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The Role of Infrastructure and Amenities in Pune City Expansion

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Abstract:

Pune, once known as a city with a rich educational and cultural heritage. However, over the last two decades, the city of Pune has witnessed unprecedented expansion and population growth. These changes can be attributed to several factors, including rapid industrialization, population migration, the provision of infrastructure can shed light on such important factors. In this paper, we explore the contribution of infrastructure and amenities to the expansion of Pune city. We highlight the impact of amenities and infrastructure on urban development, economic growth, social mobility and overall quality of life in Pune city.

Keywords:

City Expansion, Amenities, Population Growth, Infrastructure

Introduction:

The useful or desirable features of a place, that provide non-monetary benefits to those who use it but which are not necessary for its use. An amenity can be natural (such as an attractive location or accessible woods or water) or made by people (such as a swimming pool or garden). (oxford reference) Infrastructure is defined as the basic physical systems of a business, region, or nation and often involves the production of public goods or production processes. Examples of infrastructure include transportation systems, communication networks, sewage, water, and school systems. (Investopedia) Urban expansion is defined simply as the physical extension of the geographical footprints of towns, cities, and metropolitan areas into the surrounding countryside, encompassing surrounding villages and towns in the process. (journal-buildingscities.org)

Pune, once known as a city with a rich educational and cultural heritage. However, over the last two decades, the city of Pune has witnessed unprecedented expansion and population growth. These changes can be attributed to several factors, including rapid industrialization, population migration, the provision of infrastructure can shed light on such important factors. In this paper, we explore the contribution of amenities and infrastructure to the expansion of Pune city. We highlight the impact of amenities and infrastructure on urban development, economic growth, social mobility and overall quality of life in Pune city. Rapid industrialization and urbanization have led to population growth due to influx of industries, IT parks, educational institutions, which has created huge demand for housing, infrastructure and services. To meet these, the city has expanded. Solving the space problem of growing population, Pune city has expanded and increased amenities and infrastructure.

Objectives:

- 1. To assess the provision and accessibility of amenities in Pune city
- 2. To examine the impact of amenities on urban expansion in Pune.

Study Area:

Pune is the seventh most populous city in India and the second largest in the state of Maharashtra. It was known as Punyanagari in earlier times. Pune is located 560m above sea level on the western margin of the Deccan plateau. It is situated on the leeward side of the Sahyadri mountain range, which forms a barrier from the Arabian sea. It is a hilly city, with its tallest hill, Vetal hill, rising to 800m above sea level. It is lies between 18⁰ 32" N. lat. and 73⁰ 51" E. long. Central Pune is located at the confluence of the Mula and Mutha rivers.

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The city has a population of 3,124,458; while 5,057,709 people reside in the Pune urban Agglomeration as of the 2011 census. According to Pune Municipal corporation. 40% of the population lived in slums in 2001. The average literacy rate of Pune was 79.89% in 2011. Marathi is the official and most – spoken language. It is well known manufacturing and industrial center of India. (Wikipedia, n.d.)

Map No.1
Location Map

India

Maharashtra

O 112.5 225 450

Pune District

Database and Methodology:

This Research paper deals role of available amenities in expanded area of Pune city. Here the secondary data related to amenities is taken from the census handbook of Pune district also from Pune Municipal Corporation. This Secondary data is tabulated and analyzed with the help of cartographic techniques.

Amenities in Pune city:

Almost 58 villages have been included in Pune city since last four decades due to increasing population. 23 villages in 1997, Yewalewadi in 2012, 11 villages in 2017 and 23 villages in 2020 were included in Pune city. There are many reasons behind the expansion of the city of Pune, among which the available amenities are one of the important reasons.

According to the 2011 census, among the facilities available in old Pune city and also in newly expanded Pune city,

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List Of Facilities in Pune City

Table No.1

Educational Facilities	Medical Facilities:			
D. Deimanna and Carana da ma Calana d	11. 11			
P: Primary or Secondary School	H: Hospital HC: Health Centre			
PP: Pre-Primary school				
M: Junior Secondary or Middle School	FPC: Family Planning Centre			
S: Secondary School	MCW: Maternity and child welfare centre CWC: Child Welfare Centre			
SS: Senior Secondary school (SS)				
ASC: Degree college of arts science & commerce	RP: Registered private Practitioner FWC: Family Welfare Centre			
EC: Engineering college (EC)	D: Dispensary			
ITI: Vocational training school /ITI	PHC: Primary Health Centre			
AC: Adult literacy class/centre	HA: Hospital-allopathic			
H: Matriculation or Secondary School	HO: Hospital-alternative medicine			
PUC: Higher Secondary/Intermediate/Pre-	HU: Unani Hospital			
University/Junior College	DU: Unani Dispensary			
Sh: Short hand	PHS: Primary Health Sub-centre			
TYPE: Typing	TB: T.B. Clinic			
Pt: Polytechnic	NH: Nursing Home			
MC: Medical college	RMP: Registered Private Medical RMP			
ITI: Vocational training school	Practitioner			
NFTC: Non-formal training centre	VH: Veterinary hospital			
SSD: Special school for disabled	CHC: Community health centre			
	MHC: Mobile health clinic			
Drinking water Facilities:	Post and Telegraph			
W: Well water	PO: Post Office			
HP: Hand pump	PH: Telephonic Connection			
R: River water	PTO: Post and Telegraph Office			
T: Tap water				
1. Tap water	SPO: Sub post office			
TW: Tube Well water				
	SPO: Sub post office			
TW: Tube Well water	SPO: Sub post office PCO: Public call office			
TW: Tube Well water L: Lake	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage			
TW: Tube Well water L: Lake SS: Summer Source	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water F: Fountain	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water F: Fountain Communication	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre PCF: Private courier facility Power supply			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water F: Fountain Communication BS: Bus Stop	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre PCF: Private courier facility Power supply EA: Electricity for All purposes			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water F: Fountain Communication	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre PCF: Private courier facility Power supply			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water F: Fountain Communication BS: Bus Stop RS: Railway Station ODR: Others district road	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre PCF: Private courier facility Power supply EA: Electricity for All purposes EO: Electricity for other purpose Industrial, Commercial etc.			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water F: Fountain Communication BS: Bus Stop RS: Railway Station	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre PCF: Private courier facility Power supply EA: Electricity for All purposes EO: Electricity for other purpose Industrial, Commercial etc. ED: Electricity for Domestic purpose			
TW: Tube Well water L: Lake SS: Summer Source C: Canal TK: Tank Water F: Fountain Communication BS: Bus Stop RS: Railway Station ODR: Others district road MDR: Major district road	SPO: Sub post office PCO: Public call office MOB: Mobile phone coverage CSC: Internet cafes/ Common service centre PCF: Private courier facility Power supply EA: Electricity for All purposes EO: Electricity for other purpose Industrial, Commercial etc.			

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Commercial and co- operative bank	Credit societies
CM: Commercial Bank	ACS: Agricultural Credit Society
CP: Co-operative Bank	NCS: Non- Agricultural Credit Society
-	OCS: Other Credit Society
Recreational and cultural facilities	Availability of toilet & others
OCS: Other Credit Society	CTB: Community toilet including bath
CV: Cinema/Video Hall	CTEB: Community toilet excluding bath.
SP: Sports Club	RS: Rural sanitary mart or sanitary
ST: Stadium/Auditorium	hardware outlet available near the village.
PL: Public Library	RW: Community bio- gas or recycle of
SF: Sports Field	waste for productive use.
PRR: Public Reading Room	
Newspaper/Magazine	
N: News Paper	
M: Magazine	
Miscellaneous facilities	
SHP: Self Help Group	
PDS: Public Distribution System	
WH: Weekly Hat	
AMS: Agricultural marketing society	
ICDS: Integrated Child Development Scheme	
(Nutritional Centres)	
AC: Anganwadi Centre (Nutritional Centres)	
ASHA: Accredited Social Health Activist	
CC: Community centre with/without TV	
ASP: Assembly Polling station	
BDRO: Birth & Death Registration Office	
S	Challe District Course Handlack Done District 2011

Source: Census of India, District Census Handbook, Pune District, 2011

All the above facilities are available in Pune city and the newly expanded Pune city due to which the migration of people increased. The population makes the price of the land affordable and the available facilities regardless of the distance. Because of the scarcity of land in the central part of the city, the price of the available land has skyrocketed. All the facilities which are in the central part of the city are becoming available in all parts of the city.

Table No.2 DMC Zones Of PMC

DMC Zone	DMC Zone Name	Including Expanded Area of Pune City
No.		
1	Nagar Road-Wadgaon Sheri ward office Dhole Patil road ward office Yerawada Kalas Dhanori ward office	Dhanori, Lohagaon, Wadgaon Sheri, Kharadi, Kalas Wagholi.
2	Aundh- Baner ward office Shivajinagar Ghole road ward	Baner, Kothrud, Mahalunge, sus, Bavdhan Bk, Bavdhan Bk, Balewadi

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	207	
	office	
	Kothrud Bavdhan ward office	
3	Warje Karvenagar ward office	Dhankawadi, Katraj, Warje, Hingne Kh,
	Sinhgad road ward office	Dhayari, Wadgaon Bk, Wadgaon kh,
	Dhankawadi-Shankar Nagar	Shivane Uttamnagar, Kirkitwadi,
	ward office	Kondhave Dhawde, Kopare, Nanded,
		Khadakwasla, Narhe, Nandoshi,
		Kolewadi, Ambegaon Kh, Ambegaon Bk
4	Wanwadi - Ramtekadi ward	Hadpsar, Mohammadwadi, Mundhwa
	office	(Keshav nagar),Kondhwa Bk, Kondhwa
	Hadapsar- Mundhwa ward	Kh, Pisoli, Manjari Bk,Holkarwadi,
	office	Autadwadi Handewadi, Wadachiwadi,
	Kondhwa - Yewalewadi ward	Shewalwadi, Mangadewadi, Bhilarewadi,
	office	Gujar Nimbalkarwadi, Jambhulwadi,
		Uruli Devachi -Mantarwadi, Fursungi,
		Yewalewadi, Undri
5	Bhavani Peth ward office	
	Kasba Vishrambagwada ward	
	office	
	Bibvewadi ward office	

Sources: Pune Municipal Corporation

AMENITIES IN PUNE MUNICIPAL CORPORATION (PMC) ACCORDING TO DMC ZONE IN PUNE.

The following tables show various amenities in Pune city as per DMC zone in PMC as of 2011.

Ward wise Amenities in PMC:

Table No. 3

Zone No and Ward Name	No. of Pub lic Pri mar y Sch ools	No. of Publi c Seco ndar y Scho ols	No. of Publi c High er Seco ndar y Scho ols	No. of Grad uatio n Colle ges	No. of Pu bli c Toi lets	No. of Dispe nsarie s / Prima ry Hospit als	No. of Publ ic Hos pital s	No. of Libr aries	No. of Par ks and Gar den s	No. of Lice nsed Haw kers
Zone No. 1										
1. Nagar Road- Wadgaonsheri	93	39	11	3	15	4	9	5	13	733
2. Dhole Patil.	62	22	9	4	22	2	10	0	12	1554
3.Yerwada- Kalas-Dhanori	95	31	10	6	49	2	5	0	20	1466
Zone No. 2						-				
4. Aundh- Baner	56	18	10	1	38	1	7	7	11	571
5. Shivajinagar-	69	28	8	1	98	1	40	8	15	1291

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Ghole Road										
6. Kothrud- Bawdhan	48	20	4	0	32	1	14	5	9	878
Zone No.3										
7. Dhankawadi- Sahakarnagar	60	25	10	3	41	1	13	1	14	1096
8. Sinhagad Road	50	17	5	3	24	0	13	3	9	954
9. Warje- Karvenagar	65	21	4	0	20	5	21	7	12	893
Zone No.4										
10. Hadapsar- Mundhawa	67	21	10	0	23	0	19	3	11	1301
11. Wanawadi- Ramtekdi	62	18	4	0	19	1	8	0	8	465
12.Kondhwa- Yewalewadi	43	20	6	2	2	0	3	1	9	382
Zone No.5										
13. Kasba- Vishrambagwa da	109	44	23	4	63	6	84	8	19	2550
14. Bhawani Peth	74	20	4	1	70	6	17	1	6	960
15. Bibwewadi	54	17	6	3	23	3	19	3	13	1117

Source: Pune Municipal Corporation

The above table shows the amenities available in PMC according to DMC Zone. In almost all zones, Govt. Schools, there are Govt medical facilities, toilet facilities. There are also parks and gardens. Kasba Peth – Vishram Bag zone has the highest number of Govt. education, medical facilities. The number of hawkers is high on Dhole Patil Road.

Medical Facilities in PMC:

Table No. 4

DMC Zone No.	No. of Private hospitals	No. of Public Hospitals	No. of private clinic	No. of Dispensary
1	13	9	56	6
2	40	9	18	16
3	40	6	64	-
4	24	5	17	1
5	98	21	20	7

Source: Pune Municipal Corporation

The above table shows medical facilities according to zone. Zone no. 5 has the most private and public hospitals. Whereas zone no.3 has the most private clinics.

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Table No. 5

Population	Year	Presence of organized bus transport system (Y/N)	No. of Bus Service Providers	Total No. of Buses plying within the city	Mode Share - Total Number of Trips - Public Transport - Bus
57.92	2015-16	Y	1	1447	20.41
59.52	2016-17	Y	1	1382	19.14
64.14	2017-18	Y	1	1425	18.81
65.91	2018-19	Y	1	1373	15.7
67.75	2019-20	Y	1	1383	15.45
69.58	2020-21	Y	1	714	4.01

Source Pune Municipal Corporation

The above table shows the bus service in Pune city between 2015 and 2021. There is an organized bus transport system. Bus service provider is the same. Most buses ran in 2015-16. While in 2020-21, the least buses ran due to Covid 19. Total no. The ratio of trips to public transport was highest in 2015-16 and lowest in 2020-21.

Types of Buses:

Table No. 6

Type of Bus	No. of buses	Bus Companies	No. of buses of that type
AC	12	Tata	1122
Non-AC	1463	Leyland	349
Hired	956	Force	1
Total	2431	Mahindra	3
		Total	1475

Source: Pune Municipal Corporation

Bus facility:

Table No. 7

Bus Facility	Total
No. of bus terminals	92
No. of bus stands	100
No. of bus stops	2622

Source: Pune Municipal Corporation

Above tables bus type and no. of buses are showing. Most of the buses are of non-AC. 956 of them are hired. Most of the buses are of tata company. Total bus terminals are 92, bus stands are 92 and bus stops are 2622.

Length of Roads within the PMC:

Table No. 8

Zone Name	Ward Name	Length of Roads (in km)	Length of Roads with footpaths on both sides (in km)
	Nagar Road	112.16	58.58
Zone 1	Yerwada Kalas Dhanori	90.42	45.49
	Dhole Patil	64.73	49.57
Zone 2	Aund Baner	151.25	70.84
	Shivajinagar Ghole road	107.96	65.57

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	Kothrud Bawdhan	104.86	35.64
	Dhankawadi Sahakarnagar	101.49	25.94
Zone 3	Sinhagad road	75.47	21.5
	Warje Karvenagar	115.62	36.11
	Hadpasar Mundhwa	102.15	39.92
Zone 4	Wanawadi Ramtekadi	82.14	20.12
	Kondava-Yewalewadi	83.83	45.49
	Kasaba Vishrambaug	82.81	35.73
Zone 5	Bavani peth	42.59	21.11
	Bibwewadi	81.13	35.62

Source: Pune Municipal Corporation

The above table, ward wise length of road is shown. Warje, Karvenagar and Nagar road are the longest roads.

Digitisation of Pune City

Table No. 10

Digital facility Name	[Yes / No]
Online Payment of taxes (property / water) [Yes / No]	Yes
Online Payment against traffic violations (challans, fines, etc.) [Yes / No]	Yes
Online request for Service Connections (gas, water supply) [Yes / No]	No
Online request for Certificates / Licenses (marriage, driving, birth & death certificates) [Yes / No]	Yes
Online display of Tenders (for various works) across various departments/ utilities [Yes / No]	Yes
Online Grievance management (tracking of complaints) [Yes / No]	Yes
Online buying of Tickets and passes (e.g. public transport, cultural events) [Yes / No]	No
Online request of Disclosure of documents (e.g. budgets, plans, RTI requests) [Yes / No]	Yes

Source Pune Municipal Corporation:

The above table shows the digital facilities available in Pune city. Online (digital) facility is available for property tax, water tax, challans, fines for traffic violations, marriage, birth & death certificate, driving Licenses, tenders, tracking complains, budgets, plans, RTI requests. Online passes/tickets are not available for public transport or cultural events. Also, online request for service connection for gas, water supply is not available.

Consumption of Electricity (in lakh units)

Table No. 12

Year	Public Water Work & Street Light	Public Water Work & Garda	Publi c Wate r Wor k & Scho ol	Public Water Work & Hospit al	Public Water Work & Buildin	Public Water Work & Toilet	Public Water Work & Crematoriu m	Total Consumpti on of Electricity
2016- 17	1426.2 4	35.92	15.29	15.77	8.44	58.6	0.41	1560.67
	1519.9	37.843	18.1	18.75	10.38	65.919	0.46	1671.383

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18	3							
2018- 19	1609.1 4	39.07	19.59	20.85	13.44	71.481 6	0.47	1774.036
2019- 20	1719.5 9	41.464	30.37	26.48	15.99	74.372 4	0.5	1601688
2020- 21	1832.9 2	35.186	34.76	30.22	20.27	80.592	0.52	2034.472

Source: Pune Municipal Corporation

The above table shows the consumption of electricity in lakh units. In all the years from 2016 to 2021, public water work and street light have consumed the most energy. Most electricity has been used in 2020-21.

Purpose of Consumption of Electricity:

Table No. 13

Use For Purpose	Consumption of Electricity (in lakh units)
Domestic purpose	21945.39003
Commercial purpose	13177.69104
Industry purpose	14599.98957
Public Water Work & Street Light	2812.55813
Others	3479.95388
Total Consumption	56015.58265

Source: Pune Municipal Corporation

The above table shows the reason for which PMC spends electricity in lakh units. Industrial purpose consumes the most electricity.

Financial Health of PMC 2014-2021

Table No. 14

Year	Municipal Revenue Amount in Crore	Municipal Expenditure Amount in Crore	Surplus/Deficit in Crore-
2020-21	4713.31	4801.44	-88.13
2019-20	4446.68	4461.51	-14.83
2018-19	4391.06	4551.44	-160.38
2017-18	4306.59	3902.84	403.75
2016-17	3728.48	4089.31	-360.83
2015-16	4037.33	3484.43	552.9
2014-15	3325.76	3195.42	130.34

Source: Pune Municipal Corporation

The above table shows the financial health of PMC during 2014-2021. 2019-20 and 2020-21 have got the highest revenue and the expenditure has also been the highest. PMC had the highest loss in 2016-17 and the highest profit in 2015-16.

Parking Facility in Pune

Table No.15

		14010 110.13		
Zone	Name of Parking	Parking Address	No. of 2- wheel er	No. of 4- wheel er

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			parki ng	parki ng
				mg .
	Shinde Tukaram (2-Wheeler)	Pune Stataion	1200	0
	Shinde Tukaram (4-Wheeler)	Pune Station	0	377
Zone	M. Gandhi	Bund Garden, Pune	134	29
No.1	Punya nagari, Vadgaon Sheri	Vadgaon Sheri, Pune	35	48
	Kharadi S.No. 72, Amenity Space	Kharadi, Pune	101	177
Total	a part		1470	631
	S.Nagar FP 576	Shivajinagar, Pune	57	44
	S.Nagar, F.C. Shirole Road	Shivajinagar, Pune	24	22
7	S.Nagar, Millenium Plaza	Shivajinagar, pune	60	40
Zone No.2	S.Nagar, FP660, J.M. Road	Jangali Maharaj Road,Shivajinagar, Pune	60	45
	Sambhaji garden Mech. J.M. Road	Jangali Maharaj Road,Shivajinagar, Pune	0	80
Total		, , ,	201	231
	P.L. Desh. Udyan	Sinhagad Road, Pune	183	90
Zone	Rajiv Gandi Udyan	Katraj, Pune	80	30
	Katraj PMT, Old Octroi Naka Katraj, Pune		50	12
No.3	Katraj Milk Dairy, PMPML	Katraj, Pune	50	5
	Dhanakavdi, Truck Terminal	Dhankwadi, Pune	0	69
Total			363	206
Zone No. 4	Iscon Temple	Kondhva Bk., Pune	0	172
	Minarva, Misal	Mandai, Pune	200	246
	Laxmi Road 709/ 710	709/710, Laxmi Road, Pune	65	4
	Hamalwada	Narayan peth, Pune	50	257
	Peshve Park	Sadashiv Peth,Pune	42	18
	Haribhau Sane	Narayan Peth, Pune	0	183
	Navloba Temple	Saras Baug, Pune	130	15
Zone	Aryan, Babu Genu	Mandai, Pune	100	300
No. 5	Alpana Theatre, Ganesh Peth	Ganesh Peth, Laxmi Road, Pune	25	8
	Shahu Udyan	Somwar peth, Pune	17	3
	Bhavani Peth, Nagzari Nala	Kasewadi, Bhavani Peth, Pune		20
	Bhaumaharaj Bol	Shukrawar Peth, Pune	30	0
	Dudhbhatti, Rasta Peth, Daruwala Bridge	Rasta Peth, Pune	181	42
<u> </u>	Saibaba Temple	Satara Road, Pune	73	24
Total			980	1120

Source: Pune Municipal Corporation

The above table shows the parking facility in PMC zone wise. Parking facility is available in all zones for two-wheeler and four-wheeler.

Zone wise recreational activities

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Table No. 16

	Auditorium	Swimming Pool	Theater	Sports_Complex
Zone No 1	3	4	10	-
Zone No 2	4	7	7	-
Zone No 3	-	7	2	-
Zone No 4	2	3	2	1
Zone No 5	3	3	8	3

Source: Source Pune Municipal Corporation

Showing zone wise recreation facilities in PMC. All zones have theatre and swimming pool. Zone no.4 and zone no.5 have sports complex. There are auditoriums in Zone no.1, Zone no.2, Zone no.4, Zone no.5.

Available Process Technology on Waste in PMC

Table No. 18

Type of Waste (organi c, inorga nic, wet, dry, mix)	Quant ity (tpd)	Process technology - (Composting / Incineration / Landfill / Recycling / Windrow Composting / Anaerobic Digestion / Production of Refused Driven Fuel / Biomethanation / Plasma Pyrolosis)	Plant location (address)	Plant capac ity (TPD	Waste to Energ y initiat ive (Y/N)
Wet	200	Composting	Hadapsar (M-1-C)	200	N
Wet	2	Composting	Aundh (M-2)	2	N
Wet	3	Composting	koregaon park (M-4)	3	N
Wet	8	Composting	Vaikunth (M-3)	8	N
Wet	3	Composting	kalyani nagar (M-5)	3	N
Wet	200	Biomethanation	Sus Road (Bio-CNG-1)	200	Y
Wet	5	Biomethanation	Aundh (B-8)	5	Y
Wet	5	Biomethanation	Railway Museum (B-17)	5	Y
Wet	10	Biomethanation	Peshwe Park -1 &2 (B- 22 &B-23)	10	Y
Wet	10	Biomethanation	katraj -3 & 4 (B-15, B-16)	10	Y
Wet	5	Biomethanation	Phule nagar (B-4)	5	Y
Wet	5	Biomethanation	Dhanori (B-3)	5	Y
Wet	5	Biomethanation	k.k. Market (B-20)	5	Y
Wet	10	Biomethanation	Taljai (B-18, B-19)	10	Y
Wet	10	Biomethanation	Wadgon (B-11, B-12)	10	Y
Wet	5	Biomethanation	Yerewada jail (B-2)	5	Y
Wet	5	Biomethanation	Wadgon sheri (B-1)	5	Y

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Wet	5	Biomethanation	Bavdhan (B-10)	5	Y
Wet	5	Biomethanation	Wanavadi (B-21)	5	Y
Wet	5	Biomethanation	Katraj (B-13)	5	Y
Wet	5	Biomethanation	Katraj (B-14)	5	Y
Wet	5	Biomethanation	Baner (B-9)	5	Y
Wet	3	Biomethanation	Ghole road (B-6)	3	Y
Wet	5	Biomethanation	Housing board (B-5)	5	Y
Dry	200	Production of Refused Driven Fuel	Rochem, Ramtekdi (RDF-1)	400	N
Dry	50	Recycling- Material Recovery Facility	Katraj (MRF-1)	50	N
Dry	175	Production of Refused Driven Fuel	Wadgaon (RDF-2)	150	N
Dry	75	Production of Refused Driven Fuel	Ramtekdi (RDF-4)	75	N
Dry	50	Recycling- Material Recovery Facility	Dhayri (MRF-3)	50	N
Dry	25	Recycling- Material Recovery Facility	Wadgaon sheri (MRF-4)	25	N
Dry	25	Recycling- Material Recovery Facility	Handewadi (MRF-2)	25	N
Dry	50	Production of Refused Driven Fuel	Keshav nagar (RDF-3)	50	N
Dry	50	Recycling- Material Recovery Facility	Sukhsagar nagar (MRF- 5)	50	N
Dry	4	Production of Refused Driven Fuel	Ghole road Ramp (F2P-2)	4	N
Dry	100	Production of Refused Driven Fuel	Ambegaon (RDF -5)	100	N
Dry	50	Production of Refused Driven Fuel	Keshav Nagar nepra (RDF - 6)	100	N
Dry	100	Production of Refused Driven Fuel	Lohgaon (RDF- 7)	100	N

Source: Pune Municipal Corporation

The above table gives information about the waste material and the plant that processes it. The quantity of waste material is the same as the plant capacity. Composition technology has 5 plants. There are 19 plants of Biomethanation technology while there are 8 plants of Production of Refused Driven Fuel. There are 6 plants of Recycling-Material Recovery Facility. Biomethanation technology leads to Waste to Energy initiative. Biomethanation technology and Composition technology are used on wet waste material while Production of Refused Driven Fuel and Recycling- Material Recovery processes are used on dry waste.

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DMC Zone	No. of Monument	No. of Building	No. of Street	No. of Open Space
1	11	7	1	-
2	24	25	-	3
3	9	5	-	-
4	4	7	-	2
5	96	25	2	1

Source: Pune Municipal Corporation

The above table shows the no. of heritage buildings in the zone of PMC. Most of the monuments and buildings are in zone no.5 which is the central part of the city. The least heritage buildings are in zone no.4.

Conclusions:

The city of Pune caters to the smallest to the largest needs. Therefore, the population of Pune has been increasing for the last four decades. Land prices have skyrocketed in the centre part of Pune city which is not affordable to the common man. Affordable housing and land became available to the common man in the villages bordering Pune city. Land prices here are lower than in the central part of Pune, they are affordable to all. Therefore, people who came to Pune for jobs, education were automatically attracted to these bordering Pune city's villages.

The population of these villages has been increasing over the last forty years. Therefore, in this paper we have seen that facilities have been provided in Pune city from time to time to make people's lives easier. As the population grew, so did the development of amenities and infrastructure.

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