

ABBREVIATIONS

ANFIS	= Adaptive Neuro-Fuzzy Interactive System
ANNs	= Artificial Neural Networks
ARIMA	= Autoregressive Integrated Moving Average
ASCE	= American Society of Civil Engineer
ATG	= Automatic Tide Generation
BISAG	= Bhaskaracharya Institute for Space Applications and Geo-Information
BPS	= Benefit Promotion Sub-System
BPTT	= Back Propagation through Time
CANFIS	= Co-Active Neuro-Fuzzy Inference System
CDO	= Central Design Organization
CED	= Civil Engineer Department
CRED	= Commission on Red Event Disaster
Cumecs	= Cubic meter per Second
Cusecs	= Cubic feet per Second
CWC	= Central Water Commission
CWPRS	= Central Water Power Research Station.
D/S	= Downstream
DDMS	= Digital Database Management System
DEM	= Digital Elevation model
DOI	= Date of Inception
DPFNN	= Dynamic Programming Fuzzy Neural Network
DSS	= Decision Support System
EFA	= Environmental Flow Assessment
EMPSO	= Eliahst-Mutated Particle Swarm Optimization
F.P.S.	= Feet, Pound, Second
FBRO	= Forecast Based Reservoir Operation
FFWS	= Flood Forecasting and Warning System
FRL	= Full Reservoir Level
ft	= Feet
GAMS	= General Algebraic Modeling System
Gas	= Genetic Algorithms

GERI = Gujarat Engineering Research Institute

GFN = Generalized Feed-forward Networks

GI = Gravelius Index

GIS = Geographical Information System

GOG = Government of Gujarat

GP = Genetic Programming

GPS = Global Positioning System

ha = Hectar

HFL = High Flood Level

Hrs=Hours

I-D = Inflow Depth Model

ILWIS = Integrated Land and Water Information System

IMSD = Integrated Mission for Sustainable Development

IRS = Indian Remote Sensing

Km= Kilo meter

LGO = Lipchitz Global Optimizer

LTB = Lower Tapi Basin

LUP = Land use Planning

M = Meter

M. K. S. = meter, Kilogram, second

m^3/s = Cubic meter per second

MAF = Million Acre Feet

MLAD = Minimizing Largest Absolute Deviation

MW = Mega Watt

MWL = Maximum Water Level

MWSAD = Minimizing Weighted Sum of Absolute Deviations

NA-ACO = Non-dominated Archiving Ant Colony Optimization

NBSS = National Bureau of Soil Survey

NFAs = Network Flow Algorithms

NRIS = National (Natural) Resources Information System

OSS = Operational Simulation Sub-System

PMF = Probable Maximum Flood

PSO = Particle Swarm Optimizers

RBF = Radial Basis Function networks

SDP = Stochastic Dynamic Programming

SMC = Surat Municipal Corporation

SOI = Survey of India

SRTM = Shuttle Radar Topography Mission

SW = Spring Tide Wave

SWAT = Soil and Water Assessment Tool

SWDC = State Water Data Center

SYI = Sediment Yield Index

Thwg = Tidal high wave generation

TIN = Triangulated Irregular Network

U/S = Upstream

ULBC= Ukai Left Bank Canal

US = United State

USLE = Universal Soil Loss Equation

WLASF = Water Level to Alarm a more Severe Flood

WRM = Water Resources Management