

Not significant and minor drinking water quality events

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Chemical	ANG (2)	Lincoln (5) Lincoln (3)
	DWR (1)	Lampeter, Ceredigion (3)
	ESK (1)	Bacton, Suffolk (5)
	SEW (1)	Bray and Egham, Surrey (77,173)
	SRN (2)	Brede, East Sussex (3) Out of service works (N/A)
	SVT (1)	Redhill and Nottingham, Nottinghamshire (64,000)
Discolouration	ANG (9)	Mablethorpe, Lincolnshire (3) Carbrooke, Norfolk (2,780) Beckingham, Doncaster (40) Ipswich, Suffolk (43) Bramford, Suffolk (7,000) Barrowby, Lincolnshire (3,070) Ipswich, Suffolk (14,663) Coddensham, Suffolk (3) Grantham, Lincolnshire (2,247)
	DVW (3)	Llangollen, Denbighshire (3,722) Wrexham (9,373) Glyn Ceiriog, Wrexham (7,843)
	DWR (1)	Crickhowell, Powys and Abergavenny, Monmouthshire (30,000)
	HPL (3)	Hartlepool (93) Hartlepool (1,250) Hartlepool (500)
	SBW (1)	Ringwood, Hampshire (1,500)
	SEW (2)	Petersfield, Hampshire (815) Mayfield and Hadlow Down, East Sussex (4,958)
	SVT (4)	Drum Hill, Derbyshire (18,481) Satnall, Staffordshire (32,651) Wolverhampton (20,000) Butterhill, Staffordshire (9,595)
	SWT (1)	Countess Wear, Devon (250)

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Discolouration	UUT (5)	Prenton and Wallasey, Wirral (111,083) Winsford, Cheshire (46,187) Bolton, Greater Manchester (39,085) Oldham, Greater Manchester (8,573) Widnes, Cheshire (3)
Health concern	BRL (1)	Mendips area (107,000)
	UUT (1)	Carlisle, Cumbria (90,000)
Inadequate treatment	YKS (1)	Doncaster, South Yorkshire (3,750)
Loss of supplies/ poor pressure	ANG (9)	Cleethorpes, Lincolnshire (40) Barton-le-Clay, Bedfordshire (23) Bedford (7,083) Raydon, near Ipswich (3,450) Raunds, Northamptonshire (20) Cromer, Norfolk (500) Scunthorpe, Lincolnshire (4,500) Kirby Cane, Norfolk (2,450) Holbeach, Lincolnshire (21,000)
	DWR (1)	Barry, Vale of Glamorgan (6,335)
	ESK (5)	Dagenham and Rainham, Essex (21,358) Syleham and Eye, Suffolk (9,813) Romford, Essex (1,686) Fressingfield, Suffolk (3,250) Collier Row, North East London (25,260)
	HPL (1)	Hartlepool (750)
	NNE (1)	Darlington (31,500)
	PRT (3)	West Wittering, West Sussex (10,067) Southbourne, Portsmouth (8,400) Arundel, West Sussex (1,000)
	SEW (2)	Ninfield, East Sussex (1,210) Rye, East Sussex (1,600)
	SRN (3)	Worthing, West Sussex (38) Winchester, Hampshire (130) Isle of Sheppey, Kent (500)
	SSE (1)	Kennet Island, Reading (900)
	SST (1)	Smethwick, West Midlands (2,903)

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Loss of supplies/ poor pressure	SVT (8)	Redditch, Worcestershire (6,833) Eckington, Derbyshire (17,170) Alfreton, Derbyshire (27,500) Pearsley Bank, Staffordshire (15,405) Berkeley, Gloucestershire (6,750) Kidderminster, Worcestershire (28,733) Preston Brockhurst, Shropshire (13,556) Ludlow, Shropshire (8,000)
	TMS (2)	Dartford, Kent (800) Parts of North West London (34,180)
	WSX (5)	Devizes, Wiltshire (2,885) Williton, Somerset (3,750) Williton, Somerset (250) Mere, Wiltshire (63) Compton Down, Wiltshire (4,105)
Microbiological	ANG (7)	Spalding, Lincolnshire, (3) Milton Keynes (3) Grimsby, Lincolnshire (3) Market Harborough, Leicestershire (3) Northampton (3) Elm, Cambridgeshire (3) Norwich, Norfolk (3)
	BRL (6)	Yatton, North Somerset (3) Bristol (3) Whitchurch, Somerset (1,235) Burton, Wiltshire (5) Hotwells, Bristol (2,603) Clevedon, North Somerset (3)
	CAM (2)	Odsey, Hertfordshire on two occasions (100)
	DWR (1)	Hereford (3)
	SRN (1)	Goring-by-Sea, West Sussex (3)
	SST (3)	Walsall, West Midlands (3) West Bromwich, West Midlands (3) Smethwick, West Midlands (3)
	SVT (3)	Leicester (24,029) Charnwood, Leicestershire (12,235) Meirheath, Staffordshire (31,226)

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Microbiological	TMS (9)	Penge, South East London (3) Putney Heath, South West London (3) Wimbledon, South West London (3) Waltham Abbey, Essex (3) Kilburn, North West London (3) Hackney, North London (3) Kidlington, Oxfordshire (63) Lewisham, South East London (3) Reading, Berkshire (250,000)
	WSX (3)	Bishops Lydeard, Somerset (3) Shaftesbury, Dorset (3) Calne, Wiltshire (3)
	YKS (2)	Castleford, Yorkshire (3) Gargrave, North Yorkshire (3)
Other	ANG (3)	Downham Market, Norfolk (3) Perry, Cambridgeshire (N/A) Huntingdon, Cambridgeshire (2,063)
	BRL (1)	Filton, Bristol (500)
	DWR (1)	Laboratory error (N/A)
	SST (2)	Malicious tweet (N/A) Dudley and Sandwell, West Midlands (82,089)
	TMS (1)	Laboratory error (N/A)
	WSX (2)	Crewkerne, Somerset (3) Bath (50)
Public concern	ANG (12)	Withersfield, Suffolk (3) Scunthorpe, Lincolnshire (138) Denford, Northamptonshire (13) Peterborough (145) Bedford (3) Clifton, Bedfordshire (243) Hitchin, Hertfordshire (3) Milton Keynes (83) Wisbech, Cambridgeshire (13) Nettleton, Lincolnshire (3) Croughton, Northamptonshire (3) Earls Colne, Essex (25)
	BRL (1)	Almondsbury, South Gloucestershire (15)

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Public concern	DWR (1)	Whitchurch, Herefordshire (3)
	DWR (1)	Llanrumney, Cardiff (6,618)
	ESK (3)	Dagenham, Essex (65) Parham, Suffolk (3) Laxfield, Suffolk (5)
	PRT (1)	Bedhampton, Hampshire (50)
	SBW (1)	East Wellow, Hampshire (10)
	SES (2)	Limpsfield, Surrey (3) Dorking, Surrey (25)
	SEW (2)	Ringmead, Berkshire (963) Balcombe, West Sussex (1)
	SRN (5)	Ramsgate, Kent (270) Bitterne, Southampton (488) Sittingbourne, Kent (3) Winchester, Hampshire (30) Ningwood, Isle of Wight (63)
	SVT (13)	Birstall, Leicestershire (3) Tenbury Wells, Worcestershire (3) Codsall, West Midlands (3) Stapleford, Leicestershire (3) Tewkesbury, Gloucestershire (3) Worksop, Nottinghamshire (3) Welford-on-Avon, Warwickshire (5) Gloucester (3) Mucklestone, Staffordshire (48) Wellington, Shropshire (3) Wooton, Shropshire (3) Stoneleigh, Warwickshire (3) Market Drayton, Shropshire (5)
	SWT (4)	Wistlandpound, Devon on two occasions (N/A) Truro, Cornwall (2,500) Yarnscombe, Devon (3)
	TMS (6)	Swindon, Wiltshire (175) Bethnal Green, East London (3) Kennet, Berkshire (3) Didcot, Oxfordshire (3) Herne Hill, South London (80) Woodley, Reading (3)

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Public concern	UUT (2)	Walton, Cumbria (3) Southport, Merseyside (3)
	WSX (7)	Totnell, Dorset (30) Bradford-on-Avon, Wiltshire (3) Sherborne, Dorset (3) Stapleford, Wiltshire (3) Blandford Forum, Dorset (5) Sutton Poyntz, Dorset (1,250) North Petherton, Somerset (15)
	YKS (2)	Harrogate, North Yorkshire (5) Warthill, North Yorkshire (3)
Taste or odour	AFW (1)	West Drayton, Middlesex (3)
	ANG (15)	Northampton (8) Grantham, Lincolnshire (3) Peterborough (3) Little Melton, Norfolk (3) Boston, Lincolnshire (3) Botolph Claydon, Buckinghamshire (3) Boxted, Essex (3) East Ruston, Norfolk (5) Fordham, Suffolk (10) Scotter, Lincolnshire (3) Kirkby Underwood, Lincolnshire (3) Ancaster, Lincolnshire (3) Bury St Edmunds, Suffolk (8) Haconby, Lincolnshire (5) Stanwick, Northamptonshire (3)
	BRL (1)	Ashley Down, Bristol (3)
	DWR (1)	St Davids, Pembrokeshire (3)
	PRT (1)	Soberton, Hampshire (23)
	SVT (1)	Tewkesbury, Gloucestershire (3)
	SWT (2)	Buckfastleigh, Devon (5,000) Lee Moor, Devon (3)

Nature	Number of not significant and minor events	Area affected (estimate of population affected)
Taste or odour	TMS (8)	Muswell Hill, North London (8) Newbury, Berkshire (3) Bow, East London (3) Chingford, East London (3) Aylesbury, Buckinghamshire (3) Filkins, Oxfordshire (3) Muswell Hill, North London (3) Banbury, Oxfordshire (3)
	WSX (3)	South Brewham, Somerset (3) Ilton, Somerset (5) Winterslow, Wiltshire (3)
Total	225 – AFW (1), ANG (57), BRL (10), CAM (2), DVW (3), DWR (8), ESK (9), HPL (4), NNE (1), PRT (5), SBW (2), SES (2), SEW (7), SRN (11), SSE (1), SST (6), SVT (30), SWT (7), TMS (26), UUT (8), WSX (20), YKS (5)	1,478,499

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 2013 For 26 hours (UUT)	Sale, Greater Manchester.	35,085	Brown discolouration due to a mains burst.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Repaired main. • Rezoned area (brought in water from different source). • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate criticised the company for causing additional loss of supply and discolouration due to inaccurate network plans being used on site in relation to rezoning activity. • Suggested company ensures that procedures prevent the production and use of incorrect diagrams. • The company also failed to fully investigate a coliform failure at a consumer's tap. <p>Risk classification: Significant</p>
08 Jan 2013 For 6 days (TMS)	City of London.	3	Taste or odour.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Issued a do not drink notice. • Sampled affected area. • Provided bottled water on request. • Carried out water fittings inspection and identified backflow risk from filling loop connection on a boiler. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Jan 2013 For 4 hours (SRN)	Shoreham works supplying consumers in West Sussex.	10,123	Disinfection failure.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment works performance. • Flushing of water mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company failed to design and operate its treatment plant in accordance with regulations, a borehole failed to shut down as designed and staff did not act on low chlorine readings appropriately. • Recommended that the company retrain staff and rewrite the works operating procedures to prevent a recurrence. • Recommended all works were checked to confirm that they were shutting down automatically in response to adverse water quality. <p>Risk classification: Significant</p>
14 Jan 2013 For 22 weeks (CAM)	Waterbeach, Cambridgeshire.	3	Taste or odour due to fuel spillage.	<p>Cambridge Water Company Plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Replaced main. • Company replaced customers service pipe. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Company did not inform local authority or PHE contravening Regulation 35. • Recommended the company comply in future with the Information Direction. <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
14 Jan 2013 For 28 days (WSX)	Deans Farm works Salisbury, Wiltshire.	25,036	Nitrate.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Blended supply with another source. • Provided bottled water on request. • Nitrate strategy to be reviewed. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical that the company was unable to continuously operate the nitrate blending scheme as required by Regulation 26 due to a power failure and an issue with resin regeneration in the nitrate removal plant at Clarendon Park works. • Suggested that the bulk supply from Sembcorp Bournemouth Water via Standlynch service reservoir should be recorded as a critical control in the risk assessment. <p>Risk classification: Significant</p>
15 Jan 2013 For 24 hours (UUT)	Wayoh works Harwood, Greater Manchester.	4,500	Brown discolouration due to works control issues.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Repaired faulty equipment. • Sampled affected area. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company report did not contain all relevant information about the works control arrangements and nor did it contain the results of investigational sampling. • After extensive questioning by the Inspectorate, the company demonstrated the cause as accidental operation of pumps by uncontrolled access to maintenance switches. • There have been repeated discolouration events associated with this supply and also third party information passed to the Inspectorate, • Investigation ongoing. <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 2013 For 4 hours (SEW)	Bray (Keheler) works supplying water to Hale and Whitedown supply zones in Berkshire.	44,943	Pesticide (propyzamide).	<p>South East Water Plc action:</p> <ul style="list-style-type: none"> • Treatment for pesticides reinstated. • Sampled affected area. • Shut down treatment works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Ozone plant was not in use at the time for health and safety reasons. Ozone was reinstated after this event and granular activated carbon was regenerated. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
16 Jan 2013 For 53 hours (SWT)	Four properties, in Pennymoor, Tiverton, Devon.	10	Risk of contamination following mains burst.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired and flushed mains. • Increased chlorine residuals in the distribution system. • Provided bottled water on request. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
18 Jan 2013 For 52 hours (ANG)	March water supply zone, Cambridgeshire.	570	Discolouration due to a mains burst.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Sampled affected area. • Rezoned area (brought in water from different source). • Provided bottled water on request. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Jan 2013 For 3 days (ANG)	Langford, Potton, Bedfordshire.	1,435	Loss of supplies/poor pressure due to a mains burst.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Rezoned area (brought in water from different source). • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
23 Jan 2013 For 12 hours (TMS)	Ashford Common works supplying consumers in northwest London.	1,100,000	Disinfection failure.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Repaired faulty equipment. • Sampled affected area. • Review of procedures. • The company introduced an alarm to alert controllers to freezing of data. This action was completed in 2013. <p>This is linked to the event at Kings Cross on 24 January 2013.</p> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by a problem with chlorine dose alarms. • Recommended that the company review all sites where chlorine is dosed as the primary disinfectant to ensure appropriate alarms are in place. <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 Jan 2013 For 6 hours (IWN)	Kings Cross complex – inset appointment, London.	4,000	Disinfection failure.	<p>Independent Water Networks action:</p> <ul style="list-style-type: none"> • Sampled affected area which receives water from Thames Water’s Ashford works where there was a problem with disinfection (see the event at Ashford Common works on 23 January 2013). • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • There was a delay of over 13 hours between the event occurrence and the first confirmed communication between Thames Water and Independent Water Networks. • The estimated time of travel of water from Ashford Common works to Kings Cross is around five hours. • The Inspectorate suggested that the company reviewed its operational communications arrangements with Thames Water to ensure that notifications are timely. <p>Risk classification: Significant</p>
25 Jan 2013 For 24 hours (SEW)	Maidstone, Kent.	6,435	Brown discolouration due to damage to a main.	<p>South East Water Plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Blended supply with another source. • Replaced main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Suggested company revise its flushing guidance to ensure that it covers mains greater than eight inches in diameter. <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 Jan 2013 For 28 hours (SRN)	Vinings service reservoir supplying consumers in Midhurst and Petworth, West Sussex, Haslemere, Surrey.	5,000	Loss of supplies/poor pressure due to planned work.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Retrained staff. • Revised communication procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The event occurred when the company was exchanging a meter on the outlet of a service reservoir. The cause was a lack of awareness and poor communications between the production and network areas of the business. • The Inspectorate was satisfied with the company's handling of this event <p>Risk classification: Significant</p>
26 Jan 2013 For 9 hours (CAM)	Oakington, near Cambridge.	16,500	Loss of supplies/poor pressure due to a mains burst.	<p>Cambridge Water Company Plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided an alternative supply by tanker/bowser. • Provided bottled water on request. • Repaired main. • Rezoned area (brought in water from different source). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company failed to notify the Inspectorate within a reasonable time thereby contravening Regulation 35. • The company did not take samples following the mains burst in breach of Regulation 10. • The Inspectorate reminded the company of its obligation to notify as soon as possible as set out in the Water Industry (Suppliers' Information) Direction 2012. <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 Feb 2013 For 6 hours (TMS)	Reading, Berkshire.	51,000	Loss of supplies/poor pressure due to a mains burst.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Provided an alternative supply by tanker/bowser. • Repaired main. • Rezoned area (brought in water from different source). • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company was reminded that any pertinent information gained from the event investigation should feed into the risk assessment for the supply. <p>Risk classification: Significant</p>
05 Feb 2013 For 24 hours (SWT)	Tywardreath and Par, near St Austell, Cornwall.	3,750	Brown discolouration due to mains repair.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Inadequate contingency planning. • Suggested that the company endeavours to model hypotheses put forward to support conclusions of investigations and to embed learning. • Suggested that the company consider equipping network staff with the means of measuring and assessing turbidity to allow a more objective assessment of discolouration to support visual. <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 2013 For 1 hour (UUT)	Worsthorne works Burnley, Lancashire.	131,000	Treatment failure – turbidity.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Review of procedures. • Retrained staff. • Repaired faulty equipment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was associated with a loss of treatment control linked to maintenance work. Alarms generated were not responded to and the company's telemetry and scada control philosophy is now the subject of enforcement in the form of a legally binding programme of remedial work (see <i>Annex 4</i>). • Recommended a review of sampling parameters used in response to events and updating of the risk assessment to reflect the work being carried out to prevent a recurrence of this event. <p>Risk classification: Significant</p>
07 Feb 2013 For 34 days (SVT)	Draycote works supplying Rugby, Flecknoe, Napton, Shilton in Warwickshire.	89,000	Quinmerac (pesticide).	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Enhanced raw water monitoring put in place. • Review of usage of products containing this substance in the catchment. • Increased frequency of GAC regeneration. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate suggested that the company continues to carefully monitor the efficacy of treatment and update its risk assessment to reflect this newly identified risk and the associated controls. <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 2013 For 3 days (AFW)	Harlow and Epping in Essex.	80,000	Brown discolouration due to planned work.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed affected area. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Recommended the company uses the most recent data to calibrate network models to improve the risk assessment of discolouration. • Suggested that where a risk of discoloured water is predicted that consumers are provided with warning letters in advance. • Suggested the company reviews its current threshold criteria for warning customers in advance of major cleaning projects to enable awareness and action by key stakeholders, for example, schools, hospitals, sensitive customers and local authorities. <p>Risk classification: Significant</p>
11 Feb 2013 For 6 hours (WSX)	Poole, Dorset.	5,320	Brown discolouration following return of main to supply after repair.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Retrained staff. • Review of procedures. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Recommended that the company briefs staff of the importance of returning supplies in a controlled and stepwise manner with a focus on water quality when returning mains to service. <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 Feb 2013 For 2 days (NNE)	Spennymoor, County Durham.	42,546	Brown discolouration due to a mains burst.	<p>Northumbrian Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Sampled affected area. • Updated GIS system to identify critical valves in this area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was exacerbated and extended because of the company's lack of accurate knowledge of the existence of a distribution valve on an adjacent main to the one being repaired. • Suggested that the company takes steps to ensure that all line valves, particularly for strategic mains, are recorded accurately on GIS system. <p>Risk classification: Significant</p>
16 Feb 2013 For 4 days (SVT)	Belper water supply zone, Ilkeston, Derbyshire.	3,830	Brown discolouration due to a mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Sampled affected area. • Rezoned area (brought in water from different source). • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company informed customers that the water was safe to drink, however, subsequent aluminium results exceeded the standard and some exceeded the health limit (suggested no adverse response level (SNARL)). • The Inspectorate was critical that the company planned the repair, but action to reinstate the network to normal operation impacted on water quality. • Recommended that the company use caution when advising customers that the water is safe to drink before receiving results to validate that such advice is correct. <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 2013 For 1 hour (UUT)	Hodder works supplying consumers in Fleetwood, Preston and Blackpool areas.	876,961	Treatment failure – turbidity.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Consulted with turbidity instrument manufacturer to ensure suitable maintenance in the future. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical of the company for failing to maintain equipment critical to compliance with Regulation 26. <p>Risk classification: Significant</p>
18 Feb 2013 For 1 day (NNE)	Lartington works supplying consumers in Redcar, Stockton and Teesdale areas	592,006	Treatment failure due to power loss.	<p>Northumbrian Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Rezoned area (brought in water from different source). • Repaired faulty equipment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • After the event an uninterrupted power supply was installed on the ferric sulphate coagulant dosing system at this works. • The Inspectorate suggested that the company reviewed the security of supply to the lime dosing as well as coagulant aid dosing. • Following this event the company proactively assessed coagulation control systems at all works for the same fault, other site was identified as being at risk. The Inspectorate requested details of timescale for remediation of this risk. <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 2013 For 48 hours (YKS)	North Sheffield, Yorkshire.	93,580	Brown discolouration due to flow valve defect.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Provided bottled water on request. • Flushed mains. • Sampled affected area. • Repaired faulty equipment and reviewed and enhanced maintenance schedules for this type of valve. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical of inappropriate alarm settings, these have since been reviewed. <p>Risk classification: Significant</p>
01 Mar 2013 For 48 hours (YKS)	Kirkhamgate works supplying consumers in the Wakefield area of Yorkshire.	177,791	Treatment failure – turbidity.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Increased chlorine residuals at treatment works. • Shut down treatment works. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to a manganese filter being returned to service without a backwash causing water >1NTU to enter disinfection process contrary to Regulation 26. • The Inspectorate was critical of the lack of communication of faults and out of service assets. • Recommended that the company review all similarly configured sites and take action to prevent recurrence as appropriate. <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 Mar 2013 For 3 days (TMS)	Marylebone and Paddington, London	65,770	Loss of supplies/poor pressure due to a mains burst.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Provided an alternative supply by tanker/bowser. • Repaired main. • Sampled affected area. • Rezoned area (brought in water from different source). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This was a complex repair to a burst on a 70-year-old large main, the company worked with the local authority to rezone and minimise the impact of the resultant flooding. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
06 Mar 2013 For 3 weeks (UUT)	Single commercial property in north Manchester.	3	pH, aluminium, taste and odour.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Carried out water fittings inspection and installed boundary box. • Provided bottled water on request. • Issued a do not drink notice. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by water stagnating in a cement lined main because there were no other draw-offs. • Recommended review of risk assessments and Distribution, Operation and Maintenance Strategy (DOMS) to look at similar circumstances arising elsewhere, e.g. connections adjacent to closed DMA valves serving few premises. <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 Mar 2013 For 48 hours (UUT)	Sutton Hall works and Huntington works supplying consumers in areas, including Warrington, Chester and Liverpool.	1,974,734	Pesticide (MCPA and mecoprop).	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Dosed PAC to reduce levels of MCPA and mecoprop in raw water (River Dee). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Treatment insufficient to mitigate pesticide risk. • Enforcement action taken following subsequent relevant pesticide failures (see <i>Annex 4</i>). <p>This is linked to the event at Boughton works on 13 March 2013.</p> <p>Risk classification: Significant</p>
11 Mar 2013 For 24 hours (SWT)	A road in Devonport, Plymouth.	83	Taste or odour – sulphurous and musty odour.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided an alternative supply by tanker/bowser. • Rezoned area (brought in water from different source). • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical that risk assessment carried out during this event was not documented and recommended that the company review its procedures for assessing the risk of reactive network operations to ensure that information gathered is recorded in a consistent manner and that guidance is provided to staff regarding the factors to be considered in the risk assessment. • The Inspectorate was critical that the unusual network configuration in the affected area was not clearly apparent on the GIS system available to the technician therefore the existence of a dormant section of main was unknown. • The Inspectorate was critical that the impact of the root cause (lack of information) was exacerbated by a critical hydrant on the dormant section of main not being found because it was located under parked vehicles. <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 Mar 2013 For 1 day (DVW)	Boughton works supplying consumers in Chester and Newton water supply zones.	90,000	Pesticide (MCPA and mecoprop).	<p>Dee Valley Water Plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Sampled affected area. • Shut the intake to the works until levels in the river moderated. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Treatment insufficient to mitigate pesticide risk. • The Inspectorate has put in place a Notice requiring improved treatment and catchment management activities (see <i>Annex 4</i>). <p>Risk classification: Significant</p>
13 Mar 2013 For 24 hours (NNE)	Mill Hill service reservoir, Peterlee and South Sunderland, Northumberland.	34,000	Brown discolouration due to planned work.	<p>Northumbrian Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Service reservoir put back into supply. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to inadequate contingency planning during an exercise to carry out a drop test on this reservoir. • Suggested the company carefully considers the risk of switching from automatic to manual control and documents learning from this event into system procedures. • Recommended improvement to risk assessment of planned work to take account of network flow surges resulting in discoloured water. <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 Mar 2013 For 2 days (SRN)	Testwood works supplying consumers across a large area of Hampshire, including Rownhams and Lyndhurst.	25,000	Chemical delivery near miss.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Retrained staff. • Review of procedures. • Sampled affected area. • The company has since introduced a competency-based training system for all operatives, including random audits at its sites to ensure that chemical deliveries are being supervised in a satisfactory manner. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event related to the mislabelling of a chemical pressure vessel, which contained sodium hypochlorite instead of sodium bisulphite. This was a 'near miss' situation and water quality was not affected. • Recommended that the company assesses the competence of all of its current treatment works operators and managers in relation to Regulation 31 and DWI Information Letter 05/2011. • Recommended that the company undertakes witness and audit compliance checks for a number of chemical deliveries in each year at each site with the frequency and the risk-based approach to selection of sites for audit to be embedded in company policy. <p>Risk classification: Significant</p>
20 Mar 2013 For 12 hours (BRL)	Westbury-on-Trym, north of Bristol, Somerset.	2,300	Brown discolouration due to planned work.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Systematic flushing carried out. • Sampled affected area. • Review risk assessment when planned work becomes reactive work. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • A flange moved during planned work resulted in reactive work to facilitate a repair and this led to discolouration. The company acknowledged that risk assessments should be fully reviewed where planned work becomes reactive work. <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 2013 For 2 days (YKS)	New Edlington, Wadsworth, part of Conisborough and Doncaster, Yorkshire.	9,808	Brown discolouration due to planned work.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided bottled water on request. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to a hydrant being open on a new main at time of commissioning. The hydrant was a modification during construction that was not recorded correctly on GIS. • Recommended that procedures are reviewed to enable accurate information about new assets to be available to staff during commissioning works. <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 Mar 2013 For 4 hours (ESK)	Chigwell works, near Romford, Essex.	469,292	Disinfection failure: PLC failure caused loss of chlorine.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Increased chlorine residuals at treatment works. • Repaired faulty equipment. • Shut down treatment works. • Sampled affected area. • The company noted that a lack of training and experience of the operators was contributory to this event and put in place additional training for staff. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate audited this site as part of the event investigation (see <i>Chapter 6: Technical audit activity and price review</i>). • The Inspectorate was critical the company took over a month to remedy the defect after identifying the fault on the hardwired system, of particular concern was the lack of an adequate mechanism by which critical faults could be fast tracked for remediation. • The Inspectorate was critical that inadequately disinfected water was allowed to enter supply and this was not escalated to the standby manager in a timely manner. • The Inspectorate was critical of the lack of an operating procedure for the wastewater lagoon. It was recommended that the company address this gap and update the site operating manual and provide guidance on decisions to empty the contact tank into the lagoon. • Recommended that all Site Operating Manuals are kept up to date and that all works controllers are fully aware of and follow their content. <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 Apr 2013 For 4 days (NNE)	Wooley Hill service reservoir supplying customers in Stanley Crook, Billy Row, Willington and Oakenshaw in County Durham.	27,564	Brown discolouration due to burst on inlet to reservoir.	<p>Northumbrian Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided bottled water on request. • Sampled affected area. • Repaired main. • Removed service reservoir from supply. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
03 Apr 2013 For 3 days (AFW)	Iver works supplying consumers in north and west London	1,000,000	Evidence of chemical pesticide (carbetamide).	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Adjusted treatment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The ozone/GAC treatment did not provide sufficient removal of this pesticide on this occasion. • Notice and undertaking put in place for Iver works to require actions to address pesticide failures during AMP6. <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 Apr 2013 For 5 days (UUT)	Woodgate Hill service reservoir supplying consumers in Bury, Oldham, Stockport, Manchester, Macclesfield and Tameside.	1,624,866	Taste or odour – chlorine.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Installation of further telemetry equipment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to a flaw with the chlorine monitoring equipment. • The Inspectorate was critical of company's telemetry and scada system, specifically under particular operating conditions site alarms for chlorine were suppressed because they are affected by flows in a large diameter trunk main. • The Inspectorate was critical that the set point for chlorine control was allowed to vary by 50% and was controlled by only a single monitor (which failed). • Recommended that the company ensures that critical control instrumentation is fully operable under all conditions to prevent breaches of Regulation 26. <p>Risk classification: Significant</p>
09 Apr 2013 For 12 hours (SRN)	Ryde, Isle of Wight.	3,898	Brown discolouration due to a mains burst.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Provided bottled water on request. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company was reminded to exercise greater care when carrying out mains repairs. <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 Apr 2013 For 2 weeks (AFW)	Saffron Walden, Essex.	3	Polyaromatic hydrocarbons and associated taste and odour.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Regular flushing of mains to address low turnover until permanent remedy provided, e.g. connect property to a different main. • Issued a do not drink notice. • Provided bottled water on request. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate noted that the consumer had recently replaced their supply pipe and while this was not considered to be a contributory factor, the company found infringements of the fittings regulations at this property. <p>Risk classification: Significant</p>
14 Apr 2013 For 2 days (YKS)	Aughton water pumping station supplying consumers in South and South East of Sheffield.	75,000	Brown discolouration due to loss of power.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Review of procedures. • Shut down treatment works. • Restored power to site. • Provided bottled water on request. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical that the power loss event was not escalated and potential impact on water quality was not adequately risk assessed. • Suggested a review of risk assessment process to ensure it properly captures power supply issues with the potential to impact on water quality. <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 2013 For 1 week (BRL)	Shipton Moyne works supplying consumers in Sherston, Wiltshire.	21,000	Bromate.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Shut down treatment works. • Sampled affected area. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company made a significant change to the treatment at this works (installed UV) without first carrying out a full risk assessment. If this had been done then the potential to form bromate would have been identified from the level of bromide in the raw water and the use of chlorine to aid iron removal on the filters. By not taking these steps the company did not comply with Regulations 26 and 27. • The Inspectorate was critical that the company did not promptly inform Wessex Water of the bromate failure in this bulk supply. • Recommended all stakeholders be informed of issues in a timely manner. <p>Risk classification: Significant</p>
24 Apr 2013 For 24 hours (BRL)	Yate, north of Bristol.	23,000	Brown discolouration due to planned work.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided bottled water on request. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Recommended that the company risk assesses planned work with the awareness of the potential for wider impact on water quality and consumers by using network modelling. <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 Apr 2013 For 48 hours (UUT)	Wybersley works supplying consumers in Cheadle Hulme, Romiley, Stockport and large areas across Greater Manchester and some of Cheshire.	319,000	Disinfection failure.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment works operation. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company was delayed in its reporting of this event. This was discovered when another event was being investigated. • The Inspectorate was highly critical of alarm handling, response and control philosophy of this site. • The Inspectorate issued a warning letter highlighting failure to meet Regulation 35 and requirements of the Information Direction. • Enforcement action taken resulting in a legally binding programme of work to improve telemetry and scada control philosophy (see <i>Annex 4</i>). <p>Risk classification: Significant</p>
25 Apr 2013	Eurofins Environmental Testing UK Ltd.	Not applicable	Failure of laboratory AQC for pesticide analysis.	<p>South Staffordshire Water action:</p> <ul style="list-style-type: none"> • During an internal audit the company identified their United Kingdom Accreditation Service (UKAS) accredited analytical provider had been using out of date calibration standards and inappropriate processing of chromatographic peaks. • Analysis was suspended and UKAS informed. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate required the company to report shortfall in pesticide results caused by suspension of method. • The Inspectorate recommended the company resubmit affected data with annotation and add a note on the company's public record (e.g. no analytical control). • An identical event and response was reported on 26 April by Cambridge Water. <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 Apr 2013 For 1 week (WSX)	Marshfield, South Gloucestershire.	18	Bromate.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
29 Apr 2013 For 12 hours (BRL)	Montpelier service reservoir, Weston-Super-Mare, North Somerset.	12,500	<i>E.coli.</i>	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Isolated service reservoir. • Sampled affected area. • Audited the laboratory. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was related to a false presumptive <i>E.coli</i> result. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
01 May 2013 For 3 weeks (SBW)	Alderney works which supplies consumers in Bournemouth and Poole areas in Dorset.	238,000	<i>Cryptosporidium.</i>	<p>Sembcorp Bournemouth Water Ltd action:</p> <ul style="list-style-type: none"> • Enhanced monitoring in response to a notification from PHE regarding a rise in cases of cryptosporidiosis under investigation. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate carried out an audit where defects were observed. Additional control measures, including turbidity monitoring on individual slow sand filters and UV disinfection have been installed since. <p>This is linked to events on 30 November 2013 and 25 December 2013 at Alderney works.</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
03 May 2013 For 56 weeks (Eurofins)	Not applicable	Not applicable	Laboratory analysis: organophosphorous method.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> The UKAS accreditation for the method was suspended by UKAS until corrective action is taken and verified. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> This event related to an incorrect manual interpretation of trace organic analysis. The Inspectorate required the company to resubmit the data and annotate their public record for the affected results. <p>Risk classification: Significant</p>
04 May 2013 For 12 hours (UUT)	Bury, Greater Manchester.	46,611	Brown discolouration due to illegal use of a hydrant.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> Sampled affected area. Flushed the mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> This event concerns the illegal use of a hydrant by a third party. The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
05 May 2013 For 5 days (SVT)	Whitacre works supplying consumers in North Warwickshire, Nuneaton, Coventry and Bedworth.	41,200	Coliform bacteria.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> Shut down treatment works, inspected and cleaned out tank and audited works operation. Review of procedures. Sampled affected area. Rezoned area (brought in water from different source). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> The company detected coliform bacteria at the works and concluded that varying levels in a balance tank had created conditions for microbial growth, the investigation used typing of isolates to link the various works detections. <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 May 2013 For 48 hours (AFW)	Rye Hill, Harlow, Essex.	13	Taste or odour (PAH) associated with planned work.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Provided bottled water on request. • Issued a do not drink notice. • Flushed mains. • Rezoned area (brought in water from different source). • Sampled affected area. • Blended supply with another source. • Flushed mains. • Increased monitoring for PAHs. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was probably due to exposure of lining following mains cleaning to remove manganese deposits leading to increased leaching of fluoranthene and benzo(a)pyrene. • The Inspectorate was critical of the company for failing to send test results for manganese to the Inspectorate, as the area is subject to an improvement programme to address discolouration due to manganese. • Recommended that the company reviews procedures for event sampling. <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 May 2013 For 365 days (WSX)	Trading Estate, Wincanton, Somerset.	30	Taste or odour – hydrocarbons.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. • Do not drink advice given. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company were first aware of a problem on this trading estate in 2006 when consumers reported taste and odour issues. The Inspectorate was critical that the company failed to identify the wider contaminated land issue at that time. In 2013 there were further taste and odour failures and detection of hydrocarbons and later dieldrin. • By the end of 2013 only two commercial properties have replaced their communication pipes and the company are writing to the owners requiring them to replace the remaining communication pipes with suitable barrier pipes within 28 days. • The Inspectorate has noted that the company did not use its Section 74 powers under the Act in a timely way to prevent this event. <p>This event is linked to the event at a trading estate in Wincanton on 18 May 2013.</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
08 May 2013 For 5 hours (YKS)	Huby works supplying consumers near York in rural parts of North Yorkshire.	3,000	Disinfection failure.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Review of procedures. • Shut down treatment works. • Review of communications between site personnel and control room during events. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event occurred when a standby technician dosed the wrong compartment of the contact tank in response to the loss of disinfection at the site. • The Inspectorate was critical that the site override was used based on incorrect information. The site override could be applied remotely and during this event the override was operational without operatives being on site. The standby technician was unable to contact water quality staff for guidance. • Recommended the company investigate the performance of the wash water pumps to ensure that they are delivering water at a sufficient rate to effectively wash the filter. • Recommended the company remove the material from the weir wall as this may be preventing the removal of dirt during a wash and investigate the cause of the dead spot in the filter wash and take steps to ensure that the filter washes correctly. • Recommended the company alters its procedures such that the risks associated with any process change are considered and recorded. • Recommended the company introduces a system to review risk assessments in light of any event, compliance breach or near miss that could lead to a breach of the regulations. • Recommended that the company review the risk assessment for this site in light of this event and updates it accordingly. <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 May 2013 For 2 days (DWR)	Frongoch service reservoir, supplying consumers north of Aberystwyth, Ceredigion.	1,500	<i>E.coli.</i>	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Removed service reservoir from supply. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event occurred after heavy rainfall, however, the company concluded the sample was contaminated at time of collection because water was dripping from an overhanging tree. • The Inspectorate was critical of the company's conclusions and recommended that samples should be collected, handled and analysed in compliance with Regulation 16 on every sampling occasion. New sampling facilities were installed subsequently. <p>Risk classification: Significant</p>
09 May 2013 For 2 days (WSX)	Biddestone, Wiltshire.	63	Precautionary boil water notice following a burst main.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Issued a precautionary boil water notice following potential contamination of a burst main by a leaking sewer. • Provided bottled water on request. • Sampled affected area. • Replaced main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 5 days (AFW)	Ickenham, northwest London	3	Taste or odour due to a hydrocarbon spillage.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Provided bottled water on request. • Retrained staff. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate noted incorrect advice was given to the consumer initially. Call centre staff retrained on how to deal with similar complaints. • Suggested the company carry out periodic random audits of advice given to consumers reporting water quality concerns by someone knowledgeable in drinking water quality science and regulation. <p>Risk classification: Significant</p>
13 May 2013 (WSX)	Not applicable.	Not applicable.	<i>Cryptosporidium.</i>	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Notified by PHE of rise in cases of cryptosporidiosis along with other water companies in area and provided relevant information. • Liaised with Sembcorp Bournemouth Water in relation to a bulk supply. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company provided all necessary information to PHE • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 2 days (NNE)	Frosterley service reservoir supplying consumers in Bishop Auckland and Wolsingham supply zone.	91,000	<i>E.coli.</i>	<p>Northumbrian Water Ltd action:</p> <ul style="list-style-type: none"> • Bypassed service reservoir. • Sampled affected area. • Rezoned the area (brought water in from a different area). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Ingress was identified as the cause, however, the Inspectorate was critical of the company because there had been a previous inspection in 2011 when minor ingress was identified and remedied. • Recommended that the company reviews its process for inspection and verification of remedial works. <p>Risk classification: Significant</p>
16 May 2013 For 5 years (SWT)	Exeter, Devon – six schools.	Not applicable.	Media reports about nickel failures in schools.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Water fittings inspections and sampling carried out at six school premises. • Water fittings Notice served on the building owners to remediate contraventions by September 2013. • One school was supplied through a cast iron main and this has been transferred onto an alternative supply main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The water fountains installed had American National Standards Institute (ANSI) approval but not WRAS approval and the taps, although WRAS approved, have been subject to laboratory leach tests and shown to leach metals. These have been replaced. • Two previous complaints relating to water quality at two of the affected schools in 2007 and 2011. These were traced by water fittings inspections to be due to long runs of copper pipework with poor turnover. • Inspectorate requested by Education Authority to act as technical advisor in relation to repeated water quality problems in these buildings. <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
17 May 2013 For 1 day (UUT)	Holcombe Moor service reservoir supplying consumers in Bury, Greater Manchester.	1,027	Treatment failure – chlorine over dosing.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Repaired faulty equipment. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to a flaw in the monitoring system such that it failed to trigger an alarm when a high chlorine signal was received resulting in high chlorine entering distribution and consumer complaints being received. • Recommended that the company ensures that equipment and software used for chemical dosing control is fit for purpose. <p>Risk classification: Significant</p>
18 May 2013 For 5 days (SVT)	Bomere Heath, Shrewsbury, Shropshire.	53	Cross connection between mains supply and a private supply.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Issued a do not drink notice. • Sampled affected area. • Water fittings inspection undertaken. • Removed illegal connection. • Company is progressing legal action against the private supply operator and/or plumber. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Following a complaint from a consumer about a plastic odour the company investigated and found a private borehole had been illegally connected to the Severn Trent Water network. • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 365 days (WSX)	Trading estate, Wincanton, Somerset.	3	Pesticides (dieldrin and lindane).	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> Enhanced monitoring of a taste and odour hydrocarbon event identified the presence of other contaminants. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> Dieldrin (600ng/l) and Lindane (15ng/l) identified as part of the investigation of a land contamination event on this trading estate. <p>This event is linked to the event at a trading estate in Wincanton on 8 May 2013.</p> <p>Risk classification: Significant</p>
28 May 2013 For 1 day (SVT)	Strensham works supplying areas of Warwickshire and Worcestershire.	217,613	Enterococci.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> Carried out a process review and implemented a process improvement programme. Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> The Inspectorate audited the site in July and confirmed ongoing process deficiencies and noted that repeat coliform bacteria failures had not triggered a review by the company of its risk assessment. The company subsequently submitted a new risk assessment in September 2013. <p>Risk classification: Significant</p>
28 May 2013 For 12 hours (SWT)	Small area of Paignton, Devon.	7,200	Media interest due to planned work causing aeration.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> Sampled affected area. Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> The Inspectorate was satisfied with the company's handling of this event. <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 May 2013 (ESK)	Hanningfield laboratory.	Not applicable	Falsification of laboratory results.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> Investigation and internal audit of the chain of custody of relevant results and methods with disciplinary and other action to prevent a recurrence. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> This event was due to the company's sampler producing chlorine results from on-site tests without their chlorine meter which remained at their base when they forgot to bring it with them. The Inspectorate concluded that the company failed to meet the requirements of Regulation 35 as there was a delay in notifying this event, otherwise the Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
29 May 2013 For 5 days (AFW)	Rye Hill and Fairfield reservoir affecting consumers in Epping, Essex.	61,389	Brown discolouration due to planned work.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> Review of procedures. Sampled affected area. By-passed service reservoir. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> The Inspectorate expressed concern about the repeated events associated with mains cleaning work in this zone during the year. <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 May 2013 For 46 hours (DWR)	Graig Fawr service reservoir, Ammanford near Swansea.	22,750	Brown discolouration due to planned work.	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Flushed mains. • Removed service reservoir from supply. • Retrained staff to follow procedures. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate concluded that this event was caused by the company's actions and was avoidable. The company carried out an on-site risk assessment ahead of planned work to inspect the reservoir and this was not recorded. • The Inspectorate recommended the company follow its own written procedures for risk assessment. <p>Risk classification: Significant</p>
05 Jun 2013 For 104 weeks (DWR)	Tywyn, Gwynedd.	5	Brown discolouration.	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Flushed mains. • Replaced mains. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Consumers complained directly to the Inspectorate because the company was exacerbating a problem with a main in poor condition by carrying out regular flushing exercises aimed at removing iron deposits without giving advance warning to the residents. • The Inspectorate was critical of the company for allowing a protracted dispute to take place over who was responsible for the main because the site had once been owned by the Ministry of Defence (MOD). The company was reminded of their duty to supply wholesome water at the point of consumption. • The company has since installed a new main. <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 2013 For 7 days (UUT)	Tosside works, supplying consumers in Tosside, Lancashire.	91	Turbidity due to mains burst causing the borehole to drain.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Provided an alternative supply by tanker/bowser. • Rezoned area (brought in water from different source). • Tosside works has since been abandoned. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
06 Jun 2013 For 48 hours (ANG)	Hunstanton area of Norfolk.	13,708	Media interest in a burst main.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Rezoned area (brought in water from different source). • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Jun 2013 For 3 days (BRL)	St Pauls and St Werburghs areas of Bristol.	4,220	Brown discolouration due to planned work.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Retrained staff. • Review of procedures. • Sampled affected area. • Disciplinary action. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical that a network employee acted in a reckless manner contrary to company plans and procedures. • The Inspectorate notes that the company took disciplinary action and other steps to emphasise the consequences of unauthorised operations for both staff and consumers. • The Inspectorate recommended that the company gives consumers appropriate advance warning of planned work in areas identified as being at risk of discolouration. <p>Risk classification: Significant</p>
08 Jun 2013 For 10 hours (SRN)	Ashey water supply zone on the Isle of Wight.	203	Brown discolouration due to a mains burst.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Jun 2013 For 17 hours (TMS)	West Hampstead, London.	8,000	Loss of supplies/poor pressure due to mains damage.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Rezoned area (brought in water from different source). • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
12 Jun 2013 For 48 hours (DWR)	Cwmparc, Ton Pentre, Gelli, Ystrad, Mid Glamorgan.	29,805	Brown discolouration due to a mains burst.	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided bottled water on request. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
14 Jun 2013 For 8 hours (SBW)	Sandleheath, near Fordingbridge, Hampshire.	1,350	Brown discolouration due to planned work.	<p>Sembcorp Bournemouth Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided bottled water on request. • Sampled affected area. • Review of procedures. • The company's response was satisfactory. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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
14 Jun 2013 For 21 hours (UUT)	Sweetloves works supplying consumers in Bolton, Lancashire.	128,256	Treatment failure – lime dosing.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Shut down treatment works. • Sampled affected area. • Repaired equipment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate warned the company of the need to ensure appropriate water quality monitoring is in place at all sites to allow for early detection of deterioration in water quality and to ensure that the requirements of Regulation 26 are met in its entirety. • Recommended that the company take immediate action to comply with Regulation 35 and the Information Direction in full. • Recommended that the company reviews the site auto-shutdown to ensure that it provides adequate protection and that alarm levels give appropriate warning of the risks specific to the site. <p>Risk classification: Significant</p>
16 Jun 2013 For 4 days (SVT)	Broadway service reservoir and supply zone, Worcestershire.	5,000	Enterococci.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired reservoir. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event followed an earlier serious event at Broadway reservoir site in December 2012 involving ingress of faecal matter via a broken pipe within the reservoir site. • Enhanced monitoring following the previous event identified a single Enterococci and the company acted on an internal inspection, including flood testing. The company identified ingress to one of the reservoir cells and acted quickly to effect repairs before returning to supply. • The company updated the risk assessment for the site, listing the short-, medium- and long-term measure to ensure this site remains fit for purpose. <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 Jun 2013 For 1 week (CAM)	Sawston, south of Cambridge.	No properties subsequently affected.	Rising groundwater risk from historic contamination.	<p>Cambridge Water Company Plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Liaised with all relevant parties as part of risk assessment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company was informed by EA of concerns that high groundwater levels might affect black plastic service pipes because historically groundwater has contained perchloroethene. The company investigation showed no contamination had occurred. • The company was reminded to notify events to the Inspectorate as soon as possible, as required by Regulation 35 and the Information Direction. <p>Risk classification: Significant</p>
18 Jun 2013 For 360 days (TMS)	Spencer House Laboratory, Reading.	Not applicable	Analytical quality control: organics	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • A quality control problem affecting two instruments used for trace organics was identified as part of proficiency testing. The investigation led to changes in the way the instrument is calibrated for use for the particular parameter. The company has worked with UKAS to ensure its quality control for organic analysis is audited as fit for purpose. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company was required to resubmit the affected data with annotation showing where analysis could not be verified. • Recommended that the company devise a procedure for blind testing for parameters not covered by a proficiency scheme. <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 Jun 2013 For 1 day (ESK)	Shoebury, Southend, Essex.	6,849	Brown discolouration due to a mains burst.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Flushed mains. • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
20 Jun 2013 For 5 days (UUT)	Loveclough works supplying consumers in Rossendale, Lancashire	13,933	Taste or odour – geosmin.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Removed works from supply. • Dosed PAC in the raw water. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to the presence of geosmin passing undetected into treated water causing consumer complaints. • A Notice has been put in place by the Inspectorate to require catchment management measures and reservoir mixing, with GAC filtration as an alternative (see <i>Annex 4</i>), <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 Jun 2013 For 2 days (UUT)	Leigh, Greater Manchester	45,840	Brown discolouration due to planned work.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event occurred when Daisy Hill reservoir was taken out for cleaning and inspection as part of enabling work for the closure and maintenance of the Haweswater Aqueduct. The work was planned and carried out in accordance with the method statement, but the deposits were worse than expected. The company acted to warn consumers using automated message board and the number of complaints was small. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
20 Jun 2013 For 36 hours (YKS)	Villages south of Huddersfield including. Shelley, Shepley, Highburton, Kirkburton, Lepton and Farnley Tyas.	14,368	Loss of supplies/poor pressure due to a mains burst.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Rezoned area (brought in water from different source). • Provided an alternative supply by tanker/bowser. • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Jun 2013 For 12 hours (ANG)	Ipswich east, Suffolk.	2,275	Brown discolouration linked to fire fighting.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Sampled affected area. • The company contacted the fire service and wrote to all authorised users of fire hydrants reminding them of their obligations. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
21 Jun 2013 For 2 hours (DWR)	Ely and Canton, Cardiff.	25,000	Loss of supplies/poor pressure due to a mains burst.	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided bottled water on request. • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
24 Jun 2013 For 24 hours (SVT)	Wolverhampton, West Midlands.	30,145	Brown discolouration due to planned work.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired equipment (valve). • Sampled affected area. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by flow testing and maintenance of a strategic valve without sufficient contingency planning. • The Inspectorate recommended that the company identify learning from this event to minimise the likelihood of further discolouration. <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 Jul 2013 For 4 hours (UUT)	Lostock works supplying consumers in Manchester.	872,827	Treatment failure – pH.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired faulty equipment. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was related to issues with alarms and overrides in use at the site, which led to a failure of lime dosing and treated water pH was below the standard. • Enforcement action taken resulting in a legally binding programme of work to improve telemetry and scada control philosophy (see <i>Annex 4</i>). <p>Risk classification: Significant</p>
04 Jul 2013 For 29 days (UUT)	Single property in Lupton, Lancashire	3	<i>E.coli</i> and Clostridia.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Water fittings inspection. • Provided bottled water. • Issued boil water advice. • Installed backflow protection. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event occurred at an agricultural property with a private water supply. • The Inspectorate was satisfied with the company's handling of this event. <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 Jul 2013 For 1 day (ESK)	Caister area of Great Yarmouth, Norfolk.	158	Brown discolouration due to a mains burst.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. • Rezoned area. • Flushed main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical of the company's actions during re-zoning which may have caused flow reversals increasing the impact on consumers and prolonging the discolouration. <p>Risk classification: Significant</p>
08 Jul 2013 For 48 hours (SVT)	Butterhill water supply zone in Staffordshire.	9,595	Brown discolouration due to a mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The area had been scheduled for cleaning later in the year and this has been rescheduled for May 2014. • The company has updated its records since additional valves were installed. <p>Risk classification: Significant</p>
08 Jul 2013 For 24 hours (TMS)	Hangar Lane, Kempton and Hounslow, London.	80,000	Loss of supplies/poor pressure due to a mains burst.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Jul 2013 For 2 days (WSX)	Tollard Royal, Wiltshire.	16	Enterococci.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Issued boil water advice. • Provided bottled water. • Carried out water fittings inspection, a number of deficiencies found and a contraventions Notice issued. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
09 Jul 2013 For 15 hours (SRN)	Highdown reservoir near Worthing, Sussex.	72,500	Loss of supplies/poor pressure due to a mains burst.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Sampled affected area. • Removed service reservoir from supply. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by a burst on the 24 inch outlet main from Highdown service reservoir. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
09 Jul 2013 For 2 days (SVT)	Telford, Shropshire.	33,620	Loss of supplies/poor pressure due to high demand.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired faulty equipment. • Review of procedures. • Provided an alternative supply by tanker/bowser. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate concluded this was an avoidable event caused by booster pumps, which were temporarily operating on a timed basis at a time of unusually high demand. • The Inspectorate suggested that the company improved contingency planning for maintaining security of supply during periods of high demand. <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 Jul 2013 For 2 days (TMS)	Westminster, London.	168	Loss of supplies/poor pressure due to a mains burst.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided an alternative supply by tanker/bowser. • Repaired main. • Sampled affected area. • Rezoned area (brought in water from different source). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
11 Jul 2013 For 1 day (ESK)	Pitsea, Essex.	220	Brown discolouration due to a mains burst.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Repaired main. • Rezoned area (brought in water from different source). • Sampled affected area. • Provided an alternative supply by tanker/bowser. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • It was noted that the discolouration and loss of supply was caused by the company isolating the wrong main and it was suggested that the company satisfy itself that its dynamic risk assessments used during such events take water quality and consumer impact into consideration fully. <p>Risk classification: Significant</p>
11 Jul 2013 For 12 hours (SVT)	Grinshill service reservoir, Shropshire.	600	Unauthorised access and damage to service reservoir.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Reviewed procedures. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by unauthorised emergency access to a service reservoir for the purposes of firefighting (see <i>Chapter 5: Drinking water quality events</i>). <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
11 Jul 2013 For 60 days (UUT)	Single property in Horwich, Bolton, Lancashire.	3	<i>E.coli</i> and pH.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Provided an alternative supply by tanker/bowser. • Sampled affected area. • Carried out maintenance of point of use equipment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused when the owner of a concessionary supply made plumbing alterations (to tank and outside toilet) that resulted in backflow and contamination of the drinking water supply. • Recommended that the company reviews the point of use treatment in place for this supply to ensure it remains fit for purpose. • Recommended that a full fittings inspection is carried out. <p>Risk classification: Significant</p>
14 Jul 2013 For 5 days (UUT)	Haydock and Golborne area of Merseyside.	82,000	Brown discolouration due to fire fighting.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed water mains. • Contacted third parties (fire service). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 7 days (SEW)	Greatham and Hindhead, Surrey.	132,500	Brown discolouration due to planned work.	<p>South East Water Plc action:</p> <ul style="list-style-type: none"> • Blended supply with another source. • Flushed mains. • Provided an alternative supply by tanker/bowser. • Repaired faulty equipment. • Rezoned area (brought in water from different source). • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by changes to the network in preparation for high demand during hot weather. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
20 Jul 2013 For 6 days (TMS)	Latton works supplying consumers in Cirencester, East Gloucestershire	45,100	Treatment failure due to a loss of power.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Provided an alternative supply by tanker/bowser. • Replaced faulty equipment. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by a problem with the local power supply resulting in a failure of a circuit breaker at the works that stopped the mains booster pumps at Aldsworth. • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 24 hours (SRN)	Brighton, East Sussex.	125	Loss of supplies/poor pressure due to mains damage.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Unacceptable delay in notifying Inspectorate. • Samples not analysed for appropriate parameters. • Inadequate number of samples taken. • Recommended that actions were taken to ensure company complied in future with Regulations 17, 18 and 35. • Recommended the company updated procedures for sampling and information provision. <p>Risk classification: Significant</p>
25 Jul 2013 For 72 hours (BRL)	Stowey works Mendip, Somerset.	17,595	Taste or odour – musty.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Blended supply with water from other works. • Sampled affected area. • Additional low flow alarm installed and updates made to the communications panel. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by the malfunctioning of a recirculation pump for one of the slow sand filters and was exacerbated by the communications panel being set to manual and therefore the operations room was not alerted. • Critical that the company was slow to address the fault (MIB had been elevated for four days resulting in taste and odour complaints). • Recommended that the company reviews the operation of slow filters and makes improvements. <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 Jul 2013 For 6 days (DWR)	Gorseinon and Loughor areas of Swansea.	16,380	Brown discolouration due to a mains burst.	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Flushed mains. • Rezoned area (brought in water from different source). • Provided an alternative supply by tanker/bowser. • Provided bottled water on request. • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Jul 2013 For 3 weeks (SRN)	Horsham, West Sussex.	25,590	Service reservoir damaged.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Bypassed service reservoir. • Sampled area downstream. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Ethylene glycol was stated to be present in some samples, but this was identified as an error due to using antiseptic wipes on the bottles. • Critical that the company failed to communicate sample results in a timely manner. • Critical that the company withheld information relating to outstanding analysis. • Critical that the company disregarded some of the test results to determine water safety. • Critical that the wrong sample bottle type was used. • Critical that some sampling locations were not representative of the reservoir water. • Critical that an unaccredited test method was used. • Critical of the delayed sample results. • The Inspectorate recommended that the company committed to the following actions to prevent a recurrence: <ul style="list-style-type: none"> – Retrain samplers to ensure appropriate sample bottles are used during an emergency. – Audit the chain of custody of samples. – Update the procedures for emergency sampling result reporting and sample selection. – Review the Service Level Agreement with the laboratory service provider. – Create a procedure for the employment of a second laboratory to verify results. <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 Jul 2013 For 24 hours (SVT)	Tewkesbury, Gloucestershire.	2,314	Loss of supplies/poor pressure due to a mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Rezoned area (brought in water from different source). • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company failed to make appropriate checks of tankers used to provide alternate supply during this event. Chlorine residual was measured in only one tanker before leaving the depot and this result applied to all tankers, there were no other checks as to the hygienic status of tanker supplies to consumers. • The Inspectorate reminded the company of the requirements of the Information Direction and section 86 of Water Industry Act with specific reference to the duty to provide accurate information to the regulator given failure to do so may compromise the decision making of the regulator. • The Inspectorate concluded that the company was in breach of its Regulation 4 duty in relation to water provided by means of tankers and also Regulation 16 in relation to the lack of training and procedures for staff carrying out field operations and carrying out field sampling duties. <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 Jul 2013 For 48 hours (SWT)	Steeple service reservoir, St Ives, Cornwall.	3,615	<i>E.coli.</i>	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Manual dosing of chlorine at service reservoir. • After further positive samples a boil water notice was issued. • Provided an alternative supply by tanker/bowser. • Provided bottled water on request. • Review of procedures. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Critical of the manual dosing of chlorine before a full investigation. • Recommended that a robust system of review and assessment of monitoring results is put in place to confirm the efficacy and safety of such dosing. • Recommended that until such a time that permanent repairs can be made to this asset monitoring is enhanced as a check on the quality of water entering and leaving the reservoir. <p>Risk classification: Significant</p>
31 Jul 2013 For 12 hours (AFW)	Friern Barnet, North London.	20,000	Loss of supplies/poor pressure due to a mains burst.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Aug 2013 For 1 day (WSX)	Tucking Mill works, supplying consumers in Bath, Somerset.	1,933	<i>Cryptosporidium</i> .	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Shut down treatment works. • Investigation identified that the raw water monitoring point was not representative and this has now been moved. • Revised risk assessment. • Improved turbidity monitoring and shut down. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate noted that this event occurred after a period of heavy rainfall. • Following an audit at this site in November 2013, the Inspectorate is concerned that operational control measures to manage <i>Cryptosporidium</i> risk may not be robust or always effective. <p>Risk classification: Significant</p>
03 Aug 2013 For 5 days (SWT)	Tamar works, Bude, North Cornwall.	20,059	Treatment failure.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Provided bottled water on request. • Strategic flushing carried out. • Investigations at the treatment works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by treatment issues at the works whereby manganese passed into supply at a level above the standard. • The Inspectorate carried out an audit at this works, which was generally satisfactory, however, it was noted that the site was very untidy. • Investigation ongoing. <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 Aug 2013 For 17 hours (YKS)	Highfield Lane works supplying consumers in the Doncaster area, Yorkshire.	18,000	Treatment failure – nitrate.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired faulty equipment. • Retrained staff. • Review of procedures. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to a failure of a valve causing one of the two boreholes to shut down resulting in a failure of nitrate blending regime. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
07 Aug 2013 For 5 days (SEW)	Flimwell and Crowhurst Bridge, East Sussex.	7,813	Loss of supplies/poor pressure due to a mains burst.	<p>South East Water Plc action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided bottled water on request. • Removed service reservoir from supply. • Repaired main. • Sampled affected area. • Shut down treatment works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • A burst occurred on the inlet main to Flimwell service reservoir and two other bursts occurred on the outlet of Crowhurst Bridge works. The works had to be shut down to enable repairs. • The Inspectorate was satisfied with the company's handling of this event. <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 Aug 2013 For 48 hours (SWT)	Newquay (temporary event).	3,000	<i>E.coli</i> , Enterococci and Clostridia.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Supported the local authority in dealing with this supply to a temporary event, the failures occurred in local authority samples from an overland pipe connection to the mains supply. • A water fittings improvement Notice was served. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
10 Aug 2013 For 1 week (ANG)	Byards Leap near Cranwell, Sleaford, Lincolnshire.	128	<i>E.coli</i> .	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Issued precautionary advice. • Used CCTV and modelling in the investigation of the network. • Replaced valves in main. • Disinfected the mains. • Provided bottled water. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company identified poor hygienic practices and inadequate storage of fittings during planned work to install valves on a large main. • The inspectorate was critical of the company for failing to verify the quality of the water provided by an overland temporary main at consumers' properties before the planned work. • Further sampling confirmed <i>E.coli</i> in the downstream section of the main at various points. The company plan to reline this section of main and since the time of the event has retrained staff in hygienic practice and network activities and increased their frequency of audit for this type of work. <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 Aug 2013 For 5 days (AFW)	Wickerhall works serving Royston, Therfield, Barkway, Herts and Cambridge Water's Odsey zone via bulk supply.	30,000	<i>E.coli.</i>	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Increased chlorine residuals at treatment works. • Sampled affected area. • Shut down treatment works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Suggested that company reviews its notification criteria with all of these stakeholders to distinguish clearly between the relative risks and significance of indicator. • Recommended enhanced microbiological monitoring at a treatment works when it is returned to supply to be taken into account during the risk assessment when investigation inconclusive. <p>Risk classification: Significant</p>
12 Aug 2013 For 1 day (WSX)	Heathcombe service reservoir supplying villages south of Bridgewater, Somerset.	2,278	Coliform bacteria.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Increased chlorine residuals at service reservoir. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Company reported the cause related to problems with chlorine boosting equipment. <p>Risk classification: Significant</p>
13 Aug 2013 For 18 hours (ANG)	Hollesey, Suffolk.	2,500	Loss of supplies/poor pressure due to mains burst.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 28 hours (SBW)	St. Ives, St Leonards, and Poulner, Cornwall.	10,000	Brown discolouration due to a mains burst.	<p>Sembcorp Bournemouth Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Provided an alternative supply by tanker/bowser. • Provided bottled water on request. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
14 Aug 2013 For 1 day (TMS)	Shalford works near Guildford, Surrey.	47,752	<i>Cryptosporidium</i> associated with treatment failure.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Replaced faulty equipment. • Reviewed treatment works operation. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was associated with temporary dosing arrangements for coagulation. • Recommended a review of all temporary dosing arrangements for all sites to ensure that there is sufficient monitoring in place and the arrangements are robust enough to prevent a recurrence of this failure to meet the requirements of Regulation 26(3). <p>Risk classification: Significant</p>
19 Aug 2013 For 17 weeks (ANG)	Amphill service reservoir, Bedfordshire.	349,476	Evidence of microbiological contamination – <i>E.coli</i> detected in a service reservoir.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Removed service reservoir from supply. • Sampled affected area. • Completed an inspection and remedial works to identify and correct points of ingress. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • No recommendations or suggestions made. <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 Aug 2013 For 3 days (UUT)	Sandbach, Cheshire	123	<i>Clostridium perfringens.</i>	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Issued a boil water notice. • Sampled affected area. • Chlorinated the main. • Repaired the main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event involved a burst main adjacent to a foul sewer. • The Inspectorate was satisfied with the company's handling of this event. <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 Aug 2013 For 48 hours (SWT)	Caradon service reservoir supplying consumers in Pensilva, near Liskeard, Cornwall.	3,750	Boil water notice following pump failure.	<p>South West Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Boil water notice issued. • Review of procedures. • Retrained staff. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • After the service reservoir ran low due to a pump failure the company issued a boil notice on the basis that there had been depressurisation of the system, even though sample results were satisfactory. • The Inspectorate was highly critical that low level alarms for the reservoir were ignored by the control room staff. This occurred because of an error so that the ignore banner was set on the high alarm for this asset and this was misunderstood and applied to the low level alarm. • Recommended that the company reviews the level of field information support for technicians particularly during standby operating. • The Inspectorate noted that the company has given instruction to clarify requests to ignore alarms. However, the Inspectorate remains concerned that this statement does not require an evidential output to demonstrate that understanding has been achieved and suggests that an auditable system is put in place for all such alarm instructions. • The company's report under the Information Direction 2012 did not contain the requisite information about the customers who complained during this event, therefore the Inspectorate recommended that the company takes steps to prevent similar deficiencies with future reports. <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 Aug 2013 For 2 weeks (AFW)	Wickerhall works serving Royston, Therfield, Barkway, Herts and Cambridge Water's Odsey zone via bulk supply.	30,000	Coliform bacteria linked to structural failure at treatment works.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Increased chlorine residuals at treatment works. • Shut down treatment works. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Suggested that company reviews its notification criteria with all of these stakeholders to distinguish clearly between the relative risks and significance of indicator. • Recommended enhanced microbiological monitoring at a treatment works when it is returned to supply to be taken into account during the risk assessment when investigation inconclusive. <p>Risk classification: Significant</p>
23 Aug 2013 For 1 day (ESK)	Hanningfield laboratory.	N/A	Coliform bacteria.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Reviewed procedures and staff training. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company investigation identified that this sample was not representative of water in supply due to an analytical error. • A number of improvements have been made to the traceability of microbiological analysis. • The Inspectorate was satisfied with the company's response to this event. <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 Aug 2013 For 1 day (DVW)	Coedpoeth, Wrexham County Borough.	3,128	Media interest due to brown discolouration.	<p>Dee Valley Water action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Sampling was not timely enough. • The Inspectorate was critical that the company did not sample until 29 August despite receiving the first of 13 discolouration complaints from 10am on 27 August and flushing the mains on 28 August in contravention of Regulation 18. • The Inspectorate recommended the company review its procedures for sampling during discolouration events and provide a copy to the Inspectorate. <p>Risk classification: Significant</p>
27 Aug 2013 For 48 hours (SVT)	Hanchurch service reservoir, Newcastle under Lyme, Staffordshire.	57,000	Brown discolouration due to a mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Sampled affected area. • Rezoned the area (brought water in from different area). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event arose as a consequence of a burst on the outlet of a service reservoir. The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 21 hours (ESK)	Redgrave works, Redgrave, Suffolk.	7,507	Disinfection failure.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Increased chlorine residuals at treatment works. • Repaired faulty equipment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was due to software programming issues when the company was commissioning a new borehole on site. This led to failure of the chlorine dosing and water leaving the site with a residual below the site target. The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
01 Sep 2013 For 1 week (ANG)	Winslow water supply zone near Milton Keynes, Buckinghamshire.	2,500	Coliform bacteria after mains repair.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Repaired main. • Increased chlorine residuals from service reservoirs and in the network. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate recommended that the company review its criteria for notifying the Inspectorate in order to comply with Regulation 35. <p>Risk classification: Significant</p>
02 Sep 2013 For 24 hours (DWR)	Nantycaws, Carmarthenshire.	8	Mains damage by a third party.	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Repaired damaged main. • Issued boil water advice. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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
03 Sep 2013 For 2 weeks (UUT)	Single commercial property in Liverpool.	100	Taste or odour – hydrocarbons.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Do not drink advice issued. • Bottled water provided. • Sampled affected area. • Water fittings inspection carried out. • Replaced communications pipe with barrier pipe. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
06 Sep 2013 For 2 weeks (DWR)	Ponsticill works supplying consumers in Merthyr Tydfil, Aberdare, Tredegar and some parts of Rhondda, Cynon Taff, Caerphilly and Blaenau Gwent.	150,000	Taste or odour – musty due to methylisoborneol (MIB).	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Brought in water from other areas (rezoning). • Sampled affected area. • Dosed powdered activated carbon at works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Following an increase in customer contacts regarding an unusual taste and odour the company identified microbial activity in Pentwyn reservoir as the likely source. • The Inspectorate has since carried out an audit at this site and issued a Notice requiring more robust improvements due to the continuing taste and odour, and the insufficiency of the works to control this. <p>Risk classification: Significant</p>
07 Sep 2013 For 3 days (BRL)	Wickwar, Gloucestershire.	33	Burst main.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Issued a boil water notice. • Provided an alternative supply by tanker/bowser. • Provided bottled water on request. • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Sep 2013 For 36 hours (YKS)	Ainderby works supplying consumers in Northallerton, North Yorkshire.	38,000	Treatment failure – turbidity.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Blended supply with another source. • Shut down treatment works until another source commissioned. • Sampled affected area. • Rezoned area (brought in water from different source). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by disturbance of deposits in a borehole due to a faulty pump. • Once an alternate supply is commissioned standing water will be flushed to waste through 8km of main into an isolated compartment at Bullamoor service reservoir followed by draining and cleaning of the reservoir compartment. • An automatic turbidity shutdown is to be installed as part of a wider company programme to ensure compliance with Regulation 26. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
11 Sep 2013 For 4 hours (BRL)	Bristol.	16,750	Loss of supplies/poor pressure due to mains burst.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. • Rezoned area (brought in water from different source). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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
14 Sep 2013 For 2 hours (UUT)	Wybersley works supplying consumers in Cheadle Hulme, Romiley, Stockport and large areas across Greater Manchester and some of Cheshire.	320,000	Disinfection failure – turbidity.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of alarm handling. • Review of treatment works operation. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Enforcement action taken resulting in a legally binding programme of work to improve telemetry and scada control philosophy (see <i>Annex 4</i>). <p>Risk classification: Significant</p>
16 Sep 2013 For 24 hours (ANG)	Winslow in Buckinghamshire.	3	<i>E.coli.</i>	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Reviewed procedure. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event related to a sample taken, following a mains repair, from an outside tap and it is probable that the result was not representative of water in supply. • The Inspectorate was critical of the company because similar circumstances had arisen previously in 2012. • The Inspectorate recommended that the company review their procedures for situations where a kitchen tap is not sampled with particular reference to the additional hygiene precautions to be taken to secure a representative sample. It was suggested that the practice permitting sampling from other than the kitchen tap be documented in the sampling procedures. <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 2013 For 6 days (BRL)	Oldford works supplying consumers in Frome, Somerset.	55,000	Phosphate overdosing.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. • Revised procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Recommended that the company puts suitable procedures in place for works shutdown and that the process is fit for purpose. <p>Risk classification: Significant</p>
20 Sep 2013 For 2 weeks (PRT)	Highdown service reservoir supplying consumers in West Dean, Singleton and East Dean, Chichester, West Sussex.	1,303	<i>E.coli.</i>	<p>Portsmouth Water Ltd action:</p> <ul style="list-style-type: none"> • Reservoir removed from supply. • Sampled affected area. • Cleaned the reservoir. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Resamples confirmed the presence of <i>E.coli</i> on the external lagging of the sample tap. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
21 Sep 2013 For 5 days (ANG)	Potton water quality zone, Langford, Rutland.	400	Brown discolouration due to a mains burst.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Flushed mains. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Sep 2013 For 14 hours (NNE)	High Moorsley, Sunderland.	15,883	Loss of supplies/poor pressure due to a mains burst.	<p>Northumbrian Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Repaired main. • Sampled affected area. • Provided bottled water on request. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
21 Sep 2013 For 3 hours (SST)	Prestwood works, Wolverhampton, South Staffordshire, Sandwell, Dudley.	530,000	Turbidity.	<p>South Staffordshire Water action:</p> <ul style="list-style-type: none"> • Increased chlorine residuals from the works. • Sampled affected area. • Review of treatment works performance. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company was slow in notifying the Inspectorate and did not carry out an adequate investigation. • The Inspectorate was critical of poor record keeping of maintenance work, the uncontrolled use of overrides and inadequate critical control measures at the site. • The Inspectorate recommended action to improve the accuracy and operation of the borehole turbidity meter and regular documented reviews of water quality monitoring equipment to ensure it is operating satisfactorily together with verification of disinfection and safeguards to prevent the supply of inadequately treated water. • The Inspectorate also recommended reviews of the process for investigating failures and the regulatory risk assessment methodology to ensure that elevated turbidity in the final water is recognised as a trigger for action. • The Inspectorate recommended an update of company procedures to ensure timely notifications. <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 2013 For 3 days (UUT)	Tottington service reservoir and Harwood pumping station supplying consumers in Bolton, Greater Manchester.	11,250	Brown discolouration due to reservoir level running low.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed the area. • Review of telemetry and alarms. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • A telemetry failure allowed Torrington reservoir to reach a low level and it was necessary to start additional pumps at Harwood to maintain supplies. • Recommended that the company incorporate learning from this event into its tool box talks and internal procedures. • Enforcement action taken resulting in a legally binding programme of work to improve telemetry and scada control philosophy (see <i>Annex 4</i>). <p>Risk classification: Significant</p>
02 Oct 2013 For 3 days (UUT)	Single property in Langley, Macclesfield.	3	Manganese.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of point of use equipment. • Provided bottled water. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event occurred at a concessionary supply comprising four properties connected to a raw water main with point of use UV disinfection. The disinfection was bypassed at this particular property. • The company has since completed its programme of connecting these properties to the mains. <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 Oct 2013 For 7 days (ANG)	Salford, Bedfordshire.	23	Hydrocarbons.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Issued a do not drink notice. • Sampled affected area. • Identification of illegal cross connections and water fittings infringements. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Investigation of a taste and odour complaint uncovered a supply pipe affected by historic ground contamination by heating oil. The public supply was at risk as two illegal connections were discovered bypassing the water meter and its internal backflow prevention valve. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
05 Oct 2013 For 3 days (SVT)	Ladycross service reservoir near Ilkeston, Derbyshire affecting supplies to Long Eaton water supply zone.	10,000	Loss of supplies/poor pressure due to a mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Rezoned area (brought in water from different source). • Sampled affected area. • Provided an alternative supply by tanker/bowser. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The repair of the main took longer than anticipated and there was a delay in the restoration of supplies. • The Inspectorate was otherwise satisfied with the company's handling of this event. <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 Oct 2013 For 24 hours (YKS)	Loftsome Bridge works supplying consumers in Wakefield, Selby, rural East Yorkshire plus widespread parts of Yorkshire.	2,000,000	<i>E.coli.</i>	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Increased chlorine residuals leaving the works. • Inspection of the on-site contact tank. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company found possible routes of ingress to the outlet main via the level indicator and access hatches, which have since been repaired. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
07 Oct 2013 For 24 hours (AFW)	Great Parndon near Harlow in Essex.	3,643	Taste or odour (salty) due to planned work.	<p>Affinity Water Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Review of procedures. • Sampled affected area. • Retrained staff. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical of the company's procedures and method statement which did not require a 'sign off' that the correct hydrant was being used by the specialist ice pigging contractor. The company suspended its programme in light of this event. <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 Oct 2013 For 2 weeks (PRT)	Fareham water supply zone in Hampshire.	13	Taste or odour (petrol).	<p>Portsmouth Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Do not drink notice issued. • Bottled water provided. • Water fittings inspection carried out. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical that the company did not have accurate records of the mains in North Wallington and required that the company provide evidence that the records are now accurate. • It was suggested that the company carries out some random audits of complex mains layouts to verify if this recording error is an isolated issue or more widespread. • Should further issues be found the company should improve the current procedures for record keeping. • It was suggested that the company consider sampling at nearby properties when investigating taste and odour complaints in future, as this may lead to a quicker identification of the cause. • It was recommended that the company reviews its notification procedures and ensures that local authorities, health authorities and the Consumer Council for Water are notified as soon as possible after the start of an event. <p>Risk classification: Significant</p>
10 Oct 2013 For 365 days (ESK)	Hanningfield laboratory.	Not applicable	Falsification of AQC results.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Audited analysis. • Disciplinary action taken. • Analytical staff reminded of the consequences of falsely accepting failed quality control samples. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate recommended that the company resubmit the affected data with an annotation for the public register to show that there is no appropriate AQC associated with this result. <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 Oct 2013 For 24 hours (ESK)	Bungay, Suffolk.	8,150	Evidence of microbiological contamination – single <i>E.coli</i> on routine sample only.	<p>Essex and Suffolk Water action:</p> <ul style="list-style-type: none"> • Removed service reservoir from supply. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company carried out a full and satisfactory investigation into this sample failure, but was unable to identify a cause. As a result of this the Inspectorate was unable to conclude that the event is unlikely to reoccur and must recommend the consideration of enforcement action. It was recommended that the company puts in place an enhanced monitoring programme at this site which includes large volume water samples for an extended period to provide assurance of ongoing satisfactory water quality. <p>Risk classification: Significant</p>
12 Oct 2013 For 12 hours (BRL)	Cheddar works supplying consumers in Cheddar, Somerset.	96,860	Coliform bacteria.	<p>Bristol Water Plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Revised procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical of the company's sampling practice and recommended a review of training to ensure that samplers are fully aware of how to take a representative sample and the need to discard any sample contaminated by virtue of a problem with the sampling process. <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
14 Oct 2013 For 1 week (SRN)	Testwood works, supplying consumers across a wide area of Hampshire.	200,000	Pesticide (mecoprop).	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment process. • Review of analytical arrangements. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • A high level of mecoprop was mistakenly recorded in a treated water sample and this was reported to the Inspectorate. When investigated an error had been made in sample labelling and the high result was associated with a raw river water sample. • The company was reminded of the need to meet the requirements of Regulation 16. • It was noted that the company has taken action to audit the laboratory and did not find any major deficiencies, however, a number of improvements were suggested to minimise the likelihood of transcription or subsampling errors occurring. • It was also noted that the laboratory is planning to introduce a barcoding system by autumn 2014 to improve sample handling and traceability. • The Inspectorate concluded that this event was caused by human error and that the company has taken actions to prevent a recurrence of this issue. <p>Risk classification: Significant</p>
15 Oct 2013 For 8 hours (SRN)	Newport, Isle of Wight.	38	Media interest due to a burst main.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Inadequate training/competence of staff. • No suggestions or recommendations made. <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 Oct 2013 For 1 day (YKS)	Mossley service reservoir supplying consumers in Penistone, South Yorkshire.	8,510	<i>E.coli.</i>	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Increased chlorine residuals at service reservoir. • Sampled affected area. • Removed service reservoir from supply. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company has installed a connection between the outlet and inlet to ensure the inlet does not depressurise as had found to be the case. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
16 Oct 2013 For 20 hours (SRN)	Newport, Isle of Wight.	3,000	Media interest due to a burst main.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Repaired main. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Network controller failed to notify the company's sampling contractor that samples were required, sampling took place two days after the event when the error was noticed. • Recommended the company reviews its event response procedures and analytical suites to ensure testing for appropriate parameters during events. • Recommended training to ensure requirements of the Information Direction are met. <p>Risk classification: Significant</p>
17 Oct 2013 For 14 hours (SRN)	Stoneham lane, Eastleigh, Hampshire.	8,750	Media interest due to a burst main.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Rezoned area (brought in water from different source). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 16 hours (SEW)	Crowhurst Bridge works and Heathfield service reservoir in Sussex	11,250	Brown discolouration due to planned work.	<p>South East Water Plc action:</p> <ul style="list-style-type: none"> Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> This event was associated with planned work to replace a meter. The risk assessment failed to take into account that the area had been identified as at risk of discolouration through DOMS and, as part of DOMS control measures, parts of the network had been flushed earlier in the year. Following this event, further investigations will be undertaken regarding the presence of historic deposits and the condition of the main that caused the problem. Recommended that the company review their process of planning work on the network and took account of information held within its DOMS <p>Risk classification: Significant</p>
23 Oct 2013 For 3 days (PRT)	Eastergate works supplying consumers in Watergate, Barnham, Yapton near Bognor Regis.	86,000	<i>Cryptosporidium.</i>	<p>Portsmouth Water Ltd action:</p> <ul style="list-style-type: none"> Sampled affected area. Review of treatment works operation and catchment. Shut down works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> Enforcement action taken. The Inspectorate concluded that the company's actions taken to remove the source from supply were prudent. The Inspectorate was critical that this event was not notified as soon as may be and recommend that the company reviews its adherence to Regulation 35 and the Water Suppliers (Information Direction) 2012 It was further recommended that the company carries out an adequate investigation in response to events, ensuring the appropriate number and type of samples are taken to demonstrate the extent and nature of the water quality impact. <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 Oct 2013 For 48 hours (TMS)	Bexley Heath, South London.	11,220	Brown discolouration due to a mains burst.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical that the company failed to adequately address the risk of discoloured water being supplied to consumers as a result of planned work and reminded the company of its duty to undertake an adequate risk assessment before undertaking work on any part of its supply system, taking such steps as necessary to ensure that water supplied to consumers is wholesome. • The company was required to revise its Regulation 27 risk assessment for the water supply zone. <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 Oct 2013 For 6 days (WSX)	Sampford Arundel, Somerset.	100	Gastroenteritis associated with water fittings infringements at a premise with a private supply.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Increased chlorine residuals at service reservoir. • Issued a boil water notice. • Carried out a water fittings inspection. • Installed double check valves on each property affected. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Consumers issued with boil water advice while company work with Environmental Health Officers (EHO) to investigate link with private water supply. • Eleven properties issued with boil water advice were supplied by another part of the network indicating a lack of accuracy regarding the companies knowledge of its network. • The likely cause of the contamination was a private water supply on a farm which subsequently had a double check valve installed. • This event illustrates the need for companies to further develop their proactive network risk assessment methodology in areas where mixed supply arrangements are likely to exist. <p>Risk classification: Significant</p>
27 Oct 2013 For 7 days (SVT)	Frankley works, Quinton, Birmingham.	775,000	Loss of supplies/poor pressure due to a mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. • Alternative supplies and bottled water provided. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event consisted of a burst on a large water main leaving Frankley works and providing water to Warley service reservoir. • Investigation ongoing. <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 2013 For 4 days (TMS)	Speen works supplying consumers in the Thatcham and surrounding areas of Berkshire.	57,300	<i>Cryptosporidium.</i>	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Reviewed treatment process and catchment. • Consulted Public Health England (PHE). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The risk assessment for this site was inappropriate and out of date (based on monitoring data from 2000 to 2004). • The Inspectorate required the company to provide information about this and all similar sites where risk mitigation is based on retrospective action in response to monitoring and to take steps to refresh and review the risk assessments consulting with PHE as appropriate. <p>Risk classification: Significant</p>
29 Oct 2013 For 12 hours (SST)	Sedgley, Burton on Trent, Staffordshire.	10	Brown discolouration due to planned work.	<p>South Staffordshire Water action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Provided alternative supplies and bottled water. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
31 Oct 2013 For 2 days (ANG)	Congham works, King's Lynn, Norfolk.	125	Issue of a boil water notice.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Issued a boil water notice. • Sampled affected area. • Provided bottled water. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company issued a precautionary boil water notice when the works shut down in response to a rise in turbidity of the final water leaving this works. • Contemporaneous raw water quality results showed a deterioration in microbiological quality confirming the risk. <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 Oct 2013 For 1 day (PRT)	Woodmancote works supplying consumers in Portsmouth.	43,960	<i>Cryptosporidium.</i>	<p>Portsmouth Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment process and catchment. • Works shut down. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company did not meet the requirements of Regulations 10, 16 and 17 when carrying out the investigation. • Risk assessment to be reviewed and resubmitted with details of short and long-term solutions. <p>Risk classification: Significant</p>
31 Oct 2013 For 2 days (UUT)	Poaka Beck works supplying consumers in Barrow in Furness, Cumbria.	63,527	Pesticide (MCPA).	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment works performance. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company plans to install GAC treatment. <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 Oct 2013 For 1 day (WSX)	Single property in Otterford, Somerset.	3	<i>E.coli.</i>	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • The company removed the site from supply. Area supplied from an alternative site. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event occurred at a property connected to a private water supply and this fact was not identified at the time of sampling resulting in a sample of the private supply being taken instead of the public supply as intended. • The company failed in their basic check to establish what they were sampling, recommended that the company review and update its sampling procedures to prevent a recurrence. • Company procedures appeared to preclude taking samples from public buildings contrary to Regulation 7, the attention of the company was drawn to Information Letter 10/2004 on the monitoring of drinking water at establishments where water is supplied to the public. • Recommended procedures be revised to ensure that relevant and significant information relating to its investigations under Regulations 17 and 18 are reported in accordance with the Information Direction 2012. <p>Risk classification: Significant</p>
02 Nov 2013 For 12 hours (SRN)	Lockerley, Hampshire.	1,360	Media interest due to burst main.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Nov 2013 For 24 hours (UUT)	Hurleston works supplying consumers in Gorsty and Crewe, in Cheshire.	143,803	Pesticide (2,3,5-T).	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment works performance. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Enforcement action taken resulting in a legally binding programme of work for catchment measures or treatment as appropriate (see <i>Annex 4</i>). <p>Risk classification: Significant</p>
07 Nov 2013 For 5 days (SRN)	Five properties in Midhurst, West Sussex.	8	<i>E.coli.</i>	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Issued boil water notice. • Water fittings inspection carried out. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • A number of fittings contraventions were found, including a storage tank and an underground break pressure tank, both in a poor state of repair with numerous points of ingress. • Recommended that the company give written Notice to relevant person whenever fittings contraventions found in association with a water quality failure to secure an audit trail of effective enforcement action. <p>Risk classification: Significant</p>
09 Nov 2013 For 6 days (SVT)	Bitterley, Ludlow, Shropshire.	25	Issue of a boil water notice.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Issued boil water advice. • Supplied bottled water. • Sampled affected area. • Increased chlorine residuals in the network. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event arose when work being carried out by the company to replace water mains was associated with the detection of <i>E.coli</i> in operational samples. • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 24 hours (ANG)	Bow Brickhill (Bedford) service reservoir, Woburn, near Milton Keynes.	13,445	Loss of supplies/poor pressure due to emptying of service reservoir.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Sampled affected area. • Provided bottled water on request. • Review of alarms relating to site shutdown. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event occurred because of problems at the upstream works (Birchmoor) when a site generator was being tested; a borehole was started and stopped in a way that allowed water with >1 NTU turbidity to be presented for disinfection, triggering a site shutdown. • Recommended a software review at other similar sites to ensure the requirements of Regulation 26 are being met and site shutdowns triggered by changes in water quality are timely. • Consumers experienced discoloured and aerated water during recharging of the system. <p>Risk classification: Significant</p>
21 Nov 2013 For 37 hours (SST)	Burton and Winshill, Staffordshire.	80,843	Loss of supplies/poor pressure due to a mains burst.	<p>South Staffordshire Water action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Provided bottled water. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 2013 For 24 hours (UUT)	Workington, Cumbria.	828	Brown discolouration due to the repair to an air valve.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. • Repaired equipment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical of the company's sampling strategy and recommended a review of procedures to ensure the full extent and scale of any event is assessed. <p>Risk classification: Significant</p>
29 Nov 2013 For 2 days (WSX)	Calstone works supplying consumers across Wiltshire.	5,194	<i>Cryptosporidium.</i>	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Removed the works from supply. • Area supplied from an alternative source. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate concluded that treatment was inadequate in relation to the risks posed by catchment and recommended that the company assesses the controls in light of an updated risk assessment. <p>Risk classification: Significant</p>
30 Nov 2013 For 24 hours (SBW)	Alderney works supplying consumers in Bournemouth and Poole, Dorset.	238,000	<i>Cryptosporidium.</i>	<p>Sembcorp Bournemouth Water Ltd action:</p> <ul style="list-style-type: none"> • Enhanced monitoring. • Turbidity monitors to be installed on all slow sand filters by the end of January 2014. • UV to be installed by the end of February 2014. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Notice in place covering actions to mitigate risk of <i>Cryptosporidium.</i> <p>This is linked to events on 1 May 2013 and 25 December 2013 at Alderney works.</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
02 Dec 2013 For 0.5 hours (SVT)	Frankley works, Birmingham.	1,500,000	Treatment failure – overdosing of lime.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Shut down treatment works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Investigation ongoing. <p>Risk classification: Significant</p>
07 Dec 2013 For 2 days (DWR)	Abergavenny, Monmouthshire.	7,193	Brown discolouration due to a mains burst.	<p>Dŵr Cymru Welsh Water action:</p> <ul style="list-style-type: none"> • Flushed mains. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was critical that the Abergavenny district metered area (DMA) was incorrectly recorded and suggested a review of the Talybont trunk main network to ensure that all other DMA supply points are accurately represented and records updated accordingly. <p>Risk classification: Significant</p>
08 Dec 2013 For 12 hours (YKS)	Rivelin works supplying consumers in Sheffield.	236,201	Disinfection failure – turbidity.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment works performance. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Investigation ongoing. <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 2013 For 3 days (WSX)	Hillsmore waste water treatment works, Wiveliscombe West Somerset.	3	<i>E.coli.</i>	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> Water fittings inspection identified cross connections between drinking water and waste water on its own Hillsmore sewage works site. Do not drink notices put on all taps in the staff facilities on site. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
16 Dec 2013 For 3 days (YKS)	Stannington service reservoir supplying consumers in Stannington and villages near West Sheffield.	12,500	Coliform bacteria and Enterococci.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> Sampled affected area. Chlorine residuals increased at the service reservoir (manual dosing). Inspection carried out. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> Points of potential ingress identified and repaired and subsequent roof flood test gave satisfactory results. <p>Risk classification: Significant</p>
17 Dec 2013 For 2 days (PRT)	Fishbourne works supplying consumers in Chichester, West Sussex.	66,956	<i>Cryptosporidium.</i>	<p>Portsmouth Water Ltd action:</p> <ul style="list-style-type: none"> Sampled affected area. Review of treatment process and catchment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> It was noted that as part of its investigation the company consider the most likely cause of the event to be incorrect plumbing of the operational sample point which resulted in raw water being sampled instead of final water. The company has confirmed with the Inspectorate that when regulatory sampling on the final water was previously required this was collected from a different sample line and this was plumbed in correctly to the final water side. <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 Dec 2013 For 12 hours (TMS)	Speen works supplying consumers in Newbury, Berkshire.	34,400	Disinfection failure.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Failure of flow sensor led to works shut down in error. • Sampled affected area. • Reviewed procedures and training. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event initially manifested as a disinfection failure, but on investigation the works had shut down as a result of an erroneous alarm. • Control room staff failed to recognise the situation and this has occurred in previous events. • The Inspectorate was concerned that data freezing remains a live issue at all groundwater sites and recommended that the company take action to mitigate this risk before the end of 2014. <p>Risk classification: Significant</p>
20 Dec 2013 For 11 hours (WSX)	Boyne Hollow works supplying consumers in parts of Wiltshire.	2,750	<i>Cryptosporidium.</i>	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • The company removed the site from supply. • Sampled affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Investigation ongoing. <p>Risk classification: Significant</p>
22 Dec 2013 For 3 days (SVT)	Diddlesbury works supplying Ludlow in Shropshire.	3,977	<i>Cryptosporidium.</i>	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Shut down treatment works. • Provided an alternative supply by tanker/bowser. • Installed temporary filtration unit. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was content that the company put in place additional controls (filters) until the long-term control (UV) could be installed. The effectiveness of the controls was demonstrated by monitoring. <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 Dec 2013 For 30 hours (SBW)	Fordingbridge, Downton.	26,000	Disinfection failure – turbidity.	<p>Sembcorp Bournemouth Water Ltd action:</p> <ul style="list-style-type: none"> • Increased chlorine residuals at treatment works. • Installed standby power. • Plans to install turbidity monitoring on each borehole. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Critical that water left the works with a turbidity >1 for 30 hours in contravention of Regulation 26. • The company made a decision to override the auto shut down system to maintain supply without taking appropriate action to safeguard quality or consumers. Recommended the company investigate and mitigates the route of high turbidity water into the borehole(s) to ensure that Regulation 26 is complied with at all times. • Suggested permanent provision made for standby generation. <p>Risk classification: Significant</p>
24 Dec 2013 For 5 days (SEW)	Alton, Hampshire.	53,300	Loss of supplies/poor pressure due to power failures resulting from bad weather.	<p>South East Water Plc action:</p> <ul style="list-style-type: none"> • Provided bottled water on request. • Rezoned area (brought in water from different source). • Sampled affected area. • The company handled the situation well, providing bottled water in a timely fashion and restoring supplies when power returned. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Dec 2013 For 4 hours (SRN)	Coltstable reservoir Horsham, West Sussex.	10,000	Loss of supplies/poor pressure due to power failure.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Rezoned the area (brought water in from another area). <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Investigation ongoing. • Adverse weather caused loss of power and then the loss of telemetry communication to the reservoir. This was not restored for several days resulting in impaired control of the reservoir. • Review is being carried out to improve response procedures. <p>Risk classification: Significant</p>
25 Dec 2013 For 72 hours (SBW)	Alderney works supplying consumers in Bournemouth and Poole, Dorset.	238,000	<i>Cryptosporidium.</i>	<p>Semcorp Bournemouth Water Ltd action:</p> <ul style="list-style-type: none"> • Direct river abstraction stopped and abstraction from storage reservoirs commenced when turbidity exceeded 50NTU trigger level. • Turbidity monitors to be installed on all slow sand filters end of January 2014. • UV to be installed end of February 2014. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Notice in place covering actions to mitigate risk of <i>Cryptosporidium.</i> <p>This is linked to events on 1 May 2013 and 30 November 2013 at Alderney works.</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
26 Dec 2013 For 4 days (PRT)	Westergate works supplying consumers in the Bognor water supply zone, Sussex.	78,000	<i>Cryptosporidium.</i>	<p>Portsmouth Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment process and catchment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company's investigation was insufficient to determine the extent and nature of the impact, if any, on water quality. • Suggested notification procedures be reviewed to ensure adherence with Regulation 35 and the Information Direction. <p>Risk classification: Significant</p>
26 Dec 2013 For 5 days (SVT)	Derwent Valley Aqueduct supplying consumers in Derbyshire and Leicestershire.	37,500	Loss of supplies/poor pressure due to a burst on a large (36 inch) main.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by a burst on a strategic main near a motorway junction, which led to loss of supplies, medial 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. • This was a further example of an event where the company did not take timely samples to confirm the extent and nature of the event. • Investigation ongoing. <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 Dec 2013 For 1 week (UUT)	Hurleston works supplying consumers in Congleton, Gorsty and Crewe, Cheshire.	143,803	Pesticide (Chlortoluron).	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Reviewed risk assessment. • Reviewed raw water monitoring programme. • Appointed catchment manager. • Review of treatment work performance. • Revised existing Undertaking. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Undertaking in place. <p>Risk classification: Significant</p>
27 Dec 2013 For 18 hours (SRN)	Sandown works supplying consumers around Sandown and Cowes on the Isle of Wight.	1,008	Loss of supplies/poor pressure due to power failure.	<p>Southern Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Installed temporary additional treatment in the form of portable filters. • Provided bottled water on request. • Rezoned the affected area. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by severe weather impacting on telemetry and power to outstations leading to low reservoir levels. • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
31 Dec 2013 For 1 day (HPL)	Throston Grange area of Hartlepool.	3,500	Brown discolouration due to planned work.	<p>Hartlepool Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. • Review of procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <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 Dec 2013 For 6 hours (SVT)	Worcester, Worcestershire.	7,500	Loss of supplies/poor pressure due to a mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
31 Dec 2013 For 5 days (WSX)	Fulwood works supplying consumers in Taunton, Somerset.	6,500	Brown discolouration.	<p>Wessex Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Rezoned the area. • Provided bottled water to area where low pressure was experienced. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Event linked to flooding of inter-stage pumps at works which caused interruptions to treatment. • Measures have been put in place to overcome the flooding risk and prevent a recurrence of this event. • Recommended a review of risk assessments prior to rezoning taking water quality impact into account and suggests proactive mitigation, including network modelling. <p>Risk classification: Significant</p>

Events outstanding from 2012 completed in 2013

Date and duration	Area	Estimate of population affected	Nature and cause of the event	Main actions and findings from the Inspectorate investigation
15 Jan 2012 For 8 months (YKS)	Single property in Whiston, Yorkshire.	3	Lead.	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Provided bottled water. • Provided advice to consumer. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event related to high blood lead levels detected by a medical investigation of a child resident at the property. • Critical that the company was slow in notifying this event to the Inspectorate, but otherwise the Inspectorate was satisfied with the company's handling of the event. <p>Risk classification: Significant</p>
28 Feb 2012 for approx 5 months (SST)	Seedy Mill works supplying consumers of SST and SVT (via bulk supply) in Burton on Trent and surrounding area, Staffordshire.	98,588	Dead fish in a service reservoir.	<p>South Staffordshire Water Plc action:</p> <ul style="list-style-type: none"> • First of three events in 2012 linked to Seedy Mill works. • Sampled affected area. • Increased chlorine residuals. • Investigated filter performance and raw water inlet protection arrangements. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Critical of lack of maintenance and filter operation. • Critical of delayed company investigation. • Critical of filter management. • Inspectors carried out audits (<i>Drinking water 2012 – Central and Eastern region – Table 29</i>) and following repetition of this event issued a Notice requiring improvements to be made to filter media and management and raw water protection. <p>This is linked to the events at Seedy Mill works on 16 July and 30 August 2012.</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
28 Feb 2012 for approx 5 months (SVT)	Areas fed by bulk supply from South Staffs Seedy Mill works supplying consumers in Polesworth zone.	1,380	Dead fish in a service reservoir.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Company carried out risk assessment of affected zones with no other risks identified. • Company liaised with South Staffordshire Water. • Sampling surveys of hydrants and at consumer properties. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was a consequence of the event at Seedy Mill works operated by South Staffordshire Water by virtue of the bulk supply from Seedy Mill to Severn Trent Water supply zone. • The Inspectorate was content with the company's handling of this bulk supply event. • The Inspectorate expects the company to roll out implementation of new bulk supply agreements in line with national industry model. <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 2012 For 30 days (YKS)	Rivelin works supplying consumers in Manor, Fullwood and Norton areas of Sheffield.	236,301	<i>Cryptosporidium.</i>	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment process. • Review of catchment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Critical of the company's assessment of risk as evidenced by lack of previous monitoring of the reservoir. • Critical that a dose of coagulant >7 times the usual dose was used in response prolonging the event due to inadequate process support for operational staff. • Recommended that the company satisfy themselves that the procedures in place are fit for purpose and staff trained. • Critical that the company failed to meet the requirements of Regulation 35 in full. • The Inspectorate has put in place a Notice requiring improvements relating to risks from <i>Cryptosporidium</i>, manganese and disinfection by-products (see Annex 4). <p>Risk classification: Significant</p>
12 Jul 2012 For 24 hours (YKS)	Hurlfield service reservoir supplying consumers in Sheffield, South Yorkshire.	65,000	<i>E.coli.</i>	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Enhanced monitoring in place. • Reservoir inspected. • Specialist advice sought on reasons for low pressure. • Repairs carried out to minor points of ingress. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event <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 Jul 2012 For one day (SST)	Seedy Mill works supplying consumers in Burton on Trent and surrounding areas, Staffordshire.		<i>E.coli</i> detected in final water.	<p>South Staffordshire Water Plc action:</p> <ul style="list-style-type: none"> • Second of three events in 2012 linked to Seedy Mill works. • Sampled affected area. • Inspected contact tank. • Refurbished and cleaned filters. • Increased chlorine residuals. • Reviewed procedures. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate noted three plausible contributors to this event: <ul style="list-style-type: none"> – A small volume of water was retained in the valved off transfer pipe. This allowed <i>E.coli</i> to multiply and develop in significant numbers. When the valve was opened again on 16 July, the contaminated volume of water was flushed through the remainder of the disinfection process i.e. 2,000 litres of water. – Ingress in the north stream Clearwater tanks and in the north suction well. – A Ct less than the Company's disinfection policy for the site. • The company have refurbished the tanks and have undertaken to inspect and clean all clear water tanks annually as part of their response in the Notice. <p>This is linked to the events at Seedy Mill works on 28 February and 30 August 2012.</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
19 Jul 2012 For 8 days (SVT)	Single street in Stretton Coventry, West Midlands.	35	Do not drink notice following mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Issued a do not drink notice. • Carried out water fittings inspection with no deficiencies identified. • Provided bottled water on request. • Flushed affected area. • Rezoned area. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was triggered by an unusual taste and odour report by a consumer found to be linked to a burst main in the area. • The Inspectorate was content with the company's handling of this event. <p>Risk classification: Significant</p>
20 Aug 2012 (UUT)	Parbold, Lancashire.	Not relevant	Inquest with an alleged link to water supply.	<p>United Utilities Water plc and DWI actions:</p> <ul style="list-style-type: none"> • Company and Inspectorate designated by coroner as interested parties are summonsed to give evidence about the water supply history. • Inquest hearing took place in May 2014. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Directions hearings attended and witness statements provided by company and Inspectorate during 2012 and 2013. <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 2012 For 5 hours (SST)	Seedy Mill works supplying consumers across Staffordshire.	98,588	Loss of filter media allowing passage of fish into treated water.	<p>South Staffordshire Water Plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Inspected contact tank and downstream reservoirs. • Refurbished and cleaned filters. • Increased chlorine residuals. • Reviewed procedures. • Installed equipment to prevent fish in raw water from entering process streams. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Third of three events in 2012 linked to Seedy Mill works. • Critical of lack of maintenance and filter operation. • Critical of delayed company investigation and repetition of issues on site. • Critical of management, particularly lack of visibility of filtration performance and condition. • Inspectors carried out audits (<i>Drinking water 2012 – Central and Eastern region – Table 29</i>) and, following repetition of this event, issued a Notice requiring improvements to be made to filter media and management and raw water protection. • The site was audited in April 2014 to assess compliance with the short-, medium- and long-term measures specified in the Notice covering the operation, processes and control of the works required over 2012 to 2014 were met. • The Inspectorate is content that the company have acted to improve the site ensuring water quality is maintained. <p>This is linked to the events at Seedy Mill works on 28 February and 16 July 2012.</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
07 Sep 2012 For 2 weeks (UUT)	Wayoh works supplying consumers in Bolton, Greater Manchester.	111,467	Pesticide (MCPA).	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of catchment. • Review of treatment process. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was caused by recent agricultural spraying in the catchment in a location feeding into Wayoh impounding reservoir. • The Inspectorate has put in place a Notice to require further catchment investigations and measures.(see <i>Annex 4</i>). <p>Risk classification: Significant</p>
10 Sep 2012 For 3 weeks (TMS)	Overthorpe reservoir, Banbury, Oxfordshire.	54,780	Coliform bacteria.	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Flushed mains. • Sampled affected area. • Increased chlorine residuals in the distribution system. • Revised procedures for managing turnover to maintain microbiological quality in distribution and briefed staff. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Critical that a failed valve at the reservoir meant that turnover was reduced and appropriate consequential action not taken. <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
03 Oct 2012 For 12 hours (SVT)	Frankley works supplying consumers in Birmingham.	1,500,000	Treatment failure (iron).	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Retrained staff. • Review of procedures. • Replaced coagulant sparge pipes with dosing troughs to prevent a recurrence of like issues. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Inadequate treatment arrangements. • Inadequate escalation procedures. • Inadequate training/competence of staff. • Recommended that other sites with coagulant sparge pipes for coagulant dosing be assessed for risk of blocking and mitigation put in place as required. <p>Risk classification: Significant</p>
11 Oct 2012 For 66 hours (TMS)	Haslemere works, supplying Guildford and surrounding areas, Surrey.	9,330	<i>Cryptosporidium.</i>	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment process. • Removed works from supply. • Revised risk assessment for <i>Cryptosporidium</i>. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Treatment improvements have been included in the company's business plan for the AMP6 period. <p>Risk classification: Significant</p>
21 Nov 2012 For 45 hours (UUT)	Crosshill, Saughill Massie, The Wirral.	10,041	Discolouration due to planned work.	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event was associated with large scale trunk mains cleaning. • Suggested the company puts a greater focus on proactive risk assessment and preventative action. <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 Nov 2012 For 24 hours (YKS)	Harlow Hill service reservoir supplying consumers in Harrogate, North Yorkshire.	66,400	<i>E.coli</i> .	<p>Yorkshire Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Inspected reservoir. • Enhanced monitoring using large volume sampling. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • This event related to an adverse result from a large volume sample and air valve inundation. • The company has made changes to the hydraulic configuration of upstream mains and modified the air valves to prevent a recurrence. <p>Risk classification: Significant</p>
23 Nov 2012 For 8 days (SVT)	Broadway service reservoir supplying consumers in Broadway, Worcestershire.	5,000	Faecal contamination and <i>Cryptosporidium</i> occasioning boil water notice.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Issued boil water advice. • Provided bottled water on request. • Inspected service reservoir and associated pipework. • Review of risk assessment methodology. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • Initial findings indicated a serious failure of site integrity allowing faecal and pathogen contamination of water in supply. • The company was slow to understand the root cause of increasing turbidity so initial actions and advice to consumers was wrong. • The Inspectorate audited the site and took statements from company staff and consumers to assist the investigation of this event. • The inspectorate put in place a Notice requiring risks to be monitored and mitigated. • The company pleaded guilty to supplying water unfit on 20 January 2014 and was fined £66,000. <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
27 Nov 2012 For 45 hours (TMS)	Datchet works supplying consumers in Slough, Windsor and Farnham, Surrey and Berkshire.	201,420	<i>Cryptosporidium.</i>	<p>Thames Water Utilities Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of treatment process. • Review of catchment. • Shut down treatment works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>
07 Dec 2012 For 2 days (ANG)	Sandhouse works supplying consumers in Milton Keynes, Bletchley, Northamptonshire.	7,000	Sulphide odour associated with planned work.	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of planned works. • Flushed mains. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The root cause of this event was the rehabilitation works on boreholes and a subsequent burst on the raw water transfer main associated with Sandhouse works. One borehole was removed from supply. The company reevaluated the risks and scope of rehabilitation works. <p>Risk classification: Significant</p>
08 Dec 2012 For 1 day (CAM)	Great Wilbraham pumping station supplying consumers in rural Cambridgeshire.	260,000	<i>E.coli.</i>	<p>Cambridge Water Company Plc action:</p> <ul style="list-style-type: none"> • Review of procedures. • Retrained staff. • Rezoned area (brought in water from different source). • Sampled affected area. • Shut down treatment works. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The company investigation found that sample procedures had not been followed. • Recommended enhanced monitoring at this site. <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 Dec 2012 For 1 week (UUT)	Huntington works and Hurlleston works supplying consumers in Cheshire and Dee areas.	1,600,000	Pesticide (metaldehyde).	<p>United Utilities Water plc action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Reviewed the catchment. • Liaised with other stakeholders. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • An undertaking/Notice is in place requiring the company to explore catchment and treatment solutions (see <i>Annex 4</i>). <p>Risk classification: Significant</p>
28 Dec 2012 For 1 day (ANG)	Newton works supplying consumers in Lincoln and Newton, Lincolnshire.	63,800	<i>Cryptosporidium</i> .	<p>Anglian Water Services Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Review of catchment. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate audited this site in 2013 and noted deficiencies with security of access, general site housekeeping (see <i>Chapter 6: Technical audit activity and price review</i>). • The company is due to complete improvement works at this site, including protecting it from the risk of flooding, by February 2014. <p>Risk classification: Significant</p>
29 Dec 2012 For three days (SVT)	Llandinam works supplying consumers Llandinam and Newtown, Wales.	3,658	Boil notice associated with mains burst.	<p>Severn Trent Water Ltd action:</p> <ul style="list-style-type: none"> • Sampled affected area. • Issued a boil water notice. • Repaired main. <p>DWI comments and findings:</p> <ul style="list-style-type: none"> • The Inspectorate was satisfied with the company's handling of this event. <p>Risk classification: Significant</p>