

On-going Project Foreign Funds:

Project Name: Construction of centre of Reform, Research & Innovation (CERRI)

Estimated Cost: 36,058,000 million

Funded by: KWSSIP/World Bank

Area:

Detail: Revamping KW SC: Modernising infrastructure, enhancing services, and optimising operations through innovative IT solutions, centralised customer care, and efficient revenue management for sustainable water and sewerage services in Karachi

Project Name: Bulk Water Consumers Flow Metering

Estimated Cost: 9,930,000

Funded by: KWSSIP/World Bank

Area:

Detail: Transforming KW SC: Implementing advanced metering solutions, enhancing billing systems, and optimising customer databases to boost revenue generation and improve water management efficiency, fostering resilience against water scarcity in Karachi

Project Name: Replacement & Rehabilitation of Old Pipri Main(OPM)

Estimated Cost: 36,058,000

Funded by: KWSSIP/World Bank

Area:

Detail: ESMP for OPM project follows World Bank guidelines, addressing environmental and social impacts throughout its lifecycle. It evolves with project progress, ensuring dynamic adaptation to design modifications for effective management.

Project Name: Priority Sewer Network Rehabilitation of Sewerage Scheme P-1 (Teen Hatti)

Estimated Cost: 775.23 Million

Funded by: KWSSIP/World Bank

Area:

Detail: ESMP for KWSSIP's rehabilitation of water supply and sewerage systems in Karachi's low-income communities addresses environmental and social impacts, aligning with World Bank policies to support sustainable development amidst the city's rapid urbanisation.

Project Name: Rehabilitation Water Supply & Sewerage in Essa Nagri [PK-KWSB-369067-CW-RFB]

Estimated Cost: 775.23 million

Funded by: KWSSIP/World Bank

Area:

Detail: Karachi Water & Sewerage Corporation's rehabilitation project aims to address water and sanitation challenges in low-income communities, vital for Karachi's sustainable growth amidst increasing urban pressures.

ADP (Project funded by GOS)

Project Name: (All Karachi) Rehabilitation Replacement Improvement of water supply and sewerage system

Estimated Cost:789.127

Funded by: Government of Sindh

Area:

Detail: Scheme having 16 Nos Components, all work orders of 16 Nos Components issued & in progress, Scheme under execution.

Rs.157.5 Million Additional Funds required due to Bid received in allowable limit as per SPP Rules.

Project Name: (PS-114)(PS-121) Rehabilitation / Replacement / Improvement of water supply & Sewerage System

Estimated Cost:150.000

Funded by: Government of Sindh

Area:

Detail: Mr. Liaquat Ali Askani (EX-MPA / Advisor) requested in written to change the proposed components through Modified PC-I

Project Name: (PS-108) Providing and Laying over Ground 32" Dia M.S Pipe Line

Estimated Cost: 962.566

Funded by: Government of Sindh

Area:

Detail: Providing and Laying over Ground 32" Dia M.S Pipe Line from Sindhi Hotel Bridge to Bakra Piri along with Lyari Express way Layri River (Revised)

Project Name:(PS-103) Providing Of 10 Nos Suction Machines and 10 Nos High Pressure Jetting Machines

Estimated Cost: 899.92

Funded by: Government of Sindh

Area:

Detail: Providing Of 10 Nos Suction Machines nad 10 Nos High Pressure Jetting Machines Including Up-gradation of existing machines for improvement of sewer work in differernt District of Karachi (SDG # 6)

Project Name:(PS-104) Providing & Laying 400mm P.E line

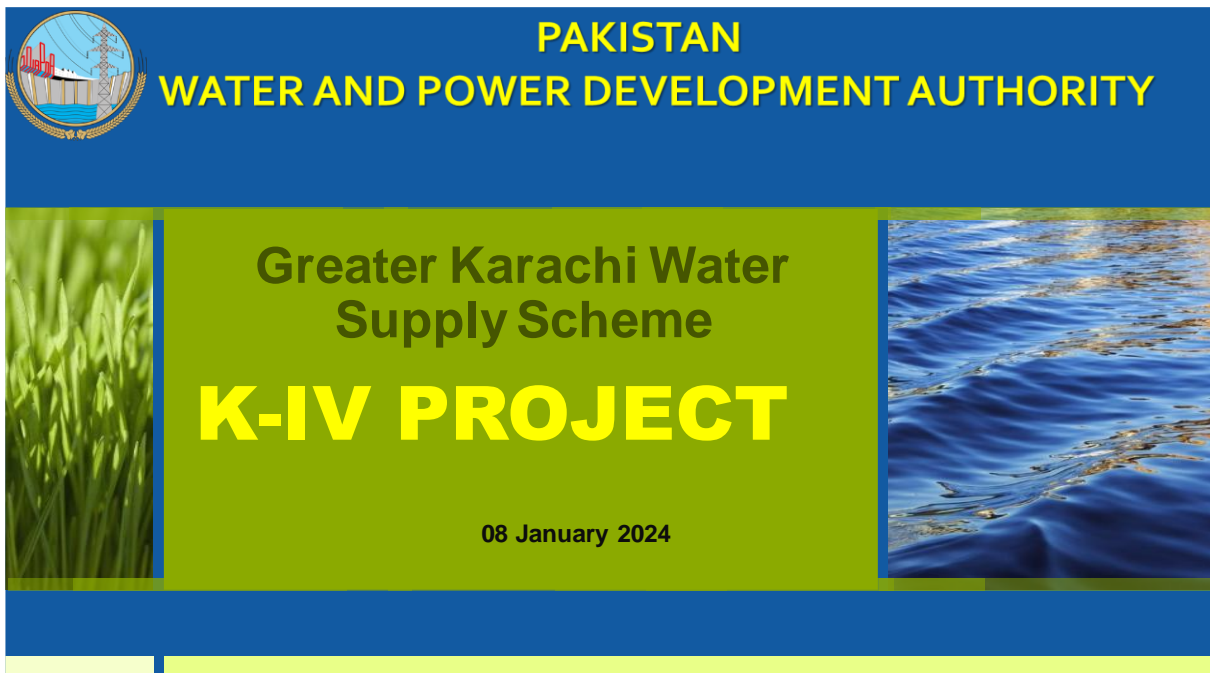
Estimated Cost:299.490

Funded by: Government of Sindh

Area:

Detail: Providing & Laying 400 mm, 315 mm, 200 mm, 160 mm & 110 mm P.E Line i/c 15" dia, 12" dia, 8" dia, 6" dia & 4" dia Sluice Valve i/c 02 Nos. DWT Vertical Turbine Pumps in UC-01 & UC-02, Akhtar Colony, Kashmir Colony, Defence View Phase-I & II Adjoining area for Improvement of water supply in Jamshed Town (Revised)

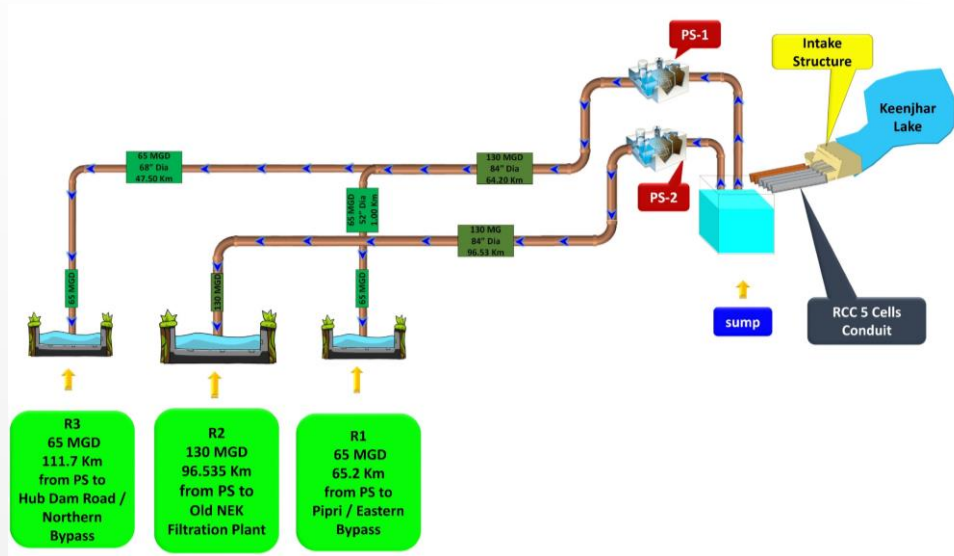
K4-Federal



BACKGROUND

- ✓ PC-II was approved by Government of Sindh April 2003
- ✓ K-IV Feasibility Study Contract awarded 2005
- ✓ K-IV Project Feasibility Study Completed 2007
- ✓ PC-I for K IV (Phase-I) 260 MGD approved by ECNEC. 2014
- ✓ OCL was awarded the D&S Supervision Consultancy 2015
- ✓ FWO was awarded two contracts (Civil) works & E&M works 2016
- ✓ K-IV Construction Works under Package A started July 2016,
- ✓ Scheduled to be completed December 2018
- ✓ Works stopped due to technical issues December 2018
- ✓ Sindh Cabinet awarded the Project Review to NESPAK February, 2019
- ✓ NESPAK Review Report - Serious reservations on K-IV Planning & Design September 2019
- ✓ The Govt. of Sindh appointed a Technical Committee with the TOR to scrutinize the report submitted by M/s NESPAK. The Technical Committee of the Govt. of Sindh submitted their report March, 2020
- ✓ With the consent of GOS, the Federal Government conveyed vide MoWR letter dated 23.09.2020, took the responsibility to implement the Greater Karachi Water Supply Scheme (Phase-I) K-IV and assigned this task to Ministry of Water Resources / WAPDA

SCHEMATIC LAYOUT – 260MGD PHASE-I



K-IV PROJECT COMPONENTS

Intake Works – KIV-IW

Allied Works – KIV-AW

Conveyance System - Pressurized Pipeline

KIV-PL1 RD0+000 to RD64+200

KIV-PL2 RD64+200 to RD111+700

Pumping Station – 2 Nos. (EPC Contract) – KIV-PS

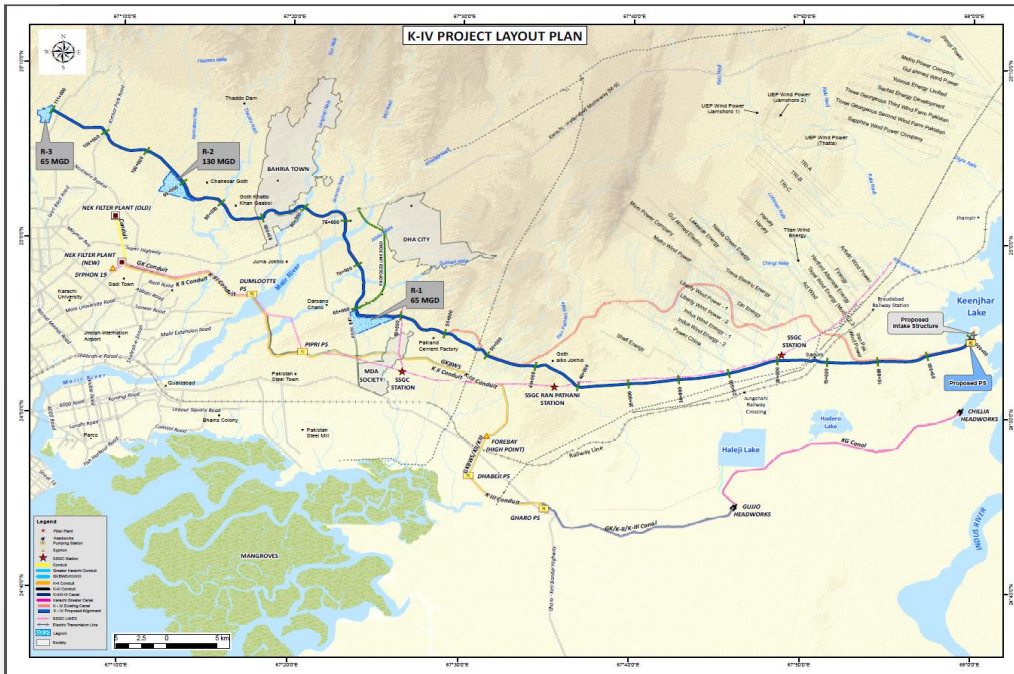
Filtration Plants and Reservoirs

KIV-FP1, R1 Water Filtration Plant and Reservoir (65 MGD) Near Pipri / Eastern Bypass

KIV-FP2, R2 Water Filtration Plant and Reservoir (130 MGD) Near old NEK Filtration Plant

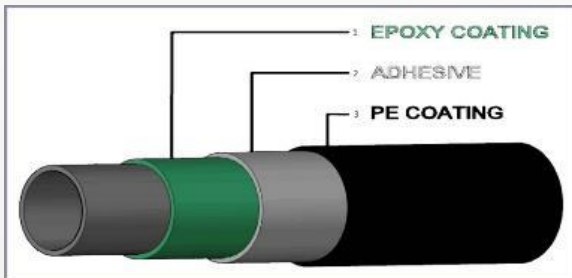
KIV-FP3, R3 Water Filtration Plant and Reservoir (65 MGD) Near Hub Dam Road / Northern Bypass





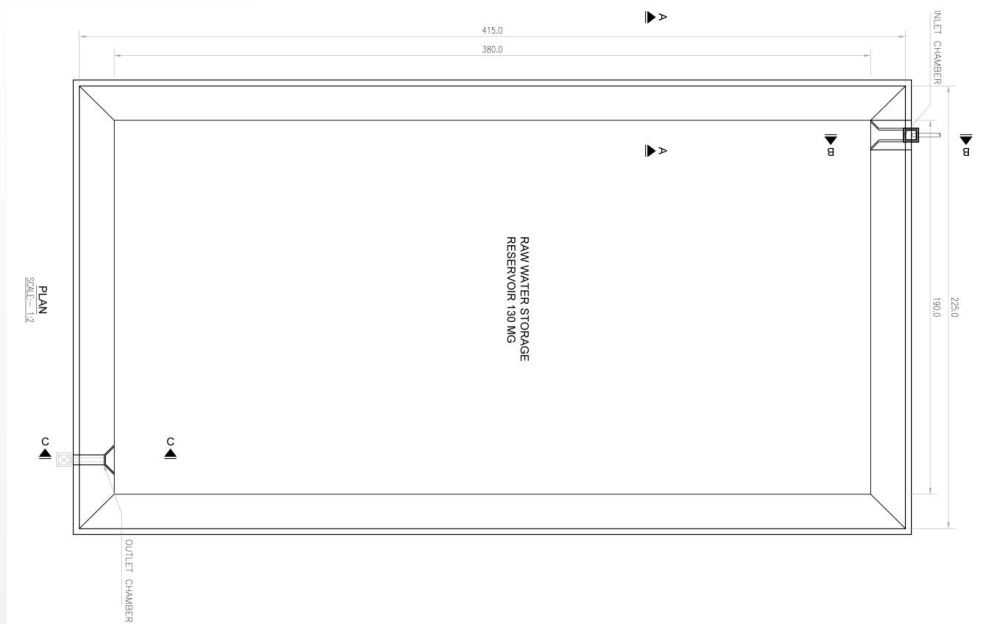
THE SELECTED MILD STEEL PIPE

- ✓ Selected based on Optimization Study by ILF Austria
- ✓ API 5L X42 DN 2100 (ASME B31.4 / AWWA M11)
- ✓ Wall Thickness 16 mm
- ✓ 3 LPE External Coating
- ✓ Cement Mortar Internal Lining 13 mm (AWWA C205)
- ✓ Pipe can be imported or manufactured in Pakistan after importing 16 mm Mild Steel Hot Rolled Coil



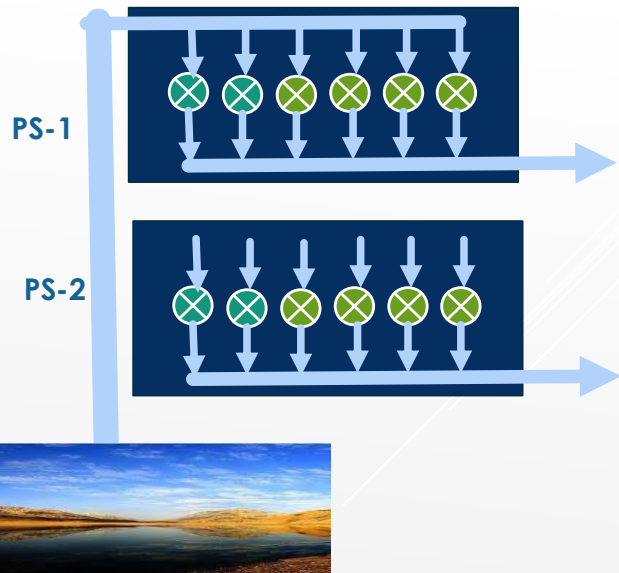
STORAGE AND FILTRATION

- ▶ Three termination points for K-IV Project Phase 1: 260 MGD
 - ▶ RD 65– Near Pipri R1 65 MGD,
 - ▶ RD 94– Near Taiser Town /NEK R2 130 MGD
 - ▶ RD 110– Near Manghopir Road R3 65 MGD
- ▶ One Day Storage at Each Location 65, 130, 65 Million Gallons





Keenjhar Pumping Complex



2 PUMPING STATIONS AT KEENJHAR PUMPING COMPLEX

- ▶ Provision for 5 Pumping Stations
- ▶ Phase 1 : 2 Pumping Station each 130 MGD Pumping Capacity
- ▶ Pumps in each Pumping Stations 4 + 2
- ▶ Pumping Head ~ 20 bar
- ▶ Pumping Motor KW ~4500
- ▶ Double-suction Split Case Centrifugal Pump coupled with vertical shaft motors



SDG (Sustainable Development Goals):

1) Increase Water Supply:

Text Content: "The aim of this project is to increase the water supply, which currently stands at 650 MGD, to 1105 MGD by the year 2030. We intend to achieve this by implementing various strategies and infrastructure enhancements. Our goal is to ensure that Karachi's water needs are met adequately and sustainably, paving the way for a better future for all residents."

Year	Demand	Supply
2024	1200	650
2027	1250	910
2030	1250	1105

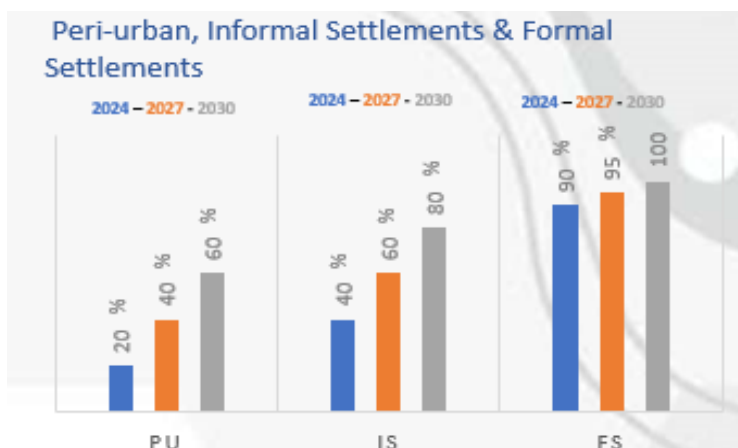
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2) Increase in distribution of water

Content: Launching a new project aimed at bolstering Karachi's water supply is a crucial step towards ensuring that every corner of the city has access to clean and pure water. This initiative is designed to address the pressing need for reliable water sources throughout Karachi. By implementing this project, we are committed to enhancing the quality of life for all residents by providing them with a fundamental necessity: safe drinking water.

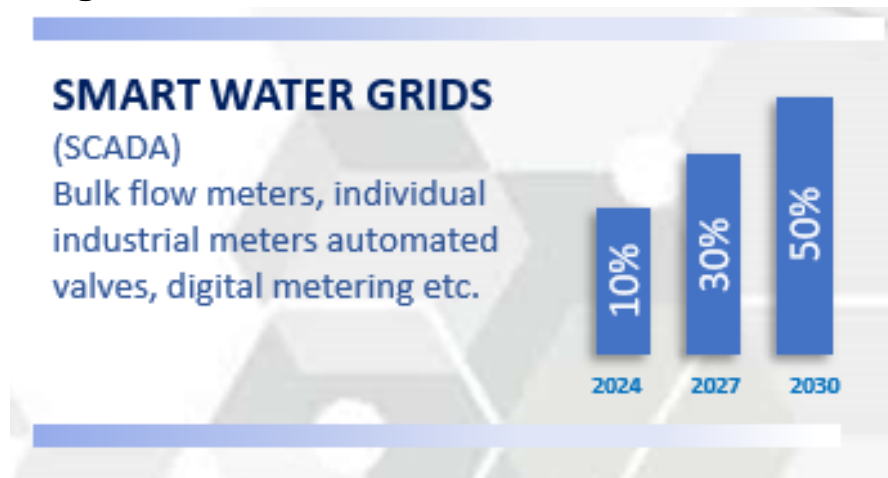
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3) Smart Water Grids

Text Content: "In addition to increasing water supply, effective control measures are equally important. This involves the installation of bulk flow meters, automated valves, and digital metering systems to ensure accurate billing for water consumption. By implementing these control mechanisms, we aim to enhance efficiency in water management while also promoting transparency and accountability in billing processes."

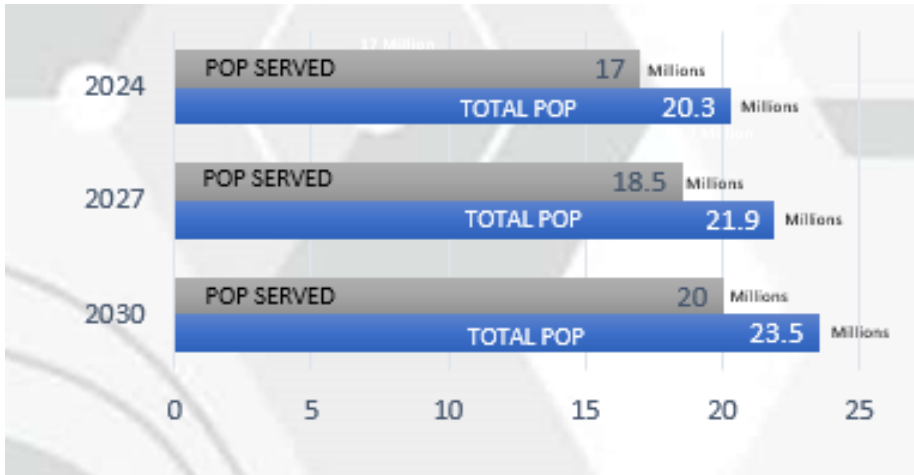
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4) Increase in Pop Served

Text Content: It is imperative to work on this project as our population is steadily increasing. Currently, Karachi is home to 20.3 million people, and it is estimated to reach 23.5 million by 2030. This population growth underscores the urgent need to bolster our water supply infrastructure to accommodate the rising demand. By investing in such projects now, we can ensure that future generations have access to sufficient and clean water resources.

Year	POP Total	Pop Served
2024	20.3	17
2027	21.9	18.5
2030	23.5	20

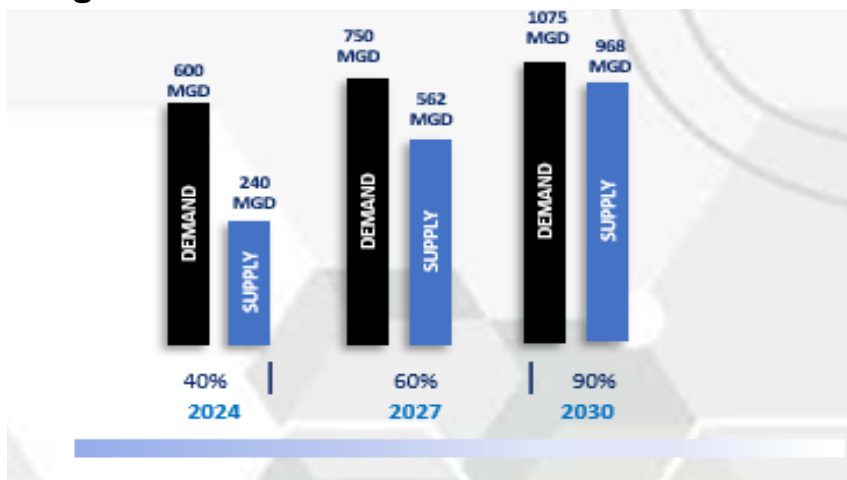


5) Safe Water Delivery

Content Ensuring the availability of safe, pure, and healthy water is not only about increasing water supply but also about improving its quality. This involves the establishment of new filtration plants, chlorination stations, and water quality monitoring stations. Currently, only 40 percent of water undergoes filtration, but our target is to increase this to 90 percent by 2030. By achieving this goal, we aim to significantly enhance the quality of water provided to the residents, promoting better health outcomes and overall well-being.

Year	Demand	Supply
2024	600	240
2027	750	562
2030	1075	968

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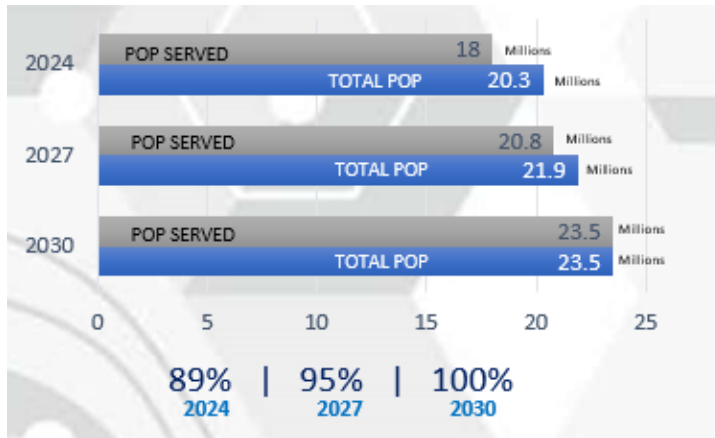


6) City Sewerage Coverage

Content: The current sewerage coverage in the city stands at 89 percent, with plans to achieve 100 percent coverage by 2030. Alongside increasing water supply, ensuring comprehensive sewerage coverage is essential. This integrated approach is vital for preventing pollution and diseases, safeguarding public health, and fostering a cleaner environment for all residents."

Year	Total POP	POP Served
2024	20.3	18
2027	21.9	20.8
2030	23.5	23.5

Image:



8) Sewerage connections in katchi abadis:

Text Content: The most significant issue concerning sewerage lies within the katchi abadis, primarily due to the low-income communities residing there. Currently, only 50 percent of these areas have sewerage connections, but our goal is to increase this to 90 percent by 2030. By achieving this target, we aim to mitigate pollution and environmental hazards in these areas, thereby improving the overall quality of life for residents and creating a safer and healthier environment for everyone."

Image:



9) Karachi Waste Water Treatment Plants:

Text content: Enhancing Karachi's wastewater treatment plants is crucial as it is the primary focus of KWSC's project. Currently, out of a capacity of 360 MGD, only 54 percent of wastewater is being treated. However, by 2030, the goal is to treat up to 500 MGD out of a planned capacity of 750 MGD. This enhancement promises immense benefits, including the production of biogas and much more. Biogas, derived from waste materials at sewage treatment plants, serves as a renewable energy

source. Additionally, improved sewage treatment contributes to increased clean water resources, maintains a cleaner environment, and signifies a better quality of life. This advancement could lead to significant environmental improvements in Karachi and ensure the well-being of its residents.

Image:

