Water Resources Management Plan

Glossary

In this appendix a list of Abbreviations used within the WRMP24 is provided, followed by a glossary of Key terms.

A. Abbreviations

Abbreviation	Description
AA	Annual Average
ABP	Address Based Premium
ACORN	A Classification Of Residential Neighbourhoods
ADD	Average Day Demand
ADO	Average Deployable Output
ADPW	Average Day Peak Week
AGWR	Australian Guidelines for Water Recycling
AH	Available Headroom
AHS	Average Household Size
AIC	Average Incremental Cost
AIM	Abstraction Incentive Mechanism
AISC	Average Incremental Social Cost
ALC	Active Leakage Control
AMI	Advanced Metering Infrastructure
AMP	Asset Management Plan
AMR	Automatic Meter Reading
AOP	Advanced Oxidation Process
APA	Adaptive Pathways Analysis
AR	Annual Return
ARK	Action for the River Kennet
ASR	Aquifer Storage and Recovery
BL	Baseline
BMAR	Bulk Metered Area
BOD	Biological Oxygen Demand
BPEP	Best Practicable Environmental Programme
BREEAM	Building Research Establishment Environmental Assessment Method
CAMs	Catchment Abstraction Management Strategy
Capex	Capital expenditure
CCG	Customer Challenge Group
CCWater	Consumer Council for Water
CDR	Conceptual Design Report
CHARS	Chingford Artificial Recharge Scheme
CMOS	Central Market Operating System

Abbreviation	Description
CMP	Customer Metering Programme
CP	Critical Period
CPP	Critical Pressure Point
CSL	Customer Side Leakage
CUZ	Conjunctive Use Zone
DAPWL	Deepest Advisable Pump Water Level
DCLG	Department for Communities and Local Government
DD11	Drought Direction 2011
Defra	Department for Environment, Food and Rural Affairs
DI	Distribution Input
DL	Distribution Losses
DMA	District Metered Area
DMAE	District Metered Area Enhancement
DMAR	District Metered Area Reduction
DMP	Demand Management Programme
DO	Deployable Output
DP	Drought Permit
DPR	Direct Potable Reuse
DRA	Direct River Abstraction
DSL	Desalination
DSOU	Distribution System Operation Use
DST	Decision Support Tool
DVS	Drought Vulnerability Surfaces
DWI	Drinking Water Inspectorate
DWSP	Drinking Water Safety Plan
DWUS	Domestic Water Use Study
DYAA	Dry Year Annual Average
DYCP	Dry Year Critical Period
EA	Environment Agency
EBSD	Economics of Balancing Supply and Demand
EBSD+	A modelling method that combines EBSD and MGA.
EC	European Commission
EDC	Endocrine Disrupting Chemical
EES	Engineering Estimating System
EIA	Environmental Impact Assessment
ELL	Economic Level of Leakage
ELRED	East London Resource Development

Abbreviation	Description
EQS	Environmental Quality Standards
EU	European Union
EVA	Extreme Value Analysis
FMZ	Flow Monitoring Zone
FP	Final Planning
FSR	Fine Screening Report
GAC	Granular Activated Carbon
GARD	Group Against Reservoir Development
GIS	Geographical Information Systems
GLA	Greater London Authority
GWR	Grey Water Recycling
HH	Household
HOF	Hands Off Flow
HRA	Habitats Regulations Assessment
HRW	HR Wallingford
ICT	Inter-company Transfer
IDM	Integrated Demand Management
IEDR	Intergenerationally Equitable Discount Rate
IGEQ	Intergenerational Equity
INNS	Invasive Non-Native Species
IPR	Indirect Potable Reuse
IRAS	Interactive River Aquifer Simulation model
IZT	Inter-zonal Transfer
LADUA	Local Authority District and Unitary Authority
LAHA	Local Authorities and Housing Associations
LAOL	Lowest Achieved Operable Leakage
LAS	London Aggregated Storage
LCE	Local Communication Equipment
LLDC	London Legacy Development Corporation
LoS	Level of Service
LTA	Long Term Average
LTCD	Lower Thames Control Diagram
LTOA	Lower Thames Operating Agreement
mAOD	Meters Above Ordnance Datum
MBR	Membrane Bio Reactor
MCA	Multi-Criterion Analysis
MCS	Multi Criteria Search

Abbreviation	Description
MGA	Modelling to Generate Alternatives
mHH	Measured Household
Ml/d	Mega litres per day
mNHH	Measured Non-household
MLE	Maximum Likelihood Estimation
MLR	Multiple Linear Regression
MRF	Minimum Residual Flow
NAV	New Appointments and Variations
NDMA	N-Nitrosodimethylamine
NEP	National Environment Programme
NERA	National Economic Research Association
NEUB	Non-Essential Use ban
NF	Nanofiltration
NHH	Non-household
NLARS	North London Artificial Recharge Scheme
NNRW	Northern New River Wells
NPC	Net Present Cost
NPR	Non Potable Reuse
NPV	Net Present Value
NRW	Natural Resources Wales
NY	Normal Year
NYAA	Normal Year Annual Average
NYRS	Number of years of record
OA	Census Output Area
ODA	Olympic Delivery Authorities
Ofwat	Water Services Regulation Authority
OFWRP	Old Ford Water Recycling Plant
OJEU	Official Journal of the European Union
ONS	Office for National Statistics
Opex	Operating expenditure
OR	Occupancy Rate
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCC	Per capita consumption
PCV	Prescribed Concentration or Value
PD	Peak Demand
pdfs	Probability density functions

Abbreviation	Description
PDO	Peak Deployable Output
PE	Population Equivalent
PET	Potential Evapotranspiration
PFOS	Perfluorooctanesulfonic acid
PLA	Port of London Authority
PMA	Pressure Management Area
PMP	Progressive Metering Programme
POI	Point of Interest
POPGROUP	Demographic forecasting software
PPC	Per Property Consumption
PR	Price Review
PRV	Pressure Reducing Valve
PS	Pumping Station
PW	Process Water
RAPID	Regulatory Alliance for the Progression of Infrastructure Development
RBMP	River Basin Management Plan
RDM	Robust Decision Making
RMSE	Root Mean Square Error
RO	Reverse Osmosis
ROA	Real Options Analysis
RPS	International consultancy specialising in natural resource management.
RQ	Risk Quotient
RQP	River Quality Planning
RWH	Rain Water Harvesting
RWP	Raw Water Purchase
RWT	Raw Water Transfer
SAC	Special Area of Conservation
SBV	Smarter Business Visit
SDB	Supply Demand Balance
SDBI	Supply Demand Balance Index
SDG	Supply Demand Gap
SDO	Source Deployable Output
SEA	Strategic Environmental Assessment
SESRO	South East Strategic Reservoir Option
SHLAA	Strategic Housing Land Availability Assessment
SHV	Smarter Home Visit
SIC	Standard Industrial Classification

Abbreviation	Description
SLARS	South London Artificial Recharge Scheme
SNPP	Sub-National Population Projection
SoR	Statement of Response
SoSI	Security of Supply Index
SPA	Special Protection Area
SR	Sustainability Reduction
SSSI	Site of Special Scientific Interest
STPR	Social Time Preference Rate
STT	Severn Thames Transfer
STW	Sewage Treatment Works
SWA	Slough, Wycombe and Aylesbury water resource zone
SWH	Storm Water Harvesting
SWOX	Swindon and Oxfordshire water resource zone
SWSE	Save Water South East
TE	Trade Effluent
TGD	Technical Guidance Document
TH	Target Headroom
TL	Total Leakage/Losses
TLOS	Target Level Of Service
TMA	Trunk Main Area
TP	Time Preference
TTFM	Teddington Target Flow Matrix
TUBs	Temporary Use Bans
TV	Thames Valley
TWUL	Thames Water Utilities Limited
UKCIP	UK Climate Impacts Programme
UKCP	UK Climate Projections
UKWIR	UK Water Industry Research
USPL	Underground Supply Pipe Leakage
UTR	Upper Thames Reservoir
UWWTD	Urban Wastewater Treatment Directive
VICUS	Edge Analytics' micro-geography forecasting software
VMR	Victorian Mains Replacement
WAFU	Water Available For Use
WARMS	Water Resources Management System
WARMS2	Water Resources Management System 2
WBGWS	West Berkshire Groundwater Scheme

Abbreviation	Description
WCSP	Water Cycle Safety Plan
Weff	Water efficiency saving
WFD	Water Framework Directive
WHO	World Health Organisation
WINEP	Water Industry National Environment Programme
WIS	Water into Supply
WISER	Water Industry Strategic Environmental Requirements
WR27	UKWIR report on Water Resources Planning Tools 2012
WRAS	Water Regulations Advisory Scheme
WRE	Water Resources East
WRF	Water Resources Forum
WRMP	Water Resources Management Plan
WRPG	Water Resources Planning Guideline
WRSE	Water Resources South East
WRSZ	Water Resource Sub Zone
WRZ	Water Resource Zone
WSP	Water Safety Plan
WTW	Water Treatment Works

B. Key terms

Term	Description
1:500 drought resilience	Being resilient to a drought that would happen on average once every 500 years.
A Classification of Residential Neighbourhoods (ACORN)	This is a socio-demographic classification of neighbourhoods published by CACI Ltd. The system is based on the assumption that people who live in similar neighbourhoods are likely to have similar behavioural and consumption habits.
Abstraction	The removal of water from any source, either permanently or temporarily.
Abstraction Incentive Mechanism (AIM)	A programme to reduce abstraction from the most environmentally sensitive abstraction sources at times of greatest water stress.
Abstraction licence	The authorisation granted by the Environment Agency to allow the removal of water from a source.
Active Leakage Control (ALC)	Management policies and processes used to locate and repair unreported leaks from the water company supply system and customer supply pipes.
Adaptive Planning	Adaptive planning allows for uncertainty, such as different impacts of population growth and climate change, which is used when planning for the future.
Advanced Metering Infrastructure (AMI)	Using the fixed network meter system, meters are read electronically and do not require a meter reader.
Allowable outage	The outage (calculated from legitimate unplanned and planned events) which affects the water available for use.
Annual Average Demand	The total demand in a year, normally measured as the amount of treated water entering the distribution system at the point of production, divided by the number of days in the year.
Annual Return	An annual report submitted to regulators by water companies to report on progress.
Annual Review	The report that Thames Water produces every year as required by the Environment Agency to show how the company has performed against the Water Resources Management Plan (WRMP), in addition to identifying any changes in the data that the plan has been based on.
Aquifer	A geological formation, group of formations, or part of a formation, that can store and transmit water in significant volumes.

Term	Description
Aquifer Storage and Recovery (ASR)	This process involves injecting water into an aquifer, through wells or by surface spreading and infiltration, and then pumping it out when needed. The aquifer essentially functions as a water bank. Deposits are made in times of surplus, typically during the rainy season, and withdrawals occur when available water falls short of demand.
Artificial Recharge (AR)	The addition of surface water to a groundwater reservoir by human activity, such as putting surface water into recharge basins.
Asset Management Period (AMP)	Five-year period for which water companies are funded by Ofwat according to their Business Plans.
Automatic Meter Reading (AMR)	A meter with a short range radio. The meter reader can record the reading from a walk-by or drive-by, rather than requiring physical access to the meter.
Available headroom	The difference (in mega litres per day or percent) between water available for use (including imported water) and demand at any given point in time.
Average Day Demand (ADD)	Total demand over a year divided by the number of days in a year.
Average Deployable Output (ADO)	The annual average daily deployable output of a source/treatment works or a group of sources/treatment works (the average daily DO, in million litres a day, or Ml/d, over a year).
Average Day Peak Week (ADPW)	The planning scenario which drives investment in our Thames Valley WRZ, meaning we plan to ensure we can meet our levels of service when customer demand is at the average level of the highest week in a dry year (1 in 10 years severity of conditions). Note that in parts of our document ADPW and Dry Year Critical Period (DYCP) may have been used interchangeably, this is because DYCP is the generic term for the planning scenario which drives investment and ADPW is the specific scenario for our Thames Valley WRZ.
Average Incremental Cost (AIC)	The unit cost of the water supply or water savings of a particular option. Calculated as the net present value of the capital and operating costs of the option, divided by the net present value of the water produced by it.
Average Incremental Social Cost (AISC)	Calculated by dividing the net present value of the scheme's financial, environmental and social costs by its discounted contribution to balancing supply and demand.
Base year	The first year of the planning period/horizon, forming the basis for the water demand and supply forecasting of subsequent years.

Term	Description
Baseline	Describes the continuation of existing and already planned policies and practice, but without any new ones coming into force. Used to establish what the situation would be if no new policies or measures were adopted.
Baseline forecast	A demand forecast which assumes no additional activity to balance supply and demand other than that required to maintain leakage or by law. In practice this means a continuation of optant metering, water efficiency activity, planned maintenance of the water mains network and active leakage control.
Best value	An approach that considers not only cost, but also the environment, resilience and customer preferences, among other things.
Borehole	A well that is drilled into the ground and used to abstract groundwater.
Boundary box	A box used to house a water meter that is located externally to a customer's property, ideally at the property boundary.
Britain Thinks	A market research company who has undertaken research studies on TW's behalf.
Bulk meter	A large meter that is fitted to pipes (usually those that supply large blocks of flats) to help detect leakage.
Bulk supply/ bulk transfer	A formal agreement between Thames Water and another party to transfer either raw or treated water out of or into Thames Water's supply area.
Business Plan	Business Plans are produced by the water companies for Ofwat and set out the investment programme for the water industry. These plans are drawn up through consultation with the Environment Agency and other bodies to cover a five-year period. Ofwat accept the Business Plan following detailed scrutiny and review.
Capital expenditure (Capex)	Spending on capital equipment. This includes spending on machinery, equipment and buildings. Capital expenditure is also termed investment.
Capital maintenance	Ongoing repair work to prevent water mains from deteriorating further.
Carbon costs	The calculated cost associated with the carbon generated during the construction and operation of a scheme.
Catchment	The area from which precipitation (rainfall) and groundwater would naturally collect and contribute to the flow of a river.

Term	Description
Catchment Abstraction Management Strategy (CAMs)	The Environment Agency's programme of assessing and classifying the abstraction status of surface water catchments and groundwater sources across England and Wales.
Central Market Operating System (CMOS)	This is the computer system that manages all the electronic transactions involved in switching customers and provides usage and settlement data which is used in the billing process.
Clearwater returns	Recovery of process water for use as a raw water source.
Communication pipe	The pipe that links the water main in the street to a customer's outside stop valve/property boundary.
Conjunctive use zone (CUZ)	The integrated use of water resources from (for example, surface storage, groundwater storage, run-of-river and desalination plant) within a water resource zone.
Consumer Council for Water (CCW)	The Consumer Council for Water represents the consumers' voice in England and Wales.
Consumption	The particular element of water demand that is used by household and non-household (commercial, industrial, retail, institutional and agricultural) users – but excluding losses of water in the distribution system and underground supply pipes.
Consumption monitor	A sample of properties whose consumption is monitored in order to provide information on the consumption and behaviour of households served by the company.
Critical Period	The time period in which the balance between supply and demand is at its most critical over the course of a year. This may be a week, a month or a longer period up to a maximum of three months.
Customer Challenge Group (CCG)	The Customer Challenge Group is an independent body set up to provide independent challenge in the preparation of Thames Water's Business Plan and other related documents.
Customer Metering Programme (CMP)	Our programme to meter the majority of household properties across our supply area.
Deepest Advisable Pump Water Level (DAPWL)	The deepest level to which water in a well should be allowed to fall, for specified conditions and demands.
Deficit	Where demand exceeds the supply of water.
Demand bounce back	A term used to refer to Thames Water's observed reductions in demand following the 2006 drought or prolonged dull and wet weather which has occurred in the past and has been followed by a subsequent 'bounce back' to the underlying longer-term demand trend.

Term	Description
Demand management or reduction	The implementation of policies or measures which serve to control or influence the consumption or waste of water (this definition can be applied at any point along the chain of supply).
De-minimis threshold	A level below which is too small to be concerned with.
Department for the Environment, Food and Rural Affairs (Defra)	The government department responsible for setting water policy.
Deployable Output (DO)	A measure of the available water resource during a drought year for a given level of service.
Desalination	A treatment process that removes the salt from saltwater or brackish water to produce drinking water.
Deterministic	When used in relation to modelling, this is a modelling technique that uses defined input values and known relationships to output a defined outcome.
Direct supply reservoir	A reservoir from which water is treated and piped directly to customers.
Distribution Input (DI)	The amount of water entering the distribution system at the point of production.
Distribution losses	This is the losses on trunk mains, service reservoirs, distribution mains and communication pipes.
Distribution System Operation Use (DSOU)	Water knowingly used by a company to meet its statutory obligations, particularly those relating to water quality. Examples include mains flushing and air scouring.
Domestic Water Use Study (DWUS)	A panel of customers who are charged on an unmeasured basis whose usage is monitored to assess the per capita consumption of unmeasured customers.
Drinking Water Inspectorate (DWI)	UK government body that regulates the quality of drinking water.
Drought Direction 2011 (DD11)	Implementation of the Flood and Water Management Act 2010.
Drought order	An authorisation granted by the Secretary of State under drought conditions, which imposes restrictions upon the use of water and/or allows for abstraction/impoundment outside the schedule of existing licences on a temporary basis.
Drought permit	An authorisation granted by the Environment Agency under drought conditions, which allows for abstraction/impoundment outside the schedule of existing licences on a temporary basis.
Drought Plan	The plan sets out a water company's short-term operational steps during periods of drought.

Term	Description
Dry year	Year in which water supply is at 1 in 100 year or 1 in 300-year levels of scarcity based on historic records.
Dry Year Annual Average (DYAA)	The dry year annual average represents a period of low rainfall and unrestricted demand and is used as the basis of a water company's WRMP.
Dry Year Critical Period (DYCP)	The generic term for the planning scenario which drives investment, i.e. at what point during the dry year (1 in 10 years severity of conditions) is the water supply most at risk of failing to meet planned levels of service. Note that in parts of our document Average Day Peak Week (ADPW) and DYCP may have been used interchangeably, this is because DYCP is the generic term for the planning scenario which drives investment and ADPW is the specific scenario for our Thames Valley WRZ.
Dry year demand	The demand for water in a typical dry year.
Economic Level of Leakage (ELL)	The level of leakage at which it would cost more to make further reductions in leakage than to produce the water from another source.
Economics of Balancing Supply and Demand (EBSD)	A method to assess the balance between a company's available water resource and the demand for water by customers. Any imbalance between supply and demand can be met either by demand management strategies, such as selective metering and leakage control, or by the provision of additional water resources.
Effective rainfall	Amount of rain that is retained in the ground.
Eftec	U.K. based environmental economics consultancy.
Environment Agency (EA)	UK government agency whose principal aim is to protect and enhance the environment in England and Wales.
Environmental and social costs	Environmental and social impacts can be valued in monetary terms so that they can be added to, or subtracted from, other items with monetary value applied to them - such as capital and operating costs. A number of techniques exist for estimating the value that society has placed on the environment.
Environmental Impact Assessment	An assessment process which determines the likely environmental impact of a given action or intervention; and assesses how effective any mitigation measures are in reducing the impact on the environment.
Final planning demand forecast	A demand forecast which reflects a company's preferred policy for managing demand and resources through the planning period, after taking account of all options through full economic analysis.

Term	Description
Final planning scenario	The scenario of water available for use and final planning demand forecast which constitutes the company's best estimate for planning purposes, and which is consistent with information provided to Ofwat for price review. The associated investment programme is known as the preferred programme.
Flow restrictor charging	A measure that involves charging households less for their water if they agree to be supplied at a reduced pressure.
Groundwater	Water in the zone of an aquifer where the voids in a rock or soil are filled with water.
Habitats Regulations Assessment (HRA)	Assessment of the potential effects on Natura 2000 sites (Special Areas of Conservation and Special Protection Areas) and Ramsar sites (wetland sites of international importance).
Hands-off flow	A condition included in an abstraction licence that requires the licence holder to stop or cut back their abstraction when the river flow falls below the predetermined flow rate stated in the licence.
Hindcasting	Calculating what a historic set of data may have looked like based on the data available.
Household	A domestic property occupied by householders. These are properties used as single dwellings (normally occupied), receiving water for domestic purposes which are not factories, offices or commercial premises.
HR Wallingford	An engineering consultancy.
Hydrograph	A graph showing the flow or level in a channel or well plotted against time. Time is normally plotted on the horizontal x- axis, with the flow or level on the vertical y-axis.
Indirect Potable Reuse (IPR)	Returning advanced treated wastewater to a point of abstraction indirectly via a natural watercourse for use as a raw water source.
Inset appointment	Arrangement where a property or group of properties within Thames Water's supply area is supplied with wholesale water by Thames Water, but their retailer is a different company.
Island zone	A sub-area within a Water Resource Zone with an isolated distribution network.
Leakage control	Control of the sum of distribution losses (on trunk mains, service reservoirs, distribution mains and communication pipes), and underground supply pipe losses (between the point of delivery at a property and the point of consumption).
Leakage reduction	Controlling the loss of treated water through leaks in the distribution pipework, either by active leakage control or by replacing whole sections of pipe (mains replacement).

Term	Description
Least cost planning	An approach that minimises the net present value of all the costs of managing the supply-demand balance over a long term (25 to 30 years) planning horizon.
Legitimate outage	An outage that lasts more than 24 hours and where the additional resource required to compensate for the outage cannot be replenished within a seven day period without affecting the deployable output.
Levels of Service (LoS)	The frequency with which water companies can impose different types of water restrictions during water shortages. These are set out in the Drought Plan.
Local Plan	Local plans provide the framework for development across England.
Lower Thames Control Diagram (LTCD)	This diagram forms a part of the implementation of the Lower Thames Operating Agreement; it dictates the extent to which Thames Water may reduce the flow over Teddington Weir (by abstracting the water) based on the levels of stored water in London reservoirs and the season.
Lower Thames Operating Agreement (LTOA)	An agreement between Thames Water and the Environment Agency on the amount of water that Thames Water can abstract from the Lower River Thames.
Mains replacement	The installation of new sections of pipework in place of leaking pipes.
Mass balance	Calculation of the inputs and outputs in a process.
Mega litres per day (Ml/d)	One mega litre = one million litres (1,000 cubic metres) per day.
Meter optants	Properties in which a meter is voluntarily installed at the request of its occupants.
Meter programme	Properties which are to be metered according to current company metering policy.
Metering	Process to install meters to measure the amount of water used (through consumption by customer or leakage from customer supply pipes).
Micro-component analysis	Detailed analysis of individual components of a customer's water use.
Mini bulk	Primarily metering of shared supply properties containing two to 12 dwellings.
Minimum Residual Flow (MRF)	A pre-defined minimum rate of water flow that must be left in a watercourse to support abstraction of water – below this level abstraction must cease. Also known as a hands-off flow.

Term	Description
Modelling	A process that aims to show how a system of interest works, to understand how changing certain factors can affect that system.
National Environment Programme (NEP)	The means by which the Environment Agency set out the environmental improvements that water companies are required to make over the following Asset Management Period.
Natural capital accounting	Natural capital accounting is the process of calculating the total stocks and flows of natural resources in a given system, either in terms of monetary value or in physical terms.
Natural Resources Wales (NRW)	Welsh government agency responsible for protecting the environment in Wales.
Net Present Cost	The present day equivalent cost of an option or intervention in our plan.
Net Present Value (NPV)	The value in the present of a sum of money, in contrast to its value at some point in the future.
Net Present Value Network constraints	The difference between the discounted sum of all the benefits arising from a project and the discounted sum of all the costs arising from the project. A limitation in the distribution network where existing infrastructure is not capable of distributing all of the water that a treatment works can produce.
Non-essential use ban (NEUB)	A ban on the non-essential use of water for commercial purposes, used as a measure to reduce demand during a drought.
Non–households (NHH)	Properties receiving potable supplies that are not occupied as domestic premises, for example, factories, offices and commercial premises.
Normal Year	A year in which temperature and rainfall values are at or close to their long-term average.
Normal Year Annual Average daily demand	The total demand in a year with normal or average weather patterns, divided by the number of days in the year.
North London Artificial Recharge Scheme	A scheme involving pumping treated water into a confined aquifer for storage in North London. Water can subsequently be re-abstracted, treated and put into supply.
Observation borehole	A borehole used to monitor groundwater levels or quality.
Occupancy Rate (OR)	The number of occupants in a household.
Operating expenditure (Opex)	Operating expenditure comprises day-to-day (planned and unplanned) routine expenses, which have no effect on the decline in service potential.
Optant metering	Our customer led metering programme.

Term	Description
Outage	Temporary loss of deployable output due to planned or unplanned events. An example of planned events is maintenance of source works and examples of unplanned events are power failure and system failure.
Outage allowance	An allowance for planned and unplanned temporary losses in deployable output that is factored into the supply demand calculations that go into the WRMP.
Peak demand	The highest demand that occurs, measured, either hourly, daily, weekly, monthly or yearly over a specified period of observation.
Peak deployable output	The average daily deployable output, measured in million litres per day (Ml/d), at the time of peak demand, whether over a period of a week (the peak week), a month (the peak month) or some longer period.
Peak week yields	The amount of water that a scheme can provide over a week to meet very high short-term demand (e.g. during a very hot week in a dry summer).
Per capita consumption (PCC)	The amount of water typically used by one person per day.
Per property consumption	The water used by a measured or unmeasured property over a given period.
Planning horizon	The period or end date of a demand forecast or WRMP.
Planning period	An agreed look ahead period for which the WRMP is prepared.
Point of abstraction	The top of a borehole for borehole abstraction; the river intake for a river abstraction to direct supply or bankside storage; the draw-off tower for a direct supply reservoir.
Point of consumption	The point where the supply pipe rises above ground level within the property, usually the inside stopcock or an internal meter.
Point of delivery	The point at which water is transferred from mains or pipes which are the responsibility of the water supplier, into pipes which are the responsibility of the customer. In practice, this is usually the outside stopcock, boundary box or external meter.
Point of production	The point where treated water enters the distribution system.
Potable water exported	Export from within a defined geographical area to an area outside the defined geographical area of treated water.
Potable water imported	Imports from outside a defined geographical area to the defined geographical area of treated water.
Potable water produced	Volume of raw water treated, less treatment works operational use and treatment work losses.

Term	Description
Potential Evapotranspiration (PET)	The level of evapotranspiration that would occur if a sufficient water source were available.
Preferred Plan	The WRMP that has been selected by a water company based on it best meeting the needs and statutory requirements of all stakeholders.
Price Review	Five yearly review of water company plans and prices undertaken by Ofwat.
Process water/ Process loss	Water that is used in the treatment process that does not then enter supply.
Progressive metering	This is the term for the TW compulsory metering programme.
Regulators' Alliance for the Progression of Infrastructure Development (RAPID)	An organisation formed by Ofwat, Environment Agency and Drinking Water Inspectorate to help accelerate the development of new water infrastructure and design future regulatory frameworks.
Rate based tariff	Tariff where the customer is charged based on the rateable value or council tax band.
Raw water abstracted	Raw water abstracted at the point where abstraction charges are levied. It is made up of raw water retained and raw water exported.
Raw water collected	Raw water retained plus raw water imported.
Raw water exported	Raw water exported from a specific geographical area.
Raw water imported	Raw water imported from outside of a specified geographical area.
Raw water losses	The net loss of water to the resource system, comprised of mains/aqueduct (pressure system) losses, open channel/very low-pressure system losses, and losses from break-pressure tanks and small reservoirs.
Raw water operational use	Abstracted raw water being used for regular washing-out of mains due to sediment build-up and poor quality of source water.
Raw water transmission	Moving raw water through our network.
Reconciliation item	The difference between the estimates of the magnitude of a variable and the sum of the estimates of the individual components of that variable.
Regulating reservoir	Upstream impounding reservoir that helps in flood control and releases water when river levels are low.
Resource option	Option to provide an additional source of raw water.
Return period	An estimate of the likelihood of an event, e.g. a drought.

Term	Description
Re-use or recycling	The use of highly treated wastewater as a source of potable supply.
Rising block tariff	Tariff where the customer is charged at a certain rate for each block of water used.
River Basin Management Plan (RBMP)	UK Government plan that sets out how organisations, stakeholders and communities will work together to protect and improve the water environment in each River Basin District.
River regulation	Supporting river flow by releases from reservoirs during periods of low flow.
Rota cut	Limiting the supply of water to customers so that it is only available at specified times. This is used to protect water resources during a period of low availability such as a drought.
Scavenging remediation scheme	Water is pumped from a borehole at a site of contamination and disposed of responsibly to remove the contamination from the aquifer.
Scenario testing	Calculating the effect of different situations or scenarios, such as a period of low rainfall, on water supplies.
Scheme	A specific magnitude and duration of demand management activity or specific size and location of water resource development.
Screening	Process used to compare options and narrow down the list of options being considered.
Seasonal tariff	Tariff where the customer is charged a higher rate during the summer months.
Security of supply	Reliability or surety of sufficient water supply to meet demand.
Sewage Treatment Works (STW)	Site for treatment of wastewater.
Social tariff	Tariff where the customer charge takes into account factors such as household size, medical needs, income levels or if certain state benefits are claimed.
Source	A named input to a resource zone. A multiple well/spring source is a named place where water is abstracted from more than one operational well/spring.
Source Deployable Output (SDO)	The deployable output for a specific groundwater source.
South East Strategic Reservoir Option (SESRO)	A proposed reservoir in South Oxfordshire.

Term	Description
South London Artificial Recharge Scheme (SLARS)	A scheme involving pumping treated water into a confined aquifer for storage in South London. Water can subsequently be re-abstracted, treated and put into supply.
Special area of conservation (SAC)	A site designated as being of special conservation value under the European Habitats Directive.
Special protection area (SPA)	A designated site of value for wild birds under the European Habitats Directive.
Statement of Response (SoR)	A document that is produced at the end of the public consultation period for the draft WRMP. The document outlines the comments received from customers and the changes that will be made to the draft WRMP as a result of these comments.
Statutory	A term used to describe something that is legally required.
Stochastic	When used related to modelling, a modelling technique where variations in input values lead to outputs with a probability of a range of outcomes.
Strategic Environmental Assessment (SEA)	This is an assessment to ensure environmental factors are considered in strategic policies, plans and programmes.
Supply pipe losses	The sum of underground supply pipe losses and above ground supply pipe losses.
Supply-demand balance	The difference between water available for use and demand at any given point in time.
Surface water sources	Any water that is above ground in lakes, rivers, streams or reservoirs, etc.
Surplus/deficit forecast	A surplus/deficit forecast shows the predicted variation between supply and demand, highlighting where there will be a surplus or deficit of water resources for a certain area.
Sustainability reductions	Reductions in deployable output required by the Environment Agency to meet statutory and/or environmental obligations.
Target headroom	Headroom is a margin of safety which serves as a buffer between supply and demand. Target headroom is the threshold of minimum acceptable headroom which would trigger the need for water management options to either increase water available for use or decrease demand.
Tariffs	The pricing mechanism by which a water company could charge for water at different rates – for example a higher rate in the summer and a lower rate in the winter (seasonal tariff).
Temporary Use Ban (TUB)	A ban on using a hosepipe for domestic and some non-domestic purposes, used as a measure to reduce demand during a drought.
Thames Basin	The area of land that drains into the River Thames.

Term	Description
Total leakage	The sum of distribution losses and underground supply pipe losses.
Total Water Management	All water management activities from source to tap, this includes resource management, production management, distribution management and customer-side demand management.
Treatment works operational use	Water used in the treatment process, calculated as net loss, which excludes water returned to source water.
Turbidity	A measure of the level of particulates in water.
UK Water Industry Research (UKWIR)	Research institution established by the water and wastewater industry which carries out research on topics that are important to water and wastewater companies.
Underground supply pipe losses	Losses between the point of delivery and the point of consumption.
Universal Metering	A universal (and in the context of a WRMP also compulsory) programme of installing water meters to households throughout a company's supply area.
Unrestricted demand	The demand for water when there are no restrictions in place (this definition can be applied at any point along the chain of supply).
Upper Thames	The Upper Thames portion of the Swindon and Oxfordshire (SWOX) water resource zone, namely the Swindon and North Oxfordshire water resource sub zones.
Void property	A property connected to the distribution network but not charged because it has no occupants.
Water available for use (WAFU)	Deployable output – less any sustainability reductions – plus any bulk supply imports – less any bulk supply exports – less any reductions made for outage allowance.
Water delivered	Water delivered to the point of delivery.
Water delivered billed	Water delivered less water taken unbilled. It can be split into unmeasured household, measured household, unmeasured non-household and measured non-household water delivered.
Water efficiency methods	Water efficiency measures comprise different methods to reduce water consumption by domestic, commercial and institutional customers.
Water Framework Directive (WFD)	EU legislation that requires certain steps to protect and improve the quality and quantity of water within water bodies such as lakes and rivers.

Term	Description
Water industry national environment programme (WINEP)	The programme of environmental measures agreed for action between Government, the Environment Agency, Natural England, Ofwat and the water companies.
Water industry strategic environmental requirements (WISER)	WISER provides a joint strategic steer for water companies from Environment Agency and Natural England on the environment, resilience and flood risk for business planning purposes.
Water resource development	The formulation and implementation of water resource management strategies.
Water resource sub zone	A water resource zone can be made up of smaller water resource sub zones (WRSZs) connected together.
Water resource zone (WRZ)	The largest possible zone in which all resources including external transfers can be shared, and hence the zone in which all customers experience the same risk of supply failure from a resource shortfall.
Water Resources East (WRE)	A multi-sectoral partnership working together to safeguard a sustainable supply of water for the East of England.
Water Resources North (WRN)	A multi-sectoral partnership working together to safeguard a sustainable supply of water for the North of England.
Water Resources in the South East (WRSE)	A group of water companies and regulators working together to determine potential programmes of water resource options and water sharing opportunities in the South East of England.
Water Resources West (WRW)	A multi-sectoral partnership working together to safeguard a sustainable supply of water for the West of England.
Water Resources West Country (WRWC)	A multi-sectoral partnership working together to safeguard a sustainable supply of water for the West Country.
Water Resources Management Plan (WRMP)	A water company's plan for supplying water to meet demand over a 25 year period as a minimum
Water Resources Management Plan tables	Tables used for presenting key quantitative data associated with a WRMP.
Water Resources Management System (WARMS)/ Water Resources Management System 2 (WARMS2)	A model that Thames Water uses to calculate the deployable output (available water resource during a drought year) that is achievable across Thames Water's operating area.
Water Resources Planning Guideline (WRPG)	A set of guidelines produced by the EA & NRW in collaboration with Defra, the Welsh Government, and Ofwat to guide water companies in creating their WRMPs.
Water resources work programme	The set of work that puts into action the plans laid out in a water company's WRMP.

Term	Description
Water Services Regulatory Authority	The water industry economic regulator (also known as Ofwat).
Water taken	Distribution input less distribution losses.
Water transfer	A transfer of raw or treated water within, out of, or into Thames Water's supply area.
Water treatment works (WTW)	Site where raw water is treated to a standard suitable for drinking water and put into supply.
Waterwise	A UK based not-for-profit, non-governmental organisation promoting water efficiency and conservation.
West Berkshire Groundwater Scheme	A series of abstraction boreholes operated by the Environment Agency as an emergency resource during times of extreme drought.
Yield	Quantity of water expressed either as a continuous rate of flow (cubic feet per second, etc.) or as a volume per unit of time. It can be collected for a given use, or uses, from surface or groundwater sources in a watershed.


Thames
Water