



Glossary of terms & abbreviations



Abstraction

The removal of water from a source.

Abstraction licence

Authorisation granted by the Environment Agency to allow the removal of water from a source.

ADD - Average Day Demand

Total demand over a year divided by the number of days in a year.

ADO - Average Deployable Output

The annual average daily deployable output of a sourceworks or group of sourceworks (the average daily DO, in Ml/d, over a year).

ADPW - Average Day demand in Peak Week

One seventh of total demand in the peak week in any 12 month accounting period (ADPW). Also termed Summer Peak Period.

AH - Available Headroom

The difference between water available for use (including imported water) and demand at any given point in time.

AIC - Average Incremental Cost

The unit cost of the supplies or savings of a particular supply-side or demand-side 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.

AISC - Average Incremental Social Cost

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.

AMP5

Asset Management Plan period number 5 from 2010 to 2015.

Annual Average

The total demand in a year, divided by the number of days in the year.

ASR - Aquifer Storage Recovery

Injection, storage and subsequent recovery (use) of water in groundwater units.

Baseline

Describes the continuation of existing and already planned policies and practice, but without any new ones. Used to establish the situation as it would be were no new policies or measures to be adopted.

Baseline demand forecast

A demand forecast which reflects a company's current demand management policy but which should assume the swiftest possible achievement of the current agreed target for leakage during the forecast duration, as well as implementation of the company water efficiency plan, irrespective of any supply surplus.

Baseline supply forecast

A forecast of the supplies attainable from existing and already planned and approved sources, under existing license limits and conditions and existing infrastructural constraints.

Best Value

The UK Government expects water companies to plan provision of reliable, sustainable supplies at best value to customers while protecting the environment. See the Guiding Principles document of the national water resources planning guideline (2012).

BSWE - Base Service Water Efficiency

The minimum statutory level of water efficiency input activities required by Ofwat.

Business Plans

Water companies must also produce a business plan that covers a five-year period. This shows how it will manage its business and where it will spend

the money it raises from customers. This plan covers all aspects of the water company business. If it is a water supply and sewage company, it will contain details of how it plans to manage wastewater as well as water supply. This plan is used by Ofwat to set water company prices for a five-year period.

CAMS - Catchment Abstraction Management Strategy

The Environment Agency's programme of assessing and classifying the abstraction status of surface water catchments and groundwater units across England & Wales.

CAPEX - Capital expenditure

Spending on capital equipment. This includes spending on machinery, equipment and buildings. Capital expenditure is also termed investment.

Carbon Costs

The calculated cost associated with the carbon construction and operation of a scheme/transfer.

COG - Consumption Group

A set of households with similar consumption, South East Water groups households into Low, Medium and High Consumption Groups to improve the resolution and accuracy of forecasting future demand.

Conjunctive Use

This applies to discussions on water supplies and water conservation. This phrase is typically used to describe the practice of using surface water and groundwater in ways to maximise their combined

outputs e.g. the storing and using surface water in wet years and withdrawing it in dry years supplemented with groundwater.

Consumer Council for Water (CCWater)

The CCWater provides a strong voice for water and sewerage consumers in England and Wales.

Consumption

That part of demand used by Household and Non-Household (Commercial, Industrial, Retail, Institutional and Agricultural) users, net of distribution losses and underground supply pipe losses.

COO - Change Of Occupancy

Change of Occupancy of a household property.

CP - Critical Period

The period in which the balance between supply and demand is at its minimum over the course of a year. This may be a week, a month or some longer period up to a maximum of three months. For South East Water, the critical period is taken as the Average Day Peak Week (ADPW: see definition) or Summer Peak Week.

Customer Metering programme (CMP)

Properties of which are to be metered according to company metering policy.

DEFRA - Department for the Environment, Food and Rural Affairs

The Government department responsible for setting water policy.

Demand management

The implementation of policies or measures which serve to control or influence the consumption or waste of water.

DI - Distribution Input

The amount of water entering the distribution system at the point of production.

DL - Distribution Losses

Made up of losses on trunk mains, service reservoirs, distribution mains and communication pipes.

DO - Deployable Output

The output of a commissioned source or group of sources or of bulk supply as constrained by: environment; licence, if applicable; pumping plant and/or well/aquifer properties; raw water mains and/or aquifers; transfer and/or output main; treatment; water quality.

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 licenses 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.

DWI (Drinking Water Inspectorate)

The Government body that regulates the quality of drinking water.

dWRMP

draft Water Resources Management Plan.

DY - Dry Year

The year in which unrestricted demand can only just be met by available supplies.

DYAA - Dry Year Annual Average

The annual average value of demand, deployable output or some other quantity over the course of a dry year.

DYCP - Dry Year Critical Period

The time in a dry year when demand is greatest, often taken to be the peak week. Commonly known as the Summer Peak Period.

EA - Environment Agency

The Government appointed environmental regulator for the water industry.

EBSD - Economics of Balancing Supply & Demand

A method to economically assess the option to balance 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.

EIA - Environmental Impact Assessment

A formal assessment process for determining the likely impact of a given action or intervention on the environment, and for assessing the effectiveness of the reduction and/or mitigation of impacts.

Environmental and social costs

Environmental impacts can be valued in monetary terms so that they can be added to, or subtracted from other items with monetary value such as capital and operating costs. A number of techniques exist for estimating the value that society has placed on the environment.

European site

European sites are those classified under Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive) or designated under Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

Final planning demand forecast

A demand forecast, which reflects a company's preferred policy for managing demand through the planning period, after taking account of all options through full economic analysis.

Final planning scenario

The scenario of water available for use and final planning demand forecast which constitute a company's best estimate for planning purposes, and which is consistent with information provided to Ofwat for the Periodic Review.

Forecast/plan horizon

The end date of demand forecast or water resources plan (in this case 2015 to 2040).

FP - Final Plan or preferred plan

The proposed final plan of any version of a WRMP, considered best able to ensure security of supply at least total cost to customers, society and the environment, with due regard to practicability, flexibility and impact considerations.

Groundwater

Water in the zone of an aquifer where the voids in a rock or soil are filled with water at a pressure greater than atmospheric pressure.

HH - Household

A domestic property occupied by Householders. These are properties used as single domestic dwellings (normally occupied), receiving water for domestic purposes which are not factories, offices or commercial premises.

Household Size

Number of people living in a household.

HRA - Habitats Regulations Assessment

Assessment of the potential impacts of proposed measures or interventions on designated sites, and the effectiveness of means to avoid, reduce or mitigate impacts.

JR - June Return/AR - Annual Return

Annual reporting data submitted to Ofwat by all water companies in England and Wales.

l/h/d

Litres per head per day.

l/pr/d

Litres per property per day.

Leakage reduction

Controlling the loss of treated water through leaks in the distribution pipe work, either by active leakage control or by replacing whole sections of pipe (mains replacement).

Least cost planning

An approach that minimises the net present value of all the costs of managing the supply and demand balance over a long term planning horizon. (See EBSD).

LoS - Level of service

The frequency with which water companies can impose different types of water restrictions during water shortages (as agreed with its customers).

MCA - Multi Criteria Analysis

The process applied to the screening of options using a range of criteria.

MCM - Micro Component Modelling

The process of deriving estimates of future consumption based on expected changes in the individual components and micro-components of customer use.

Meter optants

Properties in which a meter is installed at the request of its occupants.

mHH - measured Household

A household paying for water by measured volume.

MI/d

Megalitres per day (a Megalitre is a million litres).

mNH - Measured Non-Household

A non-household with a water meter paying for usage by volume.

MRF - Minimum Residual Flow

The rate of flow (discharge) that must be left in a watercourse supporting abstraction. Effectively, a predefined rate of flow at which abstraction from a

watercourse must cease. Also known as a handsoff flow.

NEP - National Environment Programme

The programme of environmental measures agreed for action between Government, the Environment Agency, Ofwat and the water companies, from time to time.

NH - Non-households

Properties receiving potable supplies that are not occupied as domestic premises; for example, factories, offices and commercial premises.

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.

NPC - Net Present Cost

The present day equivalent cost of an expenditure stream incurred over some forward period, with future costs discounted at a defined discount rate.

NPV - Net Present Value

The difference between the discounted sum of all of the benefits arising from a project and the discounted sum of all the costs arising from the project. NPV values for the Company's WRMP have been discounted over 30 years. NPV's have been calculated using (1) capital and operating costs only; (2) capital and operating costs plus social and environmental cost; (3) capital and operating costs plus social and environmental costs plus carbon costs. Typically the NPV value quoted

will be of type (I) unless otherwise clarified in the text.

NY - Normal year

A year in which temperature and rainfall values are at or close to their long run average values.

NYAA - Normal Year Annual Average

The annual average daily value of demand, deployable output or some other quantity over the course of a normal year.

OFWAT - Office of Water Services

The Water Industry economic regulator.

OPEX - Operating Expenditure

Day to day (fixed and variable) operating cost.

OR - Occupancy Rate

The number of occupants in a household. For any given sample of the population, or for the population as a whole, the population divided by the number of households in which they reside.

Outage

Temporary loss of deployable output due to planned or unplanned events. An example of planned events is maintenance from source works and examples of unplanned events are power failure and system failure.

PCC - per capita consumption

The amount of water typically used by one person per day.

PD - Peak Demand

The highest demand that occurs, measured either hourly, daily, weekly, monthly or yearly over a specified period of observation.

PDO - Peak Deployable Output

The average daily DO (MI/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 Factor

Difference between annual average demand and Summer Peak Day Demand.

PPC - per property consumption

The water used by a measured or unmeasured property over a given period under specified condition (litres per property per day, l/pr/d).

PR - Periodic Review

The review of water company investment requirements and charges to customers conducted by Ofwat every five years.

PR14

The 2014 Periodic Review.

Risk

A measure of the probability and magnitude of an event and the consequences of its occurrence.

RP - Return Period

The average frequency of occurrence of an event of a given magnitude, usually expressed in ratio form as 1:RI.

rWRMP - revised WRMP

The revised WRMP produced by (some) water companies following public consultation on their dWRMPs.

SAC - Special Area of Conservation

A site designated as being of special conservation value under the European Habitats Directive.

SEA - Strategic Environmental Assessment

SEA is a system of incorporating environmental considerations into policies, plans and programmes.

Security of supply

The confidence with which a company's target levels of service (frequency of demand restrictions etc) can be reached. Target headroom assessment involves choosing a level of risk which the company accepts that it can manage, which normally increases during the planning period. Supply is considered secure if resources are sufficient to meet demand plus target headroom.

SELL - Sustainable Economic Level of Leakage

The point at which the net incremental capital, operational, social, environmental and carbon costs of leakage control equals the net incremental cost of other demand side or supply side options for addressing a supply-demand imbalance. Hence, the point at which further leakage control becomes uneconomic, taking environmental and social externalities into account.

SIC - Standard Industrial Classification

The classification system used for grouping commercial and industrial properties into similar categories.

SoR - Statement of Response

The statement required to be prepared and published by a water company in response to representations made upon its draft water resources management plan.

Source

A named input to a resource zone where water is abstracted from a well, spring or borehole, or from a river or reservoir.

SPA - Special Protection Area

A designated site of value for wild birds under the European Habitats Directive.

SR - Sustainability reduction

Reductions in deployable output required by the Environment Agency to meet statutory and/or environmental requirements.

Supply-demand balance

The difference between water available for use and demand at any given point in time.

Tariffs

Charging for water supply at different rates, e.g. a higher rate after a threshold amount (rising block tariff), or a higher rate in Summer (seasonal tariff) or based on rateable value.

TH - Target Headroom

The threshold of minimum acceptable headroom, which would trigger the need for water management options to increase water available for use or decrease demand. It is a planning allowance to cover unavoidable uncertainties in estimates of supply-side and demand-side quantities.

TL - Total Leakage / Losses

The sum of distribution losses and underground supply pipe losses.

Total water management

All water management activities from source to end use (i.e. resource management, production management, distribution management and customer-side management).

UKCIP - United Kingdom Climate Impacts Programme

The Government funded body responsible for disseminating climate change and climate change impacts projections to stakeholders, including water companies.

UKCP09

UK Climate Projections 2009, as published by Defra (2009)

UKWIR - United Kingdom Water Industry Research

The collaborative research body of the water companies of England & Wales.

umHH - unmeasured Household

A Household without a water meter paying for usage through some other method like rateable value.

umNH - Unmeasured non-Household

A non household without a water meter paying for usage through some other method like rateable value.

Universal metering

In the context of the WRMP, a compulsory programme of installing water meters to households throughout a company's supply area.

Unrestricted demand

The level of demand for water right up to the point when restrictions are in place (this definition can be applied at any point along the chain of supply).

USPL - underground supply pipe losses

Losses between the end point of delivery from a company's system to the point of consumption on a customer's property.

Void property

An empty property connected to the distribution network but not charged because it has no occupants.

WAFU - water available for use

The value calculated by deducting sustainability reductions and allowable outages from deployable output (WAFU), plus the imports into and minus the exports from the area in questions (typically a resource zone).

Water efficiency

Water efficiency initiatives designed to help or support consumers to conserve water.

WRMP - Water Resources Management Plan

The statutory 25 year plans that the Water Companies in England & Wales are required to produce at five year intervals to show how they intend to provide security of supply at least all-in cost to customers, society and the environment, whilst meeting environmental obligations.

WRMPI4

The WRMP required of each water company for the period 2015 to 2040 and designed to be agreed in 2014.

WRP Tables - Water Resources Plan

Tables used for presenting key quantitative data associated with a Water Resources Management Plan.

WRPG - Water Resources Planning Guideline and Guiding Principles

The guidance document published by the Environment Agency, OFWAT, DEFRA and the Welsh Government to provide advice to water companies on the contents of their WRMPs (previously their WRPs).

WRSE - Water Resources in the South East

A collaborative group composed of the water companies of the South East region, the Environment Agency, DEFRA and Ofwat, originally established in 1997 to examine the potential for sharing water resources across the region.

WRZ - Water Resource Zone

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.

