Abbreviations

DWDS	Drinking Water Distribution System
WDN	Water Distribution Network
DSM	Decision Support Models
NOM	Natural Organic Matter
DBPs	Disinfection By-products
THM	Tri Halomethanes
TTHM	Total Tri Halomethanes
HAA	Haloacetic acids
DCAA	Dichloroacetic acid
TCAA	Trichloroacetic acid
EPS	Extended Period Simulation
EPANET MSX	EPANET Multi-Species Extension
PSO	Particle Swarm Optimization
LP	Linear Programming
GA	Genetic Algorithm
MCLP	Maximum covering location programming model
MIQP	Mixed-integer quadratic programming
PBA	Particle backtracking algorithm
DMF	Fuzzy decision-making framework
FDM	Eulerian Finite-Difference Method
DVM	Eulerian Discrete Volume Method
TOM	Lagrangian Time-Driven Method
EDM	Lagrangian Event-Driven Method
O & M	operation & maintenance
CPHEEO	Central Public Health and Environmental Engineering
TOC	Total Organic Content
UV	Ultraviolet
SCCRWA	South Central Connecticut Regional Water Authority's service
BWSN	Benha Water Supply Network.
WQI	Water Quality Index
BS	Booster Stations