# Our Pride

- Best Pollution Control Organization of the Year 2022
- Certificate of Excellence from Indian Economic Development & Research Association (Dubai, UAE) 2019
- Excellence Award for Industrial Development 2019
- Fastest Growing Company Award 2017

# Our Contribution in

- Dream City Infrastructure Consultancy Project Project Cost INR 15000 million.
- River Tapi Shuddhikaran Project Project Cost INR 9713 million.
- Swachh City Plan under Swachh Bharat Mission for Surat City
- City Sanitation Plan under Swachh Bharat Mission for Surat City
- 24 x 7 Water Supply Scheme-Area 13500 Hectare
- More than 2000 Kmt. Sewerage System
- More than 750 Kmt. Storm Drainage System
- EWS Awas under PMAY scheme for SMC • 650 MLD Tertiary Sewage Treatment Plant
- More than 2700 MLD Sewage Treatment Plant
- 700 MLD Water Treatment Plant
- 110 MLD Radial Well
- 400 MLD Intake Well
- More than 15 nos of Building Projects
- More than 150 nos of Bridges
- More than 600 Km Road Project
- Competence to projects under Amrut, Finance Commission, Smart City, JJM, SJMMSVY, NRCP, SBM, PMAY, CMAY, etc.



**Excellency** with Year

Services

Civil Engineering

Storm Water Engineering

Water and Wastewater Engineering



Fastest Growing Indian Company Excellence Award.





Road and Bridge Engineering

Solid Waste Management



Excellence Award for The Industrial Development.





**Best Pollution Control** 



# Energy Sector

Sreen Engineering Solutions...

Sreen

design & engineering services pvt. ltd.

















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## DELHI BRANCH OFFICE

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**E-MAIL**: info@greendes.com / green.des.india@gmail.com Mechanical and Electrical Engineering

# Tapi Shuddhikaran under NRCD

Project Cost	INR 9712.4 million
Tapi Stretch	85 Kms from Kakarapar Barrage
	to ONGC Bridge, Surat
Catchment Area of Project	411.55 Km2
Total Population Covered	3.91 million
Total Sewage Disposal Prevented in River	370 MLD
Drains Identified	44 No.
Villages To Be Benefited	73
Total Length of Sewerage Network	339.75 Km.
Total Length of Interceptor Gravity Line	12.37 Km.

Total Capacity of SPS	406.37 MLD
Total Length of Rising main	40.9 Km.
Total Capacity of STP	249.36 MLD
Total Length of Disposal Line	2.1 Km.
River Front parks	4 No.
Aquatic Weed Harvester Machine	1 No.
Organic Waste Vermi Composting	8 No.
Online River Quality Monitoring System	4 No.
Mass Trees Plantation	0.1 million
Centralized Laboratory	2 No.

# Sewerage Project

- 255 MLD Tertiary Sewerage Treatment Plant with BNR, BPR and Fine Filtration at Singanpore, Surat.
- 250 MLD STP at Pirana, Ahmedabad.
- 220 MLD capacity Tertiary Sewerage Treatment Plant with BNR and Fine Filtration at Variay – Kosad, Surat,
- 215 MLD capacity STP with BNR and BPR at Bamroli, Surat.
- 211 MLD STP with BNR and BPR at Karani, Surat.
- 200 MLD STP with BNR at Bhesan, Surat.
- STP's with total capacity 172 MLD at Newly added areas, SMC.
- 167 MLD STP with BNR and BPR at Dindoli, Surat.
- 122 MLD capacity STP with BNR and BPR at Anjana, Surat.
- 115 MLD STP with BNR at Bhatar & Bamroli, Surat.
- 100 MLD capacity Tertiary Sewerage Treatment Plant with BNR and Fine Filtration at Sherkhi, Vadodara.

# **Tertiary Treatment Plant At Bamroli & Dindoli**

Bamroli TTP	40 MLD + 35 MLD	Project Cost	INR 1790 Million	Commissioned	2019
Dindoli TTP	40 MLD	Project Cost	INR 1038 Million	Commissioned	2019

## TREATED USED WATER QUALITY

True Color (max.)	< 5 Hazen unit
Turbidity	< 5 NTU
pH	6.0 - 7.5
Total Hardness (CaCO3)	< 300 mg/L
Iron as Fe	< 0.25 mg/L
Manganese as Mn	< 0.10 mg/L

#### TDS < 500 mg/L BOD5 < 5 mg/L< 50 mg/L< 2 mg/LTotal Nitrogen as N < 10 mg/L Total Phosphorous < 6 − 10 mg/L

# **Water Supply Projects**

- 400 MLD Intake Well and 250 MLD Water Treatment Plant at Variay, Surat.
- Water Treatment Plant (212 MLD) with Zero Liquid Discharge facility at Kosad, Surat.
- Water Treatment Plant (160 MLD) with Advanced Ceramic Filters for PFAS removal facility at Rander, Surat.
- 360 MLD Intake Well. 1 No. of Radial Well with 50 MLD each and 152 MLD Water Treatment Plant at Newly added area of East Zone, Surat.
- 32 MLD Water Treatment Plant at Mota Varchha, Surat.

# **MAJOR TREATMENT UNITS**

- Dic Filtration/Gravity Sand Filtration
- Sludge Handling Units (Centrifuge)
- Activated Carbon Filter
- Clariflocculator
- Degasser System
- Ultra Filtration Reverse Osmosis

#### PROJECT DESCRIPTION

- The tertiary treatment of sewage is producing industrial grade water.
- 35 MLD plant at Bamroli: treated wastewater is supplied to Sachin GIDC
- 40 MLD plant at Bamroli and 40 MLD plant at Dindoli : treated wastewater is supplied to Pandesara

#### **PROJECT BENEFITS**

Water saved	120 MLD fresh water
Population benefited	0.8 Million people daily.

 $< 5 \,\mathrm{mg/L}$ 

< 5 mg/L

< 10 mg/L

< 500 mg/L

Dissolved Air flotation unit

Disc Media Filtration

Sludge Treatment

Ozonation

Sludge Handling Units

# **Reuse of Treated Used Water in Ghaziabad**

DI K-9 Treated wastewater distribution network 88071 Rmt up to industries

**Advanced Water Treatment in Rander WTP** 

Pre-Clarification / Settling is NOT required

Project Cost	INR 3190 million
Capacity	40 MLD (Net output)
Tender	HAM PPP Model Basis

INR 10190 million

70 MGD (318 MLD)

HAM PPP Model Basis

160 MLD

• 99% of total transparent exopolymer particles (TEP)

88% of colloidal/dissolved fraction

MAJOR PROJECT COMPONENTS

Disc Filtration

Project Cost

Technology

Capacity

Benefit

**EFFICIENCY** 

MS Transmission main

TTP

UGSR

## **MAJOR TTP UNITS**

56 MLD

5 ML

2.8 ML

DO

BOD

Total Coliform

**Tertiary Treatment of Used Water upto C Class River Standards** 

**MAJOR TREATED PARAMETERS** 

6.5 to 8.5

< 3 ma/L

4 mg/L or more

< 5000 MPN/100 ml

 Disc Media Filtration Ultra-Filtration

40 MLD (Net output)

1200mm Dia. and 7000 Rmt

 Reverse Osmosis Clariflocculator Activated Carbon Filter

TSS

TDS

**MAJOR TTP UNITS** 

Primary Treatment

Ultra-Filtration

Secondary Treatment

Oil & Grease Treatment

Activated Carbon Filter

Total Nitrogen

Degasser System

**MAJOR TREATED PARAMETERS** 

Total Phosphorous < 1 mg/L

# Reuse of Treated Used Water at Hazira, Surat

Project Cost	INR 12350.0 million
Capacity	200 MLD (Net Output)
Tender	Engineering, Procurement and Construction (EPC) Mode

#### **PROJECT BENEFITS**

Fresh Water Saved	200 MLD
Population benefited	1.35 million people daily.
Utilization	Steel industry at Hazira, Surat.

### MAJOR TREATED PARAMETERS

Turbidity	<2 NTU	Total Suspended Solids	< 10 mg/L
рН	6.5-8.0	Total Phosphorous	< 1 mg/L
TDS	< 100 mg/L	Total Hardness as CaCO3	<120 mg/L
BOD5	<5 mg/L	Chloride as Cl	< 40 mg/L
COD	< 10 mg/L	Total Silica as SiO2	< 8 mg/L
Oil & Grease	< 0.5 mg/L	Sulphate as SO4	< 10 mg/L

Sodium as CaCO3	< 65  mg/L	P
-Coli	Absent Not detectable for 100 ml Sample	
otal Coli from Bacteria	Absent Not detectable for 100 ml Sample	
Colloidal Silica	Absent	
otal Cation & Anion	< 200 mg/L	
DI (Silt Density Index)	< 4 mg/L	l w
-		IV

Clarriflocculator

Degasser Units

Chemical House

Dirty water Sump

Sludge handling units

# INR 1110 million Ceramic Membrane Filter No extra land is required

## **MAJOR TREATMENT UNITS**

 Cascade Aerator & Preliminary Treatment Advanced Ceramic Filtration System

• Efficient removal of Radium, Uranium, PFAs (Perfluoroalkyl substances),

- Dirty Water Sump with Overhead Backwash Tank
- Treated Sump and Pump House

THM (Total trihalomethanes), DOC (Dissolved Organic Carbon)

VOC (volatile organic compounds), Odour, Taste, Colour.

- Disinfection System
- Flash Mixer Parshall Flume
- · Chemical House

- Treated used water Pumping Station at Variay-Kosad STP 220 MLD
- Secondary used water Transmission Line -1626 mm OD: 17000 Rmt
- TSTP: 200 MLD (Net Output)

**MAJOR PROJECT COMPONENTS** 

**MAJOR TSTP UNITS** 

Ultra-filtration (UF).

• Reverse Osmosis (RO)

Dic media filter.

Strainer

Flash Mixer

- Treated used water Sump and Pumping Station at Asarma: 3000 LL
- Treated water Transmission Line -1829 mm OD: 18000 Rmt

# Reuse of Treated Used Water at Industrial Estate, Ahmedabad

Project Cost	INR 9486.5 million
Capacity	160 MLD (Net Output) TSTP and 240 MLD STP
Tender	HAM-PPP Model Basis

## **MAJOR PROJECT COMPONENTS**

Tertiary Sewage Treatment Plant (TSTP) 160 MLI	)
Tertiary bewage treatifient Flant (1517)	O (Net Output)

# MAJOR TREATED PARAMETERS

Turbidity	< 5NTU	True Color	<5 Hazen
pН	6.0 - 7.5	Total Phosphorous	<1 mg/L
TDS	< 500 mg/L	Total Hardness as CaCO3	<120 mg/L
BOD5	< 5 mg/L	Iron as Fe	< 0.25 mg/L
COD	< 50 mg/L	Total Suspended Solids	<2 mg/L
Alkalinity	< 50 mg/L	Total Nitrogen as N	< 10 mg/L

# **PROJECT BENEFITS**

Fresh Water Saved	160 MLD fresh water.
Population benefited	1 million people daily.
Utilization	Textile industries at Ahmedabad Industrial Estate

# MAJOR STP & TSTP UNITS

- Primary Treatment
- Parshall Flume Secondary Treatment
- Disinfection unit
- Disc Media Filter
- Strainer
- Ultra-filtration (UF).
- Reverse Osmosis (RO)





Activated Carbon Filter

Sludge handling units

Flash Mixer

Clarriflocculator

Degasser Units

Chemical House

Dirty Water Sump