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ABBREVIATIONS

AA	Aguas Argentinas
AAI	Airports Authority of India
ABACUS	Advanced Billing and Collection Utility System
AC	Alternating Current
ADB	Asian Development Bank
AE	Assistant Engineer
AL	Aerated Lagoon
AM	Alandur Municipality
AM	Asset Management
AMF	Automatic Mains Failure Panel
ArSP	Alandur Sewerage Project
ASEM	Advisory Services in Environmental Management
ASP	Activated Sludge Process
ASR	Average Survival Ratio
AU	Anna University
AWS	Automatic Weather Station
BCP	Business Continuity Plan
BIS	Bureau of Indian Standards
BOD	Biochemical Oxygen Demand
BOO	Build Own Operate
BOOT	Build Own Operate Transfer
BOQ	Bill of Quantities
BOT	Build Operate Transfer
BSNL	Bharat Sanchar Nigam Limited
BTO	Build Transfer Operate
BWSSB	Bangalore Water Supply and Sewerage Board
CA	Constitutional Amendment
CAA	Constitutional Amendment Act
CAD	Computer-Aided Design
CB	Circuit Breaker
CBO	Community-based Organizations
CCS	Centre for Civil Society
CCTV	Closed Circuit Television
CD	Compact Disc
CE	Chief Engineer
CETP	Common Effluent Treatment Plant
CFC	Central Finance Commission
CFD	Computational Fluid Dynamics
CFL	Compact Fluorescent Lamp
CFR	Continuous Fed Reactor

CI	Cast Iron
CI	Context Information
CII	Confederation of Indian Industry
CMP	City Master Plan
CMWSSB	Chennai Metropolitan Water Supply and Sewerage Board
COD	Chemical Oxygen Demand
CPCB	Central Pollution Control Board
CPCL	Chennai Petroleum Corporation Limited
CPHEEO	Central Public Health and Env.Engineering Organization
CPL	Community Participation Law
CPM	Critical Path Method
CRZ	Coastal Regulation Zone
CS	Chemical Sludge
CSER	Corporate Social and Environmental Responsibility
CSIR	Council of Scientific and Industrial Research
CSO	Central Statistical Organization
CSP	City Sanitation Plan
CSR	Corporate Social Responsibility
CSS	Centralized Sewerage System
CTE	Consent to Establish
CTO	Consent to Operate
DAF	Dissolved Air Flootation
DALY	Disability Adjusted Life Year
DANIDA	Danish International Development Agency
DC	Direct Current
DCB	Demand Collection Balance
DCS	Distributed Control System
DDC	Direct Digital Control
DEA	Double Entry Accounting
DFID	Department for International Development
DG	Diesel Generator
DI	Ductile Iron
DMF	Dual Media Filters
DMHQ	Disaster Management Head Quarter
DMP	Disaster Management Plan
D O	Dissolved Oxygen
DOL	Direct On Line
DPC	District Planning Committee
DPR	Detailed Project Report
DWF	Dry Weather Flow
DWMS	Decentralized Wastewater Management System

EAM	Enterprise Asset Management
EBB	Eco Bio Block
EC	Electrical Conductivity
EE	Executive Engineer
EIA	Environmental Impact Assessment
EMI	Equated Monthly Instalment
EPA	Environment Protect Agency
EPC	Engineering Procurement and Construction
ERP	Enterprise Resource Planning
ES	Effective Size
ESR	Electron Spin Resonance
EWS	Economically Weaker Section
F/M	Food to Microorganism
FAR	Floor Area Ratio
FBAS	Fixed Bed Biofilm Activated Sludge
FBR	Fed Batch Reactor
FC	Faecal Coliform
FFR	Fixed Film Reactor
FI	Funding Institution
FIDIC	International Federation of Consulting Engineers
FIRE	Financial Institutions Reform and Expansion
FL	Facultative Lagoon
FRC	French Water Club
FSI	Floor Space Index
GA	General Arrangement
GAC	Granular Activated Carbon
GDP	Gross Domestic Product
GI	Galvanized Iron
GIS	Geographical Information System
GL	Ground Level
GOI	Government of India
GOS	Group Operated Switch
GOTN	Government of Tamil Nadu
GSM	Global System for Mobile Communications
HDA	Haldia Development Authority
HDPE	High Density Polyethylene
HIA	Health Impact Assessment
HP	Horsepower
HPEC	High Powered Expert Committee
HPP	High Pressure Pump
HRD	Human Resources Development

HRT	Hydraulic Retention Time
HT	High Tension
HUDCO	Housing and Urban Development Corporation
HUF	Hindu Undivided Family
HVAC	Heating Ventilation and Air Conditioning
IDWSSD	International Drinking Water Supply and Sanitation Decade
IEC	Information, Education and Communication
IIPA	Indian Institute of Public Administration
IIT	Indian Institute of Technology
IL&FS	Infrastructure Leasing & Financial Services Limited
IP	Internet Protocol
IPR	Indirect Potable Reuse
IRC	Indian Road Congress
IISER	Indian Institute of Science Education & Research
IS	Indian Standard
ISDN	Integrated Services Digital Network
ISO	International Organization for Standardization
ISRO	Indian Space Research Organization
IT	Information Technology
ITI	Industrial Training Institutes
ITN	International Training Network
ITV	Industrial Television
IWA	International Water Association
IWWA	Indian Water Works Association
JE	Junior Engineer
JICA	Japan International Cooperation Agency
JnNURM	Jawaharlal Nehru National Urban Renewal Mission
JSWA	Japan Sewage Works Association
KAPS	Knowledge, Attitude, Practice, Study
KIADB	Karnataka Industrial Areas Development Board
KMDA	Kolkata Municipal Development Authority
Kva	Kilovolts ampere
KWA	Kerala Water Authority
LAN	Local Area Network
LBFL	Local Bodies Finance List
LCD	Liquid Crystal Display
LDPE	Low Density Polyethylene
LLDPE	Linear Low Density Polyethylene
LIC	Life Insurance Corporation

LoC	Letter of Credit
LPS	Liters per second
LT	Low Tension
M&E	Monitoring and Evaluation
mA	milliamps
MBBR	Moving Bed Biofilm Reactor
MBR	Membrane Bio Reactor
MCGM	Municipal Corporation of Greater Mumbai
MDG	Millennium Development Goals
MF	Micro Filtration
MFL	Maximum Flood Level
MIS	Management Information System
MLD	Million Litres per Day
MLE	Modified Ludzack Ettinger
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MMRDA	Mumbai Metropolitan Region Development Authority
MMSD	Milwaukee Metropolitan Sewerage District
MoEF	Ministry of Environment and Forests
MoF	Ministry of Finance
MoHA	Ministry of Home Affairs, India
MoHUPA	Ministry of Housing and Urban Poverty Alleviation
MoNRE	Ministry of New and Renewable Energy
MoSJE	Ministry of Social Justice and Empowerment
MoUD	Ministry of Urban Development
MoUHPA	Ministry of Urban Housing and Poverty Alleviation
MP	Member of Parliament
MPC	Metropolitan Planning Committee
MPLADS	Member of Parliament Local Area Development Scheme
MPN	Most Probable Number
MSDS	Material Safety Data Sheet
MSWM	Municipal Solid Waste Management
MWCI	Manila Water Company
MWSI	Manila Water Services
MWSS	Manila Metropolitan Waterworks and Sewerage Services
NABARD	National Bank for Agriculture and Rural Development
NCB-W2	World Bank's Contract for National Competitive Bidding
NCC	National Cadet Corps
NDITA	Nabadiganta Industrial Township Authority

NEERI	National Environmental Engineering Research Institute
NF	Nano Filtration
NGO	Non Governmental Organization
NIC	National Informatics Centre
NICNET	Nation-wide Informatics Network
NILIM	National Institute for Land and Infrastructure Management, Japan
NITIE	National Institute for Training in Industrial Engineering
NRC	National Research Council
NRCD	National River Conservation Directorate
NRCP	National River Conservation Plan
NRSA	National Remote Sensing Agency
NSKFDC	National Safai Karamachari Finance and Development Corporation
NSS	National Social Service
NTADCL	New Tiruppur Area Development Corporation Ltd.
NURM	National Urban Renewal Mission
NUSP	National Urban Sanitation Policy
O&M	Operation and Maintenance
OHP	Overhead Projector
PA	Poverty Alleviation
PC	Personal Computer
PCB	Pollution Control Board
PCOM	Per Capita O&M Costs
PDCA	Plan-Do-Check-Act
PE	Polyethylene
PERT	Programme Evaluation and Review Technique
PF	Power Factor
PHE	Public Health Engineering
PHED	Public Health Engineering Department
PI	Performance Indicator
PIL	Public Interest Litigations
PLC	Programmable Logic Controller
PMC	Pune Municipal Corporation
PP	Polypropylene
PPP	Public Private Partnership
PPPP	Public Private People Partnership
PSP	Private Sector Participation
PUB	Public Utilities Board
PVC	Poly Vinyl Chloride
PVC-U	Unplasticized Poly Vinyl Chloride
PWD	Public Works Department

R O	Reverse Osmosis
R&D	Research and Development
RBC	Rotating Biological Contactor
RBI	Reserve Bank of India
RCC	Reinforced Cement Concrete
RDBMS	Relational Database Management System
RIF	Rural Innovation Fund
RS	Return Sludge
RTU	Remote Terminal Unit
SAFF	Submerged Aeration Fixed Film
SAR	Sodium Absorption Ratio
SAT	Soil Aquifer Treatment
SBR	Sequencing Batch Reactor
SCADA	Supervisory Control and Data Acquisition
SCS	Survival Curve using Survey
SDE	Spatial Database Engine
SDES	State Directorates of Economics and Statistics
SE	Superintending Engineer
SECAP	System Evaluation and Capacity Assurance Plans
SEMIS	Sewerage Mapping and Information System
SFBR	Submerged Fixed Bed Reactor
SFC	State Finance Commission
SFRC	Steel Fiber Reinforced Concrete
SHG	Self-Help Group
SLB	Service Level Benchmark
SMC	Surat Municipal Corporation
SMS	Short Message Services
SOQ	Standards of Quality
SOR	Surface Overflow Rate
SPC	Special Purpose Company
SPCB	State Pollution Control Board
SPS	Sewage Pumping Station
SRT	Solids Retention Time
SS	Suspended Solids
STP	Sewage Treatment Plant
SWD	Side Water Depth
SWM	Solid Waste Management
SWMD	Sewerage and Wastewater Management Department, Japan
SXF	Secure eXchange Format file

TAIMS	Tokyo Advanced Information Management System
TCPO	Town and Country Planning Organization
TDS	Total Dissolved Solids
TNUDF	Tamil Nadu Urban Development Fund
TNUIFSL	Tamil Nadu Urban Infrastructure Financial Services Limited
TUFIDCO	Tamil Nadu Urban Finance and Infrastructure Dev. Corporation Ltd.
TWAD	Tamil Nadu Water Supply and Drainage Board
TWICL	Tamil Nadu Water Infrastructure Company Limited
UA	Urban Agglomeration
UASB	Upflow Anaerobic Sludge Blanket
UF	Ultra Filtration
UGD	Underground Drainage
UIDSSMT	Urban Infrastructure Dev. Scheme for Small & Medium Towns
ULB	Urban Local Body
UNEP	United Nations Environment Programme
UNHABITAT	United Nations Human Settlements Programme
UNICEF	United Nations International Childrens Emergency Fund
UPS	Uninterruptible Power Supply
USAID	United States Agency for International Development
USEPA	United States Environmental Protection Agency
UV	Ultra violet
UWSS	Urban Water Supply and Sanitation Sector
VDU	Video Display Unit
VFD	Variable Frequency Drive
VSNL	Videsh Sanchar Nigam Limited
VSS	Volatile Suspended Solids
WAN	Wide Area Network
WB	World Bank
WEF	Water Environment Federation
WHO	World Health Organization
WSP	Water and Sanitation Program
WS	Waste Sludge
WSS	Water Supply and Sanitation
WSSB	Water Supply and Sewerage Board
WTP	Water Treatment Plant
ZLD	Zero Liquid Discharge