



Project Concept Note & Monitoring Report (PCNMR)

Rainwater Offset Unit (RoU) Standard	Version 8.1
UWR RoU Scope (Annual RoU threshold limit)	RoU Scope 4 (2,000,000 RoUs)
UWR RoU Scope (Annual RoU threshold limit)	RoU Scope 5 (1,000,000 RoUs)
UNDP Human Development Indicator	0.644
National Water Security Index	2



Project Aggregator and Consultants	SDG-CR CONSULTING LLP
Project Proponent	ARVIND MILLS LTD. - SANTEJ
RoU Scope Description	<ol style="list-style-type: none"> Measures that remove bacteriological and other impurities from seawater, sewage and waste water, contaminated water bodies, or unutilized water, so that water is made suitable for re-use and/or recycling. Conservation measures taken to recycle and reuse water, spent wash, wastewater etc. across or within specific industrial processes and systems.
Project Description	<ol style="list-style-type: none"> Gainful use of sewage wastewater by STP Treatment and process for domestic and industrial purposes. Recycle and treatment of industrial effluent and gainful use for domestic and industrial process.
Project Location	SANTEJ, Ahmedabad
Monitoring Period:	01/01/2018 - 31/12/2025
Crediting Period:	2018 -2025
Document Title	Project Concept Note and Monitoring Report (PCNMR)
Purpose	FOR VERIFICATION
SDGC Project Number	6960 – P-05
Revision	R0
PCNMR report submission date:	April 2026

REVISION HISTORY					
REV NO	DATE	DESCRIPTION	PREPARED BY	REVIEWED BY	APPROVED BY

PREFACE

SDG-CR CONSULTING LLP (SDGC) assists in implementing water credit programs to leverage a competitive market-based approach to incentivize voluntary environmental actions of various stakeholders. Apart from incentivizing individual/community behaviors, SDGC encourages private sector industries, companies, and other entities to meet their existing obligations, stemming from various legal frameworks by taking actions that can converge with activities relevant to generating or buying water credits. SDGC creates a digital data repository by integrating geographical information systems (GIS) with artificial intelligence (AI) to create various insights into ESG reporting, social impact assessments, and business value enhancement.

SDGC plays a vital role as a project aggregator and consultant to support institutions and civil societies to encourage them to initiate integrated water management practices to reverse the depletion of groundwater sources worldwide in the context of the Universal Water Registry water credit program. SDGC also assists in establishing a clear relationship between water's price and its value; to reflect attempts not only for cost recovery but also the value delivered for unique applications like business risk analysis, climate risk analysis, green credits, finance, business valuation, engineering design, and resource valuation.

SDGC has developed methodologies in alignment with the UWR RoU standards to reflect the ecosystem service value of water to support behavior change in favor of sustainable water use and management at various levels. Methodologies are not limited to the integration of various water verticals but also redefine the relationship between civil society and water. This initiative will also help to add to the water's social value and economic value through integrated, well-coordinated, and comprehensive design services while balancing between the triple bottom line of sustainability i.e. people, planet and profit.

SDGC adopts an integrated water source study and analysis by carrying out a WATERSHED STUDY, SURFACE WATER ANALYSIS, and GROUNDWATER STUDY to redefine water as a definite "SOURCE" while bringing a paradigm shift in people's lives and the surrounding environment. The study brings technical insights and the water footprint (WF) of society's domestic, industrial, and agricultural needs to save humanity before the economy. We apply the purposeful and functional logic between various water verticals to complete a hydraulic circle while balancing water elements on the earth.

CONTENTS

1	EXECUTIVE SUMMARY	7
2	ABOUT THE PROJECT PROPONENT	8
3	STATUTORY COMPLIANCE	15
4	BASELINE SCENARIO	18
5	CONCEPT	19
6	OBJECTIVE	19
7	METHODOLOGY.....	21
8	EARTH SURFACE ASSESSMENT.....	22
9	WATER CONSERVATION (How water conserved?).....	27
10	WATER BALANCE (Available Water for gainful use)	32
11	WATER CREDITS.....	35
12	IMPLEMENTATION BENEFITS	36
13	ALTERNATE WATER CONSERVATION METHODS	37
14	FEASIBILITY EVALUATION	38
15	INTERVENTIONS BY PROJECT OWNER/ PROPONENT/ SELLER.....	38
16	UWR RAINWATER OFFSET DO NO NET HARM PRINCIPLES.....	39
17	ECOLOGICAL ASPECTS.....	39
18	SCALING PROJECTS – LESSONS LEARNED – RESTARTING PROJECTS	42
19	ABBREVIATIONS	43
20	REFERENCE DATA.....	48
21	DISCLAIMER.....	50

LIST OF FIGURES

Figure 2.1: Site Plan	8
Figure 2.2: UNDP Human Development Indicator	9
Figure 2.3: National Water Security Index.....	11
Figure 2.4: Location Map	12
Figure 2.5: Site Visit	12
Figure 4.1: Toposheet	18
Figure 5.1: Ancient Hydrological Cycle from 800 to 500 B.C.	19
Figure 6.1: Sustainable Development Goals	20
Figure 7.1: Flow Chart	21
Figure 8.1: Digital Elevation Model Map.....	23
Figure 8.2 : Land Cover Map	24
Figure 8.3 : Regional Catchment Delineation	26
Figure 9.1: Geomorphology Map.....	28
Figure 9.2: Geology Map.....	31
Figure 10.1: Single Line Diagram (2018-2025)	32
Figure 13.1: Rainwater Storage Unit.....	38

LIST OF TABLES

Table 2.1: National Water Security Stages.....	10
Table 2.2: Project Brief.....	13
Table 3.1: No. of Piezometers to be constructed & Type of Water Level Monitoring Mechanism	17
Table 4.1: Data Source	18
Table 4.2: Technical Insights	19
Table 8.1: Data Source	22
Table 8.2: Technical Insights	23
Table 8.3: Technical Insights	24
Table 8.4: Data Source	25
Table 8.5: Technical Insights	26
Table 9.1: Data Source	27
Table 9.2: Technical Insights	28
Table 9.3: Area Hydrogeology.....	29
Table 9.4: Data Source	30
Table 9.5: Technical insights	31
Table 10.1: Water Demand.....	33
Table 10.2: ETP Reuse	34
Table 10.3: STP Reuse	34
Table 10.4: Water Balance.....	35
Table 11.1: Total RoU Generation for Vintage Years (2018-2025)	36

1 EXECUTIVE SUMMARY

SDG-CR Consulting LLP (SDGC) conducted a comprehensive Water Audit and Assessment for the brownfield facilities of Arvind Ltd. Santej, Gujarat, India. The study evaluated existing water management practices and provided actionable recommendations to enhance water valuation, design alternative water structures, and strengthen water stewardship.

Arvind Ltd. Santej is a unit of the USD 1.3 billion Arvind Limited. Arvind is one of the world's largest manufacturers of denim and woven fabrics, producing 100 million meters of denim and 150 million meters of woven fabrics annually. It owns several brands through subsidiaries, like Arrow, US Polo, Izod, Elle, and Cherokee, and manages MEGAMART.

A. The Arvind Ltd. Santej site was visited on 5 th December, 2025 and 9 th February, 2026 to verify the operational ETP & STP units.
B. The unit was physically established as functional throughout the year irrespective of the production output fluctuations.
C. Statutory compliance for the premises may be revisited for GDCR (Gujarat Development Control Regulations and CGWA (Central Ground Water Authority).
D. The ETP unit with ZLD was started in 2018 & STP unit started gainful use of outside sewage water from 2019.
E. The project has been commissioned with a conscious and sustainable design approach, however the same is now complying with the UN's Sustainability goals.
F. SDG No. 6 - Drinking Water and Sanitation
G. SDG No. 9 - Industry, Innovation, and Infrastructure
H. SDG No. 11 - Sustainable Cities and Communities
I. SDG No. 12 - Responsible Consumption and Production
J. SDG No. 13 - Climate Change
K. SDSG No. 17 – Partnership for the goals
L. Total water credits that have been calculated for Scope 4 is 44,62,433 RoU
M. Total water credits that have been calculated for Scope 5 is 80,00,000 RoU
N. Total water credits that have been calculated for both the Scopes is 1,24,62,433 RoU
O.

2 ABOUT THE PROJECT PROPONENT

Arvind Ltd. Santej is a unit of the USD 1.3 billion Arvind Limited. Arvind is one of the world's largest manufacturers of denim and woven fabrics, producing 100 million meters of denim and 150 million meters of woven fabrics annually. It owns several brands through subsidiaries, like Arrow, US Polo, Izod, Elle, and Cherokee, and manages MEGAMART.

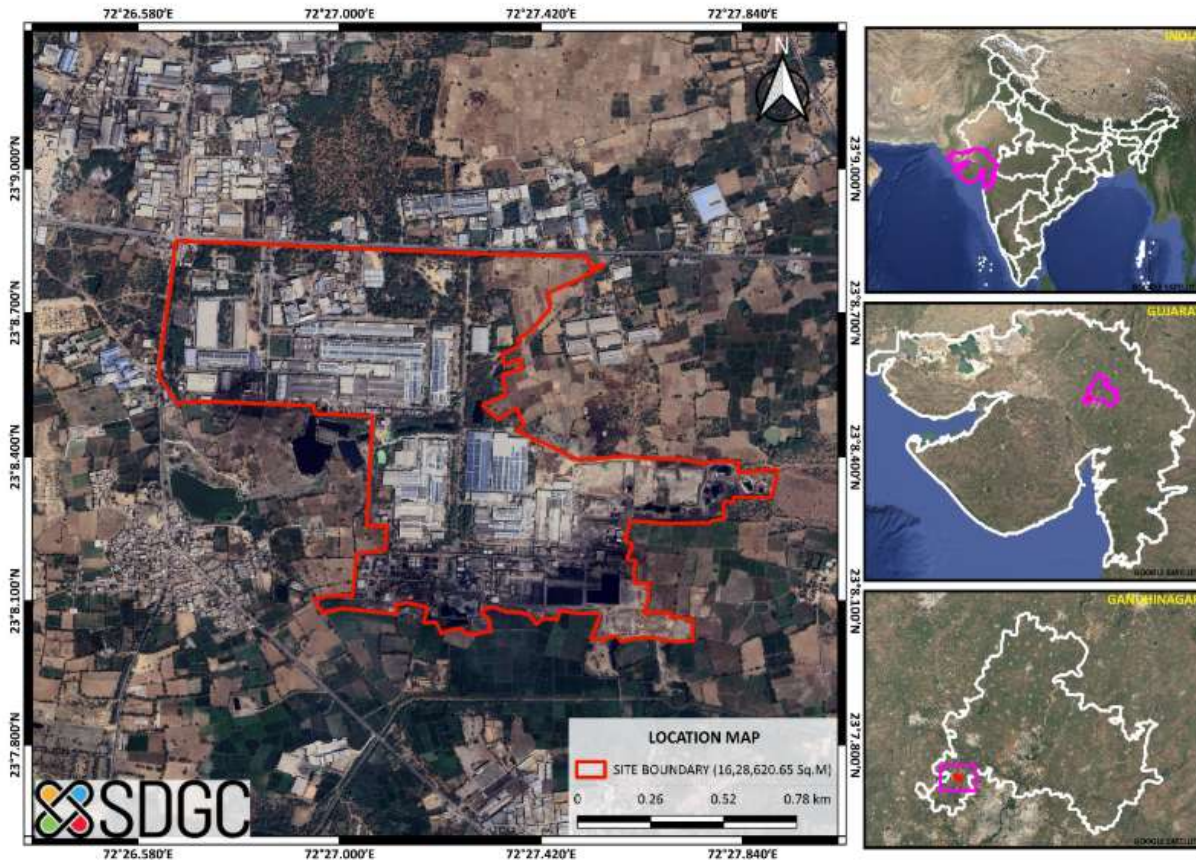


Figure 2.1: Site Plan

UWR requires projects that are real, verifiable, and must be currently operational. UWR Rules allow projects from domestic and developing nations as well. All UWR water conservation and recharge activities have prescriptive eligibility, evaluation, and verification requirements as outlined in their approved positive project list protocol requirements, as outlined in the UWR Rainwater Offset Standard Version 6.1.

2.1 UNDP HUMAN DEVELOPMENT INDICATOR

All projects using this methodology must be ideally located in a country or region with a recent UNDP Human Development Indicator below 0.900. However, countries and regions with higher HDI's will also be considered taking the goal of UN SDG 17 into account, especially water conservation and recharge projects that encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships.

India falls into 2022 HDI value 0.644 which is represented in the below image.

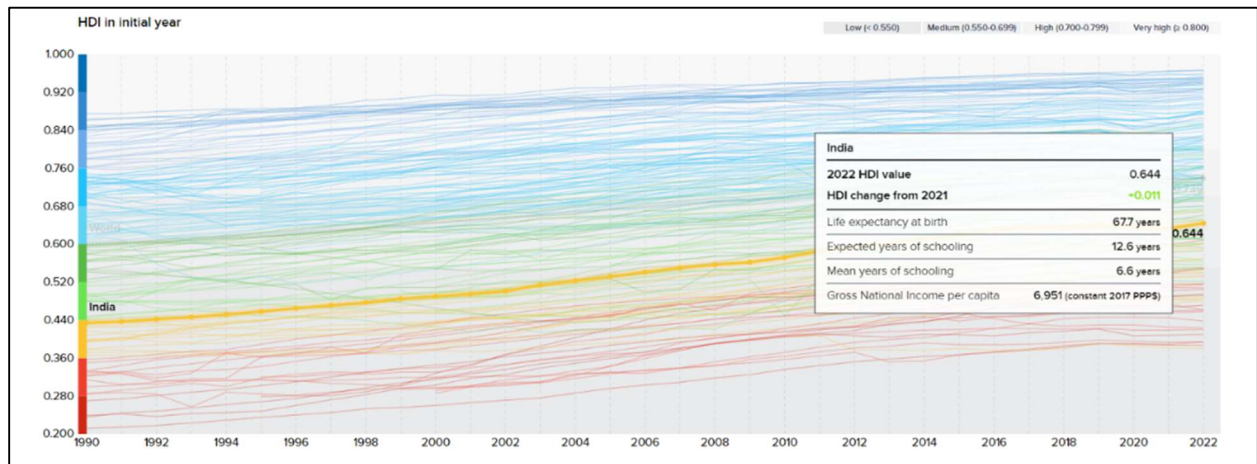


Figure 2.2: UNDP Human Development Indicator

2.2 NATIONAL WATER SECURITY INDEX

The five Key Dimensions form the National Water Security Index (NWSI). The maximum score for each KD is 20. The maximum NWS score—the sum of the KDs—is 100. At NWSI Stage 1, the water situation is encouraging, however there is a large gap between the current state and the acceptable level of water security. At NWSI Stage 5, the country may be considered a model for its management of water services and resources, and as water secure as possible under current circumstances.

All projects using this methodology are ideally below the NWS score of 60 and NWSI equal to or lower than 2 ($NWSI \leq 2$). However, projects above the NWS score of 60 can also use the methodologies outlined in the UWR RoU Standard and be eligible for RoUs under the program.

Table 2.1: National Water Security Stages

NWSI	NWS Score	NWS Stage	Description
5	96 and above	Model	All people have access to safe, affordable, and reliable drinking water and sanitation facilities. Economic activities are not constrained by water availability. Environmental governance is good, and pressure on aquatic ecosystems is limited. Water-related risks are acceptable and relatively easy to deal with.
4	78-96	Effective	Nearly all people have access to affordable safe drinking water and sanitation facilities. Economic water security is high. Environmental governance is generally acceptable, and attention is given to ecological restoration. There are systematic commitments to reduce disaster risk.
3	60-78	Capable	Access to safe drinking water and sanitation facilities is improving. Economic water security is moderate. Environmental governance is moderate, with clear pressure on the ecosystem. There are some institutional commitments to reduce disaster risk.
2	42-60	Engaged	A significant majority of rural and urban households have access to basic water supply but less to sanitation. Economic water security is low. Environmental governance is moderate, with severe pressures on aquatic ecosystems. Progress in achieving disaster risk security is low.
1	0-42	Nascent	A low proportion of rural and urban households have access to basic water supply and sanitation. Economic water security is low. Environmental governance is poor, with significant pressures on the aquatic ecosystems. Hardly any attention is given to disaster risk reduction.

India falls into the Engaged Stage (2) of the National Water Security Index in 2020 which is represented in the below image.

National Water Security Index

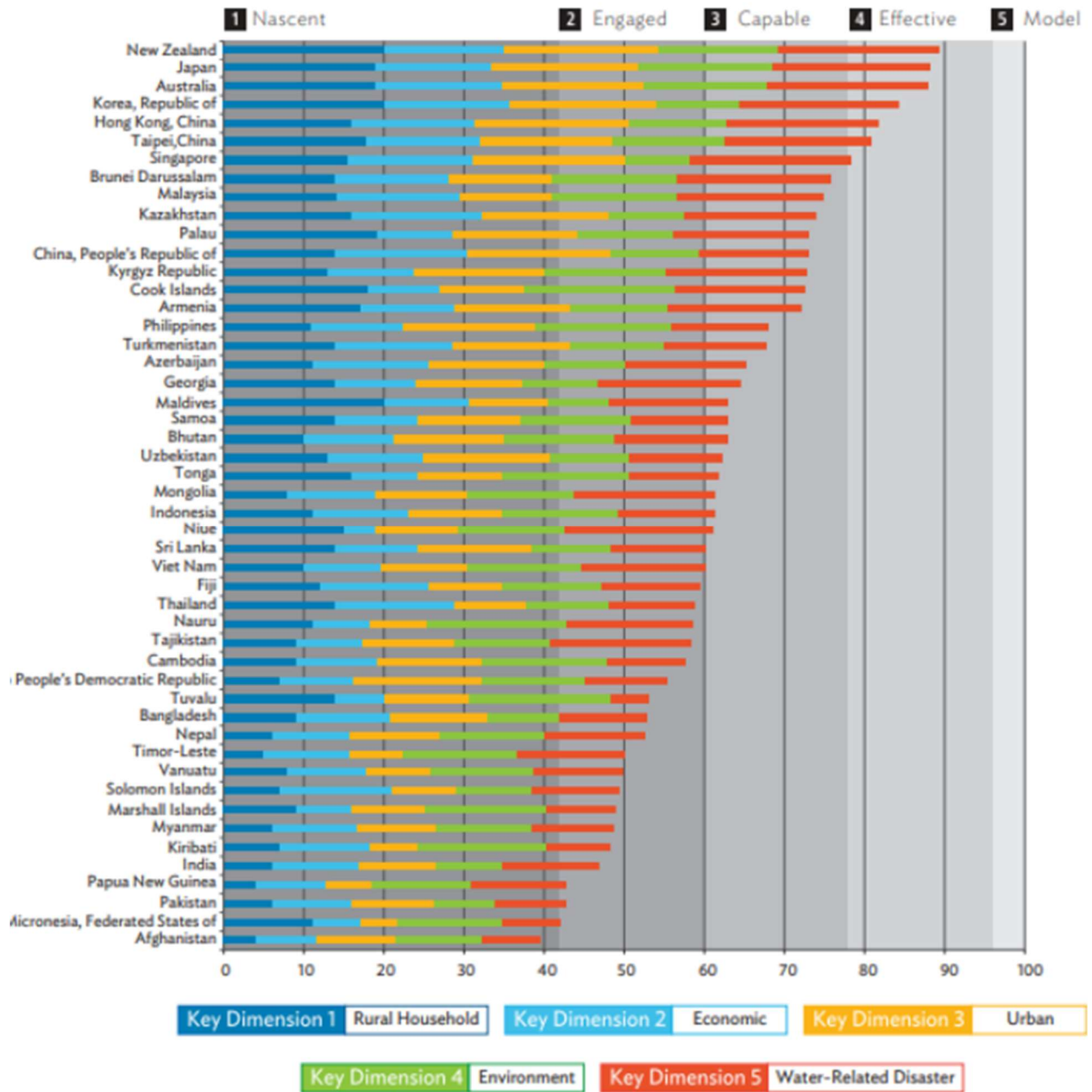


Figure 2.3: National Water Security Index

2.3 LOCATION OF PROJECT ACTIVITIES

Arvind Ltd. Santej site is located in Gandhinagar District, Gujarat, positioned within a semi-urban industrial northwest of Ahmedabad city. The area exhibits a mixed-use character, with the site surrounded by industrial estates, warehouses, scattered residential settlements, agricultural lands, and small water bodies.

The site benefits from excellent connectivity via nearby regional and local road networks, providing direct access to key urban centres in Gandhinagar and Ahmedabad. The surrounding region forms part of a growing industrial and infrastructural hub, while still maintaining open landscapes and green patches in the vicinity.

As illustrated in the location map, the site boundary encompasses an area of approximately 1,628,620.65 square meters. The site's coordinates, centred around 23.138137° N, 72.455578° E, place it within the industrial outskirts of Gandhinagar, integrating seamlessly into Gujarat's broader economic landscape.

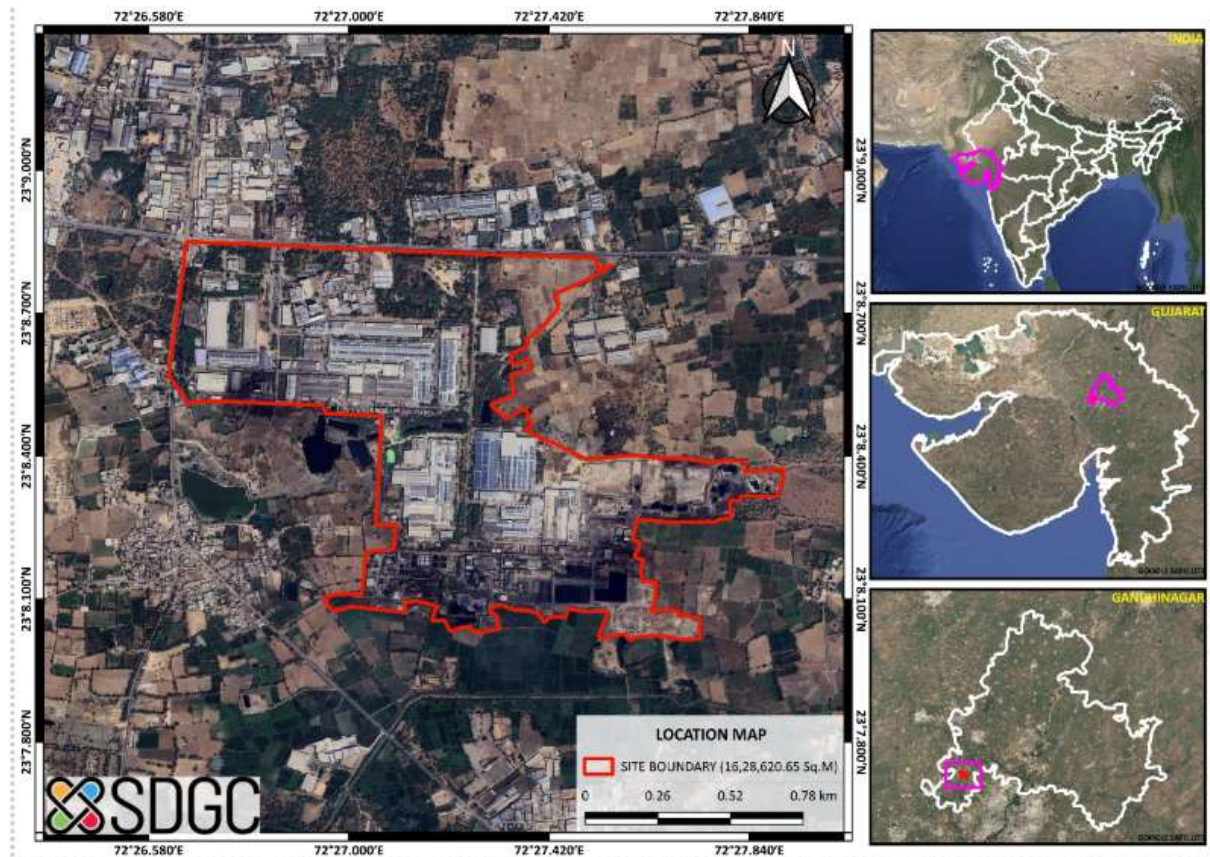


Figure 2.4: Location Map

2.4 PROJECT BRIEF

The following site-specific information and details are to be referred to get acquainted with the water condition of the premises.

Table 2.2: Project Brief

SN	SPECIFICS	DESCRIPTION
1	Address of the project activity	Arvind Ltd, Santej, P.O.: Khatraj, Tal: Kalol, Dist.: Gandhinagar - 382721, India
2	District	Gandhinagar
3	State	Gujarat
4	Country	Bharat
5	Latitude – Longitude	23.138137° N, 72.455578° E
6	Land use type	Commercial use
7	Project type	Industrial
8	Industry type	Manufacturing
9	MSME Type	No
9	Plot area	402 acres
10	Block basin	Sabarmati Basin
11	Sub-basin	Sabarmati Lower Basin
12	Assessment Unit Type	Safe
13	Primary water supply source	Production borewell (Groundwater storage)
14	Secondary water supply source	Treated ETP Effluent
15	Annual Industrial water demand	59,60,966 CuMt
16	Annual domestic water consumption	3,59,959 CuMt
17	Installed ETP Capacity	17,500 CuMt/ day
18	Installed STP Capacity	4500 CuMt / day
19	Topo sheet No	46A/12 and 46A/08

2.5 KEY ROLES AND RESPONSIBILITIES

The Project Proponent and Owner (PP) possess all the necessary permits and ownership documents for the uncontested legal land title for the project area within the project boundary of the project.

Arvind Ltd, Santej Plant, is part of Arvind Limited, a major Indian textile manufacturer and the flagship company of the Lalbhai Group. Headquartered in Ahmedabad, Gujarat, it is one of the world's largest producers of denim and a leading player in cotton shirting, knits, and advanced materials. Following are its core business strengths -

- Core Textiles: Arvind manufactures approximately 100 million meters of denim and 150 million meters of woven fabrics annually.
- Advanced Materials (AMD): This division focuses on technical textiles, including fire protection fabrics, composite materials (FRP), and industrial filtration.
- Brand Portfolio: Through its subsidiary, Arvind Fashions, the group manages iconic global and domestic brands including:
 - International Brands: Arrow, U.S. Polo Assn., Tommy Hilfiger, and Calvin Klein.
 - Indigenous Brands: Flying Machine.
- Retail Presence: The company operates The Arvind Store, which offers custom tailoring and ready-to-wear fashion.

Arvind Limited integrates sustainability through its "Fundamentally Right" strategy, focusing on six core inputs: cotton, people, money, energy, water, and chemicals. As of FY25, the company ranks #1 in India and #7 globally in the S&P Global Sustainability Assessment (DJSI) for its sector. Further, Arvind is a global leader in industrial water management, largely through its subsidiary Arvind Envisol. Arvind group is a leader in Indian industry setting benchmarks in water stewardship, renewable energy & decarbonization, sustainable raw materials, circular fashion & chemicals and creates a wide spread positive social impact through its diverse CSR activities.

Project proponent and owner	ARVIND LTD. - SANTEJ
Project proponent and owner's address	Arvind Ltd, Santej, P.O.: Khatraj, Tal: Kalol, Dist.: Gandhinagar - 382721, India
Project aggregator and consultant	SDGC
Project aggregator and consultant's address	4th Floor, Shreeji House, Behind M. J. Library, Ellisbridge, Amdavad 380006, Gujarat, Bharat.
Date PCNMR Prepared	April 2026

PROJECT NAME	ARVIND LTD. - SANTEJ
UWR Scope:	Scope 4 & 5
Date PCNMR Submitted	March 2026
Catchment Area	1313 acres (Refer to Chapter 8)
Month and Year of STP unit installation	April 2019
Month and Year of ETP unit installation	January 2018

2.6 SITE VISIT

To understand the production process, the water demand and the initiatives implemented by PP for gainful reuse of water, our team made several site visits on 5th December, 2025 and 9th February, 2026. Our team interacted with the management and engineering in-charge of the PP and explained them the data requirements, authentication parameters, and other relevant factors to be considered for claiming RoUs under the Universal Water Registry Rainwater Offset Unit (RoU) Standard Version 8.1. As per the management policy, use of cameras to document our visit was prohibited, hence there is no site visit photographs available for inclusion here in. The video of the ETP and STP uploaded along with this PCNMR is the official video as released by the PP management.

3 STATUTORY COMPLIANCE

Groundwater usage laws and their enforcement are taking shape in Bharat. The policies also reach the end users, who are expected to be key stakeholders in a way they would understand its provisions and their role. Therefore, the UWR RoU program and methodologies are introduced to employ the broad monitoring and accounting framework to promote available technologies like GIS and remote sensing, where water security plans encompass a watershed for a large number of entities.

Yet the water security concept in its true sense has not become institutionalized enough, which is expected to capture the impacts of various water recharging, harvesting, recycling, and conservation practices, that are aimed at enhancing groundwater supply stocks. Therefore, it is mandatory to comply with statutory guidelines to obtain various “No Objection Certificates” to put the building in use, while claiming the water credits.

Groundwater abstraction guidelines have been prepared to regulate groundwater extraction and conserve the scarce groundwater resources in the country to have sustainable management of water resources. These guidelines come into force in 2020, 24th September through Gazette Notification number CG-DL-E-24092020-221952 and will supersede all earlier guidelines issued by the Central Ground Water Authority (CGWA).

The authority has been regulating groundwater development and management by issuing 'No Objection Certificates' for groundwater extraction to all new/ existing residential, industries or infrastructure projects unless specifically exempted. Framed guidelines apply to PAN India.

(Reference - THE GAZETTE OF INDIA: EXTRAORDINARY [PART II—SEC. 3(ii)] Clause no 4.3 – page no 38 – 39).

3.1 COMMERCIAL USE – INFRASTRUCTURE & INDUSTRIAL PROJECTS

Since infrastructure projects are location-specific, granting of No Objection Certificate to such projects located in over-exploited assessment units shall not be banned. New infrastructure projects/ residential buildings may require dewatering during construction activity and/ or use groundwater for construction. In both cases, applicants shall seek a No Objection Certificate from CGWA before the commencement of work. However, in over-exploited assessment units, groundwater use for construction activity shall be permitted only if no treated sewage water is available within a 10 km radius of the site.

3.1.1 NO OBJECTION CERTIFICATE

New, as well as existing Infrastructure projects, shall also be required to seek a No Objection Certificate for the abstraction of groundwater.

In the case of infrastructure projects that require dewatering, the proponent shall be required to carry out regular monitoring of the dewatering discharge rate (using a digital water flow meter) and submit the data through the web portal to CGWA/SGWA as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by CGWA/ SGWA.

3.1.2 SEWAGE TREATMENT PLANT

Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where the groundwater requirement is more than 20 m³ /day. The water from STP shall be utilized for toilet flushing, car washing, gardening, etc.

3.1.3 VALIDITY – NOC

For infrastructure dewatering/ construction activity, a No Objection Certificate shall be valid for a specific period as per the detailed proposal submitted by the project proponent.

3.1.4 PIEZOMETER

A piezometer is one of the borewell/tube wells being used only for measuring the water level/piezometric head and to take water samples periodically but not to be used for groundwater abstraction. It is also being used to take a water sample for water quality testing whenever needed. The groundwater quality must be monitored and tested once a year during the pre-monsoon (April/ May) and post-monsoon (Oct/ Dec) period by industries drawing groundwater.

Construction of a Piezometer(s) (An observation well(s)) is mandatory for the premises since the water extraction quantity is more than 10 m³ /day of groundwater. The Piezometer is suggested to be installed within the premises and monitored for water level monitoring as statutory compliance. Monthly water level data shall be submitted to the CGWA through the web portal. The piezometer (observation well) is proposed at a minimum distance of 15 m from the borewell/production well. The depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. (Reference - THE GAZETTE OF INDIA: EXTRAORDINARY [PART II—SEC. 3(ii)] Clause no 14 – page no 45).

Table 3.1: No. of Piezometers to be constructed & Type of Water Level Monitoring Mechanism

S.No.	Quantum of Ground water withdrawal (cum/d)	No. of piezometer required	Monitoring mechanism		
			Manual	DWLR	DWLR with Telemetry
1	<10	0	0	0	0
2	11-50	1	1	0	0
3	51-500	1	0	1	0
4	>500	2	0	1	1

3.1.5 WETLAND

Since groundwater is very crucial for the survival of the wetland area, any excessive groundwater development within the zone of the wetland area would affect the volume of water in that wetland. Projects falling within 500 m. from the periphery of demarcated wetland areas shall mandatorily submit a detailed proposal indicating that any groundwater abstraction by the project proponent does not affect the protected wetland areas. Furthermore, before seeking permission from CGWA, the projects shall take consent/approval from the appropriate Wetland Authorities to establish their projects in the area.

3.1.6 CAUTION

Aquifers are to be enhanced by artificial recharge and to be used as potable aquifers. Hence, it must be ensured that the water that is to be recharged is free from any type of contaminant. The water quality of the pumping tube wells should be monitored periodically. **Injection of treated/ untreated wastewater into the aquifer system is strictly prohibited.**

4 BASELINE SCENARIO

Scope 4 & Scope 5 applicability with respect to the Baseline Scenario –

- The Project Proponent had an operational ETP with the treated effluent being discharged to the local sewer system in compliance with the extant legal framework and its production borewell (groundwater) remained its primary source of water.
- In 2018, the unit was converted into ZLD with upgradations in its existing ETP to reduce its reliance on ground water.
- Further, in 2019, the Project Proponent set up a STP and entered into a contract with the Gandhinagar Municipal Corporation (GMC) to procure corporation untreated sewage from its distant collection sites (sites being scattered all over the city of Gandhinagar outside the premises of the Project Proponent) and carry out treatment of the untreated sewage so procured in its onsite STP for use in production process thus further reducing its reliance on ground water.
- These developments thus establish its compliance with the baseline scenario parameters laid down in UWR RoU Standard 8.1 and further establish qualification of the project under Scope 4 & Scope 5 for RoUs under the Standard. Also refer Annexure to this report for sample evidences supporting its procurement of untreated corporation sewage as described above.

5 CONCEPT

It is pertinent to look back at ancient Sanskrit literature for valuable insights from age-old wisdom, containing highly advanced scientific concepts regarding the hydrological cycle. The present report refers to ‘**Conceptual Aspect of Hydrological Cycle in Indian Mythology of Kishkindha Kanda, Ramayana**’, to arrive at the representational approach for aquifer mapping in the modern context. The concept of modern hydrology can be transformed based on a conceptual model of how water circulates between the earth and atmosphere in different states as water vapor, liquid or solid.

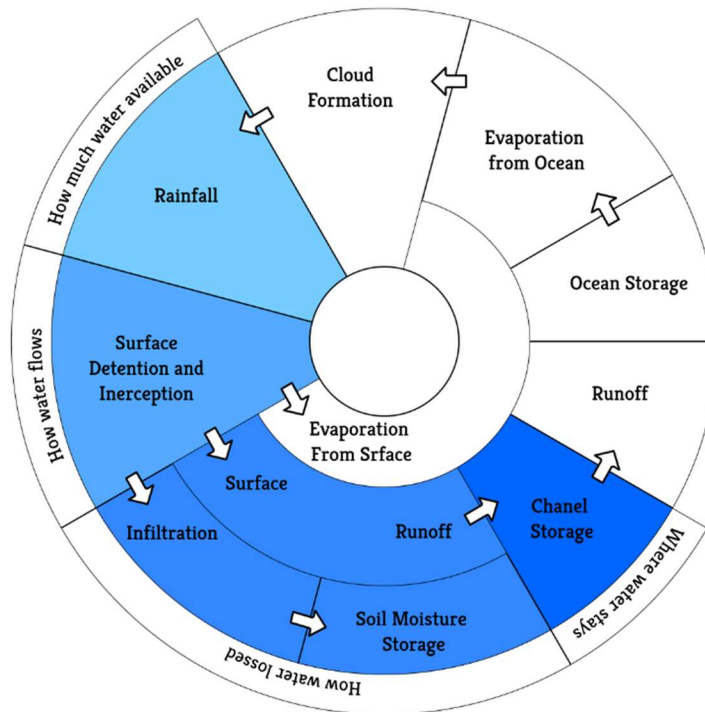


Figure 5.1: Ancient Hydrological Cycle from 800 to 500 B.C.

The present report uses these insights during the study as well as analysis of the data being generated at various stages. The Aquifer Management Plan will be based on the interdependencies of various stages to generate a contemporary understanding of the hydrological cycle with all important facets. It is required to base modern hydrological study approaches on ancient insights to obtain contextual reference and strengthen the modern approaches in terms of accuracy. Therefore, it is proposed to revisit ancient Indian water management practices to design the methodology statement to generate water credits.

6 OBJECTIVE

The objective of this voluntary water offset program is supported by the Universal Water Registry Rainwater Offset Unit Standard Version 8.1 (UWR RoU Standard or Programme). This initiative is to drive

unutilized water harvesting, recharge, and conservation efforts, defined as the catchment-based initiatives independent of water quality parameters undertaken for capturing/recycling/reusing unutilized water that is in consonance with the triple bottom line of sustainability i.e. People, Planet and Profit.

As this initiative will benefit the whole premises of Arvind Ltd. Santej, Gandhinagar, rainwater conservation is done by effective operations of ETP installations. Sufficient water is made available for industrial and domestic gainful use throughout the year, to reduce the consumption of groundwater. The overall goal of this project is to promote sustainable water development to maintain groundwater reserves and ensure water security in Bharat to attain the Sustainable Development Goals (SDGs) 6, 9, 11, 12, 13 and 17.



Figure 6.1: Sustainable Development Goals

7 METHODOLOGY

The UWR RoU program and methodology employs a broad monitoring and accounting framework that is expected to capture the impacts of various water recharging, harvesting, recycling, and conservation practices aimed at unutilized water savings and enhancing groundwater supply stocks. This methodology and protocol are aimed at the voluntary water conservation market and address the potential to quantify unutilized water units from water conservation, harvesting, restoration, and recharge projects.

This methodology addresses Managed Aquifer Recharge (MAR) processes, defined as a holistic approach to preserving groundwater by surface water storage/ rainwater conservation. This project is applied for rainwater conservation as a practice, and not combined with other practices in this document.

The detailed methodology statement and work sequence have been developed to carry out integrated water resource planning and designing for pre-defined study objectives. Effective regional hydrology and

site hydraulics are studied using an integrated approach of Geospatial technique and multiple criteria decision-making technique. Datasets based on Geographic Information Systems (GIS) are used as criteria and sub-criteria. A wide range of spatial datasets for the study area is generated, analyzed, and integrated by using various historical data like topographical, meteorological, geological, and geophysical within the context of the project.

A geographic Information System (GIS) is an essential tool to analyze and study such a large surface by remote sensing methods. Information about the physical characteristics and climatic parameters of the land has been acquired to understand its response to the business operation of the project premises for the design phase as well as for the operation/ maintenance phase. The information generated from the study may be analyzed, interpreted, and articulated as strategies to implement future water credit opportunities within the premises.

The below flowchart represents the detailed methodology statement and work sequence developed for pre-defined study objectives, where we deliberately transform and convert the ancient Indian water management practices into modern hydrology based on how water moves around between the earth and atmosphere in different states as a gas, liquid, or solid in terms of accuracy to calculate water credit and valuation.

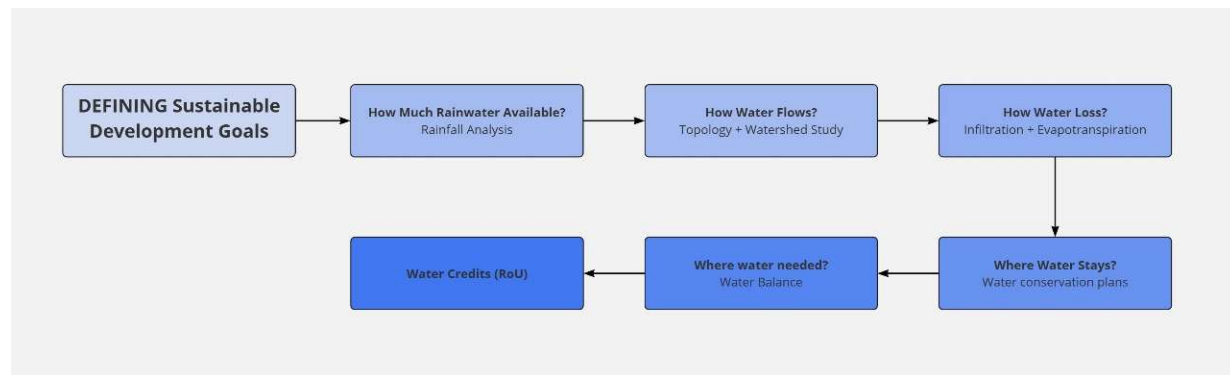


Figure 7.1: Flow Chart

8 EARTH SURFACE ASSESSMENT

Earth surface assessment is the scientific process of monitoring, analyzing, and quantifying the physical, chemical, and biological characteristics of the Earth’s surface (land and water) to understand its current state, how it changes over time, and its interaction with the atmosphere and interior. Topography, Morphology, Land use / Land cover, surface composition and state, Surface pollution and Natural Hazards are the key aspects of surface assessment.

8.1 WATERSHED STUDY (How water flows?)

The UWR RoU Standard challenges the notion of using hydrological basins as the basic organizational focus and looks at how water (and other vectors) move — a view that suggests that a “water harvesting/conservation/recharge system” could be a city, an ecosystem, a farmer’s field, or a factory

setting within closed boundaries. Water security plans need to consider a new approach that includes water sources on the surface water and groundwater.

The geographical zone in which water is captured flows through and eventually discharges at one or more points. The concept includes both surface water catchment and groundwater catchment. A surface water catchment is defined by the area of land from which all precipitation received flows through a sequence of streams and rivers towards a single river mouth, as a tributary to a larger river, or the sea.

8.1.1 Topographical data

Topographical maps are represented by Digital Elevation Maps to understand the natural water flow direction generated by natural terrain including effective water outfall locations downstream. The quality of the topographical data source is an important factor in the accuracy and reliability of the generated hydrology maps; thus, it is important to select the most suitable topographical data source.

Table 8.1: Data source

What is a Digital Elevation Map?	Digital Elevation maps are detailed representations of natural water flow direction generated from the natural terrain of the earth's surface.
How is it generated?	Digital Elevation maps are generated by using a spatial resolution of 30 m grid capturing the extent of all possible (upstream) catchment areas.
What is the data source?	DEM (Digital Elevation Model) is taken from the Copernicus European Space Agency. This is based on the radar satellite data acquired during the TanDEM-X Mission, which is funded by a Public Private Partnership between the German State.
What does it provide?	The digital elevation map typically includes information such as relative elevation using different colors, to indicate the slope of the study area.

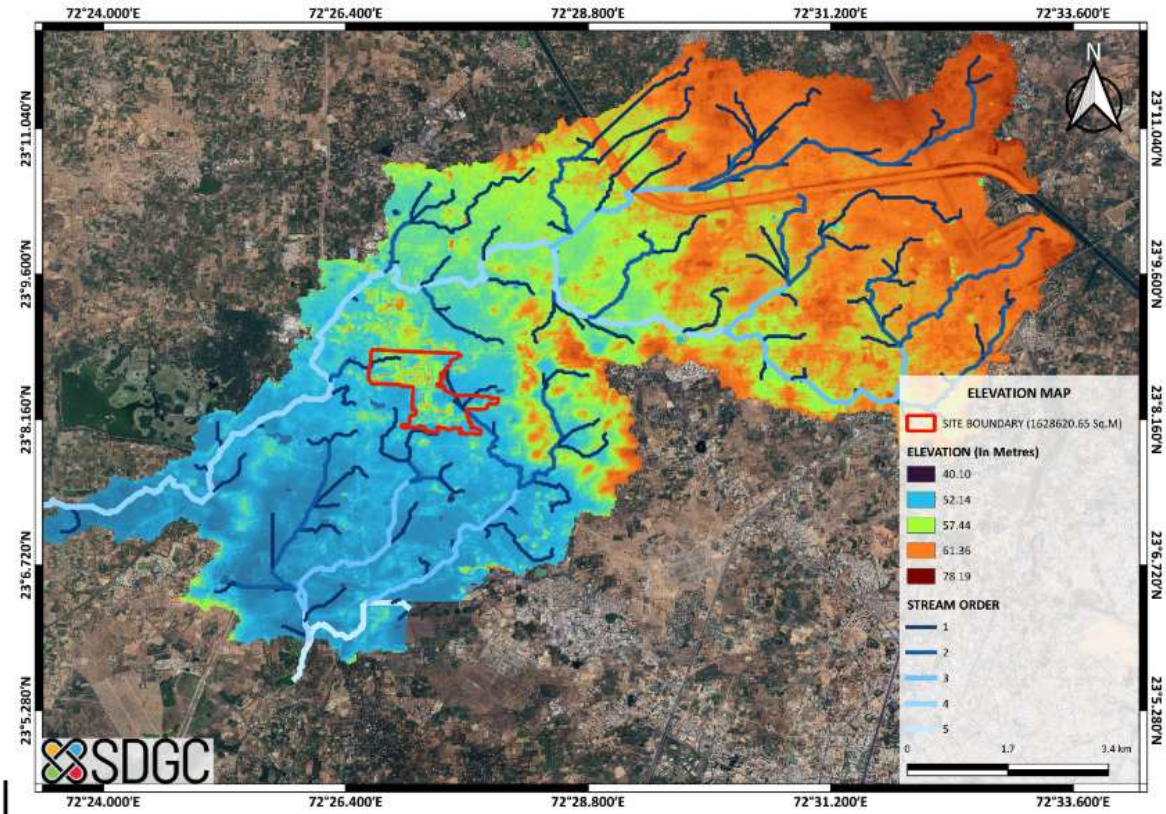


Figure 8.1: Digital Elevation Map

The following technical insights have been discovered from the Digital Elevation Map.

Table 8.2: Technical Insights

SN	TECHNICAL INSIGHTS
1	The dark brown shade indicates the upstream part of the study area.
2	The dark blue color indicates the downstream part of the study area.
3	All the levels mentioned in the map are to be referred from the mean sea level.
4	The highest terrain of the study area is at an elevation of 61.36m.
5	The lowest terrain of the study area is at an elevation of 40.10m
6	The middle part of the study area indicates the highest elevation.
7	The south part of the study area has the lowest elevation that falls into a flood plain.

8.1.2 Infiltration

The rate of infiltration depends on various land cover surfaces and human activity (e.g., grazing, conservation) associated with a specific land unit. In this study, land cover will be the preferred term as it has a more direct bearing on the data required to determine the runoff coefficient. The runoff coefficient refers to water loss due to the soil properties and land cover. Therefore, land cover for the study area is prepared based on a supervised classification technique utilizing Sentinel-2 Multi-spectral Imagery.

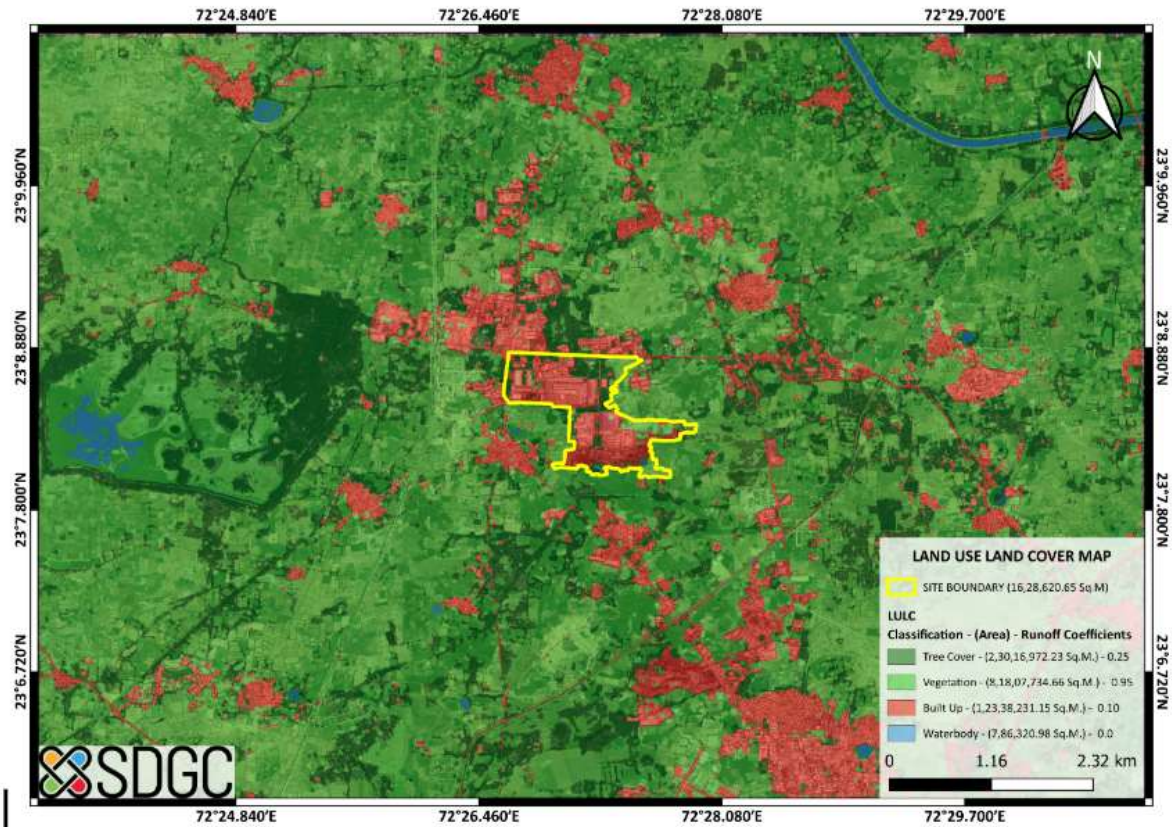


Fig 8.2: Land Use Land Cover Map

The following technical insights have been generated and interpreted to analyze the hydrological impact of the study area from the above map. Tangible data and information will be further incorporated into water credit quantification.

Table 8.3: Technical Insights

SN	TECHNICAL INSIGHTS
1	The study area is covered with built up, Tree cover and slightly with vegetation.
	There is waterbody on the west side of the site.

8.1.3 Drainage pattern

It is necessary to break the area of interest into manageable units to analyze the hydrological properties of an area. Catchments are defined as: "The region draining into a river, river system, or body of water." Catchments are always physically delineated by the area upstream from a given outlet point. This generally means that the contributing region is upstream to a separate ridgeline catchment from each other for a stream network. Before landscapes can be managed as catchments, we need to delineate the boundaries of catchments to use common spatial terminology. Many GIS software applications contain routines to delineate catchment boundaries and perform other hydrologic analyses. This includes tools such as catchment delineation, flow accumulation, and flow length.

Table 8.4: Data Source

What is Catchment Delineation?	Catchment Delineation Maps are detailed representations of natural water flow direction generated from the natural terrain of the earth's surface.
How is it generated?	The drainage pattern is generated by using a Digital Elevation Model (DEM).
What is Catchment? (Alternative terms are watershed, basin, and river basin.)	A catchment is an area of land where all rainfall and surface water naturally flow into a common outlet, such as a river, lake, or the sea. It defines the boundary within which all water drains to a single point.
What does it provide?	The drainage pattern shows how water flows across the land and helps define the catchment area. In a catchment delineation map, the ridges represent higher elevations, while the drainages (streams) represent lower elevations, indicating the slope and direction of water flow in the study area.

The boundary for the study is georeferenced to know an effective catchment, that is not restricted to a limited distance from the site boundary. The hydrological catchment of the proposed premises has been identified with the probable drain path identified with the probable drain path location.

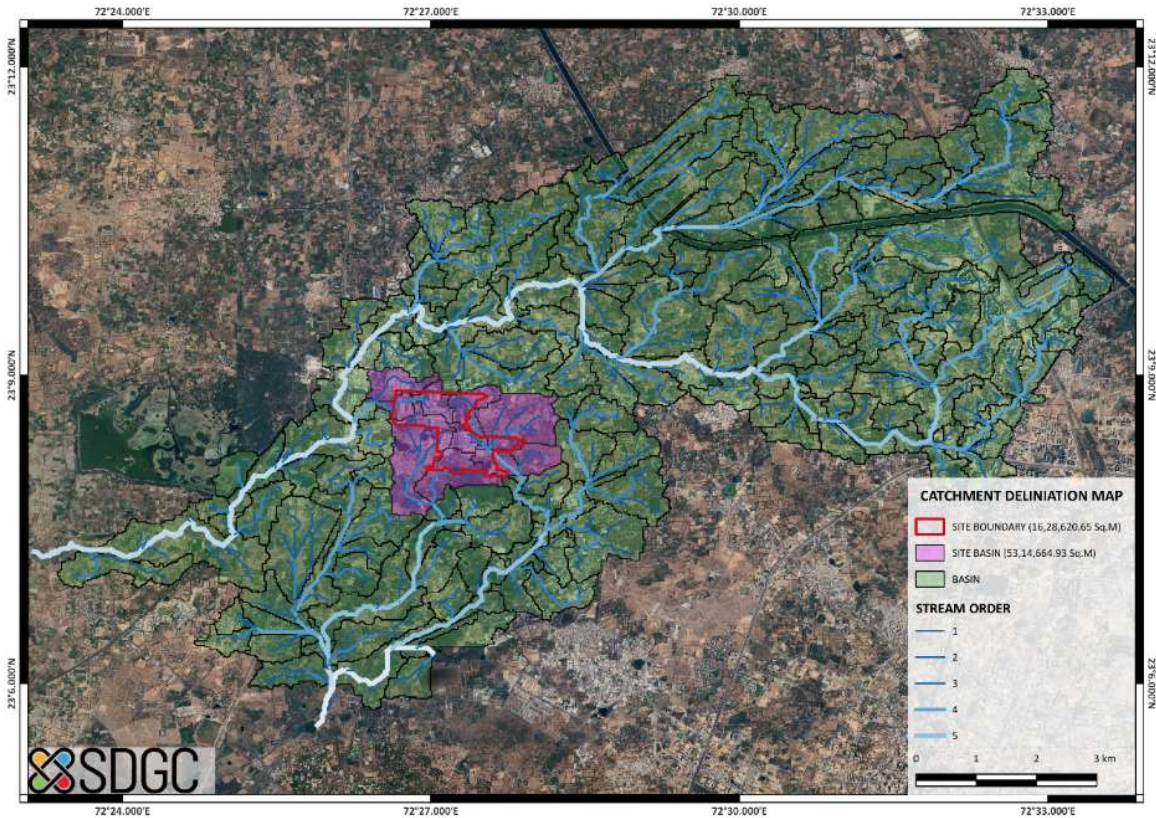


Figure 8.3: Catchment Delineation Map

The following technical insights have been generated and interpreted to analyze the hydrological impact of the study area from the above map. Tangible data and information will be further incorporated into water credit quantification.

Table 8.5: Technical Insights

SN	TECHNICAL INSIGHTS
1	The study area is demarcated with the red line, whereas sub-basins dedicated to the study area are represented in magenta color and black lines.
2	The whole study area is divided into 7 sub-basins in which 3 are large and 4 are small sub-basin.
3	The streamline was pass through the study area from north-west direction towards the south-east direction.
4	The stream in south-east side indicates a high-water potential zone.
5	The sub-basin of the study area covers a total area of 53,14,664.93 Sq.M.

9 WATER CONSERVATION (How water conserved?)

The hydrological basin may or may not be the “system” in many places, however, that focuses on what is happening within the project boundary (e.g. aquifers, often exist in recharge and discharge basins that have complex relationships with what is happening on the surface with reservoirs like rivers and lakes).

This methodology understands its own water use, catchment context, and shared concerns in terms of water governance; water balance; Important Water-Related Areas; Water, Sanitation, and Hygiene (WASH), and then engages in meaningful actions that benefit people, the economy, and nature. In all project activities under this methodology, the end use of the water must either be consumption, utilization, recycling with gainful end use, groundwater recharge, or protection of freshwater-related ecosystems.

9.1.1 Geomorphology

Geomorphology is the scientific study of the origin and evolution of topographic and bathymetric created by physical, chemical and biological processes operating at or near the earth's surface. The morphological analysis concerns the annual water presence and transition processes due to hydrological impact.

Table 9.1: Data Source

What is a Geomorphology Map?	This map represents the surface landforms and terrain features of a particular area.
How are they created?	The geomorphological data is obtained from Bhukosh (Geological Survey of India).
What do they provide?	Detailed information about the gradual changes in shape, composition, and arrangement of landforms such as mountains, valleys, plains, hills, rivers, and coastlines.
What is the application of this map?	Geography, geology, environmental science, urban planning, and engineering while understanding the morphological process and landform evolution of earth surfaces.
Water body (pond/ river)	Area containing water either freshwater, brackish or seawater which may include lakes, rivers, ponds, reservoirs, etc.
Older Alluvial Plain	Older alluvial plains are flat or gently sloping landforms composed of ancient river-deposited sediments that have undergone significant weathering and soil development, often exhibiting well-drained soils and reduced fertility compared to younger alluvial plains.
Pediment Pediplain Complex	A pediment pediplain complex is an extensive, gently sloping erosional landform formed by the coalescence of several pediments at the base of retreating hills or mountains. It represents a mature stage of landscape evolution where long-term weathering and erosion have reduced relief, producing broad, gently undulating surfaces with thin soil cover and exposed bedrock in places.

The following technical insights have been generated and interpreted to analyze the hydrological impact of the study area from the below map. Tangible data and information will be further incorporated into water credit quantification.

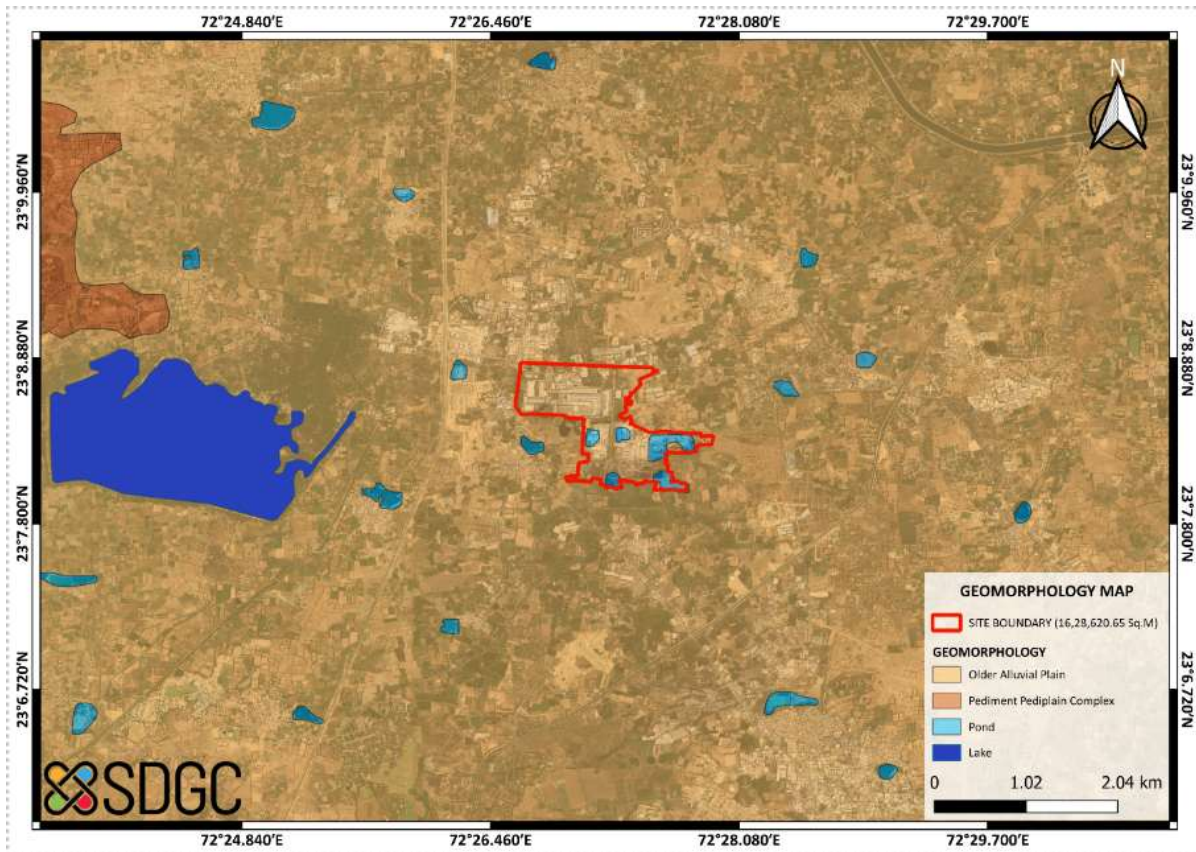


Figure 9.1: Geomorphology Map

Table 9.2: Technical Insights

SN	TECHNICAL INSIGHTS
1	The geomorphology map represents the presence of topsoil/ landscape activities above the geological strata.
2	The site primarily falls under the Older Alluvial Plain geomorphic unit, characterized by flat to gently sloping terrain formed through ancient river deposition
3	A small portion of the surrounding area exhibits Pediment–Pediplain Complex features, indicating erosional landforms formed at the base of denudational hills, representing mature landscape evolution.
4	The map also highlights several ponds and a large lake in the vicinity, suggesting localized depressions that collect surface runoff and enhance groundwater recharge potential.

9.2 GROUNDWATER STORAGE (Where water stays?)

The primary objective of the study is to investigate and understand subsoil formation by delineating sub-surface aquifer conditions and sub-surface layer information to know the depth of the potential water-bearing zone or potential groundwater recharge zone.

Water below the surface of the Earth is stored in pore spaces and fractures within rock or layers of sand and gravel (aquifers). In water sources management the term more specifically applies to water that can be extracted at a viable rate, quantity, and quality for human use (with or without treatment). Saline water or water contained in rocks of very low permeability is not conventionally considered groundwater.

The Resistivity survey and Geomagnetic survey are required carried out for delineating sub-surface aquifer conditions and subsurface layer information for groundwater beyond 10/30m. Generally, dry, and compact formations indicate high resistivity, water-bearing formations indicate medium resistivity, whereas saline (high TDS) formations indicate low resistivity. Permeable (bigger grain size) formations indicate comparatively higher resistivity than silt/clay/high TDS formations.

Specified investigation methodology will help in computing groundwater sources and strengthen the groundwater potential conditions of the study area.

The major confined and unconfined aquifer systems are formed by sand/kankars, which causes a higher intake rate. The movement of groundwater is controlled primarily by the porosity and permeability of aquifer material. The aquifer recharge potential of any area depends upon three major factors rainfall, runoff, and aquifer acceptives. Hydrogeology of an area deals with the following parameters.

Table 9.3: Area Hydrogeology

SN	PARAMETERS
1	Average rainfall and probable run-off
2	Vegetative and land use cover for run-off estimation.
3	Subsoil absorption potential
4	Aquifer geometry
5	Aquifer material
6	Impact of Aquifer material on water quality
7	Seasonal fluctuation of water level
8	Study of surrounding water bodies

9.2.1 Geology

Geology, in this context, refers to the study of lithology the physical makeup of rock and rock formations within the upper 10–30 meters of the subsurface. By characterizing each layer’s composition, grain structure, texture, and hardness, it gains crucial insight into how water may infiltrate or percolate, and where potential weaknesses or preferential seepage paths may exist. This information also helps predict subsurface flow patterns, ensuring that both construction and long-term operations remain safe and resilient.

Table 9.4: Data Source

What is a Geological Map?	It represents the geological features and characteristics of a particular area.
What do they provide?	Display information such as rock units (lithology), geological formations, faults, folds, joints, fractures, dykes, mineral deposits, and other geological phenomena.
How are they created?	The geological data is obtained from Bhukosh (Geological Survey of India).
What is the application?	This geological information provides primary technical insight into the topsoil layer. That provides a broad idea of soil infiltration possibilities. That helps us to decide on the volume of water that may create flood situations and rainwater management plans.
Oolitic Calcareous Sand	It is composed mainly of small, rounded grains called ooids, which are formed by the concentric precipitation of calcium carbonate around a nucleus. This sand is typically found in warm, shallow marine environments where calcium carbonate is abundant.

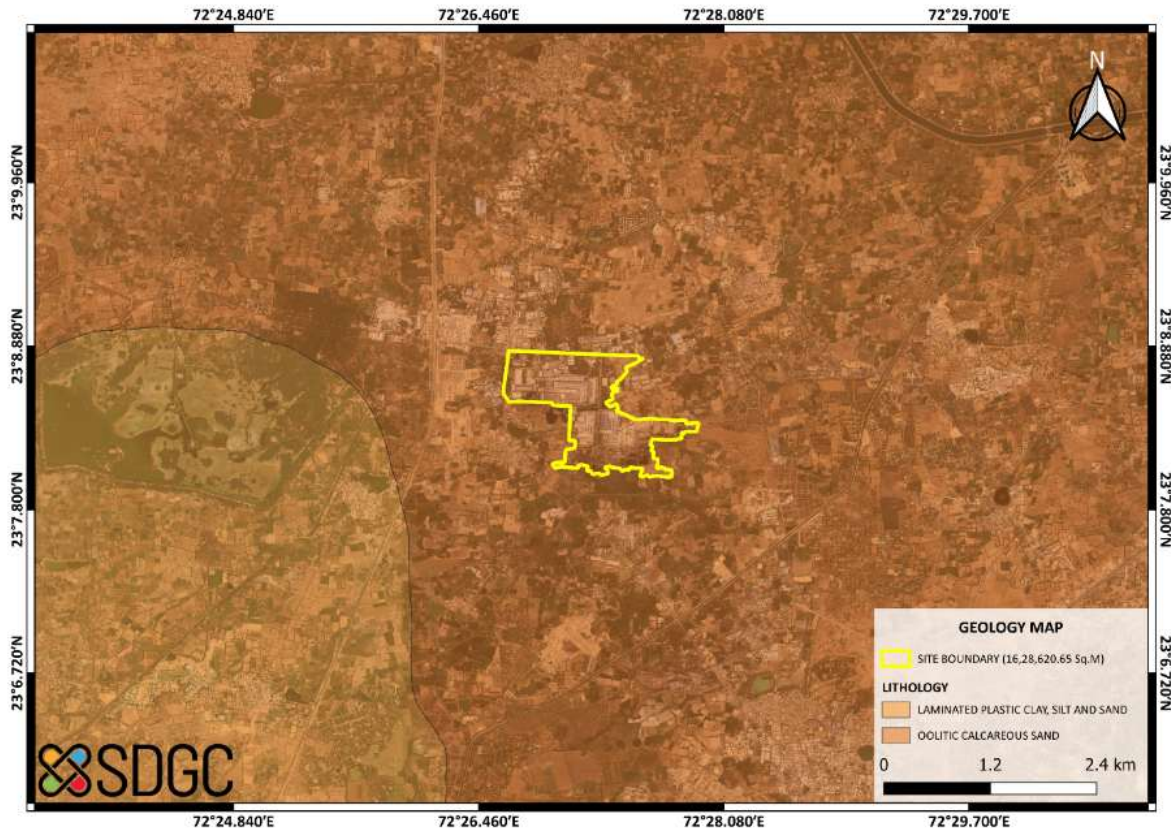


Figure 9.2: Regional Level Geology Map

The following technical insights have been generated and interpreted to analyse the hydrological impact of the study area from the above map.

Table 9.5: Technical Insights

SN	TECHNICAL INSIGHTS
1	The study area and the surrounding region were observed to be Oolitic calcareous sand and Laminated plastic clay, silt, and sand.
2	The site is fully covered with Oolitic calcareous sand.
3	Oolitic calcareous sand, characterized by its high porosity and permeability, facilitates efficient infiltration and groundwater recharge. Its calcium carbonate composition also helps improve soil structure, enhancing moisture retention and contributing to sustained water availability in the region.
4	Due to laminated plastic clay, silt, and sand, which has poor bearing capacity, high compressibility, and potential swelling — making it unsuitable for conventional shallow foundations without soil treatment.

10 WATER BALANCE (Available Water for gainful use)

The existing annual water balance is prepared to understand water demand, water consumption, and expected water losses in the study area. This will be used to define the gross water footprint and recharge potential of the study area to implement water sustainability initiatives.

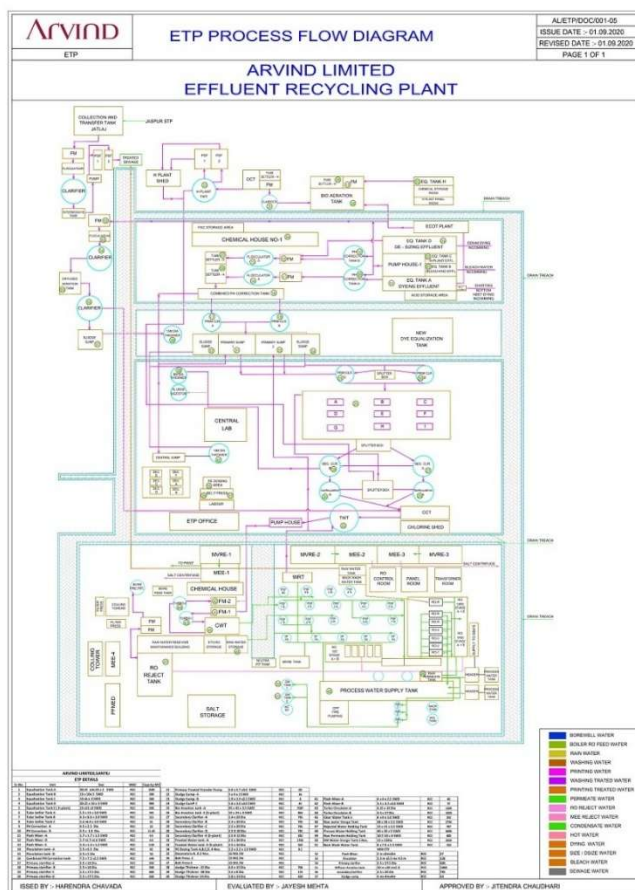


Figure 10.1: Single Line diagram (2018-2025)

10.1 WATER DEMAND

Water Demand describes the total amount of water required from its source/ alternate source (Groundwater in aquifer + Surface water storage + Recycled water) to be used. Water demand could be assessed based on potential water requirements.

Table 10.1: Water Demand

Water Demand (*)				
	Industrial (KL/Day)	Domestic (KL/Day)	Total Water Demand (KL/Day)	Total Annual Water Demand (KL/Year)
2018	17,686	1,257	18,943	69,14,306
2019	16,600	1,186	17,787	64,92,165
2020	12,266	944	13,210	44,25,190
2021	15,586	946	16,532	60,34,088
2022	15,976	895	16,870	61,57,718
2023	16,562	943	17,505	63,89,307
2024	17,429	905	18,334	66,91,823
2025	18,547	813	19,360	70,66,517
Avg Daily Water Demand (KL/Day)	16,331	986	17,317	62,71,389
Avg Annual Water Demand (KL/Year)	5,960,966	359,959		

(*)Water Demand is calculated on arithmetic mean basis for daily, monthly, and yearly water usage.

10.2 CAPACITY CALCULATION - ETP&STP

The ETP & STP plays a vital role in water conservation and eco-friendly waste management. The ETP & STP is a critical infrastructure for managing sewage and promoting sustainable water usage. Treating and reusing wastewater minimizes environmental impact, supports resource conservation, and ensures a healthier ecosystem. Proper design, operation, and maintenance are essential for maximizing its efficiency and benefits.

The physical site surveys were done 5th December, 2025 and 9th February, 2026, to know STP unit type and its capacity to treat the wastewater. Water conservation by treatment of the sewage water is represented below as per the predefined assumption and water consumption pattern.

Table 10.2: ETP Reuse

Total ETP Treated Reuse (KL)									
	2018	2019	2020	2021	2022	2023	2024	2025	Total
January	4,90,450	4,64,201	4,44,219	3,66,919	4,64,424	4,21,507	4,84,093	4,99,242	
February	4,49,608	4,24,703	4,42,247	3,70,383	4,09,952	4,10,970	4,44,485	4,54,045	
March	4,86,687	4,75,474	3,28,550	4,26,920	4,59,069	4,79,704	4,87,787	5,23,022	
April	4,73,085	4,68,581	-	4,15,268	3,79,829	4,57,793	4,66,242	4,73,640	
May	3,41,401	3,02,035	2,26,618	4,14,773	4,69,370	4,51,856	4,07,989	5,04,204	
June	4,83,461	4,74,738	3,05,598	4,39,706	4,43,684	4,33,949	4,35,787	4,74,983	
July	4,87,751	4,40,397	2,87,243	4,49,430	4,37,347	4,28,869	5,17,077	4,86,558	
August	4,87,751	4,49,926	2,87,365	4,46,454	4,51,059	4,56,269	4,85,687	4,93,923	
September	4,54,716	4,74,130	3,59,517	4,43,943	4,61,670	4,75,542	4,66,989	4,93,727	
October	4,60,968	4,53,613	3,92,544	4,87,666	4,36,574	4,91,289	4,84,227	4,90,599	
November	4,31,225	4,51,591	3,62,153	4,29,795	4,48,097	4,61,320	4,25,276	4,92,813	
December	4,88,155	4,56,294	3,97,204	4,77,524	4,45,520	4,94,918	4,93,350	5,24,643	
Total	55,35,259	53,35,683	38,33,258	51,68,781	53,06,595	54,63,986	55,98,989	59,11,399	4,21,53,950
Recovery Coefficient (0.8)	44,28,207	42,68,546	30,66,606	41,35,025	42,45,276	4,371,189	44,79,191	47,29,119	3,37,23,160

Table 10.3: ETP Reuse

Total STP Treated Reuse (KL)								
	2019	2020	2021	2022	2023	2024	2025	Total
January	-	73,268	73,268	57,896	60,484	88,353	82,046	
February	-	78,364	78,569	62,368	64,589	87,968	71,746	
March	-	79,856	80,231	78,562	58,306	78,597	78,459	
April	78,330	68,567	75,431	80,127	50,000	79,652	75,249	
May	35,794	61,983	77,568	65,387	75,770	80,653	76,596	
June	37,198	58,230	71,498	58,030	63,194	84,756	69,958	
July	45,960	60,268	80,318	65,658	58,235	77,262	79,856	
August	50,672	57,981	76,891	68,045	72,300	54,684	63,112	
September	46,834	59,003	67,598	70,801	68,540	68,828	66,426	
October	49,763	64,531	61,953	64,273	74,531	84,588	66,008	
November	60,351	70,568	72,762	73,541	79,653	85,371	70,112	
December	54,298	72,584	60,123	60,643	80,484	87,731	68,000	
Total	4,59,200	8,05,203	8,76,210	8,05,331	8,06,086	9,58,443	8,67,568	
Recover coefficient (0.8)	3,67,360	6,44,162	7,00,968	6,44,265	6,44,869	7,66,754	6,94,054	44,62,433

10.2.1 Raw Water Demand

Water is a very important source to be used judiciously to ensure the long-term operation and performance of the facility, it is important to define operational philosophy while maintaining the water usage limit against water availability.

Raw water demand is calculated for the water footprint that is accounted for directing water consumption required for the operation and maintenance of the facility. Water consumption data is projected for domestic use consisting of various direct and indirect activities like bathing, hand washing, face washing, housekeeping, and other human consumptions/ activities.

10.3 WATER BALANCE CALCULATION

Yearly water balance datasets are calculated to derive a site's water security potential using a water balance model that incorporates reference evapotranspiration, precipitation, temperature, and interpolated plant extractable soil water capacity.

RoUs serve as an important tool in rebalancing the region's water dynamics through all efforts to harvest and conserve rainwater, methods that recycle and/or reuse wastewater, and projects that convert an unutilized water source into usable water. The establishment of RoUs leads to a water-secure environment.

All projects using this methodology will be required to maintain a ratio of 1m³ of unutilized water recharged/conserved/recycled to be eligible to generate 1 RoU Rainwater offset credits = 1 RoU = 1000 liters of rainwater/unutilized water captured or recycled/reused/restored from systems (freshwater ecosystems included) and measures undertaken by individuals and entities per year. The following is the water balance for the crediting period based on Table No. 10.1, 10.2, and 10.3.

Table 10.4: Water Balance

Water Balance		
	Total Water Demand (KL)	Total Reuse (KL) (After considering 20% correction factor)
2018	69,14,306	44,28,207
2019	64,92,165	46,35,906
2020	44,25,190	37,10,769
2021	60,34,088	48,35,993
2022	61,57,718	48,89,541
2023	63,89,307	50,16,058
2024	66,91,823	52,45,946
2025	70,66,517	54,23,174

11 WATER CREDITS

The Universal Water Registry (UWR) Standard and Platform aim to introduce better wateromics with the next-generation voluntary rainwater offset projects that are far more efficient, faster, cheaper, decentralized in transfer, and convenient for every small green project involved in rainwater or unutilized water capture and/or groundwater recharge. UWR Standard allows for early action projects and the ability to monetize rainwater credits from the vintage year 2014 onwards. Similar to the carbon vintage year concept, RoUs can be classified as the year in which the conservation, recharge, or recycling of water took place and quantified for the monitoring period as applicable.

RoUs, serve as an important tool in rebalancing the water dynamics of the region by incentivizing and monetizing all efforts to harvest and conserve rainwater. The established RoUs represented below that is leading to a water-rich environment.

11.1 WATER CREDITS

Table 11.1: Total RoU Generation for Vintage Years (2018-2025)

WATER CREDITS				
Year	RoU Scope 4 *(After applying correction factor of 20%)	RoU Scope 5 * (After applying correction factor of 20%)		
	STP Treated Water Reuse	ETP Treated Water Reuse	Eligible Credits under RoU Scope 5	Total Credits
	(a)	(b)	(c)	(a+c)
01/01/2018 to 31/12/2018	-	44,28,207	10,00,000	10,00,000
01/01/2019 to 31/12/2019	3,67,360	42,68,546	10,00,000	13,67,360
01/01/2020 to 31/12/2020	6,44,162	30,66,606	10,00,000	16,44,162
01/01/2021 to 31/12/2021	7,00,968	41,35,025	10,00,000	17,00,968
01/01/2022 to 31/12/2022	6,44,265	42,45,276	10,00,000	16,44,265
01/01/2023 to 31/12/2023	6,44,869	43,71,189	10,00,000	16,44,869
01/01/2024 to 31/12/2024	7,66,754	4,79,191	10,00,000	17,66,754
01/01/2025 to 31/12/2025	6,94,054	47,29,119	10,00,000	16,94,054
Total	44,62,433	3,37,23,160		1,24,62,433

12 IMPLEMENTATION BENEFITS

12.1 STP & ETP

The ETP & STP units at Arvind Ltd. Santej are primary wastewater & effluent treatment initiatives for the PP, which treats the wastewater & effluents to make gainful reuse for various purposes such as process reuse, irrigation & gardening, dust suppression, engineering utilities, and other administrative purposes. When operating and maintaining a Sewage Treatment Plant (STP), certain preventive measures should be considered to ensure its efficiency, longevity, and environmental compliance. Here are the key preventive measures:

1. Contributing to water conservation and sustainable resource management aligns with global and local sustainability initiatives.
2. STP treats wastewater to remove harmful pollutants, ensuring that only clean, treated water can be reused for non-potable purposes such as irrigation, landscaping, etc.
3. Proper wastewater treatment prevents excessive groundwater use, which is crucial for regions relying on underground aquifers.
4. Reusing treated wastewater reduces the dependency on freshwater sources, lowering water procurement costs.

13 ALTERNATE WATER CONSERVATION METHODS

There is an urgent need for the management of water sources for sustainable development, where groundwater should be protected and reserved. Creating awareness amongst communities and industries regarding the conjunctive use of surface water and groundwater through the judicious use of water and the adoption of effective techniques has become important.

A planned water conservation strategy needs to be deployed to discharge and the withdrawal of water, that can be used during the lean period. Resorting to artificial recharge practices by diverting surplus runoff during the monsoon into ponds, percolation tanks, spreading basins abandoned dug wells, etc. could be an alternative rainwater conservation method, that could be taken up through appropriate techniques. That may be implemented depending upon the suitable hydrogeological conditions to explore other scopes as mentioned in the UWR guidelines.

other scopes as mentioned in the UWR guidelines.

13.1 Rainwater storage

Rainwater harvesting is the collection and storage of rain for future use, rather than allowing it to run off. It also helping to reduce reliance on municipal water supply and promoting sustainable water management.

Components of a Rainwater Harvesting System: Catchment Areas: Explanation: The surface from which rainwater is collected, typically a roof or open ground. Design Considerations: collected. Storage Tanks: Types: Above-ground, underground, and storage tanks. Design Considerations: Filtration Systems: Purpose: Types Roof material, slope, and area influence the volume and quality of water Size based on expected rainfall and water demand, material selection, and location for ease of access and maintenance. Remove debris and contaminants from collected rainwater before it enters the storage tank.: First flush devices, sediment filters, sand filters, and UV disinfection. Distribution Networks: Explanation: Piping systems that convey collected rainwater from storage tanks to points of use, such as irrigation systems, toilets, or industrial processes.

However, per the extant pollution control regulations, textile manufacturing and processing units are not permitted to carry out ground water recharge within their premises. The following is an alternative way for rain water collection, storage, and reuse within the extant legal operational framework for the PP.

Roof Type Rainwater Collection & Gainful Use: Influence on water quality and quantity; certain roof materials (e.g., metal, clay tiles) are more suitable for RWH. Rainfall Patterns: Understanding local rainfall data to design systems that optimize water capture during heavy rains and manage water scarcity during dry periods. Water Demand: Sizing the system to meet specific water needs, such as domestic use, irrigation, or industrial processes, ensuring efficient use of harvested water. The rainwater thus collected from the rooftops of the PP factory buildings can be channelized and stored in overground storage tanks for moving towards water positive operations wherein the gap between water demand and water reuse minimized by being a ZLD unit can be eventually filled in by such stored rainwater. Following is an illustration of such a typical rooftop rainwater collection and overground storage system –



Figure 13.1: Rainwater Storage Unit

14 FEASIBILITY EVALUATION

Alternative conservation methods have been evaluated to check the feasibility of investigating various hydrological and hydrogeological conditions based on historical rainfall patterns.

14.1 Roof Type Rainwater Collection & Gainful Use

1. Roof Type Rainwater Collection is feasible to implement at Santej.
2. Assessment as to the catchment area of all the feasible rooftops must be made.
3. Based on this assessment, the collection potential arrived at and storage requirements arrived at.
4. The location of the overground storage tank will depend on the feasibility and open area availability within the PP's premises.

15 INTERVENTIONS BY PROJECT OWNER/ PROPONENT/ SELLER

The revenue from the sale of the water credits from this project activity for the 2015 and 2025 vintage years under the UWR RoU program will enable the PP to finance and set up further action for water security within the Santej campus.

1. An annual water audit is required to identify the gap between water demand and water conservation though the same is minimal since the PP is a ZLD unit.
2. The water audit will help in creating future possibilities to generate more water credits under other scopes as may be applicable.
3. There is still an opportunity to reduce the gap between water conservation and water consumption quantity.

4. Rainwater harvesting and storage can be further planned within the campus to for moving towards water positive operations wherein the gap between water demand and water reuse minimized by being a ZLD unit can be eventually filled in by such stored rainwater.

16 UWR RAINWATER OFFSET DO NO NET HARM PRINCIPLES

The approach to mining water credits from projects addresses the “Do No Harm or Negative Impact” sustainability test. None of the information or elements of this project being mined on the UWR platform has any negative development impacts i.e. community or environment.

This PCNMR lays down the entire philosophy, methodology, implementation, and future proposal of the functional model for the Arvind Ltd. Santej as envisaged and operated by the PP. During project operations since 2007, there has not been a single case of adverse impact on the local flora, fauna, water security, or local human geography. On the contrary, the project has ensured several tangible and intangible direct and indirect benefits to the local geographical area by addressing several of the UNSDGs.

We support projects that contribute to UNSDGs encompassing environmental, social, and governance standards (ESG) as a key basis for eligibility on the UWR platform while accepting quality green water credit projects from a predefined list of activities. All our water conservation and groundwater recharge projects, either by individual or collective actions, benefit people, the economy, and nature. While this program and standard is aimed at all unutilized water conservation and recharge efforts (with or without treatment) worldwide, its genesis lies in Bharat and hence, the protocol keeps projects established within Bharat in mind as the basis of development and standardization of water offset or credits.


17 ECOLOGICAL ASPECTS

Sustainable Development Goals are part of a transformative agenda adopted by Bharat and which came into effect after the Sustainable Development Summit in 2015. At the core of this national agenda for 2030 is the principle of universality: ‘Leave No One Behind’. Development in all its dimensions must include all people, everywhere, and should be built through the participation of everyone. This comprehensive agenda recognizes that it is no longer sufficient just to focus on economic growth but on fairer and more equal societies, and a safer and more prosperous planet.


Ecological aspects protect the planet and the biodiversity of the utilized areas as habitats, maintaining ecosystem services provided by various participants of the given ecosystems. An ecosystem contains functional aspects for its maintenance, biogeochemical cycles, energy flow, nutrient cycle, ecological succession, ecological pyramid, food web, and food chain.

The Sustainable Development Goals (SDGs) are a set of 5 goals that are a call to action to end poverty and inequality, protect the planet, and ensure that all people enjoy health, justice, and prosperity through the project. These are precise outcomes against the pre-defined objective for the project.


17.1 CLEAN WATER AND SANITATION

UNSDG that is directly addressed	UNSDG indicator	How does the PP intervention with the project address the UNSDG
	<p>Ensure availability and sustainable management of water and sanitation for all.</p>	<p>Interventions of this project have fulfilled its irrigation requirements by gainful reuse of municipal sewage water and effluents generated within the operations which would otherwise have been discharged to the sea by the municipal corporation thereby preserving the groundwater security of the region and local geography thus ensuring drawable groundwater availability and water security to the local agricultural farms and communities by harnessing and conserving rainwater.</p>


17.2 INDUSTRY, INNOVATION, AND INFRASTRUCTURE

UNSDG that is directly addressed	UNSDG indicator	How does the PP intervention with the project address the UNSDG
	<p>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>	<p>Being a ZLD unit, the PP has met almost its entire water demand with gainful reuse of treated effluents and municipal sewage water throughout the entire crediting period. The intervention by the PP through this project is a hallmark of resilient and sustainable infrastructure which has stood the test of time throughout the crediting period in its industry segment.</p>


17.3 SUSTAINABLE CITIES AND COMMUNITIES

UNSDG that is directly addressed	UNSDG indicator	How does the PP intervention with the project address the UNSDG
	<p>Make cities and human settlements inclusive, safe, resilient and sustainable</p>	<p>The Project is located within the heart of Ahmadabad, which is a world heritage city. The outcomes of this project activity are enumerated above and are testimony to the fact that the project has created water sustainable infrastructure in all dimensions of the term</p>


17.4 RESPONSIBLE CONSUMPTION AND PRODUCTION

UNSDG that is directly addressed	UNSDG indicator	How does the PP intervention with the project address the UNSDG
	<p>Ensure sustainable consumption and production patterns</p>	<p>Nearly all the water demand of the PP is being met by the project interventions as detailed above thus ensuring a highly judicious, safe, sustainable, and prudent utilization/ consumption of this highly valuable and finite resource.</p>

17.5 CLIMATE ACTION

UNSDG that is directly addressed	UNSDG indicator	How does the PP intervention with the project address the UNSDG
	<p>Take urgent action to combat climate change and its impacts</p>	<p>The primary drivers to combat climate change as outlined by thousands of peer-reviewed research papers over the years are carbon footprint reduction, water footprint reduction, and responsible waste management. The project addresses one of these 3 drivers positively i.e. water footprint reduction with sustainable water management practices as enumerated in this PCNMR.</p>

17.6 PARTNERSHIP FOR THE GOALS

UNSDG that is directly addressed	UNSDG indicator	How does the PP intervention with the project address the UNSDG
	<p>Strengthen the means of implementation and revitalize the global partnership for sustainable development</p>	<p>Santej’s water stewardship initiatives strengthen UNSDG 17 (Partnerships for the Goals) by fostering collaboration between communities, local authorities, and development partners. Through joint action, resource mobilization, and capacity-building aimed at securing reliable water access, helps create strong, multi-stakeholder partnerships that advance sustainable development.</p>

18 SCALING PROJECTS – LESSONS LEARNED – RESTARTING PROJECTS

The project is fully functional and meeting its objectives partially when it comes to water security. This model of water conservation can be easily replicated elsewhere at various other textile units in the country or anywhere in the world. The PP is also committed to implementing this project model in any future site developments.

It is important to list lessons learned from this project that can be applied in future projects, restarting the new project as well as enhancing the existing system.

1. Statutory compliance is the prerequisite for enhancing the existing water management system before scaling up the project.
2. The new project must be conceptualized with a sustainability design approach while complementing the design phase, development phase, construction phase and operational phase of the program.
3. The operational phase must be supported by the dashboard monitoring system by creating monitoring indicators to generate authentic data to support the verification process.
4. The construction phase must be supported by the Integrated Management Information System (IMIS), Real-time dashboard, and Geo-tagging assets will be updated periodically as the project progresses.
5. It is important to generate a large data bank to prepare water budgeting of the premises while planning the horizontal/ vertical growth.
6. The option of raising the level of check dams at the outlet location may be explored to increase the water storage capacity of the pond while safeguarding facilities/ structures on the upstream part of the pond.

7. By incorporating low-flow fixtures, can reduce the total water demand that will prevent the excessive use of groundwater.
8. Introducing water meters as a primary header and secondary header will be used as a powerful tool to quantify and initiate water conservation efforts for promoting environmental sustainability.

19 ABBREVIATIONS

1. **Safe area:** Area categorized as SAFE from the groundwater resources point of view, based on the latest groundwater resources assessment carried out jointly by CGWB and State groundwater organizations. Details are available on the websites of NOCAP and CGWB.
2. **Semi-critical area:** Area categorized as SEMI-CRITICAL from the groundwater resources point of view, based on the latest groundwater resources assessment carried out jointly by CGWB and State groundwater organizations. Details are available on the websites of NOCAP and CGWB.
3. **Critical area:** Area categorized as CRITICAL from the groundwater resources point of view, based on the latest groundwater resources assessment carried out jointly by CGWB and State groundwater organizations. Details are available on the websites of NOCAP and CGWB.
4. **Over-exploited area:** Area categorized as OVER-EXPLOITED from the groundwater resources point of view, based on the latest groundwater resources assessment carried out jointly by CGWB and State groundwater organizations. Details are available on the websites of NOCAP and CGWB.
5. **Aquifer:** Geological formation capable of storing and transmitting groundwater.
6. **Deeper Aquifer:** In areas having multiple aquifer systems, the aquifer(s) occur below the uppermost aquifer.
7. **Well:** Any structure used for the extraction of groundwater, including open wells, dug wells, bore wells, dug-cum-bore wells, tube wells, filter points, collector wells, infiltration galleries, recharge wells, or any of their combinations or variations.
8. **Government Agency:** Maybe a Central or State Government body.
9. **Illegal Ground Water Abstraction Structure:** Any energized abstraction structure viz. dug well, tube, borewell used to withdraw groundwater without a valid No Objection Certificate from Central Ground Water Authority.
10. **Rainwater Harvesting:** The technique or system of collection and storage of rainwater, at the micro watershed scale, including rooftop harvesting, for future use or recharge of groundwater.
11. **Ground Water Draft:** Quantum of groundwater withdrawal.

12. **Saline Water:** Water having salinity above 2500 μ siemens/cm at 25°C.
13. **Water Table Intersection:** Intersection of the water table on excavating the overlying material due to mining or other activities.
14. **Drinking and domestic use:** Besides drinking & domestic use of households, this category will cover drinking requirements of industries not requiring water for the industrial process; drinking, washing, cleaning use, etc. in the case of hospitals, hotels, malls & multiplexes, institutions, offices, banquet halls, fire stations, metro stations, railway stations, airports, seaports, stadia, etc.
15. **Sewage Treatment Plant (STP):** is a process of purification of Sewage water and reusing for Gardening, Agricultural, and other general Purpose.
16. **Recycle/Reuse:** Using treated wastewater for various purposes/ putting water to multiple uses.
17. **Groundwater:** Water, which exists below the surface in the zone of saturation and can be extracted through wells or any other means or emerges as springs and base flow in streams and rivers.
18. **BGL:** Below Ground Level.
19. **BCM:** Billion cubic meters.
20. **Groundwater Abstraction structure:** Structure used to withdraw groundwater like bore well/tube well / dug well/dug cum bore well/tunnel well.
21. **Observation well or Piezometer:** A bore well/tube well is used only for measuring the water level/piezometric head and to take water samples periodically but is not used for groundwater abstraction.
22. **Water Audit:** A method of quantifying water use in simple or complex systems to reduce water usage and often to save money on otherwise unnecessary water use.
23. **Groundwater pollution:** If the concentration of any parameter in groundwater exceeds the maximum permissible limit for drinking water prescribed by the Bureau of Indian Standards.
24. **Cooperative Group Housing Societies/ Builder flats:** A Housing Society is formed by house owners within a residential complex. The housing society formed must be formally registered with the registrar of co-operatives.
25. **KLD** – Kilo Liter per day
26. **ECGW** – Environmental compensation for drawing illegal groundwater.

27. **ECGWR** – Environmental compensation rates for drawing illegal groundwater.
28. **VES** – Vertical Electrical Sounding
29. **SWL** – Static Water Level
30. **PWL** – Pumping Water Level
31. **DD** – Draw Down
32. **LPM** – Liters Per Minute
33. **ppm** – Parts Per million
34. **TDS** – Total Dissolved Solids
35. **GPS** – Global Positioning System
36. **Aquifer Recharge** - defined as the process of water being added to a groundwater system comprised of a geological structure or formation, or part thereof, permanently, or intermittently permeated with water or capable of transmitting water. Water introduced or recharged into an aquifer becomes ‘groundwater.’
37. **Aquifer storage and recovery (ASR)** - injection of water into a well for storage and recovery from the same well.
38. **Aquifer storage transfer and recovery (ASTR)** - injection of water into a well for storage and recovery from a different well, generally to provide additional water treatment.
39. **Aquitard**- A geological layer that has low permeability and confines or separates aquifers.
40. **Artificial recharge (AR)** —intentional banking and treatment of water in aquifers.
41. **Artificial recharge and recovery (ARR)** —recharge to and recovery of water from an aquifer; that is, both artificial recharge of the aquifer and recovery of the water for subsequent use.
42. **Augmentation pond**—water body designed to supply water to river systems at defined rates during times.
43. **Bank filtration**—extraction of groundwater from a well or caisson near or under a river or lake to induce infiltration from the surface water body, thereby improving and making more consistent the quality of water recovered.
44. **Conjunctive use**—combining the use of both surface and groundwater to minimize the undesirable physical, environmental, and economic effects of each solution.

45. **Dry well**—synonymous with vadose zone well.
46. **Infiltration basin**—synonymous with recharge basin.
47. **Managed (or management of) aquifer recharge (MAR)**—intentional banking and treatment of water in aquifers (synonymous with AR). MUS may be considered a subset of MAR.
48. **Recharge basin (or pond)**—a surface facility, often a large pond, used to increase the infiltration of surface water into a groundwater basin; basins require the presence of permeable soils or sediments at or near the land surface and an unconfined aquifer beneath. Recharge well—a well-used to directly recharge water to either a confined or an unconfined aquifer.
49. **Surface spreading**—recharging water at the surface through recharge basins, ponds, pits, trenches, constructed wetlands, or other systems.
50. **Spreading basin**—synonymous with recharge basin.
51. **Underground storage and recovery (USR)** —similar to MUS; any type of project whose purpose is the artificial recharge, underground storage, and recovery of project water.
52. **Vadose zone well**—a well-constructed in the interval between the land surface and the top of the static water level and designed to optimize the infiltration of water.
53. **Borehole:** A vertical below-ground installation to abstract groundwater. It is drilled (or bored) and lined with metal or plastic tubes to keep it open, and to protect against surface/near surface pollution.
54. **Beneficial use:** A use of the environment or any element or segment of the environment which (a) is conducive to public benefit, welfare, safety, health, or aesthetic enjoyment and which requires protection from the effects of waste discharges, emissions, or deposits or of the emission of noise or (b) is declared in India's environment protection policy to be a beneficial use.
55. **Catchment:** The geographical zone in which water is captured, flows through and eventually discharges at one or more points. The concept includes both surface water catchment and groundwater catchment.
56. **A surface water catchment** is defined by the area of land from which all precipitation received flows through a sequence of streams and rivers towards a single river mouth, as a tributary to a larger river, or the sea.
57. **A groundwater catchment** is defined by the geological structure of an aquifer and groundwater flow paths. It is replenished by water that infiltrates from the surface. It has vertical thickness

(from a few meters to 100s meters) as well as area. Depending on local conditions, surface and groundwater catchments may be physically separate or interconnected.

58. **Catchment of origin** - refers to a catchment, distinct from the site's catchment(s), where a product or service is manufactured or sourced. It may be anywhere from an adjacent catchment to the other side of the world. Alternative terms are watershed, basin, and river basin.
59. **Consumption** - references in the WF industry currently refer to it as the loss of water from the available ground-surface water body in a catchment area, which happens when water evaporates, is incorporated into a product or is transported to another catchment area or the sea.
60. **Contaminated water body:** A water body that receives (or has received) untreated sewage, effluent discharge, and/or industrial waste, and/or is defined as 'heavily polluted' or "unfit for human consumption" by the authorities.
61. **Effluent:** Water or wastewater discharged from a site after being used. It is a more specific term than discharge (i.e., not including drainage or runoff). The quality of effluent may range from good to polluted, depending on its origin, its use, and the treatments applied.
62. **Embedded/virtual water:** Water that was used in the production or creation of an item, but not contained within it. For a crop, it is the water it needs to grow (irrigated or rain-fed), taken up by its roots and lost via transpiration, and is usually hundreds of times more than the water physically retained within the crop. It may also include water used to wash, process and transport it. Alternative terms are 'virtual water' and 'water footprint'.
63. **Freshwater:** Freshwater plays a fundamental role in support of the environment, society, and the economy. Ecosystems such as wetlands, rivers, aquifers, and lakes are indispensable for life on Earth.
64. **Rain Water Offset Unit or Credit (RoU)** is a volumetric measure of water harvested or conserved through project activities on UWR and expressed as m³ or 1000 liters of water per year.
65. **Groundwater:** Water below the surface of the Earth stored in pore spaces and fractures within rock or layers of sand and gravel (aquifers). In water resources management the term more specifically applies to water that can be extracted at a viable rate, quantity and quality for human use (with or without treatment).
66. **Injection well** A well that admits water into an aquifer, either by pumping or under gravity.

20 REFERENCE DATA

1. Average rainfall data obtained from the region from the GSDMA website
2. Historical rainfall event data from the Indian Meteorological Department (IMD)
3. THE GAZETTE OF INDIA: EXTRAORDINARY, MINISTRY OF JAL SHAKTI (Department of Water Resources, River Development, and Ganga Rejuvenation) (CENTRAL GROUND WATER AUTHORITY) NOTIFICATION New Delhi, the 24th of September 2020

[Guidelines-Ground-water.pdf \(space-elements.in\)](#)

4. Preliminary Consolidated Report on Effect of Climate Change on Water Resources Central Water Commission Central Water Commission National Institute of Hydrology National Institute of Hydrology New Delhi June 2008
5. National Engineering Handbook – Part 630, Natural Resources Conservation Service (NRCS), United States Department of Agriculture (USDA), USA
6. Volume 1 - Part A – Engineering design - Manual on Stormwater Drainage System – By Government of India – Ministry of Housing and Urban Affairs – CPHEEO – Aug 2019

[Volume-I-Part-A-Engineering-Design.pdf \(space-elements.in\)](#)

7. IGBC Green New Buildings

<https://www.space-elements.in/wp-content/uploads/2021/12/IGBC-Green-New-Buildings-Rating-System-Version-3.0.pdf>

8. UWR Rainwater (RoU) Standard Version 6.1 Dated: 17/11/2023

9. MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

https://www.space-elements.in/wp-content/uploads/2023/12/GREEN-CREDIT-PROGRAMME_OCT23-1.pdf

10. NATIONAL BUILDING CODE OF INDIA 2016 VOLUME 1

https://www.space-elements.in/wp-content/uploads/2021/12/india_national_building_code_nbc_2016_vo.pdf

11. Manual On Artificial Recharge of Ground Water

<https://www.space-elements.in/wp-content/uploads/2021/12/Manual-on-Artificial-Recharge-of-Ground-Water.pdf>

12. IS.14961.2001 Guidelines For Rainwater Harvesting In Hilly Areas

<https://www.space-elements.in/wp-content/uploads/2022/03/IS.14961.2001-GUIDELINES-FOR-RAIN-WATER-HARVESTING-IN-HILLY-AREAS.pdf>

13. IS-Code-15797-2008 Roof Top Rain Water Harvesting Guidelines

<https://www.space-elements.in/wp-content/uploads/2022/03/IS-Code-15797-2008-ROOF-TOP-RAIN-WATER-HARVESTING-GUIDELINES.pdf>

14. CGWA Guidelines

<https://www.space-elements.in/wp-content/uploads/2021/12/Guidelines-Ground-water.pdf>

15. IS 10500 - Drinking water Standards

<https://www.space-elements.in/wp-content/uploads/2022/04/IS-10500-Drinking-water-Standards.pdf>

16. Kohler Fixture Catalog

<https://www.kohler.co.in/>

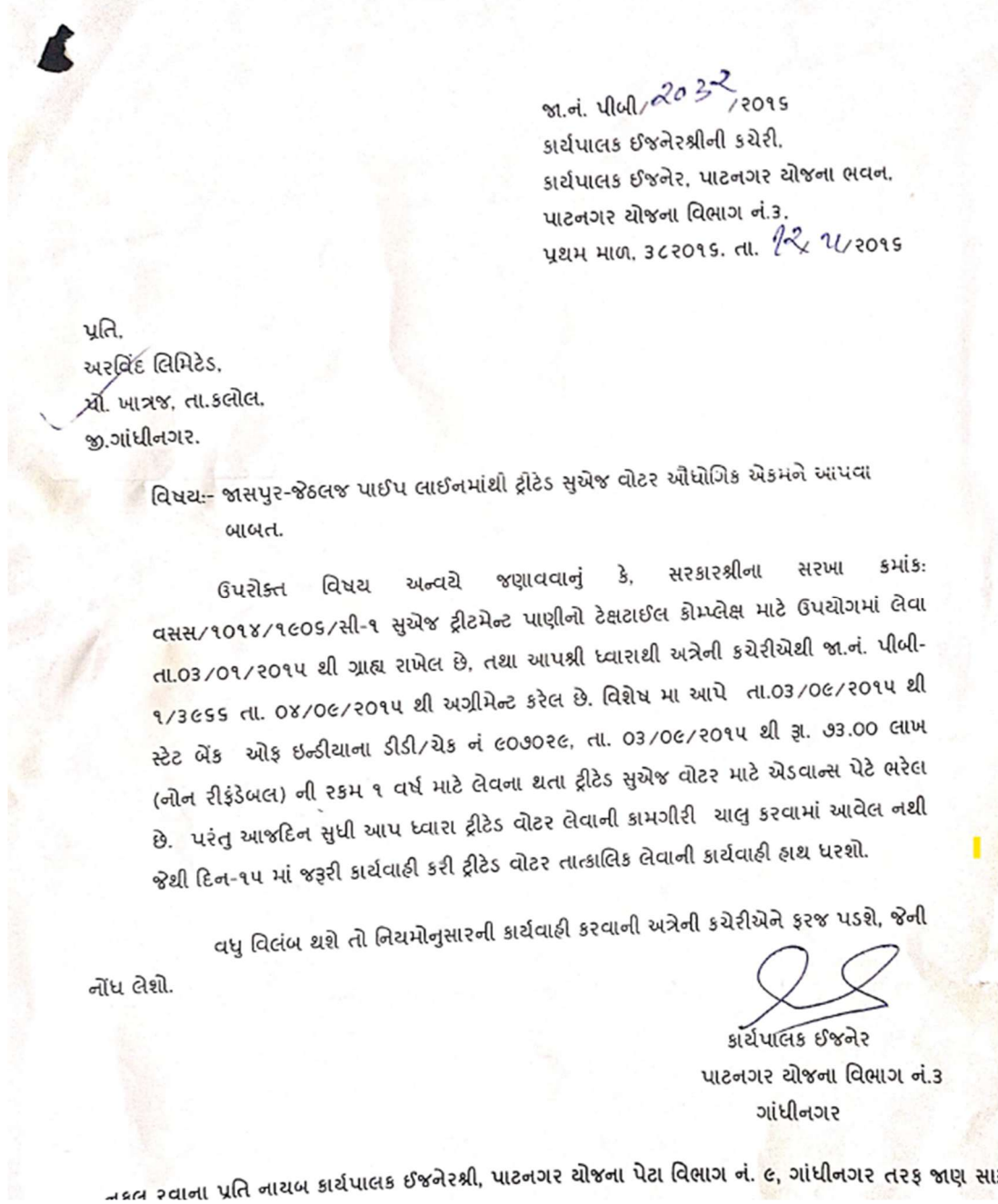
21 DISCLAIMER

The information contained in this document is prepared on behalf of the project proponent and for the exclusive use of the Universal Water Registry to issue RoUs according to the provisions of the communication agreement between SDGC and the project proponent. SDGC accepts no liability or responsibility for, or in respect of, any use of, or reliance upon, this document by any third party. Water-related data specified in the document may be considered highly sensitive and confidential. The report is not a confidential document and is for external use to be published on the UWR web portal.

END OF DOCUMENT

ANNEXURE – AS REFERRED TO IN BASELINE SCENARIO SECTION 4 OF THIS REPORT

Below are samples of letters received from the GMC for price fixation and supply and billing for sewage water supplied to the PP –



No.PB-1/3966 /2015
Office of the Executive Engineer,
Capital Project Division No.3,
Block-B,1st Floor, Patnagar Yojna
Bhavan, Sector No.16,
Gandhinagar. Dt. 4 / 9 /2015.

To,
Head Environment,
Arvind Limited,
Santej
Ta- Kalol,
Dist- Gandhinagar 382721

Sub : - **Return of agreement duly signed.**
Drawing 4000 m3 per day Sewage treated water from
Jaspur Jethlaj pipeline by Arvind Ltd.

Ref : - Your letter No . dt.04/09/2015.

With reference to above, one copy of agreement duly signed by this
office is enclosed herewith.


Executive Engineer
Capital Project Division No.3
Gandhinagar

Copy forwarded to Deputy Executive Engineer, Sub Division, No 09
Gandhinagar for information & necessary action please.

જા.નં. પીબી/૨૦૩૨/૨૦૧૬
 કાર્યપાલક ઈજનેરશ્રીની કચેરી,
 કાર્યપાલક ઈજનેર, પાટનગર યોજના ભવન,
 પાટનગર યોજના વિભાગ નં.૩,
 પ્રથમ માળ, ૩૮૨૦૧૬. તા. ૧૨/૫/૨૦૧૬

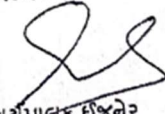
પ્રતિ,
 અરવિંદ લિમિટેડ,
 પો. ખાત્રજ, તા.કલોલ,
 જી.ગાંધીનગર.

વિષય:- જાસપુર-જેઠલજ પાઈપ લાઈનમાંથી ટ્રીટેડ સુએજ વોટર ઔદ્યોગિક એકમને આપવા
 બાબત.

ઉપરોક્ત વિષય અન્વયે જણાવવાનું કે, સરકારશ્રીના સરખા ક્રમાંક: વસસ/૧૦૧૪/૧૯૦૬/સી-૧ સુએજ ટ્રીટમેન્ટ પાણીનો ટેક્સટાઈલ કોમ્પ્લેક્સ માટે ઉપયોગમાં લેવા તા.૦૩/૦૧/૨૦૧૫ થી ગ્રાહ્ય રાખેલ છે, તથા આપશ્રી ધ્વારાથી અત્રેની કચેરીએથી જા.નં. પીબી-૧/૩૯૬૬ તા. ૦૪/૦૯/૨૦૧૫ થી અગ્રીમેન્ટ કરેલ છે. વિશેષ મા આપે તા.૦૩/૦૯/૨૦૧૫ થી સ્ટેટ બેંક ઓફ ઇન્ડિયાના ડીડી/ચેક નં ૯૦૭૦૨૯, તા. ૦૩/૦૯/૨૦૧૫ થી રૂ. ૭૬.૦૦ લાખ (નોન રીફંડેબલ) ની રકમ ૧ વર્ષ માટે લેવાના થતા ટ્રીટેડ સુએજ વોટર માટે એડવાન્સ પેટે ભરેલ છે. પરંતુ આજદિન સુધી આપ ધ્વારા ટ્રીટેડ વોટર લેવાની કામગીરી ચાલુ કરવામાં આવેલ નથી જેથી દિન-૧૫ માં જરૂરી કાર્યવાહી કરી ટ્રીટેડ વોટર તાત્કાલિક લેવાની કાર્યવાહી હાથ ધરશો.

વધુ વિલંબ થશે તો નિયમોનુસારની કાર્યવાહી કરવાની અત્રેની કચેરીએને ફરજ પડશે, જેની નોંધ લેશો.

ના. કા. ઇ. ક્રીની કચેરી	
પા. ઓ. પ. વિ. ઇ, ગાંધીનગર	
સામગ્ર	૨૮૮૧-૨૭૦
એસ.ડી.સી.	
ના.કા.ઈ.	૨૭૦૬
આવક નં.	૭૧૫
તારીખ	૧૩/૫/૧૬


 કાર્યપાલક ઈજનેર
 પાટનગર યોજના વિભાગ નં.૩
 ગાંધીનગર

નકલ રવાના પ્રતિ નાયબ કાર્યપાલક ઈજનેરશ્રી, પાટનગર યોજના પેરા વિભાગ નં. ૯, ગાંધીનગર તરફ જાણ સારૂ.