

# Service Level Benchmarking, Sewerage Department



**PUNE MUNICIPAL CORPORATION,**  
SHIVAJINAGAR, PUNE – 411 005

September 2010

# Pune Municipal Corporation

## City Profile

- 2001 Census Population – ( 25,38,473 )
- 2009 Population Estimate – ( 39,33,140 )
- Area in sq. kms – 243.84
- Slum Population– 655494.00
- Whether JNNURM/ UIDSSMT city – JNNURM city.

## Service Providers

- Water Supply – Pune Municipal Corporation
- Sewerage – Pune Municipal Corporation
- Storm Water Drainage – Pune Municipal Corporation
- Solid Waste Management - Pune Municipal Corporation

# Sewerage Indicators

Performance Indicator	Benchmark	Status	Reliability
Coverage of Toilets	100%	97.57%	B
Coverage of Sewerage Network	100%	97.57%	B
Coll. Eff. of Sewerage Network	100%	69.63%	B
Adequacy of Sewage Treatment Capacity	100%	66.80%	B
Quality of Sewage Treatment	100%	100.00%	A
Extent of Reuse and Recycling of Sewage	20%	5.38%	A
Eff. In Redressal of Consumer Complaints	80%	99.99%	B
Extent of Cost Recovery	100%	76.05%	B
Eff. In Collection of Sewage Charges	90%	68.81%	B

# Benchmarking & ISIP for Sewerage Division

S.No.	Indicator	Benchmark	Current Value	Reliability Scale	Data	BASE FOR DATA	ISIP
2.1	Coverage of toilets	100%	97.57%	B	<p>a) Total number of properties with access to individual or community toilet within walkable distance = 9,71,578 Nos (undeclared slums not considered for services)</p> <p>b) Total number of properties without toilet within walkable distance = 24,153</p> <p>Coverage of water supply connections is <math>(a/(a+b)) \times 100 = (9,71,578/9,95,731) \times 100 = 97.57\%</math></p>	Total properties are as per PMC property tax Dept. records. Number of properties with toilet connections to sewer network are as per actual survey and records. Undeclared slums not considered for services.	PMC has been started carrying out detailed survey of households and updating the records. The data updating activity will be completed by March 2011.
2.2	Coverage of sewage network services	100%	97.57%	B	<p>a) Total number of properties in the service area = 9,95,731Nos</p> <p>b) Total number of properties with direct connection to sewage network = 9,71,578</p> <p>Coverage of sewage network <math>(b/a) \times 100 = (9,71,578/9,95,731) \times 100 = 97.57\%</math></p>	Total properties are as per PMC property tax Dept. records. Number of properties with toilet connections to sewer network are as per actual survey and records. Undeclared slums not considered for services.	PMC has been started carrying out detailed survey of households and updating the records. The data updating activity will be completed by March 2011.
2.3	Collection efficiency of the sewage network	100%	69.63%	B	<p>a) Total water production and water use = 842.25 MLD</p> <p>b) Estimated water use from other sources = 50 MLD</p> <p>c) Waste water collected at STP = 497 MLD</p> <p>Collection efficiency <math>[c/((b+a) \cdot 0.8)] \times 100 = [497 / ((50 + 842.25) \times 0.8)] \times 100 = 69.63\%</math></p>	Actual sewage volume treated is measured at STPs and total volume of waste water generated is 80% of water consumed.	Detailed survey of existing old sewer lines will be carried out by physical inspection and carrying capacity will be computed using necessary softwares and instruments.

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S.N o.	Indicator	Bench mark	Current Value	Reliability Scale	Data	BASE FOR DATA	ISIP
2.4	Adequacy of sewage treatment capacity.	100%	66.80%	B	a) Total waste generated in city = 744 MLD b) Rated Capacity of all STPs = 497 MLD Treatment capacity = $(b/a) \times 100 = (497/744) \times 100 = 66.80\%$	Data is collected from flow meters installed at every STP.	To maintain the existing system.
2.5	Quality of sewage treatment.	100%	100%	A	a) Total wastewater received samples tested 8 Nos. b) Total number of samples meeting the specific secondary treatment standards = 8 Quality $(b/a) \times 100 = (8/8) \times 100 = 100\%$	Actual samples are collected at every STP and registers are maintained by chemists.	To maintain the existing system.
2.6	Extent of reuse and recycling of sewage.	20%	5.38%	A	a) A. Volume of treated Waste water reused = 40 MLD. b) Sewerage volume treated = 744 MLD Extent of reuse = $(a/b) \times 100 = (40/744) \times 100 = 5.38\%$	As per flow meter records	To maintain the existing system.

# Benchmarking & ISIP for Sewerage Division

S.No.	Indicator	Benchmark	Current Value	Reliability Scale	Data	BASE FOR DATA	ISIP
2.7	Efficiency in redressal of consumer complaints	80%	99.90%	B	<p>a) Total number of complaints of waste water received = 2306 per month</p> <p>b) Total number of waste water complaints redressed in 24 hours = 2301 per month</p> <p>Efficiency in redressal of complaints = <math>(b/a) \times 100 = 2301/2306 \times 100 = 99.9\%</math></p>	As per actual records kept at zonal offices.	<p>1) Multiple mechanism by which consumer can register their complaints will be adopted.</p> <p>2) All the complaints at all levels will be recorded at ward level &amp; central information collection system will be adopted on daily bases.</p> <p>3) Status of redressal of complaints will be maintained.</p>
2.8	Extent of Cost recovery in sewage management.	100%	76.05%	B	<p>a) Total annual operating expenses = 57.95 Crore</p> <p>b) Total Annual operative revenue = 44.07 Crore</p> <p>Cost Recovery = <math>(b/a) \times 100 = (44.07/57.95) \times 100 = 76.05\%</math></p>	Reports of Annual Budget 2010-2011	Adopting an accrual based double entry accounting system, the accounting standards will be made comparable to commercial accounting standards with clear guidelines for recognition of income and expenditure.
2.9	Efficiency in collection of sewage charges	90%	68.81%	B	<p>a) Current revenues collected in a year Rs 44.07 Crore.</p> <p>b) Total operating revenues billed in a year = Rs 64.04 Crore.</p> <p>Collection efficiency = <math>(a/b) \times 100 = 44.07/64.04 \times 100 = 68.81\%</math></p>	Records available from Tax Department	Collection records will be maintained for wardwise each billing cycle with overall accrual principles will be followed so as to avoid inclusion of deposits and advances in income and expenditure respectively.

# Sewerage: Observations & Comments

- ◆ PMC is building system to maintain record of all sewerage connections.
- ◆ PMC has planned to carry out a house to house survey
  - to determine the no. of sewerage connections.
  - to identify households connected to sewerage network and septic tanks
- ◆ All the STP'S are being equipped with laboratories for regular analysis of samples for the quality of waste water treatment.
- ◆ PMC has framed bye laws for implementing reuse of domestic sewage from housing projects with 80 tenements and above or commercial buildings more than 2000 sq.m.

# Sewerage: Areas identified for improvement – Info Systems

- ◆ PMC supplies treated waste water of about 40 MLD for irrigation purpose to farmers.
- ◆ PMC collects sewerage charges under property tax (        % of retable value of property tax).
- ◆ Sewerage related complaints – Web based Grievances redressal system is under implementation.

# Sewerage: Areas identified for improvement – Performance

- ◆ Additional 230 MLD capacity of STP work identified and implementation for 100% treatment of waste water generated in PMC limits will be completed in next 2 years.
- ◆ PMC implementing additional sewerage projects under NRCD to improve the coverage of sewerage network (collection and conveyance) up to 100%.
- ◆ Implementing SCADA system to monitor of sewerage inflow and outflow at STP's.

THANK YOU

