



HITECH ENVIRO SOLUTIONS



COMPANY PROFILE



CONTACT US

HITECH ENVIRO SOLUTIONS

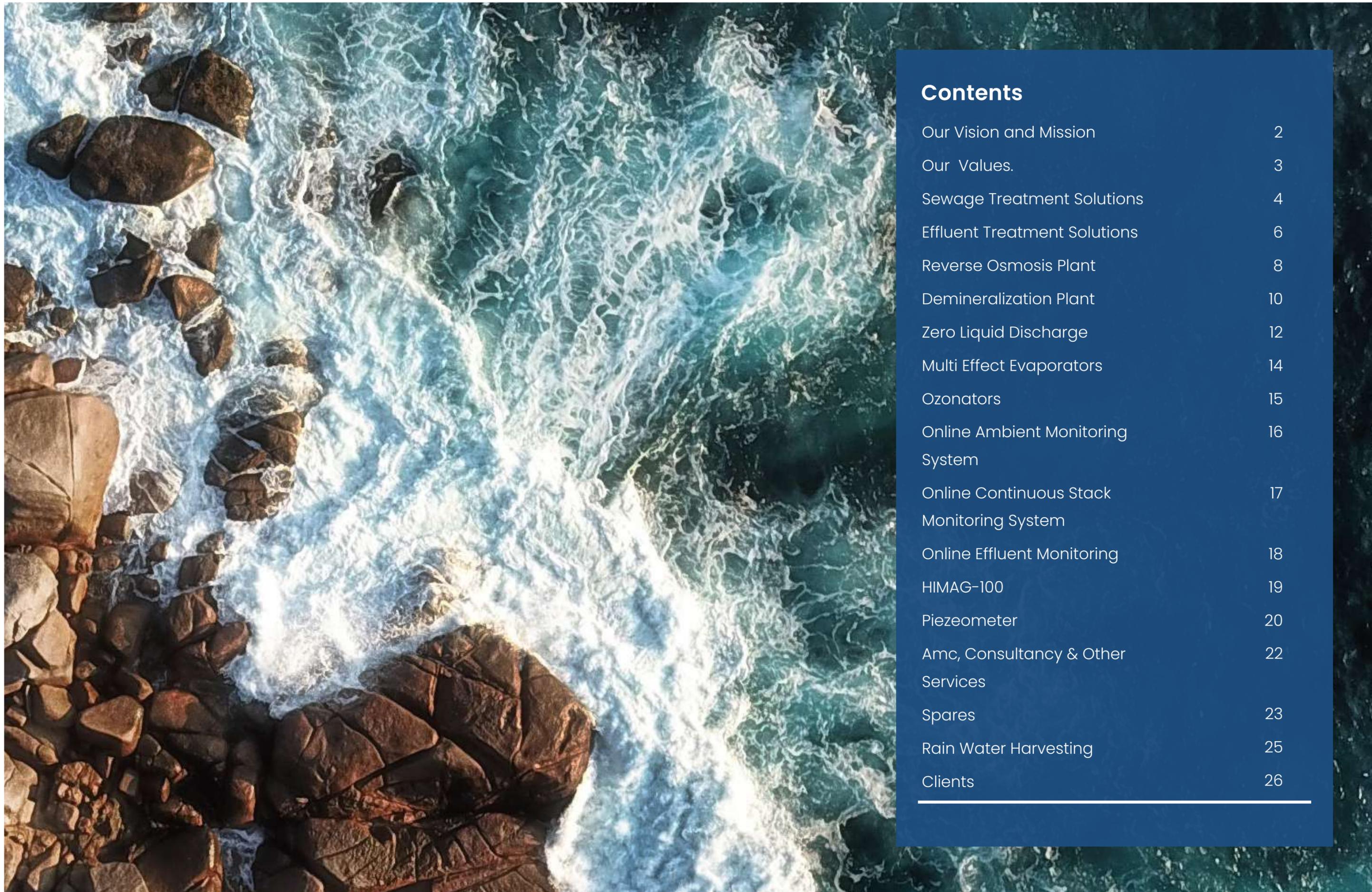
B-116, FIRST FLOOR, B BLOCK, SECTOR 65,

NOIDA, UTTAR PRADESH 201301

CONTACT : 0120-4134544, EMAIL : Sales@Hitechcs.com



HITECH ENVIRO SOLUTIONS



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OUR MISSION AND VISION

OUR MISSION

Through the use of innovative technology and sustainable practices, we manufacture AAQMS, AQMS, IAQMS, EQMS, CEMS, HANDHELD MONITORING DEVICES, Flowmeters and piezometers to help conservation of Environment . We are dedicated to providing our customers with reliable and accurate water measurement solutions that reduce waste and promote efficient resource management.

OUR VISION

Our vision is to become a leader in the development of water conservation technologies and solutions. We seek to positively impact the environment by providing advanced water measurement devices that enable communities and businesses to optimize their water usage. By doing so, we aim to protect and preserve this precious resource for generations to come, fostering a sustainable future for all.

OUR VALUES

RESPONSIVENESS

We understand the urgency of wastewater treatment and will respond promptly to meet the needs of our clients.

INNOVATION

We will continuously find ways to innovate and improve our wastewater treatment processes to stay ahead of the curve.

SUSTAINABILITY

We will strive to be environmentally responsible in all our actions, ensuring that we protect the planet for future generations.

COLLABORATION

We value collaboration and partnerships with our clients and stakeholders to ensure we deliver the best solutions for their wastewater treatment needs.

INTEGRITY

We believe in conducting our business with the highest ethical standards, treating all our customers and employees with respect and honesty.

SAFETY

We put safety first in all our operations, ensuring that our employees and clients stay safe and secure at all times.

EXCELLENCE

We believe in delivering excellence in everything we do, ensuring that our clients receive the best possible wastewater treatment solutions tailored to their specific needs.

SEWAGE TREATMENT SOLUTIONS



SEWAGE TREATMENT PLANT

We are leading manufacturer of Sewage Treatment Plants widely used for treating sewage before releasing it into rivers and oceans. We offer both customized and standard sewage treatment plants for municipal corporations, housing societies, commercial complexes, SEZs, hotels and hospitals. These systems reduce lifetime costs and occupy 1/5th of the space of any conventional system. With options of installations in basements and on terraces, plus recycling with complete automation and connecting further to the municipal lines. These custom plants are priced low, consume less power and serve life long.

TREATMENT TECHNOLOGIES

- MBR (Membrane Bio Reactor)
- MBBR (Moving Bed Bio Reactor)
- E.A. (Extended Aeration)
- SAFF (Submerged Aeration Fixed Film)
- SBR (Sequential Batch Reactor)
- CASP (Conventional Activated Sludge process)

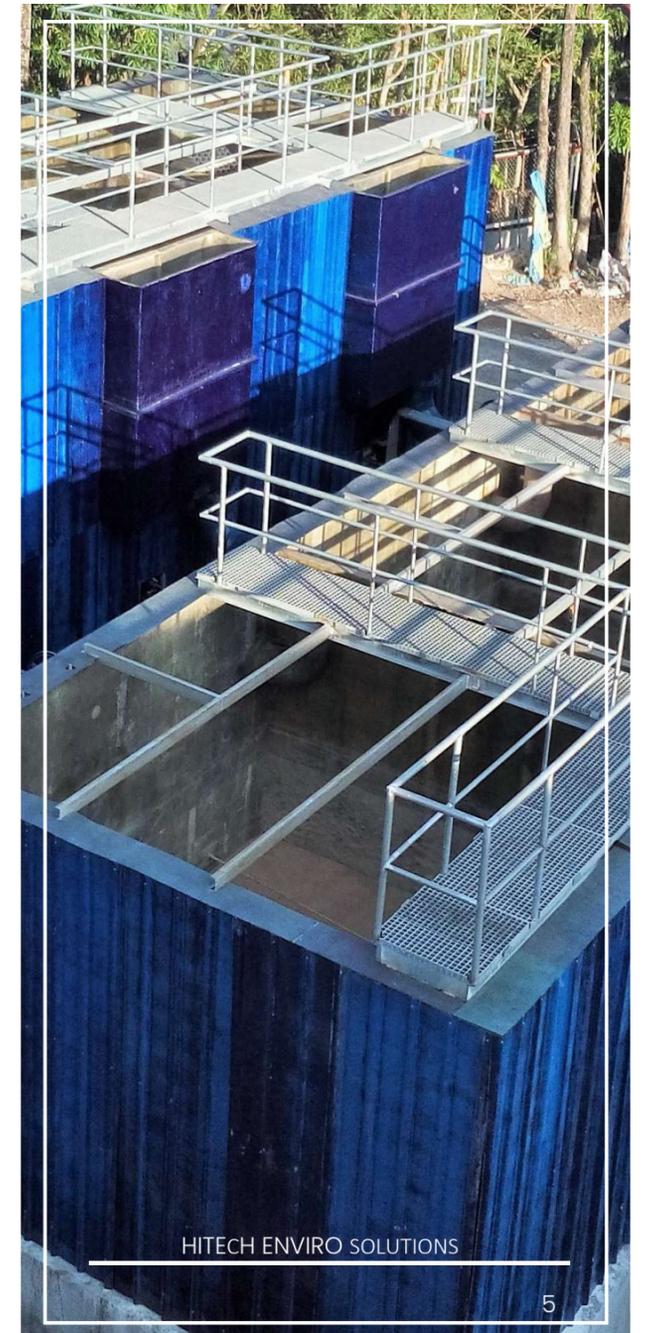
MODULAR / PREFABRICATED SEWAGE TREATMENT PLANT

We are engaged in designing supreme range of Modular/Prefabricated Sewage Treatment Plants. The modular construction (for noiseless & odourless working) allows the increase of the processing capacity by placing more plants in parallel. All the instruments and control elements of the plant are housed inside an anti-vandal cabinet. These can be installed in a short span of time, are easily transportable, customizable and flexible in working.

Starting from packaged plants our range spreading from Mini Sewage Treatment Plant to Large Size Sewage Treatment Plant for Residential / Township / Commercial / Industrial / Hotels / Hospitals / Educational Institutions / IT Parks /

FEATURES

- Design allows for quick turnaround time for delivery and installation.
- Effective aerobic operational principal.
- Pre-engineered, pre-fabricated structures resulting in lower cost.
- Unit is easily transported to the customer's project site.
- User friendly.
- Low & easy maintenance.
- Regulatory compliant.
- Custom design / application specific systems.
- Long service life.
- Can achieve Zero Discharge.
- Colourless & Odourless Treated Sewage Water.
- Suitable even if there is uneven supply of sewage water.
- No Sewer odour issues even during the treatment process.
- Overall Organic & Inorganic reduction (BOD & COD).
- Low Sludge Production.
- Low footprint requirement.
- Environmentally Safe to dispose treated sewage water in Land or Water.
- Treated Water can be reuse for gardening, flushing, irrigation, construction and many more non-potable uses.



EFFLUENT TREATMENT SOLUTIONS



EFFLUENT TREATMENT PLANT

Industrial wastewater is the sum total of all kinds of reject streams coming out of the industrial processes. In a tampered eco-system where the synergistic relationship is already disrupted, the additional wastewater being generated everyday pose a very serious danger to human health and existence. At HEE-PL, we build waste water treatment systems to restore balance for a peaceful and healthy co-existence of humans in the natural eco-system. So it's necessary to recycle that to reduce cost and also conserve it. Main function of our ETP is to clean industry effluent and recycle it for further use.

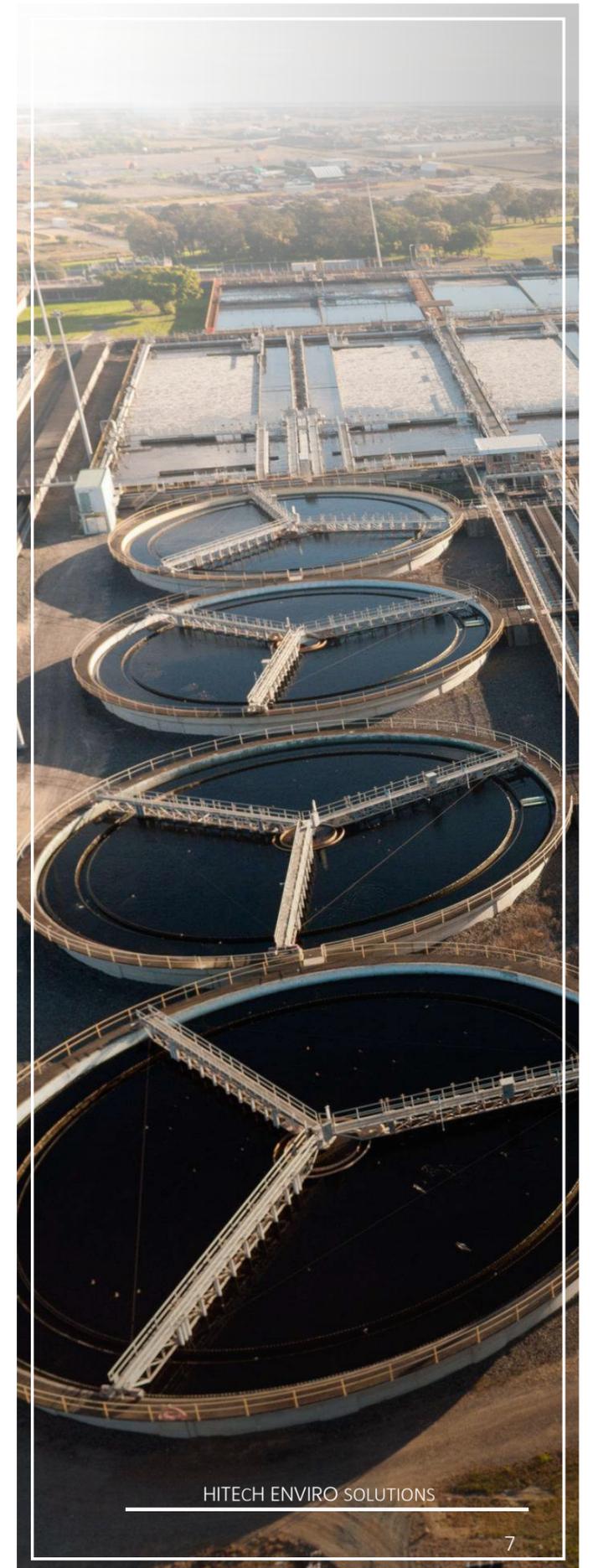
Our process experts work with the design team to supervise the various factors that contribute to a plant's design, including effluent requirements, land availability, energy, labor and disposal costs. Different kinds of ETP's are designed on different types of technologies based on the pollution potential of the effluent, resources available at site and stringent discharge standards. With energy efficient & high performance solutions we help our customers in converting waste to profit.

TECHNOLOGIES EMPLOYED

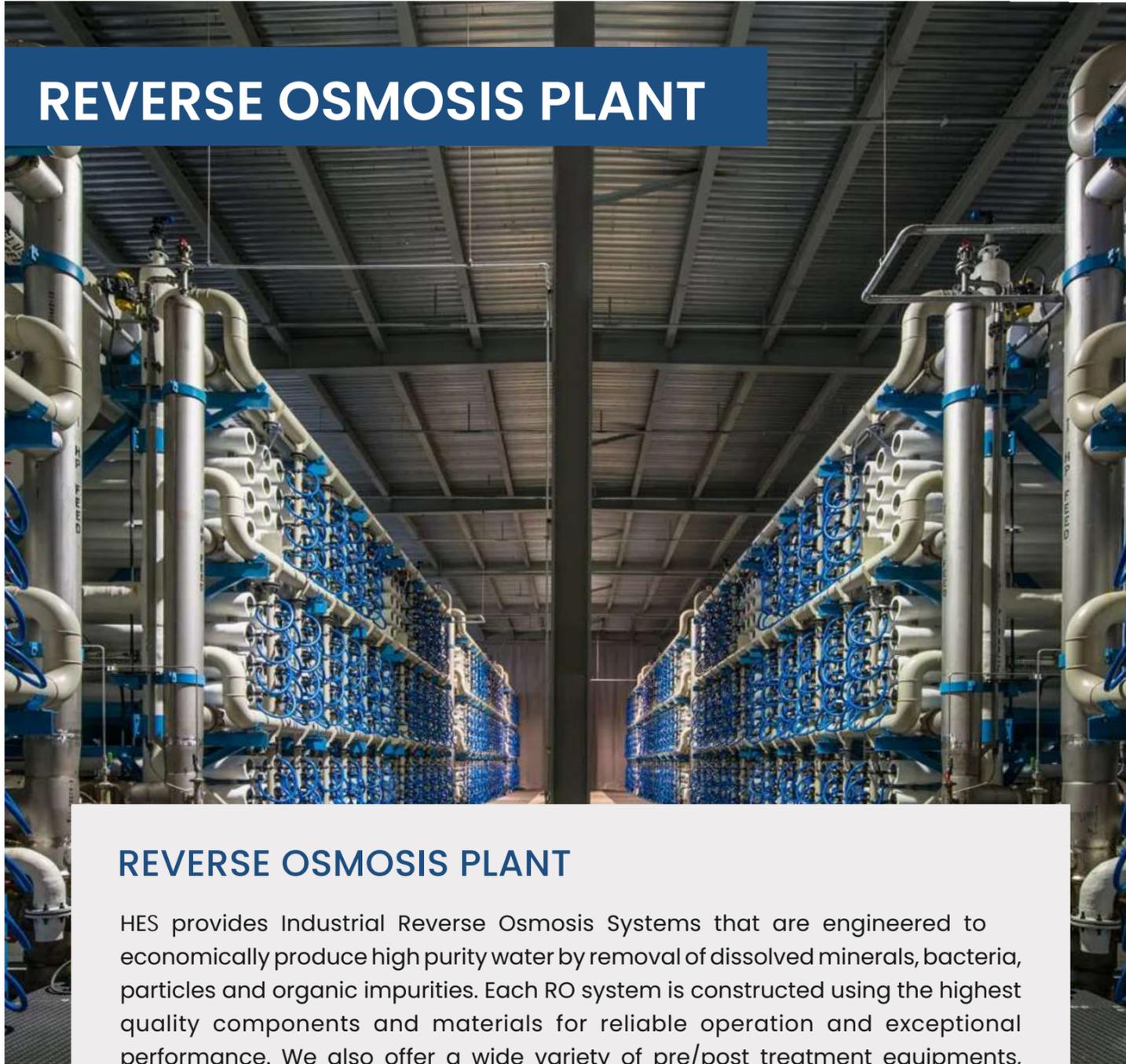
- Dissolved Air Flotation (DAF) & Induced Gas Flotation (IGF)
- Physio – Chemical Treatment
- Coagulation & Sedimentation
- Screening, Flow & pH Balancing
- Oil Separation
- Heavy Metal Removal
- Membrane Bioreactor (MBR)
- Upflow Anaerobic Sludge Blanket Reactor(UASBR)
- Submerged Air Fixed Film (SAFF)
- Moving Bed Bio Reactor (MBBR)
- Sequential Batch Reactor (SBR)

ADVANTAGES/ KEY FEATURES

- Customized tailor made solutions as per customer needs
 - Designs based on first-hand experience of tackling toughest waste waters
 - Consistent performance over longer periods of time
 - Fully automatic variants with zero operator interference available
 - Low chemical and energy costs
- Water Treatment Plants



REVERSE OSMOSIS PLANT



REVERSE OSMOSIS PLANT

HES provides Industrial Reverse Osmosis Systems that are engineered to economically produce high purity water by removal of dissolved minerals, bacteria, particles and organic impurities. Each RO system is constructed using the highest quality components and materials for reliable operation and exceptional performance. We also offer a wide variety of pre/post treatment equipments, distribution pumps and integrated controls for a complete water treatment system. Our specialty is skid mounted, pre-piped and pre-wired equipment allowing for quick installation and start-up time.

Other types of membrane technology are also available including two-pass, cellulose acetate (CA), nano-filtration (NF) and ultrafiltration (UF) for custom applications. HEE-PL is ready to work with you to design a system to meet your water treatment requirements.

SYSTEM OPTIONS

- SS 304 (stainless steel) skid and frame assembly
- SS 316 (stainless steel) pre-filter housing
- SS 316 (stainless steel) high pressure piping / valves
- Premium efficient pressure pump motor
- Instrumentation
- Digital inlet feed-water pH monitor/controller
- Digital inlet feed-water ORP monitor/controller
- Inlet feed-water hardness monitor
- Inlet feed-water turbidity monitor
- Silt Density Index (SDI) test assembly
- High RO product pressure alarm / shutdown
- RO product divert valve
- Touch-screen operator control monitor
- RO Product Storage and Distribution Systems
- FRP and HDPE storage tanks with level controls
- Re-pressurization pumps and controls
- Pre-Treatment Systems
- Multi-media filters
- Activated carbon filters

ULTRA FILTRATION

An ultrafiltration filter has a pore size around 0.01 micron. A microfiltration filter has a pore size around 0.1 micron, so when water undergoes microfiltration, many microorganisms & viruses are removed from water. Ultrafiltration would remove these larger particles, and may remove some viruses. Neither microfiltration nor ultrafiltration can remove dissolved substances unless they are first adsorbed (with activated carbon) or coagulated (with alum or iron salts).



DEMINERALIZATION PLANT



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APPLICATION AREAS

- Boilers feed water
- Textiles
- Pharmaceuticals
- Chemicals
- Breweries
- Swimming pools
- Hospitals
- Automobile industry
- Battery
- Fertilizers
- Ion Exchange Plants

SOFTENING PLANTS

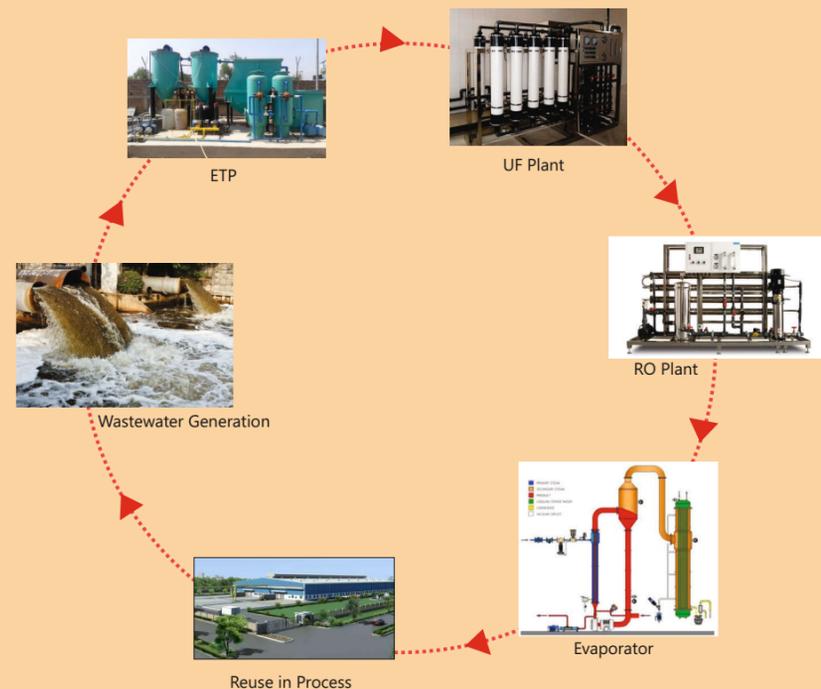
Hard water causes a higher risk of lime scale deposits in household water systems, due to which the pipes are blocked and the efficiency of hot boilers and tanks is reduced. This increases the cost of domestic water heating by about fifteen to twenty percent. It also has damaging effects on household machinery, such as laundry machines. Water softening helps expand the life span of pipelines and household machines such as laundry machines, solar heating systems, air conditioning units and many other water-based applications.

WATER SOFTENER SYSTEMS

- Inlet feed-water pH adjustment chemical addition
- Inlet feed-water anti-scalant chemical addition
- Inlet feed-water dechlorination chemical addition
- Inlet feed-water heat exchanger systems Post-Treatment Systems
- Two-bed and mixed-bed deionization
- UV sterilization
- Polishing cartridge filter housings Membrane Cleaning and Maintenance
- Skid mounted membrane Clean-In-Place (CIP) systems
- RO product water membrane flush system
- RO system performance evaluation software.



ZERO LIQUID DISCHARGE



ZERO LIQUID DISCHARGE

A Zero Liquid Discharge (ZLD) system involves a range of advanced wastewater treatment technologies to Recycle Recovery and Re-use of the 'treated' wastewater and thereby ensure there is no discharge of wastewater to the environment.

A typical ZLD system comprises of the following components:

1. Pre-treatment (Physico-chemical & Biological)
2. Reverse Osmosis (Membrane Processes)
3. Evaporators & Crystallizer (Thermal Processes)

Efficient, innovative management of entire water cycles for industrial applications are heading towards Zero Liquid Discharge (ZLD), allowing businesses to save money, reduce environmental impact and meet pollution discharge.

Achieving stringent wastewater treatment regulations and reducing water usage have become one of the most critical considerations in industry today. Numerous environmental regulations, rigorous permitting processes, and lack of water availability, among other factors, are driving many industrial facilities to implement zero liquid discharge (ZLD) systems as a solution.

KEY BENEFITS OF ZLD

- Recovers valuable ingredients from effluent wastewater
- Reduces process water disposal cost
- Meets environmental permit targets
- Reliable and robust solutions allows focus on main production business

In many cases, your plant's water consumption can be reduced by up to 90 percent - saving money and helping to protect the environment. With more than 10 years of experience in the design, delivery, commissioning and service of ZLD systems. HEE-PL provides a comprehensive portfolio of technologies for ZLD applications, including brine concentrators, evaporators, and crystallizers.

ZLD equipments, such as ultrafiltration (UF), reverse osmosis (RO) and Evaporators to provide the optimal solution. Our specialists can tailor a system to fit your wastewater characteristics, flow rates and end-product requirements.

ZLD evaporator systems for concentrating liquid waste streams allow you to recover distilled water from waste streams.

Crystallizing systems for ZLD reduce wastewater discharge and, in many cases, can allow you to capture valuable by-products. Typically an evaporator or RO (Reverse Osmosis) system is used to pre-concentrate wastewater. Crystallization or evaporation then produces water for reuse as well as recovering specific salts that are suitable for disposal or resale to offset plant costs. We also provide parts and service on all of our equipment, as well as equipment which may have been provided by other manufacturers.

APPLICATION AREA

- Textile Industries
- Distilleries
- Pharma Industries
- Chemical Industries
- Paper Industries
- Tannery Industries
- Dye & Dye Intermediaries
- Edible Oil Refineries
- Electroplating Industries
- Sugar Industries

MULTI EFFECT EVAPORATORS



MULTI EFFECT EVAPORATORS

Carrying an enormous experience of over a decade in designing and manufacturing of Multiple Effect Evaporators, HEE-PL has emerged as a reliable and trustworthy name in the national and international market.

Our modern production facilities, engineering excellence and highly experienced and dedicated team of engineers and technicians have made us capable of supplying wide range of Multiple Effect Evaporators in the market.

Being a client centric firm, we understand the value of our customer's hard efforts in procuring the various accessories for a MULTIPLE EFFECT EVAPORATOR project. Understanding such concerns and value of our customer's efforts, we have been taking complete turnkey projects also, so that our customers have a total solution for their MULTIPLE EFFECT EVAPORATOR Projects and they enjoy a single and reliable source of supply.

Our systems also come with complete instrumentation and automation package which reduces the manpower and efforts in running the system, thus making the system more User-Friendly.



OZONATORS



Ozone generators are available in several series with capacities from 2 gmO₃/hr up to >200 kgO₃/hr produced from air or oxygen.

The ozone generators are fully equipped with all components necessary for automatic operation ready for operation. The air-fed type ozone generators include in general a dessicant air dryer.

Vacuum type ozone generators, which are commonly used for swimming pool water treatment, are available from 2 gmO₃/hr up to >1050 gmO₃/hr.

APPLICATIONS OF OZONATOR

- Bacterial Disinfection
- Viral Inactivation
- Oxidation of Soluble Iron and/or Manganese
- Decomplexing organically bound Manganese (Oxidation)
- Colour removal (Oxidation)
- Taste Removal (Oxidation)
- Algae Removal (Oxidation)
- Removal of Organics (Oxidation) such as pesticides, detergents, phenols
- Removal of Cyanides (Oxidation)
- Suspended Solids Removal (Oxidation)
- Increase Bio-degradability of Dissolved Organics
- Preparation of Granular Activated Carbon for Biological Removal of Ammonia and Dissolved Organics

ONLINE AMBIENT MONITORING SYSTEM



Air quality monitoring involves the measurement of pollution in ambient conditions. Monitoring the air quality is important in protecting the health of populations and is performed by Ambient Air Quality Monitoring Stations (AAQMS) that are totally integrated with gas analyzers, particulate matters, calibration equipment, data loggers and data reporting software. HEE-PL provides a totally integrated air quality monitoring system or network of systems for all its world wide clients.

To measure the real time ambient air quality online is a challenge. A large number of gaseous components need to be measured with high accuracy and high availability. Our Ambient Air Quality Monitoring System is a microprocessor based multi gas air pollutants quality gas detector that is suitable to incorporate number of gases measurements. Ambient Air Quality Monitoring System that we offer is known for providing accurate results and displays it on screen with real date & time.

ONLINE CONTINUOUS STACK MONITORING



A range of advanced Process and Stack Gas Emissions Monitoring System, which, coupled with advanced reporting systems, cost effectively fulfil the requirements of both Operators and Environmental Agencies to provide superb continuous emission monitoring solutions.

The complete portfolio includes SO_x/ NO_x/ CO/ CO₂/ O₂/ CH₄/ THC/ NH₃/ HF/ HCL and Dust/ SPM/ Flow/ Pressure/ Temperature/ Moisture and SCADA DAS and all housed inside an Analyzer Shelter.

The System is equipped with a comprehensive emission data recording and management system which complies to the guidelines of the authorities / Pollution Control board. The System also features online data transmission to the authorities. The latest version includes the remote calibration feature in which the CEMS system can be remotely calibrated from the authority location/ CPCB.



ONLINE EFFLUENT MONITORING

Online Effluent Monitoring – BOD/COD/TSS/pH and more parameters.

We conform to the final guidelines of CPCB. Monitor continuously the effluents in water from ANY remote location in real time using PC/Tablets/Smart Phones.

Detect unacceptable change in water quality immediately. Continuous online monitoring ensures effluents levels in discharged water at outlet is always within regulatory norms. This aids in optimizing water and waste water treatment processes.

Our Technology: UV Vis Absorption Spectroscopy
Constantly monitor water quality parameters like:

1. pH
2. BOD
3. COD
4. TSS
5. Conductivity
6. Dissolved Oxygen
7. ORP
8. Turbidity
9. Ammonium Nitrate
10. TOC

in Real Time.

One of our typical set up comprises of:

1. Sensors
2. Connecting Cables
3. A Terminator and/or Controller, and
4. Data Communication module using a LAN/MODBUS/PROFIBUS or 3G/2G GSM/GPRS Modems for remote connectivity.

That is not all. For accurate measurements we are at your beck & call. We will partner for swift analysis and continuous monitoring of waste process and drinking water.



HIMAG – 100

ELECTROMAGNETIC FLOW METER

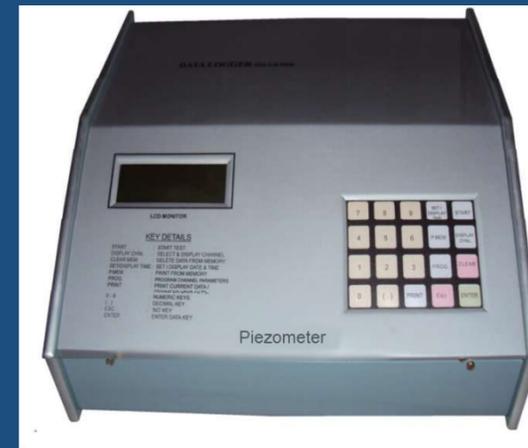
- Flow measurement with unit conversion facility
- Material options depending upon process data.
- Media : Liquids (Conductive)
- Power Supply : 90 – 260 V AC, 50 Hz; OPTIONAL: 24 V DC
- Line Size : 15 NB to 600 NB (for higher line size, please consult factory)
- Output : 4 to 20 mA DC ; OPTIONAL:
- HART/Pulse/Communication Port
- Transmitter Electronics : Integral ; OPTIONAL : Remote (Max.25 mtrs cable)
- Accuracy : $\pm 0.5\%$ of F. S. (for 20 to 100% flow)
- Material of construction : As per requirement
- Transmitter Enclosure : Die cast Aluminium IP 66, flow tube IP 68
- Operating pressure : Upto 10kg/cm² (Others : Please specify)
- Process Connections : ASA 150 flanged, as per table B 16.5

ULTRASONIC FLOW METER

- Suitable for conductive & non conductive liquids
- No moving parts, no pressure drop, no maintenance.
- INSERTION TYPE/ Potable Type – Also available for a wide range of pipe sizes from DN65mm to DN4500 mm.
- Power Supply : 90-240V AC 50/60Hz $\pm 15\%$, 5VA max./ 10 – 28V DC, 2.5VA max.
- Display : 16 x 2 LCD Display
- Output : 4 – 20mA DC
- Accuracy : $\pm 1.0\%$ of F.S.
- Maximum permitted pressure : 1.6MPa, classes MAP 16
- Protection class : IP 67
- Optional : RS 485 Communication
- Flange Connection : EN 1092-1, Alternatively ANSI (Others- Please specify)



DIGITAL WATER LEVEL RECORDER/ PIEZOMETER MODEL – GEOTECH



PIEZOMETER AUTO RECORD

As Per Guidelines of Central Ground Water Authority (CGWA) Piezometer is mandatorily installed within the premises and in peripheral areas to measure the ground water level periodically.

APPLICATION

The Auto Piezometer provides accurate data on pore water pressure in any embankment, foundation or natural ground. This is automatic system for unmanned recording of pressure saving a person to go in field and take measurements. Another important feature is vented tube for automatic barometric pressure compensation and easy to use data downloading software application.

ADVANTAGES SECURITY

The system has three main components i.e. Transducer, Signal Cable, and Datalogger. Signal Cable is vented yet strong, may be routed through underground trenches. Transducer is made from Stainless Steel 316 and installed below ground. Datalogger, the expensive unit is kept in the control room or in locking arrangement.

EASY INSTALLATION

Transducer and Cable are rugged and may be installed at almost every location. Transducer is installed at a known height and cable is installed through trenches. Data logger is a simple device simply needs a connection with the signal cable.

FLEXIBLE SAMPLING INTERVAL

The Datalogger provides flexible sampling interval as per the actual requirement at the site. Time interval may be any one selectable from 1 minute to 1440 minute (1 day). Delay sampling is also possible since datalogger incorporates real time clock.

DATA HANDLING

1000 records (extendable up to 1,00,000) may be recorded in ASCII format, compatible to almost every computer having Windows and MS Office installed. This ASCII file may be converted into EXCEL file for further analysis and graphs etc.

ANNUAL MAINTENANCE CONTRACTS, CONSULTANCY & OTHER SERVICES...

Effluent Treatment Plant Tech – Operational Review & Troubleshooting

- Effluent Treatment Plant Design
- Technical & Operational Specification
- Operational Management
- Troubleshooting
- Documentation

Sewage Treatment Plant Tech – Operational Review & Troubleshooting

- Effluent Treatment Plant Design
- Technical & Operational Specification
- Operational Management
- Troubleshooting
- Documentation

Water Management Systems

- Water Resource Management
- Rain Water Harvesting
- Water Shed Management
- Water Balancing
- Water Audit

STP & ETP

- Oil Skimmers
- Coarse Air Bubble Diffusers
- Fine membrane Diffusers
- Pumps
- Blowers
- Bio Media (SAFF, FAB)
- Tubedeck Media
- Piping & Fittings
- Multi Port Valves
- DMF/ACF Filters
- Online pH meters
- Water level Controllers
- Reaction Tanks
- Auto chemical dosing pumps
- pH Controller & Sensors
- Flash Mixers/Agitators
- Clarifiers
- Filter's Media Gravels, Pebbles, Silica Sand
- Activated Carbon (600-1100 ID Value)
- ORP Sensors
- TDS Sensors

REVERSE OSMOSIS, ULTRA FILTRATION, DM PLANTS

- Anti-scalant chemicals
- FRP Vessels
- RO Membrane
- UF membrane
- Micron Filter & Housings
- Resins for Softener Plants
- Resins for DM Plants

SPARES



SPARES

COAGULANTS & FLOCCULANTS

- Color Removals
- Odour Removals
- Anti Scalants
- Laboratory Chemicals
- Waste water Treatment Chemicals



RAIN WATER HARVESTING



LAB EQUIPMENT & GLASSWARE



PPE & SAFETY ACCESSORIES



Rain water is a precious resource due to increases in demand from our ever growing population. Changes in rainfall patterns in the India have seen both drought conditions and flooding.

The Central Ground Water Authority (CGWA) has made rainwater harvesting mandatory in all institutions and residential colonies in notified areas (South and southwest Delhi and adjoining areas like Faridabad, Gurgaon and Ghaziabad). This is also applicable to all the buildings in notified areas that have tubewells. The deadline for this was for March 31, 2002.

The CGWA has also banned drilling of tubewells in notified areas.

Rain water harvesting is one of the most effective methods of water management and water conservation. It involves collection and storage of rain water at surface or in sub-surface aquifer, before it is lost as surface run off. The augmented resource can be harvested in the time of need.

This is a very useful method for a developing country like India in reducing the cost and the demand of treated water and also economising the treatment plants operation, maintenance and distribution costs.

