.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Flushed mains in affected area.</li> <li>• Sampled affected area.</li> <li>• Reviewed procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company were slow to respond as increased flows were thought to be due to planned flushing work in the vicinity.</li> <li>• Recommendations were made to the company to review its internal communications.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
27 Oct 2015 For 3 days (NNE)	Port Clarence, Middlesborough	750	Do not drink notice due to backsiphonage of industrial chemicals following planned work.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Issued do not drink advice to 300 properties.</li> <li>• Provided bottled water to affected properties.</li> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Protected the public supply against backflow from the factory.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Consumer complaints of unacceptable taste and odour were the first indication of this event, which was caused when the south main supply into a major chemical factory was switched on to supplement the north supply (normally only one operates at a time). Failure of a critical valve and inadequate backflow protection resulted in backsiphonage of potentially toxic chemicals into the public supply.</li> <li>• Severely criticised the company because of its wholly inadequate response.</li> <li>• Served a Regulation 28 Notice in order to prevent recurrence.</li> </ul> <p>Risk classification: Serious</p>
28 Oct 2015 For 3 days (UUT)	Preston	156,000	Loss of supply and brown discolouration due to planned work at Whitebull service reservoir.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Sampled affected area.</li> <li>• Reviewed procedures.</li> <li>• Retrained staff.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
29 Oct 2015 For 12 hours (SRN)	Redbridge Lane, Southampton	300	Loss of supplies and brown discolouration due to burst mains.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired main.</li> <li>• Rezoned area (brought in water from different source).</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
01 Nov 2015 For 3 days (BRL)	Dial Hill service reservoir, Clevedon, Somerset	16,600	Microbiological contamination.	<p><b>Bristol Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Removed service reservoir from supply.</li> <li>• Sampled affected area.</li> <li>• Repaired points of ingress.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate communication caused delay in isolating the reservoir.</li> <li>• No cause identified.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
04 Nov 2015 For 3 days (DWR)	Llechryd, mid Wales	6,250	Loss of supplies due to burst main.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> <li>• Provided an alternative supply by tanker/bowser.</li> <li>• Provided bottled water on request.</li> <li>• Actions put in place to prevent a recurrence.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company responded well in dealing with the loss of supplies in a rural area in both repairing the bust under difficult conditions and in the provision of alternative supplies.</li> <li>• A recommendation was made about sampling from tankers used to supplement the water supply.</li> <li>• The company intend to replace the main by September 2016.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
08 Nov 2015 For 2 days (TMS)	Sheafhouse works, Chipping Campden	8,075	Treatment failure due to failure of automatic shutdown.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• The works experienced a power outage, but the auto-shutdown failed to operate allowing water to enter the downstream service reservoir which may not have been fully treated.</li> <li>• The system was flushed and sampled.</li> <li>• The company is at risk of enforcement action at this site.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate risk assessment.</li> <li>• Lack of maintenance of equipment.</li> <li>• Inadequate treatment process – disinfection.</li> <li>• Inadequate communication caused delay in response.</li> <li>• Recommended the company revises its mains records to comply with Regulations 17 and 18.</li> <li>• Recommended the company reappraises the control philosophy for the works to deal with a power failure.</li> <li>• Recommended the company revises its Regulation 27 risk assessment for Sheafhouse works.</li> <li>• Recommended the company reviews its disinfection policy for Sheafhouse works, to ensure future compliance with Regulation 26.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
10 Nov 2015 For 7 hours (NNE)	Thorpe works, Easington	7,090	Compromised disinfection due to planned maintenance work.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Flushed mains to remove improperly disinfected water.</li> <li>• Reviewed procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company inappropriately disabled a failsafe shutdown system to calibrate a flow meter allowing undisinfecting water to enter supply for 20 minutes.</li> <li>• Criticised the company for allowing key failsafe systems to be overridden without authorisation, and without any risk assessment.</li> <li>• Recommendations were made requiring: <ul style="list-style-type: none"> <li>– those sites where there is a likelihood of a similar event and takes steps to prevent any recurrences;</li> <li>– training of works operatives;</li> <li>– checking and improving disinfection control systems and alarm settings; and</li> <li>– implementing procedures for seeking authorisation when making operational changes.</li> </ul> </li> </ul> <p>Risk classification: Significant</p>
10 Nov 2015 For 1 day (SRN)	Burham works, Kent	242,400	Treatment failure due to excess sodium hydroxide dose.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Following a works shut down it was identified that the sodium hydroxide dosing pump, post contact tank, had continued operating as it had been left in manual mode. The high pH water was removed to waste from the high lift pump sump.</li> <li>• Sampled affected area.</li> <li>• Review of procedures.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The event was caused by staff not operating the plant as per procedure and recommendations were made in respect of inadequate training/competence of staff.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
13 Nov 2015 For 4 days (SRN)	Hove, East Sussex	3	Taste or odour due to mains problem.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>The company connected a property to a stagnant main. The owner was advised not to use the water, while the connection was transferred to a different main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company was criticised for not following its procedure for mains connections and for not having a policy for physically isolating decommissioned mains. A recommendation was made in respect of inadequate procedures.</li> </ul> <p>Risk classification: Significant</p>
16 Nov 2015 For 3 days (DWR)	Banc y Darren service reservoir, West Wales	580	Evidence of microbiological contamination.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>Sampled affected area.</li> <li>Repaired the cause of the ingress.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Site drainage to be remediated.</li> <li>Recommendation made that the asset is improved to allow removal from supply.</li> <li>The company responded well to the event to protect supplies but the event identified the failure to protect the system from ingress particularly cables fitted by the company themselves.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
16 Nov 2015 For 4 days (WSX)	Stratford Tony, Wiltshire	133	Microbiological contamination caused by planned work on the distribution system.	<p><b>Wessex Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Increased chlorine residuals in the distribution system.</li> <li>• Issued a boil water notice.</li> <li>• Sampled affected area.</li> <li>• The company's response to the event was appropriate timely and proportional.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The Inspectorate was minded to recommend that the company improve turnover and chlorine residuals, but noted that appropriate steps had already been taken.</li> </ul> <p>Risk classification: Significant</p>
17 Nov 2015 5 days (UUT)	Carlisle	17,500	Loss of supplies and brown discolouration following damage to the inlet to High Brow reservoir, caused by severe flooding.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Isolated inlet main.</li> <li>• Rezoned supplies where possible.</li> <li>• Alternative supplies were provided by tanker.</li> <li>• Sampled affected area.</li> <li>• Retrained staff.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Flooding of the River Caldew following heavy rain destabilised the ground which damaged the inlet main to High Brow (Nelson) SR. The rezoning and tanker supplies activity consequently led to discoloured supplies, demonstrating inadequate risk assessments and turbidity monitoring.</li> <li>• The company were criticised for their lack of filling point and tanker sampling and recommended to review their procedures and to include turbidity as a monitoring requirement.</li> <li>• Risk assessment to be reviewed and amended for mitigation of hazards.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
18 Nov 2015 For 1 week (SVT)	Coleshill, Warwickshire	23	Do not drink notice due to TCP taste and odour.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Bottled water was provided to the affected consumers, sampling and investigation carried out, company issued a do not use notice.</li> <li>• The company originally believed the taste problem was confined to a discrete area of six properties. Their investigations did not identify a cause, and a small number of additional downstream customers also complained. The drinking restrictions were lifted with the support of health colleagues. An illegal cross connection with a private supply was found, but was not thought to be the cause of the unsatisfactory taste and odours.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company were criticised for the investigational sampling which was delayed.</li> </ul> <p>Risk classification: Significant</p>
19 Nov 2015 2 days (UUT)	Blackpool	99,588	Air in water (white) due to faulty level gauge at Warbreck Tower.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment.</li> <li>• Sampled affected area.</li> <li>• Flushed mains.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A faulty water level pressure transducer at Warbreck tower caused intermittent operation of the outlet pumps, resulting in air entrainment and 73 customer contacts regarding white water.</li> <li>• The company were criticised for not suitably protecting external equipment and recommended to incorporate suitable measures to prevent pump operation causing aeration.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
20 Nov 2015 For 3 days (NNE)	Whittle Dene works, Newcastle	1,846,926	<i>Cryptosporidium</i> associated with heavy rainfall in the catchment area.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>Sampled at the works and in the area supplied.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Public Health England confirmed that there were no reported cases of cryptosporidiosis illness in the area supplied.</li> <li>The Inspectorate was satisfied with the company's response.</li> </ul> <p>Risk classification: Significant</p>
20 Nov 2015 For 3 days (NNE)	Mosswood works, Sunderland	1,250,000	<i>Cryptosporidium</i> associated with heavy rainfall in the catchment area.	<p><b>Northumbrian Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>Sampled at the works and in the area supplied.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company's response to this event was satisfactory and no further DWI action will be taken. Public Health England confirmed that there were no reported cases of cryptosporidiosis illness in the area supplied.</li> <li>The company plans to replace the filter media at Mosswood works commencing in 2016.</li> </ul> <p>Risk classification: Significant</p>
20 Nov 2015 For 1 week (SVT)	Rugby	5	Do not drink notice due to a damaged service pipe running through a sewer.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>Issued a do not drink notice.</li> <li>Sampled affected area.</li> <li>Bottled water provided to the two properties affected.</li> <li>Replaced the service pipe in a safe location.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company conducted inadequate investigations into a root cause, with inconsistent sampling and timely notification to consumers.</li> <li>The company was also criticised for an inadequate report with inconsistent statements and lacking in supporting evidence.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
21 Nov 2015 For 3 days (PRT)	Eastergate and Westergate works	83,065	<i>Cryptosporidium</i> .	<p><b>Portsmouth Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Detection of <i>Cryptosporidium</i> following a period of heavy rainfall. Both works were shut down.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Notices are in place covering both works requiring installation of UV treatment for inactivation of <i>Cryptosporidium</i>, due for completion in 2016.</li> <li>• The company was criticised for a short-lived failure to comply with the requirement to continuously monitor for <i>Cryptosporidium</i>, which was a condition of the Notice when Eastergate works was returned to supply.</li> </ul> <p>Risk classification: Significant</p>
23 Nov 2015 For 2 weeks (DVW)	Oerog Springs works, Llangollen, Garth and Trevor, Denbighshire	10,017	Evidence of <i>Cryptosporidium</i> .	<p><b>Dee Valley Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Shut down treatment works.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The scheduled UV installation has been fast tracked at the site.</li> </ul> <p>Risk classification: Significant</p>
25 Nov 2015 For 24 hours (DWR)	Cribbarth service reservoir, Abercarn, Cwmcarn, Crosskeys, Pontywaun, Cwmfelinfach, Ynysddu and parts of Newbridge	37,500	Loss of supplies due to burst main by third party.	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Provided bottled water on request.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company's investigation and response protected supplies and no further DWI action to be taken.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
25 Nov 2015 For 1 hour (TMS)	Coppermills works, West Ham, Stratford, Stepney	1,000	Loss of supplies/poor pressure due to power loss.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>A momentary power loss at the works caused a high lift pump to trip. The pump trip system had been incorrectly set.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The company was criticised for not identifying the error in commissioning tests and are to inform the Inspectorate on completion of a review of all large treatment, and confirm that similar faults do not exist or have been rectified at other critical works.</li> </ul> <p>Risk classification: Significant</p>
28 Nov 2015 For 5 hours (UUT)	Godley works, Hyde, Greater Manchester	503,075	Compromised disinfection due to power interruption and failure of emergency back-up power supply.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>Works shut down.</li> <li>Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>UPS failure resulted in phosphoric acid dosing rig shutting down and prevention of associated alarms. Consequent elevated pH in the contact tank prevented effective disinfection. The improperly disinfected water continued to gravitationally flow into supply.</li> <li>Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> <li>Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
30 Nov 2015 For 2 weeks (DWR)	Cwm Dulyn works, North-West Gwynedd	1,000	Evidence of <i>Cryptosporidium</i> .	<p><b>Dŵr Cymru Welsh Water action:</b></p> <ul style="list-style-type: none"> <li>• Blended supply with another source.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Site audit carried out which confirmed that the company had an adequate mitigation to the identified risk and this protected supplies. The company response highlighted the practised response by the company to such an event.</li> <li>• The company should revise its risk assessment for the lake to reduce the impact of sheep faeces getting into the raw water.</li> <li>• No further action to be taken by the Inspectorate.</li> </ul> <p>Risk classification: Significant</p>
02 Dec 2015 For 1 day (TMS)	Shalbourne service reservoir, Bedwyn	3,544	Evidence of microbiological contamination.	<p><b>Thames Water Utilities Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Statutory samples collected from two compartments at the reservoir detected <i>E.coli</i> in one compartment. The company sampled widely and then isolated the compartment from supply.</li> <li>• The cause of contamination was attributed to the condition of the sampling facilities.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• No points of ingress were identified, but the sampling facility was not fit for purpose. Enforcement action was considered, but the company has developed a prioritised action plan for resolution of company-wide sampling facilities which the Inspectorate will keep under review.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
05 Dec 2015 For 4 days (UUT)	Bridge End works	8,000	Shutdown of Bridgend works near Keswick, due to heavy rainfall and severe flooding.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Supplies were supported where possible through rezoning, use of tankers to support local reservoirs and provision of bottled water.</li> <li>• Sampling in affected areas following restoration of supplies.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Loss of Bridge End works because of flooding of the works.</li> <li>• Works repaired and supplies returned to normal.</li> </ul> <p>Risk classification: Significant</p>
06 Dec 2015 For 20 days (UUT)	Edenhall works	4,542	Treatment failure – flooding of works due to adverse weather.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Repaired faulty equipment.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Site was switched off before flooding occurred.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate risk assessment which had not mitigated the risk of flooding.</li> <li>• Site was part of a number of sites affected by Storm Desmond starting with the initial notification of Bridge End.</li> <li>• Multiple problems with the site including inadequate monitors, UV, chlorine dosing and disinfection.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
06 Dec 2015 For 4 days (UUT)	Keswick	3	Loss of supplies/poor pressure due to burst main causing loss of supply and Castlerigg SR to run dry following heavy rainfall and flooding.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>Boil advice issued to consumers in Castlerigg, Borrowdale and Langwathby following damage to water mains caused by flooding.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Company issued boil water advice where required.</li> <li>Company were recommended to update procedures and record keeping for alternative supply vehicles.</li> </ul> <p>Risk classification: Significant</p>
07 Dec 2015 For 1 day (CAM)	Heydon, Cambridgeshire	28,839	Risk of contamination due to mouse found in service reservoir following coliform detection.	<p><b>Cambridge Water Company Plc action:</b></p> <ul style="list-style-type: none"> <li>Sampled affected area.</li> <li>Company did not initially report this as an event.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
07 Dec 2015 For 23 days (UUT)	Concessionary supply	7	Issue of warning/boil water notice due to raw water deterioration.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>Deteriorating water quality resulted in boil water advice being issued.</li> <li>A temporary alternative supply was provided by tankers and bowsers.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>The storm resulted in increased turbidity affecting the water in the Thirlmere Aqueduct, which provides the concessionary supply.</li> <li>The company were criticised for inadequate sampling and an untimely period for the consumers to be supplied via alternative means.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
09 Dec 2015 For 10 days (SWT)	Yettington, Devon	75	Taste and odour due to burst main.	<p><b>South West Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• PRV installation and revalving,</li> <li>• Sharing of learning across operational management.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Inadequate procedures.</li> <li>• Did not keep customers informed.</li> </ul> <p>Risk classification: Significant</p>
10 Dec 2015 For 3 days (ESK)	Dagenham, Essex	78,868	Brown discolouration due to planned work.	<p><b>Essex and Suffolk Water action:</b></p> <ul style="list-style-type: none"> <li>• In planning for a road bridge replacement the company operated a valve to check its remote operation. The action caused discolouration of supplies.</li> <li>• The company flushed the mains and rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was highly criticised for completely failing to conduct any risk assessment of their proposed action, which was wholly avoidable.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
10 Dec 2015 For 24 hours (SVT)	Ruddington, near Nottigham	33,000	Complaints of discolouration due to treatment failure at Church Wilne works.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• A filter at Church Wilne works was returned to use after being refilled with newly regenerated carbon. The company failed to follow correct procedures and as a consequence high levels of manganese were released into the treated water.</li> <li>• The company sampled the affected area and isolated the filter.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company was highly criticised for returning the filter to service without following its own operational procedures. The associated turbidity monitoring of all filters was also identified as being inadequate.</li> <li>• Investigation ongoing.</li> </ul> <p>Risk classification: Significant</p>
10 Dec 2015 For 4 days (UUT)	Glenridding	468	Loss of supplies/poor pressure due to burst main.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Boil advice issued to consumers following damage to water mains caused by flooding.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Company carried out repairs and issued cautionary boil water advice until repairs and bacteriological samples were clear.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
11 Dec 2015 For 1 day (SRN)	Greatwood service reservoir, Shanklin, Isle of Wight	10,991	Risk of contamination due to ingress into service reservoir.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Ingress into the reservoir at a site of a previous internal repair was identified during a routine inspection.</li> <li>• The reservoir was isolated from supply, but because the risk of losing supplies was not fully mitigated, the reservoir was later returned to supply without any measures to prevent the ingress.</li> <li>• A boil water notice was issued.</li> <li>• Supplies were further maintained by use of tankers until a temporary bypass main was installed to allow Greatwood reservoir to be bypassed and removed from supply.</li> <li>• Company are reviewing the repair options.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Did not keep customers informed.</li> <li>• Boil water notice was delayed to some customers. The company were recommended to review procedures to ensure notifications on restriction of use are made as soon as is practicable.</li> <li>• Repairs carried out in 2008 failed before the scheduled ten year inspection, however, repairs carried out this year will be inspected in two years.</li> <li>• Quarterly visual inspections were not followed up when comments were made regarding work needed.</li> <li>• Recommended that staff carrying out reservoir inspections are kept abreast of issues identified and timely closure of actions is made.</li> <li>• Recommended that risks identified at inspections are addressed in a timely manner to protect public health.</li> <li>• Recommended that the service reservoir is not returned to supply until it is structurally sound and watertight.</li> <li>• Recommended that the company reviews the work of the reservoir repair team to determine if a wider issue exists.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
12 Dec 2015 For 1 day (SEW)	Burwash zone, East Sussex	10,000	Loss of supplies/poor pressure and discolouration due to burst main supplying Flimwell service reservoir.	<p><b>South East Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Bypassed service reservoir.</li> <li>• Repaired main.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• The company investigation, response, provision of information and assistance was satisfactory.</li> </ul> <p>Risk classification: Significant</p>
16 Dec 2015 For 12 hours (SRN)	Romsey, Chandler's Ford and Rownhams, Southampton	162,500	Brown discolouration following shutdown and restart of Testwood works after power outage, causing suspension of sediments and elevated turbidity.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Emergency generators failed after operating for a short period.</li> <li>• Reviewed procedures.</li> <li>• Sampled affected area.</li> <li>• Shut down treatment works.</li> <li>• Restarted the works.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Maintenance of equipment was lacking.</li> <li>• The company did not liaise with health authorities and were recommended to do so in future, on all occasions where the water supplied has been improperly disinfected.</li> <li>• Inadequate follow-up sampling. Recommended that the company reviews its sampling procedures to comply with the requirements of the Regulations.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
18 Dec 2015 For 1 hour (YKS)	Fixby works, Huddersfield area	70,000	Compromised disinfection due to high turbidity water entering contact tank.	<p><b>Yorkshire Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Restarted works and increased chlorine residuals at treatment works.</li> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• A seized valve caused dirty washwater to backflow into the treatment process following the loss of clarification, leading to high turbidity water entering the final chlorine contact tank.</li> <li>• The company were criticised by allowing the process control system to initiate a filter backwash when the faulty valve was showing an alarm.</li> <li>• Enforcement action was considered, but the company has instigated capital work to mitigate the problem.</li> </ul> <p>Risk classification: Significant</p>
21 Dec 2015 For 1 month (UUT)	Lancaster	8	Do not drink notice due issued to four properties.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice to four properties following complaints of petrol odour.</li> <li>• Sampled affected area.</li> <li>• Provided temporary overland supply.</li> <li>• Re-laid supply pipes in barrier pipework.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Root cause not confirmed but possible permeation from local petrol station. The company were criticised for a slow investigation and poor communications with consumers, but commended for replacement of both the communication and service pipes.</li> </ul> <p>Risk classification: Significant</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
23 Dec 2015 For 4 weeks (SRN)	Worthing, West Sussex	157,250	<i>Cryptosporidium</i> – PHE notification of five cases.	<p><b>Southern Water Services Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Sampling was not timely enough. Recommended that the relevant parts of the business are reminded for the need to conduct robust and timely investigations when investigating water quality events and the requirements of the regulations are reinforced.</li> </ul> <p>Risk classification: Significant</p>

## Event outstanding from 2013 and 2014 completed in 2015

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
15 Dec 2014 For 2 hours (UUT)	Hodder works, Lancashire.	750,000	Disinfection failure.	<p><b>United Utilities Water Plc action:</b></p> <ul style="list-style-type: none"> <li>• Works was shutdown.</li> <li>• Repaired the faulty dosing equipment and sampled the affected area.</li> <li>• The company subsequently installed a failsafe shutdown.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• Chlorine dosing failed at both the intermediate and final water stage. The sodium hypochlorite back-up system also failed. The company was criticised for no auto-shutdown control and for not manually shutting the works down for over three hours.</li> <li>• Enforcement action is being progressed, in association with eight other improperly disinfected water events, to ensure robust systems, including: process control; policy and procedures; and asset improvement.</li> </ul> <p>Risk classification: Serious</p>

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
26 Dec 2013 For 5 days (SVT)	Derwent Valley Aqueduct supplying consumers in Derbyshire and Leicestershire	37,500	Loss of supply due to burst main.	<p><b>Severn Trent Water Ltd action:</b></p> <ul style="list-style-type: none"> <li>• Sampled affected area.</li> <li>• Repaired main.</li> </ul> <p><b>DWI comments and findings:</b></p> <ul style="list-style-type: none"> <li>• This event was caused by a burst on a large strategic main near a motorway junction, which led to loss of supplies, media interest and discoloured water. Work to reinstate the main was poorly planned and the first attempt was aborted due to further discoloured water complaints. This large strategic main is now being prioritised for cleaning.</li> <li>• The company did not take timely samples to confirm the extent and nature of the event.</li> <li>• Recommended improvements to the company's planned work risk assessment procedures.</li> <li>• Recommended timely samples are taken from all areas potentially affected during incidents.</li> <li>• Recommended notifications and significant updates are given in a timely manner.</li> </ul> <p>Risk classification: Significant</p>