



Suruhanjaya Perkhidmatan Air Negara

WATER AND SEWERAGE FACT BOOK | 2024

**PENINSULAR MALAYSIA &
F.T. LABUAN**



OVERVIEW

The Water and Sewerage Fact Book 2024 provides statistical data covering states in Peninsular Malaysia and the Federal Territory of Labuan, governed by the Water Services Industry Act 2006 (WSIA 2006). All reasonable efforts have been made to ensure the completeness and accuracy of the compiled data. Some historical data have been revised to reflect updated information submitted by the operators.

MEASUREMENTS & ABBREVIATIONS

%	Percentage
km	Kilometer
km ²	Square Kilometer
l/c/d	Litres Consumption Per Capita Per Day
m ³	Cubic Meter
m ³ /d	Cubic Meter Per Day
r	Revised
-	Not Available
n.a.	Not Applicable

MLD	Million Litres Per Day
NRW	Non-Revenue Water
PE	Population Equivalent
STP	Sewerage Treatment Plant
WTP	Water Treatment Plant
NPS	Network Pumping Station
CST	Communal Septic Tank
IST	Individual Septic Tank

WATER AND SEWERAGE STATISTICS

- Data is collected from State Water Supply entities, Indah Water Konsortium Sdn Bhd and Majaari Services Sdn Bhd (2017-2020)
- Selangor includes F.T. Kuala Lumpur and F.T. Putrajaya.
- Kedah includes Pulau Langkawi.
- Data excludes Sabah and Sarawak.
- Sewerage : Johor data includes from the following agencies:
 - Majlis Bandaraya Johor Bahru (MBJB)
 - Majlis Perbandaran Pasir Gudang (MPPG)
 - Lembaga Kemajuan Johor Tenggara (KEJORA)
- Sewerage : Terengganu includes data from Lembaga Kemajuan Terengganu Tengah (KETENGAH).

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PENINSULAR MALAYSIA & F.T. LABUAN

(SNAPSHOT & RATES)

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SEWERAGE RATES : IWK

SNAPSHOT:

PENINSULAR MALAYSIA & F.T. LABUAN

WATER SUPPLY			
 Raw Water Extraction Total 17,299 MLD	 River 80.2% 13,868 MLD	 Dam 17.5% 3,035 MLD	 Others 2.3% 396 MLD
 No of WTP 350	 Design Capacity 18,998 MLD		
 System Input Volume 16,167 MLD	 Reserved Margin 14.9%		
 Billed Authorised Consumption 10,626 MLD	 Non Revenue Water 5,541 MLD	34.3%	
 Water Consumption Total 10,614 MLD	 Domestic 59.1% 6,269 MLD	 Non-Domestic 40.9% 4,344 MLD	
 Population Served 97.0%	 Urban 97.0%	 Rural 97.0%	
 Domestic Consumption Per Capita 225 LCD			
 No. of Accounts Total 8,360,998	 Domestic 86.6% 7,240,636	 Non-Domestic 13.4% 1,120,362	
 Pipeline (Kilometers) 140,172	AC 28.0% 39,287 PE	MS 27.3% 38,206 uPVC	CI 0.5% 638 Others
	16.0% 22,391	17.8% 24,883	3.5% 4,851
 No. of Meters Total 8,110,345	0-7 Years 82.3% 6,678,675	>7 Years 17.7% 1,431,670	
 Water Interruption (Scheduled) 2,637	 Water Interruption (Unscheduled) 38,036		
 No. of Complaints Total 1,545,296	Pipe Breakage 43.3% 669,235	Water Quality 0.7% 10,799	Water Pressure 6.2% 95,688
	Water Interruption 17.3% 267,411	Billing & Meter 23.1% 357,643	Others 9.4% 144,520
 No. of Staff Total 16,668	Management 749	Executive 2,186	
	Non-Executive 12,223	Meter Reader 1,510	

POPULATION		
 No. of Population 27,798,600	 Urban 75.1%	 Rural 24.9%

SEWERAGE SECTOR		
Public Sewage Treatment Plant		
 Total 7,794 33,176,257 PE	Multipoint 7,738 23,775,266 PE	Regional 56 9,400,991 PE
Private Sewage Treatment Plant		
 5,043	5,132,866 PE	
Septic Tank		
 Total 1,377,076 7,635,290 PE	Communal 3,457 389,258 PE	Individual 1,373,619 7,246,032 PE
STP: Sewer pipes  22,564 Kilometers	CST: Sewer pipes  341 Kilometers	Network Pumping Station  1,542
Traditional System		
 1,135,758	5,678,790 PE	
No. of Accounts		
 Total 5,245,133	Domestic 87.1% 4,570,477	Commercial 9.5% 496,771
	Industrial 0.2% 10,253	Government Premises 0.1% 7,039
		Government Quarters 3.1% 160,593
No. of Complaints		
 Total 770,854	Billing 83.7% 645,204	Desludging 9.4% 72,797
	Others 1.2% 8,921	NPS 4.9% 37,885
		STP 0.8% 6,047
No. of Staff		
 Total 2,794	STP & Treatment 1,385	Operating & Planning 417
	Desludging 396	Network Services 294
		Others 302

LAST REVISION (WATER & SEWERAGE RATES)			
Water Rates		Sewerage Rates	
	Refer to page water rates by state		Refer to page sewerage rates by IWK

SEWERAGE SECTOR			
Public Sewage Treatment Plant Total 7,794 33,176,257 PE	Multipoint 7,738 23,775,266 PE	Regional 56 9,400,991 PE	
Private Sewage Treatment Plant 5,043 5,132,866 PE			
Septic Tank Total 1,377,076 7,635,290 PE	Communal 3,457 389,258 PE	Individual 1,373,619 7,246,032 PE	
STP: Sewer pipes 22,564 Kilometers	CST: Sewer pipes 341 Kilometers	Network Pumping Station 1,542	
Traditional System 1,135,758 5,678,790 PE			
 No. of Accounts Total 5,245,133	Domestic 87.1% 4,570,477	Commercial 9.5% 496,771	Industrial 0.2% 10,253
	Government Permits 0.1% 7,039	Government Quarters 3.1% 160,593	
No. of Complaints Total 770,854	Billing 83.7% 645,204	Desludging 9.4% 72,797	Others 1.2% 8,921
	NPS 4.9% 37,885	STP 0.8% 6,047	
No. of Staff Total 2,794	STP & Treatment 1,385	Operating & Planning 417	Desludging 396
	Network Services 294	Others 302	

LAST REVISION (WATER & SEWERAGE RATES)	
Water Rates Refer to page water rates by state	Sewerage Rates Refer to page sewerage rates by IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024

SNAPSHOT : JOHOR

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  2,022 MLD	58.3%  1,180 MLD	41.7%  842 MLD	-  n.a MLD

No of WTP	Design Capacity
 47	 2,375 MLD

System Input Volume	Reserved Margin
 2,001 MLD	 15.7%

Billed Authorised Consumption	Non Revenue Water
 1,519 MLD	 482 MLD 24.1%

Water Consumption	Domestic	Non-Domestic
Total  1,511 MLD	59.6%  901 MLD	40.4%  610 MLD

Population Served	Urban	Rural
 99.9%	 100.0%	 99.8%

Domestic Consumption Per Capita
 215 LCD

No. of Accounts	Domestic	Non-Domestic
Total  1,312,536	85.1%  1,117,032	14.9%  195,504

Pipeline (Kilometers)	AC	MS	CI	DI
 24,188	26.2% 6,348 PE	22.5% 5,436 uPVC	0.5% 128 Others	8.2% 1,977
	3.7% 891	36.1% 8,740	2.8% 667	

No. of Meters	0-7 Years	>7 Years
Total  1,312,536	90.2%  1,183,698	9.8%  128,838

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 181	 5,721

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  179,136	47.0% 84,143	1.4% 2,569	9.1% 16,384
	Water Interruption 28.8%	Billing & Meter 11.9%	Others 1.8%
	51,502	21,313	3,225

No. of Staff	Management	Executive
Total  2,427	165 Non-Executive 1,797	215 Meter Reader 250

POPULATION

No. of Population	Urban	Rural
 4,186,300	 79.6%	 20.4%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
Total  1,092 5,460,293 PE	1,082 4,830,547 PE	10 629,746 PE

Private Sewage Treatment Plant
 575 1,301,153 PE

Septic Tank	Communal	Individual
Total  273,016 1,429,622 PE	528 46,290 PE	272,488 1,383,332 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 3,740 Kilometers	 49 Kilometers	 310

Traditional System
 110,354 551,770 PE

No. of Accounts	Domestic	Commercial
Total  697,159	89.2% 622,053	8.6% 59,662
	Industrial 0.6% 4,313	Government Permits 0.1% 690
		Government Quarters 1.5% 10,441

No. of Complaints	Billing	Desludging
Total  111,504	86.4% 96,324	8.4% 9,389
	Others 1.3% 1,440	NPS 3.4% 3,739
		STP 0.5% 612

No. of Staff	STP & Treatment	Operating & Planning
Total  240	106 Desludging 42	43 Network Services 28
		Others 21

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates

 **1 February 2024**

Sewerage Rates

 **Refer to page sewerage rates by IWK**

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

JOHOR

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 1.05/m³

Band 2 > 20 – 35m³ @ RM 2.35/m³

Band 3 > 35m³ @ RM 3.15/m³

Minimum Charge RM 10.50

Domestic (Bulk Meter)

Consumption RM 2.55/m³

Minimum Charge RM 25.50

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 3.15/m³

Band 2 > 35m³ @ RM 3.55/m³

Minimum Charge RM 31.50/m³

House Of Worship And Welfare Institution

Consumption RM 1.65/m³

Minimum Charge RM 16.50

Shipping

Consumption RM 7.05/m³

Minimum Charge RM 70.50

Current Rate Effective From : 1 February 2024

SNAPSHOT : KEDAH

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  1,745 MLD	98.6%  1,720 MLD	1.4%  25 MLD	-  n.a MLD

No of WTP	Design Capacity
 35	 1,459 MLD

System Input Volume	Reserved Margin
 1,600 MLD	 0.0%

Billed Authorised Consumption	Non Revenue Water
 783 MLD	 817 MLD 51.1%

Water Consumption	Domestic	Non-Domestic
Total  783 MLD	63.8%  499 MLD	36.2%  283 MLD

Population Served	Urban	Rural
 98.3%	 100.0%	 96.5%

Domestic Consumption Per Capita
 225 LCD

No. of Accounts	Domestic	Non-Domestic
Total  662,614	88.3%  585,218	11.7%  77,396

Pipeline (Kilometers)	AC	MS	CI	DI
 13,652	44.7% 6,107 PE	19.4% 2,653 uPVC	0.7% 90 Others	6.4% 870
	21.9% 2,994	6.8% 922	0.1% 16	

No. of Meters	0-7 Years	>7 Years
Total  481,622	71.7%  345,313	28.3%  136,309

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 37	 355

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  106,219	41.5% 44,133 Water Interruption	0.4% 390 Billing & Meter	4.6% 4,935 Others
	47.9% 50,915	2.8% 3,026	2.7% 2,820

No. of Staff	Management	Executive
Total  1,423	41 Non-Executive 1,097	135 Meter Reader 150

POPULATION

No. of Population	Urban	Rural
 2,217,500	 61.1%	 38.9%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
Total  696 1,304,271 PE	692 1,239,503 PE	4 64,768 PE

Private Sewage Treatment Plant
 399 241,680 PE

Septic Tank	Communal	Individual
Total  159,124 855,449 PE	410 44,172 PE	158,714 811,277 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 1,839 Kilometers	 39 Kilometers	 73

Traditional System
 203,106 1,015,530 PE

No. of Accounts	Domestic	Commercial
Total  209,362	90.6% 189,782	7.2% 15,141
	Industrial 0.1% 176	Government Permits 0.1% 313
		Government Quarters 1.9% 3,950

No. of Complaints	Billing	Desludging
Total  33,557	70.7% 23,717	22.3% 7,483
	Others 1.9% 625	NPS 4.1% 1,374
		STP 1.1% 358

No. of Staff	STP & Treatment	Operating & Planning
Total  217	94 49	41 24
	Desludging 24	Others 9

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates	Sewerage Rates
 1 February 2024	 Refer to page sewerage rates by IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

KEDAH

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.75/m³

Band 2 > 20 – 35m³ @ RM 1.30/m³

Band 3 > 35m³ @ RM 1.75/m³

Minimum Charge RM 7.50

Domestic (Bulk Meter)

Consumption RM 1.60/m³

Minimum Charge RM 16.00

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 1.75/m³

Band 2 > 35m³ @ RM 2.15/m³

Minimum Charge RM 17.50/m³

House Of Worship And Welfare Institution

Consumption RM 1.00/m³

Minimum Charge RM 10.00

Shipping

Consumption RM 7.10/m³

Minimum Charge RM 71.00

Current Rate Effective From : 1 February 2024

SNAPSHOT : KELANTAN

WATER SUPPLY

Raw Water Extraction Total	River	Dam	Others
 558 MLD	 56.2% 313 MLD	 - n.a MLD	 43.8% 244 MLD

No of WTP	Design Capacity
 43	 550 MLD

System Input Volume	Reserved Margin
 526 MLD	 4.4%

Billed Authorised Consumption	Non Revenue Water
 244 MLD	 282 MLD 53.7%

Water Consumption Total	Domestic	Non-Domestic
 244 MLD	 67.3% 164 MLD	 32.7% 80 MLD

Population Served	Urban	Rural
 73.5%	 65.2%	 81.9%

Domestic Consumption Per Capita
 87 LCD

No. of Accounts Total	Domestic	Non-Domestic
 272,594	 86.2% 235,036	 13.8% 37,558

Pipeline (Kilometers)	AC	MS	CI	DI
 7,357	54.4% 4,005 PE	7.6% 558 uPVC	0.3% 25 Others	0.9% 67 Others
	28.7% 2,111	5.7% 423	2.3% 167	

No. of Meters Total	0-7 Years	>7 Years
272,594	 76.7% 208,958	 23.3% 63,636

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 125	 537

No. of Complaints Total	Pipe Breakage	Water Quality	Water Pressure
 64,099	66.6% 42,719	1.7% 1,069	1.4% 923
	Water Interruption 17.9% 11,492	Billing & Meter 8.2% 5,242	Others 4.1% 2,654

No. of Staff Total	Management	Executive
 775	44 Non-Executive 595	71 Meter Reader 65

POPULATION

No. of Population	Urban	Rural
 1,888,500	 42.4%	 57.6%

SEWERAGE SECTOR

Public Sewage Treatment Plant			
	Total	Multipoint	Regional
	48	48	0
	93,858 PE	93,858 PE	- PE

Private Sewage Treatment Plant	Total	PE
 310	433,437	PE

Septic Tank	Communal	Individual
 48,253 404,730 PE	- - PE	48,253 404,730 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 105 Kilometers	 - Kilometers	 16

Traditional System	Total	PE
 208,938	1,044,690	PE

No. of Accounts Total	Domestic	Commercial
 12,918	86.2% 11,129	11.4% 1,472
	Industrial 0.0% 1	Government Permits 0.1% 7
		Government Quarters 2.4% 309

No. of Complaints Total	Billing	Desludging
 5,373	19.0% 1,020	73.6% 3,954
	Others 5.2% 280	NPS 2.2% 119
		STP 0.0% -

No. of Staff Total	STP & Treatment	Operating & Planning
 55	11 Desludging 22	11 Network Services 3
		Others 8

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates



**1 February
2024**

Sewerage Rates



**Refer to page
sewerage rates by
IWK**

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

KELANTAN

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.68/m³

Band 2 > 20 – 35m³ @ RM 1.26/m³

Band 3 > 35m³ @ RM 1.68/m³

Minimum Charge RM 6.80

Domestic (Bulk Meter)

Consumption RM 1.73/m³

Minimum Charge RM 17.30

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 2.03/m³

Band 2 > 35m³ @ RM 2.28/m³

Minimum Charge RM 20.30/m³

House Of Worship And Welfare Institution

Consumption RM 0.78/m³

Minimum Charge RM 7.80

Shipping

Consumption RM 7.08/m³

Minimum Charge RM 70.80

Current Rate Effective From : 1 February 2024

SNAPSHOT: F.T. LABUAN

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  87 MLD	89.3%  78 MLD	10.7%  9 MLD	-  n.a MLD

No of WTP	Design Capacity
 6	 104 MLD

System Input Volume	Reserved Margin
 82 MLD	 21.2%

Billed Authorised Consumption	Non Revenue Water
 51 MLD	 31 MLD 38.3%

Water Consumption	Domestic	Non-Domestic
Total  51 MLD	37.6%  19 MLD	62.4%  32 MLD

Population Served	Urban	Rural
 100.0%	 100.0%	 100.0

Domestic Consumption Per Capita
 189 LCD

No. of Accounts	Domestic	Non-Domestic
Total  20,696	84.8%  17,560	15.2%  3,136

Pipeline (Kilometers)	AC	MS	CI	DI
 608	20.5% 124 PE	24.2% 147 uPVC	0.2% 1 Others	12.2% 74 Others
	38.7% 235	n.a n.a	4.2% 25	

No. of Meters	0-7 Years	>7 Years
Total  21,799	79.3%  17,297	20.7%  4,502

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 6	 432

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  9,491	27.7% 2,628 Water Interruption	0.8% 75 Billing & Meter	3.1% 293 Others
	42.3% 4,014	15.8% 1,501	10.3% 980

No. of Staff	Management	Executive
Total  128	1 Non-Executive 117	4 Meter Reader 6

POPULATION

No. of Population	Urban	Rural
 100,800	 78.0%	 22.0%

SEWERAGE SECTOR

Public Sewage Treatment Plant			
	Total	Multipoint	Regional
	34	34	0
	68,851 PE	68,851 PE	- PE

Private Sewage Treatment Plant	Total	PE
 59	60,069	PE

Septic Tank			Communal			Individual		
	Total							
	8,639		5			8,634		
	44,686	PE	790	PE		43,896	PE	

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 47 Kilometers	 0 Kilometers	 9

Traditional System	Total	PE
 -	-	PE

No. of Accounts	Domestic	Commercial
Total  7,675	67.1% 5,147 Industrial 0.6% 46	16.2% 1,240 Government Permits 1.1% 87 Government Quarters 15.0% 1,155

No. of Complaints	Billing	Desludging
Total  759	25.2% 191 Others 1.8% 14	68.1% 517 NPS 4.7% 36 STP 0.1% 1

No. of Staff	STP & Treatment	Operating & Planning
Total  28	12 Desludging 6	7 Network Services 2 Others 1

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates	Sewerage Rates
 1 February 2024	 Refer to page sewerage rates by IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

F.T. LABUAN

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.92/m³

Band 2 > 20 – 35m³ @ RM 1.52/m³

Band 3 > 35m³ @ RM 2.12/m³

Minimum Charge RM 9.20

Domestic (Bulk Meter)

Consumption RM 2.12/m³

Minimum Charge RM 21.20

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 2.22/m³

Band 2 > 35m³ @ RM 2.52/m³

Minimum Charge RM 22.20/m³

House Of Worship And Welfare Institution

Consumption RM 0.92/m³

Minimum Charge RM 9.20

Shipping

Consumption RM 7.02/m³

Minimum Charge RM 70.20

Current Rate Effective From : 1 February 2024

SNAPSHOT: MELAKA

WATER SUPPLY

Raw Water Extraction Total	River	Dam	Others
 775 MLD	 47.1% 365 MLD	 33.8% 262 MLD	 19.1% 148 MLD

No of WTP	Design Capacity
 12	 736 MLD

System Input Volume	Reserved Margin
 698 MLD	 5.2%

Billed Authorised Consumption	Non Revenue Water
 458 MLD	 240 MLD 34.4%

Water Consumption Total	Domestic	Non-Domestic
 457 MLD	 53.0% 242 MLD	 47.0% 215 MLD

Population Served	Urban	Rural
 100.0%	 100.0%	 100.0

Domestic Consumption Per Capita
 231 LCD

No. of Accounts Total	Domestic	Non-Domestic
 355,051	 86.5% 307,163	 13.5% 47,888

Pipeline (Kilometers)	AC	MS	CI	DI
 5,872	19.9% 1,171 PE	32.6% 1,914 uPVC	0.3% 16 Others	1.6% 91
	15.5% 907	18.3% 1,077	11.9% 696	

No. of Meters Total	0-7 Years	>7 Years
 352,799	 91.8% 323,909	 8.2% 28,890

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 34	 56

No. of Complaints Total	Pipe Breakage	Water Quality	Water Pressure
 60,994	47.8% 29,158 Water Interruption	0.6% 373 Billing & Meter	11.7% 7,164 Others
	14.8% 9,026	5.2% 3,187	19.8% 12,086

No. of Staff Total	Management	Executive
 743	26 Non-Executive 601	65 Meter Reader 51

POPULATION

No. of Population	Urban	Rural
 1,047,100	 91.8%	 8.2%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
 610 1,259,945 PE	607 1,040,256 PE	3 219,689 PE

Private Sewage Treatment Plant
 505 314,104 PE

Septic Tank	Communal	Individual
 59,826 336,451 PE	295 29,825 PE	59,531 306,626 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 1,205 Kilometers	 26 Kilometers	 36

Traditional System
 63,035 315,175 PE

No. of Accounts Total	Domestic	Commercial
 199,490	87.1% 173,783	11.4% 22,690
	Industrial 0.2% 311	Government Permits 0.2% 400
		Government Quarters 1.2% 2,306

No. of Complaints Total	Billing	Desludging
 32,298	79.9% 25,807	12.1% 3,922
	Others 1.6% 507	NPS 5.1% 1,645
		STP 1.3% 417

No. of Staff Total	STP & Treatment	Operating & Planning
 177	76 Desludging 21	22 Network Services 15 Others 43

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates	Sewerage Rates
 1 February 2024	 Refer to page sewerage rates by IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

MELAKA

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.87/m³

Band 2 > 20 – 35m³ @ RM 1.52/m³

Band 3 > 35m³ @ RM 2.02/m³

Minimum Charge RM 8.70

Domestic (Bulk Meter)

Consumption RM 2.07/m³

Minimum Charge RM 25.00

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 2.47/m³

Band 2 > 35m³ @ RM 2.52/m³

Minimum Charge RM 25.00/m³

House Of Worship And Welfare Institution

Consumption RM 0.97/m³

Minimum Charge RM 9.70

Shipping

Consumption RM 7.07/m³

Minimum Charge RM 70.70

Current Rate Effective From : 1 February 2024

SNAPSHOT: NEGERI SEMBILAN

WATER SUPPLY

Raw Water Extraction Total  931 MLD	River  48.5% 451 MLD	Dam  51.5% 480 MLD	Others  - n.a MLD	
No of WTP  22	Design Capacity  1,050 MLD			
System Input Volume  880 MLD	Reserved Margin  16.2%			
Billed Authorised Consumption  560 MLD	Non Revenue Water  320 MLD 36.4%			
Water Consumption Total  560 MLD	Domestic  57.8% 323 MLD	Non-Domestic  42.2% 237 MLD		
Population Served  99.9%	Urban  100.0%	Rural  99.8%		
Domestic Consumption Per Capita  260 LCD				
No. of Accounts Total  490,193	Domestic  87.0% 426,399	Non-Domestic  13.0% 63,794		
Pipeline (Kilometers)  9,555	AC 42.9% 4,096 PE 9.5% 911	MS 39.9% 3,816 uPVC 3.4% 328	CI 0.2% 23 Others 1.6% 155	DI 2.4% 225
No. of Meters Total 453,457	0-7 Years  73.1% 331,289	>7 Years  26.9% 122,168		
Water Interruption (Scheduled)  19	Water Interruption (Unscheduled)  5,211			
No. of Complaints Total  59,044	Pipe Breakage 64.6% 38,144 Water Interruption 17.3% 10,192	Water Quality 0.7% 420 Billing & Meter 6.1% 3,576	Water Pressure 8.8% 5,211 Others 2.5% 1,501	
No. of Staff Total  1,038	Management 19 Non-Executive 835	Executive 101 Meter Reader 83		

POPULATION

No. of Population  1,240,100	Urban  70.5%	Rural  29.5%
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SEWERAGE SECTOR

Public Sewage Treatment Plant			
	Total 533 1,779,493 PE	Multipoint 529 1,321,672 PE	Regional 4 457,821 PE
Private Sewage Treatment Plant			
	275	172,356	PE
Septic Tank			
	Total 77,583 436,024 PE	Communal 452 41,705 PE	Individual 77,131 394,319 PE
STP: Sewer pipes		CST: Sewer pipes	Network Pumping Station
	2,116 Kilometers		37 Kilometers
			127
Traditional System			
	58,037	290,185	PE
No. of Accounts		Domestic	Commercial
	Total 282,491	89.6% 253,197	8.1% 22,903
		Industrial 0.1% 200	Government Permisses 0.2% 450
			Government Quarters 2.0% 5,741
No. of Complaints		Billing	Desludging
	Total 41,136	81.8% 33,660	12.2% 5,017
		Others 0.5% 205	NPS 5.0% 2,048
			STP 0.5% 206
No. of Staff		STP & Treatment	Operating & Planning
	Total 177	104	24
		Desludging 23	Network Services 18
			Others 8

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates



1 February
2024

Sewerage Rates



Refer to page
sewerage rates by
IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

NEGERI SEMBILAN

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.71/m³

Band 2 > 20 – 35m³ @ RM 1.09/m³

Band 3 > 35m³ @ RM 1.64/m³

Minimum Charge RM 7.10

Domestic (Bulk Meter)

Consumption RM 1.49/m³

Minimum Charge RM 14.90

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 1.94/m³

Band 2 > 35m³ @ RM 2.79/m³

Minimum Charge RM 19.40/m³

House Of Worship And Welfare Institution

Consumption RM 0.59/m³

Minimum Charge RM 5.90

Shipping

Consumption RM 7.09/m³

Minimum Charge RM 70.90

Current Rate Effective From : 1 February 2024

SNAPSHOT: PULAU PINANG

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  1,340 MLD	91.5%  1,226 MLD	8.5%  114 MLD	-  n.a MLD

No of WTP	Design Capacity
 9	 1,723 MLD

System Input Volume	Reserved Margin
 1,208 MLD	 29.9%

Billed Authorised Consumption	Non Revenue Water
 870 MLD	 338 MLD 28.0%

Water Consumption	Domestic	Non-Domestic
Total  870 MLD	56.9%  495 MLD	43.1%  375 MLD

Population Served	Urban	Rural
 99.9%	 100.0%	 99.8%

Domestic Consumption Per Capita
 275 LCD

No. of Accounts	Domestic	Non-Domestic
Total  705,528	86.0%  606,719	14.0%  98,809

Pipeline (Kilometers)	AC	MS	CI	DI
 4,801	24.1% 1,159 PE	25.7% 1,234 uPVC	2.1% 100 Others	15.0% 719
	31.2% 1,499	1.7% 81	0.2% 9	

No. of Meters	0-7 Years	>7 Years
Total  704,121	71.5%  503,742	28.5%  200,379

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 38	 8,914

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  143,207	28.7% 41,161	0.4% 622	4.1% 5,941
	Water Interruption 6.0%	Billing & Meter 12.9%	Others 47.8%
	8,630	18,415	68,438

No. of Staff	Management	Executive
Total  1,508	15 Non-Executive 1,293	112 Meter Reader 88

POPULATION

No. of Population	Urban	Rural
 1,800,400	 91.7%	 8.3%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
Total  623 1,657,966 PE	623 1,657,966 PE	0 -

Private Sewage Treatment Plant
 252 200,122 PE

Septic Tank	Communal	Individual
Total  15,049 95,273 PE	564 14,243 PE	14,485 81,030 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 2,193 Kilometers	 20 Kilometers	 77

Traditional System
 65,059 325,295 PE

No. of Accounts	Domestic	Commercial
Total  552,093	89.1% 491,722	9.0% 49,835
	Industrial 0.2% 1,282	Government Permits 0.2% 900
		Government Quarters 1.5% 8,354

No. of Complaints	Billing	Desludging
Total  69,052	83.3% 57,544	7.4% 5,136
	Others 2.2% 1,513	NPS 6.2% 4,264
		STP 0.9% 595

No. of Staff	STP & Treatment	Operating & Planning
Total  306	148	46
	Desludging 25	Network Services 37
		Others 50

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates

 **1 February 2024**

Sewerage Rates

 **Refer to page sewerage rates by IWK**

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

PULAU PINANG

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.62/m³

Band 2 > 20 – 35m³ @ RM 1.17/m³

Band 3 > 35m³ @ RM 2.07/m³

Minimum Charge RM 6.20

Domestic (Bulk Meter)

Consumption RM 1.73

Minimum Charge RM 17.30

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 1.57/m³

Band 2 > 35m³ @ RM 2.17/m³

Minimum Charge RM 15.70/m³

House Of Worship And Welfare Institution

Consumption RM 0.67/m³

Minimum Charge RM 6.70

Shipping

Consumption RM 7.07/m³

Minimum Charge RM 70.70

Current Rate Effective From : 1 February 2024

SNAPSHOT: PAHANG

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  1,606 MLD	97.2%  1,560 MLD	2.7%  44 MLD	0.1%  2 MLD

No of WTP	Design Capacity
 76	 1,624 MLD

System Input Volume	Reserved Margin
 1,314 MLD	 19.1%

Billed Authorised Consumption	Non Revenue Water
 676 MLD	 639 MLD 48.6%

Water Consumption	Domestic	Non-Domestic
Total  672 MLD	56.3%  378 MLD	43.7%  293 MLD

Population Served	Urban	Rural
 98.0%	 100.0%	 96.0%

Domestic Consumption Per Capita
 227 LCD

No. of Accounts	Domestic	Non-Domestic
Total  481,670	86.3%  415,872	13.7%  65,798

Pipeline (Kilometers)	AC	MS	CI	DI
 15,432	23.4% 3,618 PE	26.4% 4,071 uPVC	0.0% 3 Others	1.8% 272
	33.2% 5,117	6.0% 927	9.2% 1,423	

No. of Meters	0-7 Years	>7 Years
Total  481,622	 71.7% 345,313	 28.3% 136,309

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 186	 3,959

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  53,161	70.7% 37,567 Water Interruption	0.7% 367 Billing & Meter	8.1% 4,329 Others
	5.7% 3,015	12.8% 6,783	2.1% 1,100

No. of Staff	Management	Executive
Total  1,722	72 Non-Executive 1,432	56 Meter Reader 162

POPULATION

No. of Population	Urban	Rural
 1,668,200	 53.2%	 46.8%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
Total  682 940,327 PE	679 769,694 PE	3 170,633 PE

Private Sewage Treatment Plant
 602 642,660 PE

Septic Tank	Communal	Individual
Total  141,750 756,832 PE	16 2,665 PE	141,734 754,167 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 949 Kilometers	 9 Kilometers	 37

Traditional System
 86,182 430,910 PE

No. of Accounts	Domestic	Commercial
Total  134,793	89.9% 121,182	7.9% 10,642
	Industrial 0.0% 21	Government Permits 0.2% 328
		Government Quarters 1.9% 2,620

No. of Complaints	Billing	Desludging
Total  21,162	67.1% 14,208	27.2% 5,755
	Others 0.6% 132	NPS 3.7% 778
		STP 1.4% 289

No. of Staff	STP & Treatment	Operating & Planning
Total  145	75 Desludging 31	19 Network Services 13
		Others 7

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates	Sewerage Rates
 1 February 2024	 Refer to page sewerage rates by IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

PAHANG

Domestic Supply

Domestic (Individual)

Band 1 0 – 20 m³ @ RM 0.78/m³

Band 2 20 – 35m³ @ RM 1.38/m³

Band 3 > 35m³ @ RM 1.78/m³

Minimum Charge RM 7.80

Domestic (Bulk Meter)

Consumption RM 1.68

Minimum Charge RM 16.80

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 1.88/m³

Band 2 > 35m³ @ RM 2.18/m³

Minimum Charge RM 30.00/m³

House Of Worship And Welfare Institution

Consumption RM 0.78/m³

Minimum Charge RM 7.80

Shipping

Consumption RM 7.08/m³

Minimum Charge RM 70.80

Current Rate Effective From : 1 February 2024

SNAPSHOT : PERAK

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  1,574 MLD	81.1%  1,277 MLD	18.9%  297 MLD	-  n.a MLD

No of WTP	Design Capacity
 46	 1,977 MLD

System Input Volume	Reserved Margin
 1,470 MLD	 25.7%

Billed Authorised Consumption	Non Revenue Water
 1,000 MLD	 469 MLD 31.9%

Water Consumption	Domestic	Non-Domestic
Total  999 MLD	60.1%  601 MLD	39.9%  398 MLD

Population Served	Urban	Rural
 99.6%	 100.0%	 99.2%

Domestic Consumption Per Capita
 234 LCD

No. of Accounts	Domestic	Non-Domestic
Total  885,490	86.0%  761,296	14.0%  124,194

Pipeline (Kilometers)	AC	MS	CI	DI
 16,913	30.3% 5,122 PE	11.1% 1,883 uPVC	1.2% 195 Others	2.1% 348
	17.0% 2,874	32.9% 5,564	5.5% 929	

No. of Meters	0-7 Years	>7 Years
Total  885,490	 79.0% 699,537	 21.0% 185,953

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 10	 264

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  56,766	66.7% 37,841	1.0% 594	8.8% 4,968
	Water Interruption 18.8% 10,658	Billing & Meter 4.8% 2,705	Others 0.0% -

No. of Staff	Management	Executive
Total  1,070	44 Non-Executive 652	197 Meter Reader 177

POPULATION

No. of Population	Urban	Rural
 2,569,600	 72.1%	 27.9%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
Total  1,207 2,205,899 PE	1,206 2,183,975 PE	1 21,924 PE

Private Sewage Treatment Plant
 566 292,668 PE

Septic Tank	Communal	Individual
Total  223,869 1,155,806 PE	81 15,411 PE	223,788 1,140,395 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 2,742 Kilometers	 95 Kilometers	 121

Traditional System
 125,811 629,055 PE

No. of Accounts	Domestic	Commercial
Total  406,394	90.9% 369,354	7.9% 32,105
	Industrial 0.0% 112	Government Permits 0.1% 287
		Government Quarters 1.1% 4,536

No. of Complaints	Billing	Desludging
Total  63,556	70.4% 44,764	19.9% 12,641
	Others 1.4% 880	NPS 6.8% 4,326
		STP 1.5% 945

No. of Staff	STP & Treatment	Operating & Planning
Total  309	128 Desludging 64	57 Network Services 28
		Others 32

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates	Sewerage Rates
 1 February 2024	 Refer to page sewerage rates by IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES PERAK

Domestic Supply

Domestic (Individual)

Band 1 0 – 20 m³ @ RM 0.75/m³

Band 2 20 – 35 m³ @ RM 1.08/m³

Band 3 > 35 m³ @ RM 1.35/m³

Minimum Charge RM 7.50

Domestic (Bulk Meter)

Consumption RM 1.08/m³

Minimum Charge RM 10.80/m³

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 1.50/m³

Band 2 > 35m³ @ RM 1.70/m³

Minimum Charge RM 15.00/m³

House Of Worship And Welfare Institution

Consumption RM 0.45/m³

Minimum Charge RM 4.50

Shipping

Consumption RM 7.05/m³

Minimum Charge RM 70.50

Current Rate Effective From : 1 February 2024

SNAPSHOT: PERLIS

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
 Total 305 MLD	 65.0% 198 MLD	 34.5% 105 MLD	 0.5% 1 MLD

No of WTP	Design Capacity
 4	 279 MLD

System Input Volume	Reserved Margin
 265 MLD	 5.0%

Billed Authorised Consumption	Non Revenue Water
 102 MLD	 163 MLD 61.5%

Water Consumption	Domestic	Non-Domestic
 Total 100 MLD	 64.2% 64 MLD	 35.8% 36 MLD

Population Served	Urban	Rural
 99.5%	 100.0%	 99.0%

Domestic Consumption Per Capita
 213 LCD

No. of Accounts	Domestic	Non-Domestic
 Total 81,222	 86.2% 70,043	 13.8% 11,179

Pipeline (Kilometers)	AC	MS	CI	DI
 2,014	37.0% 745 PE	20.7% 417 uPVC	0.0% 1 Others	0.7% 15
	41.5% 835	0.0% 1	0.1% 1	

No. of Meters	0-7 Years	>7 Years
 Total 81,670	 60.7% 49,586	 39.3% 32,084

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 44	 33

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
 Total 17,296	94.7% 16,379 Water Interruption	0.3% 52	1.8% 316
	2.9% 495	0.2% 35	0.1% 19

No. of Staff	Management	Executive
 Total 202	7 Non-Executive 137	41 Meter Reader 17

POPULATION

No. of Population	Urban	Rural
 296,800	 51.4%	 48.6%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
 Total 69 1,805,779 PE	63 60,745 PE	6 1,745,034 PE

Private Sewage Treatment Plant
 73 47,689 PE

Septic Tank	Communal	Individual
 Total 20,226 197,858 PE	175 95,143 PE	20,051 102,715 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 191 Kilometers	 1 Kilometers	 19

Traditional System
 33,317 166,585 PE

No. of Accounts	Domestic	Commercial
 Total 11,066	80.3% 8,881	10.2% 1,130
	Industrial 0.0% 1	Government Permits 0.5% 60
		Government Quarters 9.0% 994

No. of Complaints	Billing	Desludging
 Total 2,583	47.9% 1,236	48.4% 1,249
	Others 1.7% 44	NPS 1.5% 39
		STP 0.6% 15

No. of Staff	STP & Treatment	Operating & Planning
 Total 19	8 Desludging 9	2 Network Services -
		Others -

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates	Sewerage Rates
 1 February 2024	 Refer to page sewerage rates by IWK

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

PERLIS

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.72/m³

Band 2 >20m³ – 35m³ @ RM 1.12/m³

Band 3 > 35m³ @ RM 1.52/m³

Minimum Charge RM 7.20

Domestic (Bulk Meter)

Consumption RM 1.32/m³

Minimum Charge RM 13.20/m³

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 1.52/m³

Band 2 > 35m³ @ RM 1.72/m³

Minimum Charge RM 15.20

House Of Worship And Welfare Institution

Consumption RM 0.72/m³

Minimum Charge RM 7.20

Shipping

Consumption RM 7.02/m³

Minimum Charge RM 70.20

Current Rate Effective From : 1 February 2024

SNAPSHOT : SELANGOR

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  5,524 MLD	89.1%  4,924 MLD	10.9%  600 MLD	-  n.a MLD

No of WTP	Design Capacity
 34	 6,035 MLD

System Input Volume	Reserved Margin
 5,308 MLD	 12.1%

Billed Authorised Consumption	Non Revenue Water
 3,877 MLD	 1,431 27.0% MLD

Water Consumption	Domestic	Non-Domestic
Total  3,879 MLD	59.0%  2,288 MLD	41.0%  1,591 MLD

Population Served	Urban	Rural
 99.8%	 100.0%	 99.5%

Domestic Consumption Per Capita
 240 LCD

No. of Accounts	Domestic	Non-Domestic
Total  2,743,079	87.8%  2,408,040	12.2%  335,039

Pipeline (Kilometers)	AC	MS	CI	DI
 31,250	17.6% 5,494 PE	45.6% 14,237 uPVC	0.2% 52 Others	13.6% 4,256
	10.8% 3,384	11.9% 3,718	0.4% 110	

No. of Meters	0-7 Years	>7 Years
Total  2,743,079	91.6%  2,512,678	8.4%  230,401

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 1,954	 10,312

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  749,225	35.4% 265,100	0.5% 3,891	5.1% 38,407
	Water Interruption 14.3% 107,351	Billing & Meter 38.0% 284,527	Others 6.7% 49,949

No. of Staff	Management	Executive
Total  5,066	279 Non-Executive 3,276	1,149 Meter Reader 362

POPULATION

No. of Population	Urban	Rural
 9,551,200	 95.8%	 4.2%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
Total  1,992 16,360,984 PE	1,967 10,269,608 PE	25 6,091,376 PE

Private Sewage Treatment Plant
 1,067 1,227,447 PE

Septic Tank	Communal	Individual
Total  245,249 1,361,277 PE	786 83,051 PE	244,463 1,278,226 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 7,137 Kilometers	 49 Kilometers	 700

Traditional System
 67,006 335,030 PE

No. of Accounts	Domestic	Commercial
Total  2,701,141	85.1% 2,299,104	10.3% 277,700
	Industrial 0.1% 3,778	Government Permisses 0.1% 3,287
		Government Quarters 4.3% 117,272

No. of Complaints	Billing	Desludging
Total  379,301	90.3% 342,590	3.2% 12,018
	Others 0.7% 2,656	NPS 5.1% 19,456
		STP 0.7% 2,581

No. of Staff	STP & Treatment	Operating & Planning
Total  1,007	584	127
	Desludging 73	Network Services 120
		Others 103

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates

 **1 February 2024**

Sewerage Rates

 **Refer to page sewerage rates by IWK**

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

SELANGOR

Domestic Supply

Domestic (Individual)		Domestic (Bulk Meter) (High Rise Residential Building)		Domestic (Bulk Meter) (Estate Quarters And Government Quarters)	
Band 1	0 – 20m ³ @ RM 0.65/m ³	Consumption	RM 1.68/m ³	Consumption	RM 1.68/m ³
Band 2	> 20 – 35m ³ @ RM 1.32/m ³	Minimum Charge	RM 173.00	Minimum Charge	RM 16.80
Band 3	> 35m ³ @ RM 2.63/m ³	Domestic (Bulk Meter) (Low-cost High-rise Residential Building)			
Minimum Charge	RM 6.50				
		Band 5	RM 0.98/m ³		
		Band 5	RM 35.00		

Non-Domestic Supply

Non-Domestic	
Band 1	0 – 35m ³ @ RM 2.70/m ³
Band 2	> 35m ³ @ RM 2.94/m ³
Minimum Charge	RM 36.00/m ³

House Of Worship And Welfare Institution		Shipping	
Consumption	RM 0.66/m ³	Consumption	RM 7.08/m ³
Minimum Charge	RM 6.60	Minimum Charge	RM 70.80

Current Rate Effective From : 1 February 2024

SNAPSHOT : TERENGGANU

WATER SUPPLY

Raw Water Extraction	River	Dam	Others
Total  833 MLD	69.0%  575 MLD	31.0%  258 MLD	-  n.a MLD

No of WTP	Design Capacity
 16	 1,085 MLD

System Input Volume	Reserved Margin
 817 MLD	 24.8%

Billed Authorised Consumption	Non Revenue Water
 488 MLD	 328 MLD 40.2%

Water Consumption	Domestic	Non-Domestic
Total  489 MLD	60.1%  294 MLD	39.9%  195 MLD

Population Served	Urban	Rural
 96.0%	 99.1%	 92.9%

Domestic Consumption Per Capita
 239 LCD

No. of Accounts	Domestic	Non-Domestic
Total  350,325	82.9%  290,258	17.1%  60,067

Pipeline (Kilometers)	AC	MS	CI	DI
 8,530	15.2% 1,297 PE	21.6% 1,840 uPVC	0.1% 6 Others	11.7% 1,001
	7.4% 631	36.4% 3,103	7.7% 653	

No. of Meters	0-7 Years	>7 Years
Total  319,556	49.2%  157,355	50.8%  162,201

Water Interruption (Scheduled)	Water Interruption (Unscheduled)
 3	 2,242

No. of Complaints	Pipe Breakage	Water Quality	Water Pressure
Total  46,658	64.9% 30,262 Water Interruption	0.8% 377 Billing & Meter	14.6% 6,817 Others
	0.3% 121	15.7% 7,333	3.7% 1,748

No. of Staff	Management	Executive
Total  566	36 Non-Executive	40 Meter Reader
	391	99

POPULATION

No. of Population	Urban	Rural
 1,232,100	 59.3%	 40.7%

SEWERAGE SECTOR

Public Sewage Treatment Plant	Multipoint	Regional
Total  208 238,591 PE	208 238,591 PE	0 - PE

Private Sewage Treatment Plant
 360 199,481 PE

Septic Tank	Communal	Individual
Total  104,492 561,282 PE	145 15,963 PE	104,347 545,319 PE

STP: Sewer pipes	CST: Sewer pipes	Network Pumping Station
 301 Kilometers	 14 Kilometers	 17

Traditional System
 114,913 574,565 PE

No. of Accounts	Domestic	Commercial
Total  30,551	82.3% 25,143	7.4% 2,251
	Industrial 0.0% 12	Government Permisses 0.8% 230
		Government Quarters 9.5% 2,915

No. of Complaints	Billing	Desludging
Total  10,573	39.2% 4,143	54.1% 5,716
	Others 5.9% 625	NPS 0.6% 61
		STP 0.3% 28

No. of Staff	STP & Treatment	Operating & Planning
Total  114	39	18
	Desludging 31	Network Services 6
		Others 20

LAST REVISION (WATER & SEWERAGE RATES)

Water Rates

 **1 February 2024**

Sewerage Rates

 **Refer to page sewerage rates by IWK**

Note: 1) Population data is based on figures provided by the Department of Statistics Malaysia (DOSM) as of 20 September 2024.

WATER RATES

TERENGGANU

Domestic Supply

Domestic (Individual)

Band 1 0 – 20m³ @ RM 0.58/m³

Band 2 > 20 – 35m³ @ RM 0.83/m³

Band 3 > 35m³ @ RM 1.08/m³

Minimum Charge RM 5.80

Domestic (Bulk Meter)

Consumption RM 1.08/m³

Minimum Charge RM 10.80/m³

Non-Domestic Supply

Non-Domestic

Band 1 0 – 35m³ @ RM 1.08/m³

Band 2 > 35m³ @ RM 1.48/m³

Minimum Charge RM 15.00

House Of Worship And Welfare Institution

Consumption RM 0.74/m³

Minimum Charge RM 7.40

Shipping

Consumption RM 7.08/m³

Minimum Charge RM 70.80

Current Rate Effective From : 1 February 2024

SEWERAGE RATES

(IWK)

DOMESTIC PREMISES

“Domestic premises” means any premises used exclusively for human habitation and does not include premises that are partly used for industrial or commercial activities.

ITEM	CATEGORY	CONNECTED SERVICES CHARGES (RM PER MONTH)		DESLUDGING SERVICES CHARGES (RM)	
1.	Low cost house or any house with annual value of less than RM600.00 (including Government quarters categories F,G,H and I as determined by the relevant authority)	Effective until 31 December 2023	2.00	Effective until 30 September 2022	2.00 per month
		Effective from 1 January 2024	4.00	Effective from 1 October 2022	192.00 per service
2.	Village dwelling house, new village dwelling house and estate dwelling house	Effective until 31 December 2023	3.00	Effective until 30 September 2022	3.00 per month
		Effective from 1 January 2024	5.00	Effective from 1 October 2022	192.00 per service
3.	Domestic premises other than those specified in items (1), (2) and (4)	Effective until 31 December 2022	8.00	Effective until 30 September 2022	6.00 per month
		Effective from 1 January 2023	10.00		
		Effective from 1 January 2024	12.00	Effective from 1 October 2022	192.00 per service
		Effective from 1 January 2026	15.00		
4.	Domestic premises with non-approved septic tank			For tank size <2.5m ³ effective from 1 October 2022	260.00
				For tank size > 2.5m ³ up to 4.5m ³ effective from 1 October 2022	390.00
				For tank size > 4.5m ³ effective from 1 October 2022	390.00+ (130.00 for every additional m ³ tank size)

SEWERAGE RATES

(IWK)

COMMERCIAL PREMISES

"Commercial premises" means any premises used wholly or partly for trade, business, provision of services or facilities, whether for profit or otherwise.

ITEM	MINIMUM ANNUAL VALUE (RM)	MAXIMUM ANNUAL VALUE (RM)	CONNECTED SERVICES CHARGE (RM PER MONTH)	DESLUDGING SERVICES CHARGE (RM PER MONTH)
1	0	2,000	8	7
2	2,001	5,000	14	8
3	5,001	10,000	20	14
4	10,001	20,000	26	19
5	20,001	30,000	29	21
6	30,001	40,000	32	23
7	40,001	50,000	35	25
8	50,001	60,000	38	27
9	60,001	70,000	41	29
10	70,001	80,000	44	31
11	80,001	90,000	47	33
12	90,001	100,000	50	35
13	100,001	200,000	180	120
14	200,001	400,000	495	330
15	400,001	600,000	522	348
16	600,001	800,000	1,980.00	1,320.00
17	800,001	1,000,000	2,160.00	1,440.00
18	1,000,001	3,000,000	4,320.00	2,880.00
19	3,000,001	5,000,000	8,880.00	5,400.00
20	5,000,001	7,000,000	9,200.00	6,000.00
21	7,000,001	above	9,600.00	6,600.00
For water consumed from 101m ³ – 200m ³ a month, an additional charge will be imposed			RM0.30 for every m ³	
For water consumed exceeding 200m ³ a month, an additional charge will be imposed			RM0.45 for every m ³	

Note: For premises without annual value, a charge based on minimum annual value of RM0.00 to maximum annual value of RM2,000.00 will be imposed.

SEWERAGE RATES

(IWK)

INDUSTRIAL PREMISES

"Industrial premises" means any premises used wholly or partly for industrial activities which include the manufacturing, processing or assembling of goods or substance.

CATEGORY	CONNECTED SERVICES CHARGES (PER WORKER) (RM PER MONTH)	DESLUDGING SERVICES CHARGES (PER WORKER) (RM PER MONTH)
Industrial premises	2.50	2.00

MINIMUM CHARGES FOR CONNECTED SERVICES

ITEM	CATEGORY	Minimum Charge (RM)
1.	Domestic premises effective from 1 October 2022	(i) Low cost house or any house with annual value of less than RM600.00
		(i) Village dwelling house, new village dwelling house and estates dwelling house
		(i) Domestic premises other than those specified in item (i) and (ii)
2.	Government Quarters effective from 1 October 2022	(i) Categories F, G, H and I as determined by relevant authority
		(i) Categories A, B, C, D and E as determined by relevant authority
3.	Commercial Premises effective from 1 October 2022	(i) Annual value of RM0 up to RM2,000.00
		(i) Annual value in excess of RM2,000.00
4.	Industrial premises effective from 1 October 2022	8.00
5.	Government premises effective from 1 October 2022	8.00

SEWERAGE RATES

(IWK)

REPEATED OR ADDITIONAL DESLUDGING SERVICES CHARGES

CATEGORY	CHARGE (RM PER TRIP)
Repeated or additional desludging services charges effective from 1 October 2022	192.00

CANCELLATION CHARGES OF DESLUDGING SERVICES

CATEGORY	CHARGE (RM PER TRIP)
Cancellation charges of desludging services effective from 1 October 2022	80.00

WATER SECTOR

STATISTICS

01

RAW WATER RESOURCES

02

WATER SUPPLY AND DEMAND

03

PIPE TYPE AND METER

04

CUSTOMER SERVICE

05

WORKFORCE

06

INDICATORS

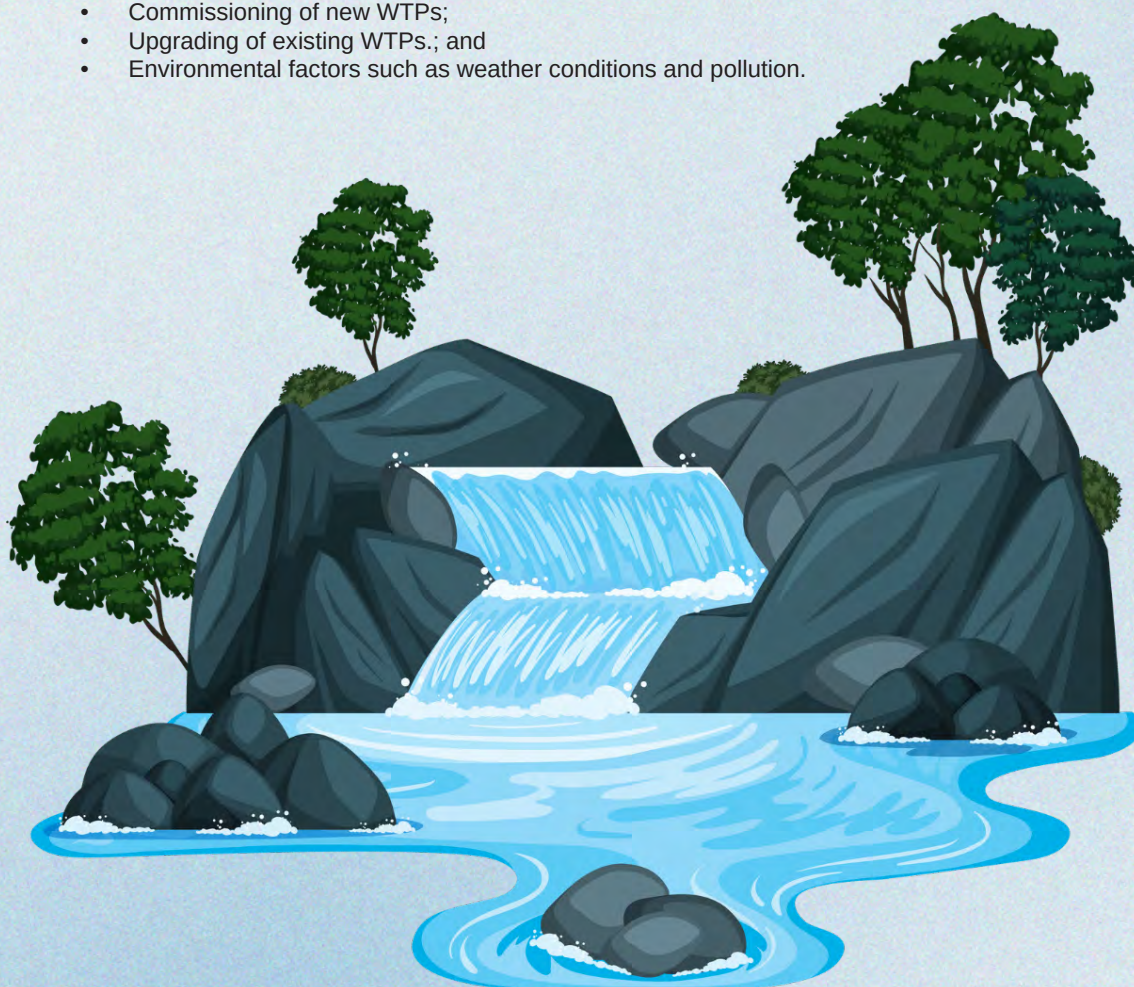


RAW WATER EXTRACTION : GRAND TOTAL

Unit MLD	2020	2021	2022	2023	2024
Johor	1,912	1,871	1,895	1,946	2,022
Kedah	1,584	1,655	1,728	1,730	1,745
Kelantan	516	508	543	553	558
F.T. Labuan	90	88	86	85	87
Melaka	728	680	718	770	775
N.Sembilan	833	850	896	921 ^r	931
Pulau Pinang	1,383	1,390	1,269	1,280	1,340
Pahang	1,407	1,361	1,562	1,564	1,606
Perak	1,366	1,418	1,464	1,461	1,574
Perlis	263	240	270	286	305
Selangor	5,254	5,130	5,143	5,308	5,524
Terengganu	743	694	720	809	833
Pen. Malaysia & F.T. Labuan	16,079	15,884	16,293	16,711^r	17,299

Note: Volume of raw water extracted may vary due to several factors, including:

- Fluctuations in treated water supply and demand;
- Commissioning of new WTPs;
- Upgrading of existing WTPs.; and
- Environmental factors such as weather conditions and pollution.





RAW WATER EXTRACTION : RIVER

Unit MLD	2020	2021	2022	2023	2024
Johor	1,162	1,142	1,145	1,192	1,180
Kedah	1,551	1,645	1,708	1,708	1,720
Kelantan	323	310	322	319	313
F.T. Labuan	80	80	78	77	78
Melaka	368	354	378	360	365
N.Sembilan	400	412	406	439 ^r	451
Pulau Pinang	1,297	1,283	1,138	1,192	1,226
Pahang	1,357	1,322	1,512	1,514	1,560
Perak	1,033	1,144	1,186	1,185	1,277
Perlis	188	174	192	199	198
Selangor	4,787	4,687	4,681	4,785	4,924
Terengganu	507	461	475	550	575
Pen. Malaysia & F.T. Labuan	13,051	13,015	13,221	13,521 ^r	13,868



% RIVER EXTRACTION TO TOTAL RAW WATER EXTRACTION

Unit (%)	2020	2021	2022	2023	2024
Johor	60.8%	61.1%	60.4%	61.2%	58.3%
Kedah	97.9%	99.4%	98.8%	98.7%	98.6%
Kelantan	62.5%	61.0%	59.3%	57.7%	56.2%
F.T. Labuan	89.6%	91.2%	90.6%	90.9%	89.3%
Melaka	50.5%	52.2%	52.7%	46.8%	47.1%
N.Sembilan	48.0%	48.4%	45.3%	47.7% ^r	48.5%
Pulau Pinang	93.7%	92.3%	89.7%	93.2%	91.5%
Pahang	96.4%	97.1%	96.8%	96.8%	97.2%
Perak	75.6%	80.7%	81.0%	81.1%	81.1%
Perlis	71.4%	72.7%	71.1%	69.8%	65.0%
Selangor	91.1%	91.4%	91.0%	90.2%	89.1%
Terengganu	68.2%	66.4%	66.0%	67.9%	69.0%
Pen. Malaysia & F.T. Labuan	81.2%	81.9%	81.1%	80.9% ^r	80.2%

Note: Volume of raw water extracted may vary due to several factors, including:

- Fluctuations in treated water supply and demand;
- Commissioning of new WTPs;
- Upgrading of existing WTPs.; and
- Environmental factors such as weather conditions and pollution.



RAW WATER EXTRACTION : DAM

Unit MLD	2020	2021	2022	2023	2024
Johor	749	729	751	754	842
Kedah	33	10	20	22	25
Kelantan	n.a	n.a	n.a	n.a	n.a
F.T. Labuan	9	8	8	8	9
Melaka	361	325	258	262	262
N.Sembilan	433	439	490	482 ^r	480
Pulau Pinang	87	107	131	87	114
Pahang	45	37	48	48	44
Perak	333	274	278	276	297
Perlis	72	63	75	85	105
Selangor	468	442	461	523	600
Terengganu	236	233	245	259	258
Pen. Malaysia & F.T. Labuan	2,826	2,666	2,765	2,806 ^r	3,035



% DAM EXTRACTION TO TOTAL RAW WATER EXTRACTION

Unit (%)	2020	2021	2022	2023	2024
Johor	39.2%	38.9%	39.6%	38.8%	41.7%
Kedah	2.1%	0.6%	1.2%	1.3%	1.4%
Kelantan	n.a	n.a	n.a	n.a	n.a
F.T. Labuan	10.4%	8.8%	9.4%	9.1%	10.7%
Melaka	49.5%	47.8%	35.9%	34.1%	33.8%
N.Sembilan	52.0%	51.6%	54.7%	52.3% ^r	51.5%
Pulau Pinang	6.3%	7.7%	10.3%	6.8%	8.5%
Pahang	3.2%	2.7%	3.0%	3.0%	2.7%
Perak	24.4%	19.3%	19.0%	18.9%	18.9%
Perlis	27.5%	26.1%	28.0%	29.6%	34.5%
Selangor	8.9%	8.6%	9.0%	9.8%	10.9%
Terengganu	31.8%	33.6%	34.0%	32.1%	31.0%
Pen. Malaysia & F.T. Labuan	17.6%	16.8%	17.0%	16.8% ^r	17.5%

Note: Volume of raw water extracted may vary due to several factors, including:

- Fluctuations in treated water supply and demand;
- Commissioning of new WTPs;
- Upgrading of existing WTPs.; and
- Environmental factors such as weather conditions and pollution.



RAW WATER EXTRACTION: GROUND WATER & OTHERS

Unit MLD	2020	2021	2022	2023	2024
Johor	n.a	n.a	n.a	n.a	n.a
Kedah	n.a	n.a	n.a	n.a	n.a
Kelantan	193.4	198.2	221.0	233.8	244.5
F.T. Labuan	n.a	n.a	n.a	n.a	n.a
Melaka	n.a	0.2	81.5	147.4	148.0
N.Sembilan	n.a	n.a	n.a	n.a	n.a
Pulau Pinang	n.a	n.a	n.a	n.a	n.a
Pahang	4.7	1.7	1.8	1.8	1.7
Perak	n.a	n.a	n.a	n.a	n.a
Perlis	2.9	2.8	2.4	1.6	1.5
Selangor	n.a	n.a	n.a	n.a	n.a
Terengganu	n.a	n.a	n.a	n.a	n.a
Pen. Malaysia & F.T. Labuan	201.0	202.9	306.7	384.6	395.6



% GROUND WATER & OTHERS EXTRACTION TO TOTAL RAW WATER EXTRACTION

Unit (%)	2020	2021	2022	2023	2024
Johor	n.a	n.a	n.a	n.a	n.a
Kedah	n.a	n.a	n.a	n.a	n.a
Kelantan	37.5%	39.0%	40.7%	42.3%	43.8%
F.T. Labuan	n.a	n.a	n.a	n.a	n.a
Melaka	n.a	0.0%	11.4%	19.2%	19.1%
N.Sembilan	n.a	n.a	n.a	n.a	n.a
Pulau Pinang	n.a	n.a	n.a	n.a	n.a
Pahang	0.3%	0.1%	0.1%	0.1%	0.1%
Perak	n.a	n.a	n.a	n.a	n.a
Perlis	1.1%	1.2%	0.9%	0.6%	0.5%
Selangor	n.a	n.a	n.a	n.a	n.a
Terengganu	n.a	n.a	n.a	n.a	n.a
Pen. Malaysia & F.T. Labuan	1.3%	1.3%	1.9%	2.3%	2.3%

- 1) Volume of raw water extracted may vary due to several factors, including:
- Fluctuations in treated water supply and demand;
 - Commissioning of new WTPs;
 - Upgrading of existing WTPs.; and
 - Environmental factors such as weather conditions and pollution.

- 2) Raw extraction for Ground water and other sources are categorised as below:
- Ground Water : Kelantan, Pahang & Perlis
 - Seawater : Melaka



NO. OF WATER TREATMENT PLANTS (WTP)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	46	46	46	47	47
Kedah	38	35	35	35	35
Kelantan	35	39	41	42	43
F.T. Labuan	6	6	6	6	6
Melaka	10	11	12	12	12
N.Sembilan	21	21	21	22	22
Pulau Pinang	9	9	9	9	9
Pahang	74	74	74	75	76
Perak	43	44	46	46	46
Perlis	4	4	4	4	4
Selangor	34	34	34	34	34
Terengganu	12	12	16	16	16
Pen. Malaysia & F.T. Labuan	332	335	344	348	350

New



Upgraded



Closed



2023	2024
Johor 1) Layang 2 Fasa 1 / +160.00 MLD Kelantan 1) Mini Meranti / +6 MLD Pahang 1) Karak Indah / +11 MLD <i>Reactivation WTP</i> N.Sembilan 1) Bukit / +2 MLD	Kelantan 1) Mini Jelawat / +4 MLD Pahang 1) Runchang Agro / +0.48 MLD
Johor 1) Air Panas C / +15.00 MLD 2) Lok Heng / +4.00 MLD Melaka 1) Merlimau / +55 MLD Perak 1) Beruas / +11 MLD P.Pinang 1) Bukit Panchor / +10 MLD	Johor 1) Kahang / +40.00 MLD P.Pinang 1) Sg. Dua / +114 MLD
	Terengganu 1) Pakej Marang / -3.0 MLD

- Note: Information regarding active WTPs reflects the latest updates and declarations provided by water operators. Therefore, the data presented may differ from previous publications.



WTP DESIGN CAPACITY

Unit MLD	2020	2021	2022	2023	2024
Johor	2,098	2,133	2,133	2,313	2,352
Kedah	1,494	1,457	1,459	1,459	1,459
Kelantan	439	488	537	546 ^r	550
F.T. Labuan	101	101	104	104	104
Melaka	651	651	681	736	736
N.Sembilan	994	994	1,048	1,050	1,050
Pulau Pinang	1,599	1,599	1,599	1,609	1,723
Pahang	1,480	1,612	1,615	1,623	1,624
Perak	1,886	1,891	1,951	1,977	1,977
Perlis	211	211	251	251	279
Selangor	6,036	6,035	6,035	6,035	6,035
Terengganu	851	873	1,045	1,039	1,035
Pen. Malaysia & F.T. Labuan	17,840	18,047	18,460	18,744 ^r	18,925



WATER PRODUCTION

Unit MLD	2020	2021	2022	2023	2024
Johor	1,831	1,848	1,837	1,867	2,001
Kedah	1,487	1,538	1,597	1,602	1,600
Kelantan	507	504	517	522	526
F.T. Labuan	82	84	83	81	82
Melaka	578	603	649	692	698
N.Sembilan	795	811	848	874	880
Pulau Pinang	1,108	1,126	1,178	1,198	1,208
Pahang	1,269	1,281	1,337	1,333	1,314
Perak	1,392	1,386	1,418	1,416	1,470
Perlis	243	236	243	262	251
Selangor	4,967	4,985	5,116	5,226	5,308
Terengganu	657	656	720	773	787
Pen. Malaysia & F.T. Labuan	14,916	15,058	15,542	15,844	16,124

- Information on active WTPs based on latest updates and declaration by water operators. Hence, information on design capacity differ from previous publications.



DESIGN CAPACITY DEMAND

Unit MLD	2020	2021	2022	2023	2024
Johor ✦	2,105	2,156	2,156	2,336	2,375
Kedah	1,494	1,457	1,459	1,459	1,459
Kelantan	439	488	537	546 ^r	550
F.T. Labuan	101	101	104	104	104
Melaka	651	651	681	736	736
N.Sembilan	994	994	1,048	1,050	1,050
Pulau Pinang	1,599	1,599	1,599	1,609	1,723
Pahang	1,480	1,612	1,615	1,623	1,624
Perak	1,886	1,891	1,951	1,977	1,977
Perlis ✦	261	261	279	279	279
Selangor	6,036	6,035	6,035	6,035	6,035
Terengganu ✦	896	923	1,095	1,089	1,085
Pen. Malaysia & F.T. Labuan	17,942	18,170	18,561	18,845 ^r	18,998



WATER DEMAND : SYSTEM INPUT VOLUME (SIV)

Unit MLD	2020	2021	2022	2023	2024
Johor ✦	1,900	1,848	1,909	1,942	2,001
Kedah	1,487	1,538	1,597	1,602	1,600
Kelantan	507	504	517	522	526
F.T. Labuan	82	84	83	81	82
Melaka	578	603	649	692	698
N.Sembilan	795	811	848	874	880
Pulau Pinang	1,108	1,126	1,178	1,198	1,208
Pahang	1,269	1,281	1,337	1,333	1,314
Perak	1,392	1,386	1,418	1,416	1,470
Perlis ✦	256	249	256	275	265
Selangor	4,967	4,985	5,116	5,226	5,308
Terengganu ✦	685	685	747	790	817
Pen. Malaysia & F.T. Labuan	15,026	15,100	15,653	15,950	16,167

✦ Note: The figures above include data as explained in Note (1) on the following page.

Note (1)

For the following states, total WTP Design Capacity and Production figures include:

State	Water Operator	Designated Capacity (mld)	Average Supply for State (mld)
Terengganu	Petroleum Nasional Berhad (Petronas)	50	17
Perlis	Prisma Karun Sdn Bhd	28	13
Johor	Public Utilities Board, Singapore (PUB)	23	75

The designated capacity is based on the water supply agreement between the respective entities.



RESERVE MARGIN

Unit (%)	2020	2021	2022	2023	2024
Johor	9.7%	14.3%	11.5%	16.8%	15.7%
Kedah	0.0%	0.0%	0.0%	0.0%	0.0%
Kelantan	0.0%	0.0%	0.0%	4.6% ^r	4.4%
F.T. Labuan	18.7%	17.1%	20.3%	22.6%	21.2%
Melaka	11.2%	7.5%	4.7%	6.1%	5.2%
N.Sembilan	20.0%	18.4%	19.1%	16.8%	16.2%
Pulau Pinang	30.7%	29.6%	26.4%	25.6%	29.9%
Pahang	14.2%	20.6%	17.3%	17.9%	19.1%
Perak	26.2%	26.7%	27.3%	28.4%	25.7%
Perlis	1.9%	4.5%	8.4%	1.3%	5.0%
Selangor	0.0%	17.4%	15.2%	13.4%	12.1%
Terengganu	23.6%	25.7%	31.8%	27.5%	24.8%
Pen. Malaysia & F.T. Labuan	16.3%	16.9%	15.7%	15.4% ^r	14.9%



BILLED AUTHORISED CONSUMPTION

Unit MLD	2020	2021	2022	2023	2024
Johor	1,393	1,385	1,407	1,457	1,519
Kedah	767	770	775	789	783
Kelantan	245	239	239	237	244
F.T. Labuan	55	52	52	50	51
Melaka	405	414	433	449	458
N.Sembilan	542	549	550	534	560
Pulau Pinang	847	860	868	877	870
Pahang	631	649	699	697	676
Perak	972	976	988	989	1,000
Perlis	90	91	98	98	102
Selangor	3,550	3,612	3,696	3,776	3,877
Terengganu	443	460	458	473	488
Pen. Malaysia & F.T. Labuan	9,940	10,059	10,265	10,427	10,626



NON-REVENUE WATER (NRW)

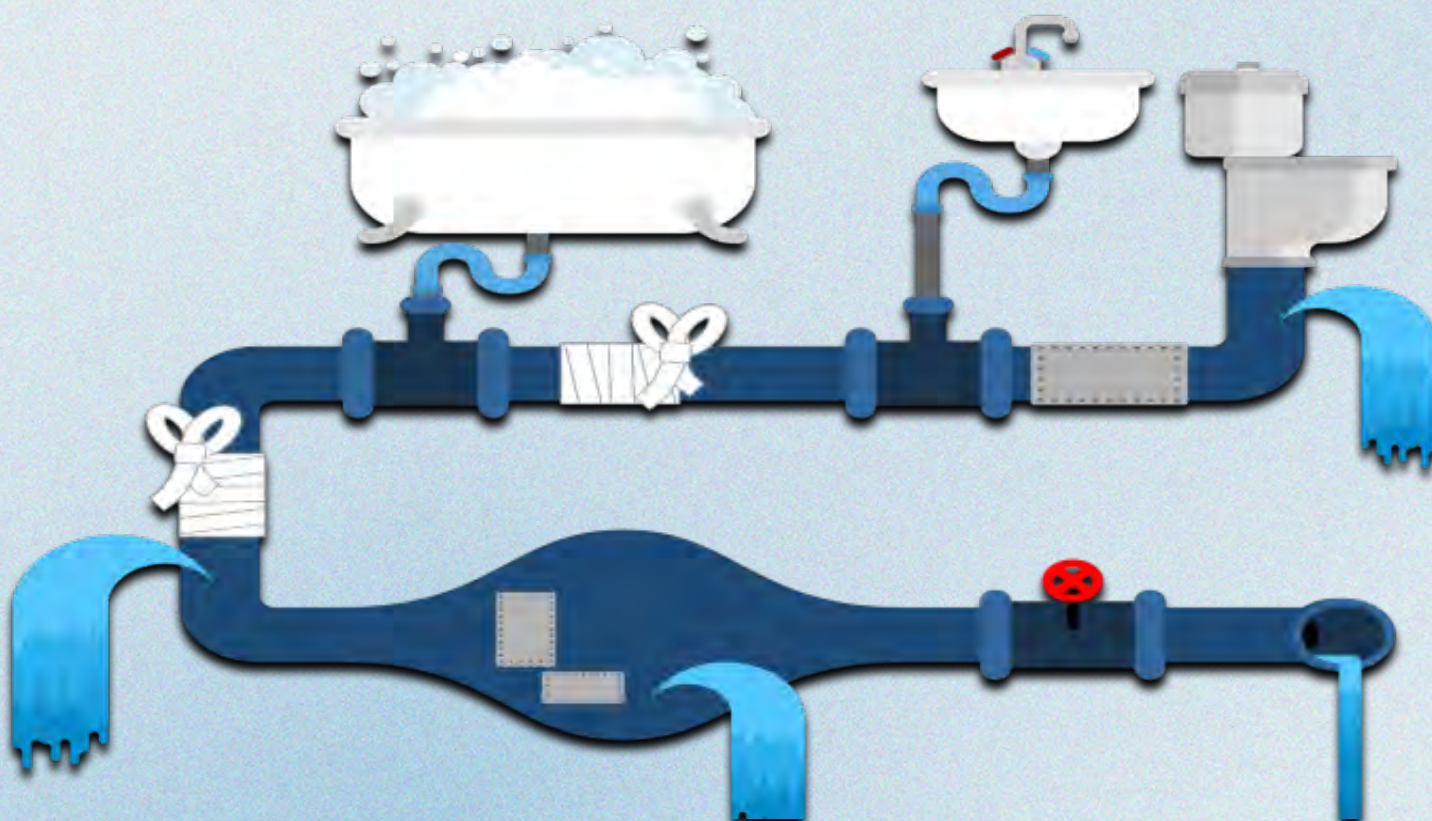
Unit (MLD)	2020	2021	2022	2023	2024
Johor	507	463	501	485	482
Kedah	719	768	822	813	817
Kelantan	262	265	277	284	282
F.T. Labuan	28	32	31	30	31
Melaka	173	188	216	243	240
N.Sembilan	253	262	298	339	320
Pulau Pinang	261	266	310	321	338
Pahang	638	632	638	636	639
Perak	419	410	430	428	469
Perlis	166	158	157	178	163
Selangor	1,417	1,373	1,420	1,450	1,431
Terengganu	241	225	289	317	328
Pen. Malaysia & F.T. Labuan	5,086	5,041	5,389	5,524	5,541



NON - REVENUE WATER (NRW)

Unit (%)	2020	2021	2022	2023	2024
Johor	26.7%	25.1%	26.3%	25.0%	24.1%
Kedah	48.4%	49.9%	51.5%	50.7%	51.1%
Kelantan	51.7%	52.6%	53.7%	54.5%	53.7%
F.T. Labuan	33.6%	37.6%	36.8%	37.6%	38.3%
Melaka	30.0%	31.2%	33.2%	35.1%	34.4%
N.Sembilan	31.8%	32.3%	35.1%	38.9%	36.4%
Pulau Pinang	23.5%	23.6%	26.3%	26.8%	28.0%
Pahang	50.3%	49.3%	47.7%	47.7%	48.6%
Perak	30.1%	29.6%	30.3%	30.2%	31.9%
Perlis	64.9%	63.3%	61.5%	64.5%	61.5%
Selangor	28.5%	27.5%	27.8%	27.8%	27.0%
Terengganu	35.2%	32.8%	38.7%	40.1%	40.2%
Pen. Malaysia & F.T. Labuan	33.8%	33.4%	34.4%	34.6%	34.3%

- For NRW, calculations involving water treatment plants operating under concession agreements, the position of the System Input Volume (SIV) meter (before or after the balancing reservoir) is determined as specified in each respective agreement;
- SIV for Kedah, F.T. Labuan, Perak, Selangor, and Terengganu includes treated water purchases from Water Treatment Operators (WTOs); and
- SIV for Melaka-Johor, Perak-Selangor, Terengganu-Kelantan, and Pahang-Negeri Sembilan includes treated water purchases through interstate transfers





DOMESTIC CONSUMPTION PER CAPITA PER DAY (LCD)

Unit LCD	2020	2021	2022	2023	2024
Johor	229	232	216	215	215
Kedah	263	269	258	234	225
Kelantan	89	89	89	85	87
F.T. Labuan	168	202	196	189 ^r	189
Melaka	231	246	226	229	231
N.Sembilan	282	290	254	252	260
Pulau Pinang	301	308	307	284 ^r	275
Pahang	219	232	239	235	227
Perak	281	280	277	236	234
Perlis	306	313	276	217	213
Selangor	260	272	245	241	240
Terengganu	227	237	241	239	239
Pen. Malaysia & F.T. Labuan	244	251	237	228 ^r	225



WATER CONSUMPTION: GRAND TOTAL

Unit MLD	2020	2021	2022	2023	2024
Johor	1,392	1,383	1,403	1,455	1,511
Kedah	767	770	776	790	783
Kelantan	245	239	239	237	244
F.T. Labuan	56	52	52	51	51
Melaka	405	414	433	449	457
N.Sembilan	540	549	538	534	560
Pulau Pinang	847	860	868	881 ^r	870
Pahang	631	650	665	676	672
Perak	972	969	988	987	999
Perlis	90	91	98	97	100
Selangor	3,547	3,609	3,689	3,754	3,879
Terengganu	451	463	459	476	489
Pen. Malaysia & F.T. Labuan	9,944	10,051	10,209	10,388 ^r	10,614

Formula:

- $LCD = \frac{\text{Domestic Consumption per Total Population per day}}{\text{Total Population}}$
- Total Population is based on the Department of Statistics, Malaysia (<http://pqi.stats.gov.my>).



WATER CONSUMPTION : DOMESTIC

Unit MLD	2020	2021	2022	2023	2024
Johor	867	879	867	883	901
Kedah	574	590	559	511	499
Kelantan	170	171	162	159	164
F.T. Labuan	17	20	19	19	19
Melaka	215	230	228	235	242
N.Sembilan	318	327	307	309	323
Pulau Pinang	533	547	534	503 ^r	495
Pahang	367	391	386	385	378
Perak	706	703	699	600	601
Perlis	78	80	80	63	64
Selangor	2,186	2,294	2,230	2,248	2,288
Terengganu	286	302	286	289	294
Pen. Malaysia & F.T. Labuan	6,318	6,535	6,358	6,205 ^r	6,269



% WATER CONSUMPTION (DOMESTIC) TO TOTAL WATER CONSUMPTION

Unit (%)	2020	2021	2022	2023	2024
Johor	62.3%	63.5%	61.8%	60.7%	59.6%
Kedah	74.8%	76.7%	72.0%	64.7%	63.8%
Kelantan	69.5%	71.6%	67.8%	66.9%	67.3%
F.T. Labuan	29.8%	38.6%	36.2%	37.1%	37.6%
Melaka	53.2%	55.6%	52.7%	52.4%	53.0%
N.Sembilan	58.9%	59.5%	57.1%	57.8%	57.8%
Pulau Pinang	62.9%	63.6%	61.6%	57.1%	56.9%
Pahang	58.2%	60.2%	58.0%	57.0%	56.3%
Perak	72.6%	72.6%	70.7%	60.8%	60.1%
Perlis	86.8%	87.6%	81.5%	65.0%	64.2%
Selangor	61.6%	63.6%	60.5%	59.9%	59.0%
Terengganu	63.4%	65.2%	62.3%	60.7%	60.1%
Pen. Malaysia & F.T. Labuan	63.5%	65.0%	62.3%	59.7%	59.1%



WATER CONSUMPTION : NON-DOMESTIC

Unit MLD	2020	2021	2022	2023	2024
Johor	526	505	536	572	610
Kedah	193	179	217	278	283
Kelantan	75	68	77	79	80
F.T. Labuan	40	32	33	32	32
Melaka	189	184	205	214	215
N.Sembilan	222	222	231	226	237
Pulau Pinang	314	313	334	378 ^r	375
Pahang	264	259	280	291	293
Perak	266	266	289	387	398
Perlis	12	11	18	34	36
Selangor	1,362	1,315	1,459	1,506	1,591
Terengganu	165	161	173	187	195
Pen. Malaysia & F.T. Labuan	3,626	3,516	3,852	4,183 ^r	4,344



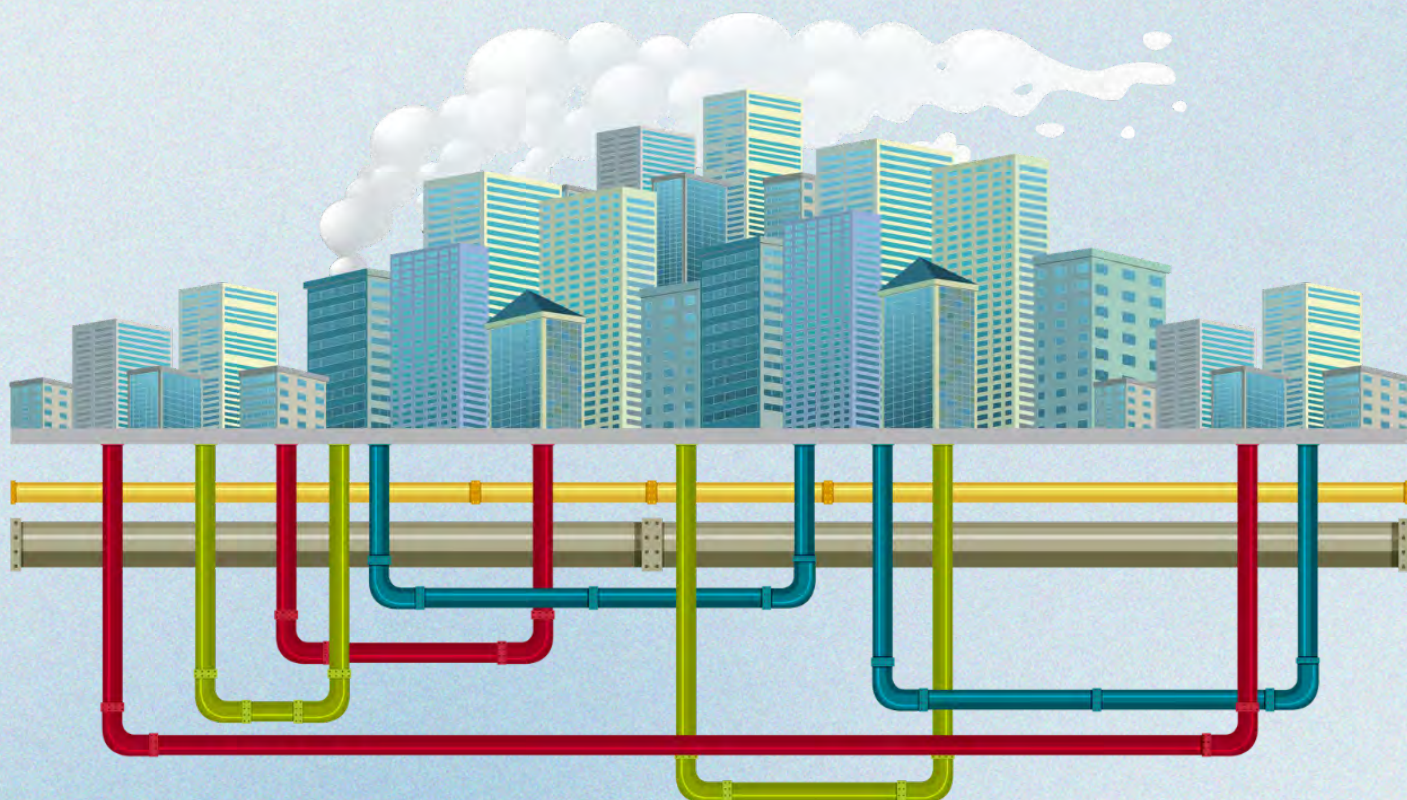
% WATER CONSUMPTION (NON-DOMESTIC) TO TOTAL WATER CONSUMPTION

Unit (%)	2020	2021	2022	2023	2024
Johor	37.7%	36.5%	38.2%	39.3%	40.4%
Kedah	25.2%	23.3%	28.0%	35.3%	36.2%
Kelantan	30.5%	28.4%	32.2%	33.1%	32.7%
F.T. Labuan	70.2%	61.4%	63.8%	62.9%	62.4%
Melaka	46.8%	44.4%	47.3%	47.6%	47.0%
N.Sembilan	41.1%	40.5%	42.9%	42.2%	42.2%
Pulau Pinang	37.1%	36.4%	38.4%	42.9%	43.1%
Pahang	41.8%	39.8%	42.0%	43.0%	43.7%
Perak	27.4%	27.4%	29.3%	39.2%	39.9%
Perlis	13.2%	12.4%	18.5%	35.0%	35.8%
Selangor	38.4%	36.4%	39.5%	40.1%	41.0%
Terengganu	36.6%	34.8%	37.7%	39.3%	39.9%
Pen. Malaysia & F.T. Labuan	36.5%	35.0%	37.7%	40.3%	40.9%



NO. OF CONNECTIONS : GRAND TOTAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,216,219	1,236,385	1,260,731	1,285,632	1,312,536
Kedah	616,710	630,125	640,641	652,217	662,614
Kelantan	265,689	271,235	273,821	276,171	272,594
F.T. Labuan	19,446	19,933	20,350	20,668	20,696
Melaka	318,520	328,245	335,970	343,701	355,051
N.Sembilan	450,450	457,670	467,015	471,382	490,193
Pulau Pinang	645,719	658,910	676,857	689,786	705,528
Pahang	446,599	452,489	466,257	473,646	481,670 ^r
Perak	816,643	833,688	850,594	868,727	885,490
Perlis	75,807	77,204	78,322	79,538	81,222
Selangor	2,491,888	2,557,248	2,588,993	2,661,743	2,743,079
Terengganu	322,263	331,528	333,886	342,271	350,325
Pen. Malaysia & F.T. Labuan	7,685,953	7,854,660	7,993,437	8,165,482	8,360,998 ^r





NO. OF CONNECTIONS : DOMESTIC

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,043,954	1,063,684	1,083,185	1,102,333	1,117,032
Kedah	551,103	562,647	565,089	575,523	585,218
Kelantan	228,248	233,005	235,455	238,279	235,036
F.T. Labuan	16,418	16,800	17,209	17,509	17,560
Melaka	276,056	284,376	290,732	297,720	307,163
N.Sembilan	385,348	392,706	400,311	403,818	426,399
Pulau Pinang	558,721	571,219	585,740	593,255	606,719
Pahang	389,144	393,579	404,772	409,385 ^r	415,872
Perak	713,645	727,480	730,568	746,457	761,296
Perlis	67,768	68,863	67,851	68,625	70,043
Selangor	2,166,925	2,230,180	2,262,706	2,331,435	2,408,040
Terengganu	272,463	279,302	279,746	285,241	290,258
Pen. Malaysia & F.T. Labuan	6,669,793	6,823,841	6,923,364	7,069,580 ^r	7,240,636



% DOMESTIC CONNECTIONS TO TOTAL NO. OF CONNECTIONS

Unit (%)	2020	2021	2022	2023	2024
Johor	85.8%	86.0%	85.9%	85.7%	85.1%
Kedah	89.4%	89.3%	88.2%	88.2%	88.3%
Kelantan	85.9%	85.9%	86.0%	86.3%	86.2%
F.T. Labuan	84.4%	84.3%	84.6%	84.7%	84.8%
Melaka	86.7%	86.6%	86.5%	86.6%	86.5%
N.Sembilan	85.5%	85.8%	85.7%	85.7%	87.0%
Pulau Pinang	86.5%	86.7%	86.5%	86.0%	86.0%
Pahang	87.1%	87.0%	86.8%	86.4%	86.3%
Perak	87.4%	87.3%	85.9%	85.9%	86.0%
Perlis	89.4%	89.2%	86.6%	86.3%	86.2%
Selangor	87.0%	87.2%	87.4%	87.6%	87.8%
Terengganu	84.5%	84.2%	83.8%	83.3%	82.9%
Pen. Malaysia & F.T. Labuan	86.8%	86.9%	86.6%	86.6%	86.6%



NO. OF CONNECTIONS : NON-DOMESTIC

Unit (Nos)	2020	2021	2022	2023	2024
Johor	172,265	172,701	177,546	183,299	195,504
Kedah	65,607	67,478	75,552	76,694	77,396
Kelantan	37,441	38,230	38,366	37,892	37,558
F.T. Labuan	3,028	3,133	3,141	3,159	3,136
Melaka	42,464	43,869	45,238	45,981	47,888
N.Sembilan	65,102	64,964	66,704	67,564	63,794
Pulau Pinang	86,998	87,691	91,117	96,531	98,809
Pahang	57,455	58,910	61,485	64,261 ^r	65,798
Perak	102,998	106,208	120,026	122,270	124,194
Perlis	8,039	8,341	10,471	10,913	11,179
Selangor	324,963	327,068	326,287	330,308	335,039
Terengganu	49,800	52,226	54,140	57,030	60,067
Pen. Malaysia & F.T. Labuan	1,016,160	1,030,819	1,070,073	1,095,902 ^r	1,120,362



% NON-DOMESTIC CONNECTIONS TO TOTAL NO. OF CONNECTIONS

Unit (%)	2020	2021	2022	2023	2024
Johor	14.2%	14.0%	14.1%	14.3%	14.9%
Kedah	10.6%	10.7%	11.8%	11.8%	11.7%
Kelantan	14.1%	14.1%	14.0%	13.7%	13.8%
F.T. Labuan	15.6%	15.7%	15.4%	15.3%	15.2%
Melaka	13.3%	13.4%	13.5%	13.4%	13.5%
N.Sembilan	14.5%	14.2%	14.3%	14.3%	13.0%
Pulau Pinang	13.5%	13.3%	13.5%	14.0%	14.0%
Pahang	12.9%	13.0%	13.2%	13.6%	13.7%
Perak	12.6%	12.7%	14.1%	14.1%	14.0%
Perlis	10.6%	10.8%	13.4%	13.7%	13.8%
Selangor	13.0%	12.8%	12.6%	12.4%	12.2%
Terengganu	15.5%	15.8%	16.2%	16.7%	17.1%
Pen. Malaysia & F.T. Labuan	13.2%	13.1%	13.4%	13.4%	13.4%



POPULATION SERVED (AVERAGE BY STATE)

Unit (%)	2020	2021	2022	2023	2024
Johor	99.9%	99.9%	99.9%	99.9%	99.9%
Kedah	98.3%	98.3%	98.3%	98.3%	98.3%
Kelantan	71.7%	73.1%	73.9%	74.5%	73.5%
F.T. Labuan	100.0%	100.0%	100.0%	100.0%	100.0%
Melaka	100.0%	100.0%	100.0%	100.0%	100.0%
N.Sembilan	99.9%	99.9%	99.9%	99.9%	99.9%
Pulau Pinang	99.9%	99.9%	99.9%	99.9%	99.9%
Pahang	98.0%	98.0%	98.0%	98.0%	98.0%
Perak	99.6%	99.6%	99.6%	99.6%	99.6%
Perlis	99.5%	99.5%	99.5%	99.5%	99.5%
Selangor	99.8%	99.8%	99.8%	99.8%	99.8%
Terengganu	96.0%	96.0%	96.0%	96.0%	96.0%
Pen. Malaysia & F.T. Labuan	96.9%	97.0%	97.1%	97.1%	97.0%

Note: Population served refers to the percentage of the population connected to treated water supplied by state water operators. In certain states, this percentage may appear low due to the use of alternative water sources outside the services provided by state water operators, which are not included in the population served calculation.





POPULATION SERVED (URBAN)

Unit (%)	2020	2021	2022	2023	2024
Johor	100.0%	100.0%	100.0%	100.0%	100.0%
Kedah	100.0%	100.0%	100.0%	100.0%	100.0%
Kelantan	64.5%	65.4%	65.8%	65.8%	65.2%
F.T. Labuan	100.0%	100.0%	100.0%	100.0%	100.0%
Melaka	100.0%	100.0%	100.0%	100.0%	100.0%
N.Sembilan	100.0%	100.0%	100.0%	100.0%	100.0%
Pulau Pinang	100.0%	100.0%	100.0%	100.0%	100.0%
Pahang	100.0%	100.0%	100.0%	100.0%	100.0%
Perak	100.0%	100.0%	100.0%	100.0%	100.0%
Perlis	100.0%	100.0%	100.0%	100.0%	100.0%
Selangor	100.0%	100.0%	100.0%	100.0%	100.0%
Terengganu	99.1%	99.1%	99.1%	99.1%	99.1%
Pen. Malaysia & F.T. Labuan	97.0%	97.0%	97.1%	97.1%	97.0%



POPULATION SERVED (RURAL)

Unit (%)	2020	2021	2022	2023	2024
Johor	99.8%	99.8%	99.8%	99.8%	99.8%
Kedah	96.5%	96.5%	96.5%	96.5%	96.5%
Kelantan	78.9%	80.8%	82.0%	83.1%	81.9%
F.T. Labuan	100.0%	100.0%	100.0%	100.0%	100.0%
Melaka	100.0%	100.0%	100.0%	100.0%	100.0%
N.Sembilan	99.8%	99.8%	99.8%	99.8%	99.8%
Pulau Pinang	99.8%	99.8%	99.8%	99.8%	99.8%
Pahang	96.0%	96.0%	96.0%	96.0%	96.0%
Perak	99.2%	99.2%	99.2%	99.2%	99.2%
Perlis	99.0%	99.0%	99.0%	99.0%	99.0%
Selangor	99.5%	99.5%	99.5%	99.5%	99.5%
Terengganu	92.9%	92.9%	92.9%	92.9%	92.9%
Pen. Malaysia & F.T. Labuan	96.8%	96.9%	97.0%	97.1%	97.0%

Note: Population served refers to the percentage of the population connected to treated water supplied by state water operators. In certain states, this percentage may appear low due to the use of alternative water sources outside the services provided by state water operators, which are not included in the population served calculation.



PIPE LENGTH : GRAND TOTAL

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	23,341	23,705	24,001	24,149	24,188
Kedah	14,194	13,103	13,194	13,453	13,652
Kelantan	8,121	7,201	7,083	7,264	7,357
F.T. Labuan	596	595	596	602	608
Melaka	5,385	5,523	5,551	5,719	5,872
N.Sembilan	9,108	9,273	9,405	9,621	9,555
Pulau Pinang	4,641	4,696	4,732	4,777	4,801
Pahang	15,086	15,089	15,089	15,427 ^r	15,432
Perak	15,052	15,636	16,777	16,777	16,913
Perlis	1,936	1,946	1,958	2,010 ^r	2,014
Selangor	29,541	30,008	30,422	30,734	31,250
Terengganu	7,860	8,030	8,311	8,426 ^r	8,530
Pen. Malaysia & F.T. Labuan	134,861	134,806	137,120	138,958 ^r	140,172

AC	Asbestos Cement
CI	Cast Iron
DI	Ductile Iron
MS	Mild Steel
PE	Polyethylene includes HDPE (High Density Polyethylene)
UPvc	Unplasticized Polyvinylchloride
Others Include:	• GI : Galvanised Iron • ABS : Acrylonitrile Butadiene

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



PIPE LENGTH: ASBESTOS CEMENT (AC)

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	6,588	6,465	6,415	6,352	6,348
Kedah	7,981	6,110	6,128	6,271	6,107
Kelantan	4,006	4,091	4,050	4,023	4,005
F.T. Labuan	135	135	135	129	124
Melaka	1,191	1,182	1,158	1,170	1,171
N.Sembilan	3,991	4,026	4,035	4,090	4,096
Pulau Pinang	1,203	1,192	1,182	1,159	1,159
Pahang	3,731	3,727	3,727	3,618 ^r	3,618
Perak	4,770	4,777	5,052	5,052	5,122
Perlis	922	919	766	748 ^r	745
Selangor	6,188	6,198	6,198	5,710	5,494
Terengganu	1,371	1,342	1,320	1,314 ^r	1,297
Pen. Malaysia & F.T. Labuan	42,076	40,163	40,166	39,636 ^r	39,287



% AC PIPE TO TOTAL PIPE LENGTH

Unit (%)	2020	2021	2022	2023	2024
Johor	28.2%	27.3%	26.7%	26.3%	26.2%
Kedah	56.2%	46.6%	46.4%	46.6%	44.7%
Kelantan	49.3%	56.8%	57.2%	55.4%	54.4%
F.T. Labuan	22.6%	22.7%	22.6%	21.5%	20.5%
Melaka	22.1%	21.4%	20.9%	20.5%	19.9%
N.Sembilan	43.8%	43.4%	42.9%	42.5%	42.9%
Pulau Pinang	25.9%	25.4%	25.0%	24.3%	24.1%
Pahang	24.7%	24.7%	24.7%	23.5% ^r	23.4%
Perak	31.7%	30.6%	30.1%	30.1%	30.3%
Perlis	47.6%	47.2%	39.1%	37.2% ^r	37.0%
Selangor	20.9%	20.7%	20.4%	18.6%	17.6%
Terengganu	17.4%	16.7%	15.9%	15.6% ^r	15.2%
Pen. Malaysia & F.T. Labuan	31.2%	29.8%	29.3%	28.5% ^r	28.0%

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



PIPE LENGTH: MILD STEEL (MS)

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	5,155	5,266	5,357	5,417	5,436
Kedah	2,605	2,297	2,229	2,369	2,653
Kelantan	603	482	537	542	558
F.T. Labuan	151	151	151	147	147
Melaka	1,660	1,722	1,785	1,833	1,914
N.Sembilan	3,527	3,590	3,693	3,741	3,816
Pulau Pinang	1,067	1,108	1,141	1,205	1,234
Pahang	3,646	3,646	3,646	4,071 ^r	4,071
Perak	1,276	2,204	2,102	2,102	1,883
Perlis	251	257	401	414 ^r	417
Selangor	13,913	14,068	14,023	14,007	14,237
Terengganu	1,547	1,633	1,770	1,786 ^r	1,840
Pen. Malaysia & F.T. Labuan	35,401	36,424	36,835	37,635 ^r	38,206



% MS PIPE TO TOTAL PIPE LENGTH

Unit (%)	2020	2021	2022	2023	2024
Johor	22.1%	22.2%	22.3%	22.4%	22.5%
Kedah	18.4%	17.5%	16.9%	17.6%	19.4%
Kelantan	7.4%	6.7%	7.6%	7.5%	7.6%
F.T. Labuan	25.3%	25.3%	25.2%	24.5%	24.2%
Melaka	30.8%	31.2%	32.2%	32.0%	32.6%
N.Sembilan	38.7%	38.7%	39.3%	38.9%	39.9%
Pulau Pinang	23.0%	23.6%	24.1%	25.2%	25.7%
Pahang	24.2%	24.2%	24.2%	26.4% ^r	26.4%
Perak	8.5%	14.1%	12.5%	12.5%	11.1%
Perlis	13.0%	13.2%	20.5%	20.6% ^r	20.7%
Selangor	47.1%	46.9%	46.1%	45.6%	45.6%
Terengganu	19.7%	20.3%	21.3%	21.2% ^r	21.6%
Pen. Malaysia & F.T. Labuan	26.3%	27.0%	26.9%	27.1% ^r	27.3%

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



PIPE LENGTH: CAST IRON (CI)

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	134	133	133	131	128
Kedah	234	95	82	82	90
Kelantan	25	25	25	25	25
F.T. Labuan	1	1	1	1	1
Melaka	19	20	18	18	16
N.Sembilan	22	22	22	22	23
Pulau Pinang	102	102	100	100	100
Pahang	7	3	3	3	3
Perak	190	582	589	589	195
Perlis	4	4	1	1	1
Selangor	52	52	51	52	52
Terengganu	6	6	6	6	6
Pen. Malaysia & F.T. Labuan	796	1,046	1,031	1,029	638



% CI PIPE TO TOTAL PIPE LENGTH

Unit (%)	2020	2021	2022	2023	2024
Johor	0.6%	0.6%	0.6%	0.5%	0.5%
Kedah	1.6%	0.7%	0.6%	0.6%	0.7%
Kelantan	0.3%	0.3%	0.4%	0.3%	0.3%
F.T. Labuan	0.2%	0.2%	0.2%	0.2%	0.2%
Melaka	0.4%	0.4%	0.3%	0.3%	0.3%
N.Sembilan	0.2%	0.2%	0.2%	0.2%	0.2%
Pulau Pinang	2.2%	2.2%	2.1%	2.1%	2.1%
Pahang	0.0%	0.0%	0.0%	0.0%	0.0%
Perak	1.3%	3.7%	3.5%	3.5%	1.2%
Perlis	0.2%	0.2%	0.0%	0.0% ^r	0.0%
Selangor	0.2%	0.2%	0.2%	0.2%	0.2%
Terengganu	0.1%	0.1%	0.1%	0.1%	0.1%
Pen. Malaysia & F.T. Labuan	0.6%	0.8%	0.8%	0.7%	0.5%

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



PIPE LENGTH: DUCTILE IRON (DI)

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	1,919	1,932	1,953	1,975	1,977
Kedah	467	868	871	907	870
Kelantan	75	72	75	75	67
F.T. Labuan	74	74	74	74	74
Melaka	98	97	84	91	91
N.Sembilan	205	213	221	224	225
Pulau Pinang	698	707	715	720	719
Pahang	236	236	236	267	272
Perak	365	296	401	401	348
Perlis	4	4	10	15 ^r	15
Selangor	2,996	3,191	3,496	3,979	4,256
Terengganu	907	939	977	980	1,001
Pen. Malaysia & F.T. Labuan	8,043	8,629	9,110	9,706 ^r	9,916



% DI PIPE TO TOTAL PIPE LENGTH

Unit (%)	2020	2021	2022	2023	2024
Johor	8.2%	8.1%	8.1%	8.2%	8.2%
Kedah	3.3%	6.6%	6.6%	6.7%	6.4%
Kelantan	0.9%	1.0%	1.1%	1.0%	0.9%
F.T. Labuan	12.4%	12.4%	12.4%	12.3%	12.2%
Melaka	1.8%	1.8%	1.5%	1.6%	1.6%
N.Sembilan	2.3%	2.3%	2.3%	2.3%	2.4%
Pulau Pinang	15.0%	15.1%	15.1%	15.1%	15.0%
Pahang	1.6%	1.6%	1.6%	1.7% ^r	1.8%
Perak	2.4%	1.9%	2.4%	2.4%	2.1%
Perlis	0.2%	0.2%	0.5%	0.7% ^r	0.7%
Selangor	10.1%	10.6%	11.5%	12.9%	13.6%
Terengganu	11.5%	11.7%	11.8%	11.6% ^r	11.7%
Pen. Malaysia & F.T. Labuan	6.0%	6.4%	6.6%	7.0%	7.1%

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



PIPE LENGTH: POLYETHYLENE (PE)

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	867	871	899	893	891
Kedah	2,648	2,811	2,959	2,900	2,994
Kelantan	2,921	2,025	2,058	2,047	2,111
F.T. Labuan	215	214	215	227	235
Melaka	906	895	897	915	907
N.Sembilan	817	871	894	908	911
Pulau Pinang	1,480	1,497	1,503	1,503	1,499
Pahang	5,175	5,159	5,159	5,117 ^r	5,117
Perak	5,459	2,745	2,869	2,869	2,874
Perlis	749	758	779	831 ^r	835
Selangor	2,538	2,707	2,970	3,211	3,384
Terengganu	624	624	631	631	631
Pen. Malaysia & F.T. Labuan	24,398	21,177	21,832	22,051 ^r	22,391



% PE PIPE TO TOTAL PIPE LENGTH

Unit (%)	2020	2021	2022	2023	2024
Johor	3.7%	3.7%	3.7%	3.7%	3.7%
Kedah	18.7%	21.5%	22.4%	21.6%	21.9%
Kelantan	36.0%	28.1%	29.1%	28.2%	28.7%
F.T. Labuan	36.0%	35.9%	36.0%	37.7%	38.7%
Melaka	16.8%	16.2%	16.2%	16.0%	15.5%
N.Sembilan	9.0%	9.4%	9.5%	9.4%	9.5%
Pulau Pinang	31.9%	31.9%	31.8%	31.5%	31.2%
Pahang	34.3%	34.2%	34.2%	33.2% ^r	33.2%
Perak	36.3%	17.6%	17.1%	17.1%	17.0%
Perlis	38.7%	38.9%	39.8%	41.3% ^r	41.5%
Selangor	8.6%	9.0%	9.8%	10.4%	10.8%
Terengganu	7.9%	7.8%	7.6%	7.5%	7.4%
Pen. Malaysia & F.T. Labuan	18.1%	15.7%	15.9%	15.9%	16.0%

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



PIPE LENGTH: UNPLASTISIZED POLYVINYLCHLORIDE (uPVC)

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	8,062	8,411	8,599	8,725	8,740
Kedah	260	905	908	908	922
Kelantan	331	188	189	395	423
F.T. Labuan	n.a	n.a	n.a	n.a	n.a
Melaka	1,006	1,074	1,034	1,061	1,077
N.Sembilan	295	313	336	338	328
Pulau Pinang	82	82	82	81	81
Pahang	927	926	926	927 ^r	927
Perak	2,984	4,502	5,236	5,236	5,564
Perlis	6	6	2	1 ^r	1
Selangor	3,690	3,689	3,586	3,688	3,718
Terengganu	3,045	3,070	3,076	3,090 ^r	3,103
Pen. Malaysia & F.T. Labuan	20,688	23,164	23,973	24,449 ^r	24,883



% uPVC PIPE TO TOTAL PIPE LENGTH

Unit (%)	2020	2021	2022	2023	2024
Johor	34.5%	35.5%	35.8%	36.1%	36.1%
Kedah	1.8%	6.9%	6.9%	6.7%	6.8%
Kelantan	4.1%	2.6%	2.7%	5.4%	5.7%
F.T. Labuan	n.a	n.a	n.a	n.a	n.a
Melaka	18.7%	19.4%	18.6%	18.6%	18.3%
N.Sembilan	3.2%	3.4%	3.6%	3.5%	3.4%
Pulau Pinang	1.8%	1.7%	1.7%	1.7%	1.7%
Pahang	6.1%	6.1%	6.1%	6.0% ^r	6.0%
Perak	19.8%	28.8%	31.2%	31.2%	32.9%
Perlis	0.3%	0.3%	0.1%	0.0% ^r	0.0%
Selangor	12.5%	12.3%	11.8%	12.0%	11.9%
Terengganu	38.7%	38.2%	37.0%	36.7%	36.4%
Pen. Malaysia & F.T. Labuan	15.3%	17.2%	17.5%	17.6%	17.8%

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



PIPE LENGTH : OTHERS

(GALVANISED IRON-GI & ACRYLONITRILE BUTADIENE-ABS)

Pipe Length (KM)	2020	2021	2022	2023	2024
Johor	615	626	646	657	667
Kedah	0	17	17	17	16
Kelantan	161	319	149	157	167
F.T. Labuan	21	21	21	23	25
Melaka	505	533	576	631	696
N.Sembilan	250	238	206	299	155
Pulau Pinang	9	9	9	9	9
Pahang	1,364	1,393	1,393	1,423 ^r	1,423
Perak	8	528	528	528	929
Perlis	n.a	n.a	n.a	1 ^r	1
Selangor	165	103	99	89	110
Terengganu	361	415	530	619 ^r	653
Pen. Malaysia & F.T. Labuan	3,459	4,203	4,173	4,452 ^r	4,851



% OTHERS PIPE TO TOTAL PIPE LENGTH

Unit (%)	2020	2021	2022	2023	2024
Johor	2.6%	2.6%	2.7%	2.7%	2.8%
Kedah	0.0%	0.1%	0.1%	0.1%	0.1%
Kelantan	2.0%	4.4%	2.1%	2.2%	2.3%
F.T. Labuan	3.5%	3.5%	3.5%	3.9%	4.2%
Melaka	9.4%	9.7%	10.4%	11.0%	11.9%
N.Sembilan	2.7%	2.6%	2.2%	3.1%	1.6%
Pulau Pinang	0.2%	0.2%	0.2%	0.2%	0.2%
Pahang	9.0%	9.2%	9.2%	9.2%	9.2%
Perak	0.1%	3.4%	3.1%	3.1%	5.5%
Perlis	n.a	n.a	n.a	0.1% ^r	0.1%
Selangor	0.6%	0.3%	0.3%	0.3%	0.4%
Terengganu	4.6%	5.2%	6.4%	7.3% ^r	7.7%
Pen. Malaysia & F.T. Labuan	2.6%	3.1%	3.0%	3.2%	3.5%

Note: In some states, changes in the total length of pipelines are attributed to updated data from Geographic Information System (GIS) mapping and ongoing pipe replacement programs.



NO. OF METERS : AGE 0-7 YEARS

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,017,697	1,000,211	1,033,523	1,126,550	1,183,698
Kedah	439,269	453,414	510,465	504,099	345,313
Kelantan	228,403	232,059	223,209	218,237	208,958
F.T. Labuan	16,306	16,000	14,886	13,251	17,297
Melaka	242,218	224,461	242,155	280,890	323,909
N.Sembilan	350,412	322,421	324,962	298,486	331,289
Pulau Pinang	427,802	474,637	407,456	435,075	503,742
Pahang	326,538	326,538	333,493	321,449	345,313
Perak	645,148	658,614	671,969	686,294	699,537
Perlis	46,174	62,742	67,978	55,163	49,586
Selangor	2,371,122	2,433,314	2,342,440	2,438,174	2,512,678
Terengganu	182,515	159,413	148,408	158,663	157,355
Pen. Malaysia & F.T. Labuan	6,293,604	6,363,824	6,320,944	6,536,331	6,678,675



% NO. OF METERS : AGE 0-7 YEARS TO TOTAL NO.OF METERS

Unit (%)	2020	2021	2022	2023	2024
Johor	83.7%	80.9%	82.0%	87.6%	90.2%
Kedah	71.3%	72.0%	79.7%	77.8%	71.7%
Kelantan	86.0%	85.6%	81.4%	79.0%	76.7%
F.T. Labuan	82.1%	78.9%	71.1%	61.9%	79.3%
Melaka	76.2%	68.4%	72.1%	82.1%	91.8%
N.Sembilan	85.4%	79.2%	75.7%	67.5%	73.1%
Pulau Pinang	66.3%	72.0%	60.2%	63.7%	71.5%
Pahang	73.5%	73.5%	71.5%	67.9%	71.7%
Perak	79.0%	79.0%	79.0%	79.0%	79.0%
Perlis	60.8%	81.2%	86.9%	69.5%	60.7%
Selangor	95.2%	95.2%	91.6%	91.6%	91.6%
Terengganu	57.7%	49.4%	44.5%	46.4%	49.2%
Pen. Malaysia & F.T. Labuan	82.4%	81.7%	79.8%	80.5%	82.3%



NO. OF METERS: AGE >7 YEARS

Unit (Nos)	2020	2021	2022	2023	2024
Johor	198,522	236,174	227,208	159,082	128,838
Kedah	177,096	176,635	130,178	143,684	136,309
Kelantan	37,286	39,176	51,090	57,934	63,636
F.T. Labuan	3,547	4,291	6,042	8,143	4,502
Melaka	75,733	103,784	93,815	61,334	28,890
N.Sembilan	59,707	84,594	104,176	143,684	122,168
Pulau Pinang	217,917	184,273	269,401	247,830	200,379
Pahang	117,850	117,850	132,816	152,158	136,309
Perak	171,495	175,074	178,625	182,433	185,953
Perlis	29,764	14,571	10,216	24,166	32,084
Selangor	120,766	123,934	214,791	223,569	230,401
Terengganu	133,987	163,428	185,280	183,606	162,201
Pen. Malaysia & F.T. Labuan	1,343,670	1,423,784	1,603,638	1,587,623	1,431,670



% NO. OF METERS: AGE >7 YEARS TO TOTAL NO.OF METERS

Unit (%)	2020	2021	2022	2023	2024
Johor	16.3%	19.1%	18.0%	12.4%	9.8%
Kedah	28.7%	28.0%	20.3%	22.2%	28.3%
Kelantan	14.0%	14.4%	18.6%	21.0%	23.3%
F.T. Labuan	17.9%	21.1%	28.9%	38.1%	20.7%
Melaka	23.8%	31.6%	27.9%	17.9%	8.2%
N.Sembilan	14.6%	20.8%	24.3%	32.5%	26.9%
Pulau Pinang	33.7%	28.0%	39.8%	36.3%	28.5%
Pahang	26.5%	26.5%	28.5%	32.1%	28.3%
Perak	21.0%	21.0%	21.0%	21.0%	21.0%
Perlis	39.2%	18.8%	13.1%	30.5%	39.3%
Selangor	4.8%	4.8%	8.4%	8.4%	8.4%
Terengganu	42.3%	50.6%	55.5%	53.6%	50.8%
Pen. Malaysia & F.T. Labuan	17.6%	18.3%	20.2%	19.5%	17.7%



NO. OF COMPLAINTS : GRAND TOTAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	171,768	158,602	171,695	175,807	179,136
Kedah	63,666	76,659	74,694	83,093	106,219
Kelantan	42,603	39,383	39,142	45,795	64,099
F.T. Labuan	1,785	2,204	6,911	11,141	9,491
Melaka	47,065	52,659	54,163	60,267	60,994
N.Sembilan	69,626	63,626	66,698	72,105	59,044
Pulau Pinang	200,666	207,970	181,149	121,444 ^r	143,207
Pahang	41,539	38,780	35,835	42,579	53,161
Perak	35,399	39,700	48,769	47,219	56,766
Perlis	11,094	4,079	4,583	4,718	17,296
Selangor	645,619	655,704	650,639	729,182	749,225
Terengganu	26,495	32,944	31,408	42,717	46,658
Pen. Malaysia & F.T. Labuan	1,357,325	1,372,310	1,365,686	1,436,067 ^r	1,545,296



% TOTAL COMPLAINTS TO TOTAL ACCOUNTS

Unit (%)	2020	2021	2022	2023	2024
Johor	14.1%	12.8%	13.6%	13.7%	13.6%
Kedah	10.3%	12.2%	11.7%	12.7%	16.0%
Kelantan	16.0%	14.5%	14.3%	16.6%	23.5%
F.T. Labuan	9.2%	11.1%	34.0%	53.9%	45.9%
Melaka	14.8%	16.0%	16.1%	17.5%	17.2%
N.Sembilan	15.5%	13.9%	14.3%	15.3%	12.0%
Pulau Pinang	31.1%	31.6%	26.8%	17.6% ^r	20.3%
Pahang	9.3%	8.6%	7.7%	9.0%	11.0%
Perak	4.3%	4.8%	5.7%	5.4%	6.4%
Perlis	14.6%	5.3%	5.9%	5.9%	21.3%
Selangor	25.9%	25.6%	25.1%	27.4%	27.3%
Terengganu	8.2%	9.9%	9.4%	12.5%	13.3%
Pen. Malaysia & F.T. Labuan	17.7%	17.5%	17.1%	17.6% ^r	18.5%

Note: Data is based on complaints received by the Customer Service Departments of the respective State Water Operators.



NO. OF COMPLAINTS: PIPE BURST/BREAKAGES/ LEAKS

Unit (Nos)	2020	2021	2022	2023	2024
Johor	93,362	89,660	93,900	88,440	84,143
Kedah	38,042	43,562	38,910	39,668	44,133
Kelantan	25,155	21,600	22,391	28,244	42,719
F.T. Labuan	1,455	1,272	1,571	2,558	2,628
Melaka	22,351	25,024	24,450	28,260	29,158
N.Sembilan	34,870	36,037	38,141	41,813	38,144
Pulau Pinang	43,384	36,136	40,322	38,730 ^r	41,161
Pahang	25,483	23,492	23,026	28,964	37,567
Perak	25,711	28,557	34,566	33,424	37,841
Perlis	9,438	2,950	3,287	3,477	16,379
Selangor	185,893	187,667	178,813	228,973	265,100
Terengganu	18,241	20,866	26,190	26,114	30,262
Pen. Malaysia & F.T. Labuan	523,385	516,823	525,567	588,665 ^r	669,235

% COMPLAINTS TO TOTAL COMPLAINTS (PIPE BURST/BREAKAGES/ LEAKS)

Unit (%)	2020	2021	2022	2023	2024
Johor	54.4%	56.5%	54.7%	50.3%	47.0%
Kedah	59.8%	56.8%	52.1%	47.7%	41.5%
Kelantan	59.0%	54.8%	57.2%	61.7%	66.6%
F.T. Labuan	81.5%	57.7%	22.7%	23.0%	27.7%
Melaka	47.5%	47.5%	45.1%	46.9%	47.8%
N.Sembilan	50.1%	56.6%	57.2%	58.0%	64.6%
Pulau Pinang	21.6%	17.4%	22.3%	31.9% ^r	28.7%
Pahang	61.3%	60.6%	64.3%	68.0%	70.7%
Perak	72.6%	71.9%	70.9%	70.8%	66.7%
Perlis	85.1%	72.3%	71.7%	73.7%	94.7%
Selangor	28.8%	28.6%	27.5%	31.4%	35.4%
Terengganu	68.8%	63.3%	83.4%	61.1%	64.9%
Pen. Malaysia & F.T. Labuan	38.6%	37.7%	38.5%	41.0% ^r	43.3%

% COMPLAINTS TO TOTAL ACCOUNTS (PIPE BURST/BREAKAGES/ LEAKS)

Unit (%)	2020	2021	2022	2023	2024
Johor	7.7%	7.3%	7.4%	6.9%	6.4%
Kedah	6.2%	6.9%	6.1%	6.1%	6.7%
Kelantan	9.5%	8.0%	8.2%	10.2%	15.7%
F.T. Labuan	7.5%	6.4%	7.7%	12.4%	12.7%
Melaka	7.0%	7.6%	7.3%	8.2%	8.2%
N.Sembilan	7.7%	7.9%	8.2%	8.9%	7.8%
Pulau Pinang	6.7%	5.5%	6.0%	5.6% ^r	5.8%
Pahang	5.7%	5.2%	4.9%	6.1%	7.8%
Perak	3.1%	3.4%	4.1%	3.8%	4.3%
Perlis	12.5%	3.8%	4.2%	4.4%	20.2%
Selangor	7.5%	7.3%	6.9%	8.6%	9.7%
Terengganu	5.7%	6.3%	7.8%	7.6%	8.6%
Pen. Malaysia & F.T. Labuan	6.8%	6.6%	6.6%	7.2%	8.0%

Note: Data is based on complaints received by the Customer Service Departments of the respective State Water Operators.



NO. OF COMPLAINTS: WATER QUALITY

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,935	1,600	1,680	2,489	2,569
Kedah	769	666	327	263	390
Kelantan	2,638	616	686	546	1,069
F.T. Labuan	9	10	40	65	75
Melaka	757	2,131	748	738	373
N.Sembilan	490	521	319	514	420
Pulau Pinang	553	605	621	426 ^r	622
Pahang	305	363	183	192	367
Perak	271	305	358	376	594
Perlis	91	92	71	83	52
Selangor	3,230	4,464	2,792	4,699	3,891
Terengganu	159	277	375	361	377
Pen. Malaysia & F.T. Labuan	11,207	11,650	8,200	10,752 ^r	10,799

% COMPLAINTS TO TOTAL COMPLAINTS (WATER QUALITY)

Unit (%)	2020	2021	2022	2023	2024
Johor	1.1%	1.0%	1.0%	1.4%	1.4%
Kedah	1.2%	0.9%	0.4%	0.3%	0.4%
Kelantan	6.2%	1.6%	1.8%	1.2%	1.7%
F.T. Labuan	0.5%	0.5%	0.6%	0.6%	0.8%
Melaka	1.6%	4.0%	1.4%	1.2%	0.6%
N.Sembilan	0.7%	0.8%	0.5%	0.7%	0.7%
Pulau Pinang	0.3%	0.3%	0.3%	0.4% ^r	0.4%
Pahang	0.7%	0.9%	0.5%	0.5%	0.7%
Perak	0.8%	0.8%	0.7%	0.8%	1.0%
Perlis	0.8%	2.3%	1.5%	1.8%	0.3%
Selangor	0.5%	0.7%	0.4%	0.6%	0.5%
Terengganu	0.6%	0.8%	1.2%	0.8%	0.8%
Pen. Malaysia & F.T. Labuan	0.8%	0.8%	0.6%	0.7%	0.7%

% COMPLAINTS TO TOTAL ACCOUNTS (WATER QUALITY)

Unit (%)	2020	2021	2022	2023	2024
Johor	0.2%	0.1%	0.1%	0.2%	0.2%
Kedah	0.1%	0.1%	0.1%	0.0%	0.1%
Kelantan	1.0%	0.2%	0.3%	0.2%	0.4%
F.T. Labuan	0.0%	0.1%	0.2%	0.3%	0.4%
Melaka	0.2%	0.6%	0.2%	0.2%	0.1%
N.Sembilan	0.1%	0.1%	0.1%	0.1%	0.1%
Pulau Pinang	0.1%	0.1%	0.1%	0.1%	0.1%
Pahang	0.1%	0.1%	0.0%	0.0%	0.1%
Perak	0.0%	0.0%	0.0%	0.0%	0.1%
Perlis	0.1%	0.1%	0.1%	0.1%	0.1%
Selangor	0.1%	0.2%	0.1%	0.2%	0.1%
Terengganu	0.0%	0.1%	0.1%	0.1%	0.1%
Pen. Malaysia & F.T. Labuan	0.1%	0.1%	0.1%	0.1%	0.1%

Note: Data is based on complaints received by the Customer Service Departments of the respective State Water Operators.



NO. OF COMPLAINTS : WATER PRESSURE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	12,927	12,650	14,733	16,621	16,384
Kedah	3,211	4,924	4,366	4,906	4,935
Kelantan	910	814	898	737	923
F.T. Labuan	62	129	137	253	293
Melaka	5,152	7,109	6,846	6,953	7,164
N.Sembilan	5,378	5,747	5,403	5,519	5,211
Pulau Pinang	5,522	5,129	4,541	4,277 ^r	5,941
Pahang	3,759	3,990	3,784	4,089	4,329
Perak	3,071	3,521	4,234	4,292	4,968
Perlis	396	262	295	386	316
Selangor	38,417	42,970	39,308	42,771	38,407
Terengganu	4,240	5,686	2,108	7,124	6,817
Pen. Malaysia & F.T. Labuan	83,045	92,931	86,653	97,928 ^r	95,688

% COMPLAINTS TO TOTAL COMPLAINTS (WATER PRESSURE)

Unit (%)	2020	2021	2022	2023	2024
Johor	7.5%	8.0%	8.6%	9.5%	9.1%
Kedah	5.0%	6.4%	5.8%	5.9%	4.6%
Kelantan	2.1%	2.1%	2.3%	1.6%	1.4%
F.T. Labuan	3.5%	5.9%	2.0%	2.3%	3.1%
Melaka	10.9%	13.5%	12.6%	11.5%	11.7%
N.Sembilan	7.7%	9.0%	8.1%	7.7%	8.8%
Pulau Pinang	2.8%	2.5%	2.5%	3.5% ^r	4.1%
Pahang	9.0%	10.3%	10.6%	9.6%	8.1%
Perak	8.7%	8.9%	8.7%	9.1%	8.8%
Perlis	3.6%	6.4%	6.4%	8.2%	1.8%
Selangor	6.0%	6.6%	6.0%	5.9%	5.1%
Terengganu	16.0%	17.3%	6.7%	16.7%	14.6%
Pen. Malaysia & F.T. Labuan	6.1%	6.8%	6.3%	6.8% ^r	6.2%

% COMPLAINTS TO TOTAL ACCOUNTS (WATER PRESSURE)

Unit (%)	2020	2021	2022	2023	2024
Johor	1.1%	1.0%	1.2%	1.3%	1.2%
Kedah	0.5%	0.8%	0.7%	0.8%	0.7%
Kelantan	0.3%	0.3%	0.3%	0.3%	0.3%
F.T. Labuan	0.3%	0.6%	0.7%	1.2%	1.4%
Melaka	1.6%	2.2%	2.0%	2.0%	2.0%
N.Sembilan	1.2%	1.3%	1.2%	1.2%	1.1%
Pulau Pinang	0.9%	0.8%	0.7%	0.6%	0.8%
Pahang	0.8%	0.9%	0.8%	0.9%	0.9%
Perak	0.4%	0.4%	0.5%	0.5%	0.6%
Perlis	0.5%	0.3%	0.4%	0.5%	0.4%
Selangor	1.5%	1.7%	1.5%	1.6%	1.4%
Terengganu	1.3%	1.7%	0.6%	2.1%	1.9%
Pen. Malaysia & F.T. Labuan	1.1%	1.2%	1.1%	1.2%	1.1%

Note: Data is based on complaints received by the Customer Service Departments of the respective State Water Operators.



NO. OF COMPLAINTS: WATER SUPPLY INTERRUPTION

Unit (Nos)	2020	2021	2022	2023	2024
Johor	38,143	32,513	42,540	50,261	51,502
Kedah	18,812	25,031	29,081	35,968	50,915
Kelantan	10,329	11,853	10,263	10,463	11,492
F.T. Labuan	6	228	2,599	4,599	4,014
Melaka	13,308	14,630	11,476	11,557	9,026
N.Sembilan	11,243	10,490	12,267	12,555	10,192
Pulau Pinang	6,717	5,228	7,266	6,144 ^r	8,630
Pahang	2,438	2,741	2,501	3,083	3,015
Perak	5,209	6,062	7,847	7,467	10,658
Perlis	876	607	783	710	495
Selangor	119,471	114,253	106,344	116,403	107,351
Terengganu	186	1,279	432	339	121
Pen. Malaysia & F.T. Labuan	226,738	224,915	233,399	259,549 ^r	267,411

% COMPLAINTS TO TOTAL COMPLAINTS (WATER SUPPLY INTERRUPTION)

Unit (%)	2020	2021	2022	2023	2024
Johor	22.2%	20.5%	24.8%	28.6%	28.8%
Kedah	29.5%	32.7%	38.9%	43.3%	47.9%
Kelantan	24.2%	30.1%	26.2%	22.8%	17.9%
F.T. Labuan	0.3%	10.3%	37.6%	41.3%	42.3%
Melaka	28.3%	27.8%	21.2%	19.2%	14.8%
N.Sembilan	16.1%	16.5%	18.4%	17.4%	17.3%
Pulau Pinang	3.3%	2.5%	4.0%	5.1%	6.0%
Pahang	5.9%	7.1%	7.0%	7.2% ^r	5.7%
Perak	14.7%	15.3%	16.1%	15.8%	18.8%
Perlis	7.9%	14.9%	17.1%	15.0%	2.9%
Selangor	18.5%	17.4%	16.3%	16.0%	14.3%
Terengganu	0.7%	3.9%	1.4%	0.8%	0.3%
Pen. Malaysia & F.T. Labuan	16.7%	16.4%	17.1%	18.1% ^r	17.3%

% COMPLAINTS TO TOTAL ACCOUNTS (WATER SUPPLY INTERRUPTION)

Unit (%)	2020	2021	2022	2023	2024
Johor	3.1%	2.6%	3.4%	3.9%	3.9%
Kedah	3.1%	4.0%	4.5%	5.5%	7.7%
Kelantan	3.9%	4.4%	3.7%	3.8%	4.2%
F.T. Labuan	0.0%	1.1%	12.8%	22.3%	19.4%
Melaka	4.2%	4.5%	3.4%	3.4%	2.5%
N.Sembilan	2.5%	2.3%	2.6%	2.7%	2.1%
Pulau Pinang	1.0%	0.8%	1.1%	0.9%	1.2%
Pahang	0.5%	0.6%	0.5%	0.7%	0.6%
Perak	0.6%	0.7%	0.9%	0.9%	1.2%
Perlis	1.2%	0.8%	1.0%	0.9%	0.6%
Selangor	4.8%	4.5%	4.1%	4.4%	3.9%
Terengganu	0.1%	0.4%	0.1%	0.1%	0.0%
Pen. Malaysia & F.T. Labuan	3.0%	2.9%	2.9%	3.2%	3.2%

Note: Data is based on complaints received by the Customer Service Departments of the respective State Water Operators.



NO. OF COMPLAINTS : BILLING & METER

Unit (Nos)	2020	2021	2022	2023	2024
Johor	17,320	15,756	13,972	13,337	21,313
Kedah	134	0	0	31	3,026
Kelantan	2,509	3,673	3,821	4,792	5,242
F.T. Labuan	247	459	1,217	1,408	1,501
Melaka	3,330	2,253	2,133	2,594	3,187
N.Sembilan	15,043	10,144	9,628	10,645	3,576
Pulau Pinang	18,718	16,914	21,844	18,527 ^r	18,415
Pahang	6,798	5,889	4,813	4,588	6,783
Perak	709	1,249	1,660	1,660	2,705
Perlis	184	140	126	44	35
Selangor	252,186	255,667	274,829	287,117	284,527
Terengganu	3,390	3,701	844	6,789	7,333
Pen. Malaysia & F.T. Labuan	320,568	315,845	334,887	351,532 ^r	357,643

% COMPLAINTS TO TOTAL COMPLAINTS (BILLING & METER)

Unit (%)	2020	2021	2022	2023	2024
Johor	10.1%	9.9%	8.1%	7.6%	11.9%
Kedah	0.2%	0.0%	0.0%	0.0%	2.8%
Kelantan	5.9%	9.3%	9.8%	10.5%	8.2%
F.T. Labuan	13.8%	20.8%	17.6%	12.6%	15.8%
Melaka	7.1%	4.3%	3.9%	4.3%	5.2%
N.Sembilan	21.6%	15.9%	14.4%	14.8%	6.1%
Pulau Pinang	9.3%	8.1%	12.1%	15.3% ^r	12.9%
Pahang	16.4%	15.2%	13.4%	10.8%	12.8%
Perak	2.0%	3.1%	3.4%	3.5%	4.8%
Perlis	1.7%	3.4%	2.7%	0.9%	0.2%
Selangor	39.1%	39.0%	42.2%	39.4%	38.0%
Terengganu	12.8%	11.2%	2.7%	15.9%	15.7%
Pen. Malaysia & F.T. Labuan	23.6%	23.0%	24.5%	24.5% ^r	23.1%

% COMPLAINTS TO TOTAL ACCOUNTS (BILLING & METER)

Unit (%)	2020	2021	2022	2023	2024
Johor	1.4%	1.3%	1.1%	1.0%	1.6%
Kedah	0.0%	0.0%	0.0%	0.0%	0.5%
Kelantan	0.9%	1.4%	1.4%	1.7%	1.9%
F.T. Labuan	1.3%	2.3%	6.0%	6.8%	7.3%
Melaka	1.0%	0.7%	0.6%	0.8%	0.9%
N.Sembilan	3.3%	2.2%	2.1%	2.3%	0.7%
Pulau Pinang	2.9%	2.6%	3.2%	2.7%	2.6%
Pahang	1.5%	1.3%	1.0%	1.0%	1.4%
Perak	0.1%	0.1%	0.2%	0.2%	0.3%
Perlis	0.2%	0.2%	0.2%	0.1%	0.0%
Selangor	10.1%	10.0%	10.6%	10.8%	10.4%
Terengganu	1.1%	1.1%	0.3%	2.0%	2.1%
Pen. Malaysia & F.T. Labuan	4.2%	4.0%	4.2%	4.3%	4.3%

Note: Data is based on complaints received by the Customer Service Departments of the respective State Water Operators.



NO. OF COMPLAINTS: OTHERS

Unit (Nos)	2020	2021	2022	2023	2024
Johor	8,081	6,423	4,870	4,659	3,225
Kedah	2,698	2,476	2,010	2,257	2,820
Kelantan	1,062	827	1,083	1,013	2,654
F.T. Labuan	6	106	1,347	2,258	980
Melaka	2,167	1,512	8,510	10,165	12,086
N.Sembilan	2,602	687	940	1,059	1,501
Pulau Pinang	125,772	143,958	106,555	53,340 ^r	68,438
Pahang	2,756	2,305	1,528	1,663	1,100
Perak	428	6	104	0	0
Perlis	109	28	21	18	19
Selangor	46,422	50,683	48,553	49,219	49,949
Terengganu	279	1,135	1,459	1,990	1,748
Pen. Malaysia & F.T. Labuan	192,382	210,146	176,980	127,641 ^r	144,520

% COMPLAINTS TO TOTAL COMPLAINTS (OTHERS)

Unit (%)	2020	2021	2022	2023	2024
Johor	4.7%	4.0%	2.8%	2.7%	1.8%
Kedah	4.2%	3.2%	2.7%	2.7%	2.7%
Kelantan	2.5%	2.1%	2.8%	2.2%	4.1%
F.T. Labuan	0.3%	4.8%	19.5%	20.3%	10.3%
Melaka	4.6%	2.9%	15.7%	16.9%	19.8%
N.Sembilan	3.7%	1.1%	1.4%	1.5%	2.5%
Pulau Pinang	62.7%	69.2%	58.8%	43.9% ^r	47.8%
Pahang	6.6%	5.9%	4.3%	3.9%	2.1%
Perak	1.2%	0.0%	0.2%	0.0%	0.0%
Perlis	1.0%	0.7%	0.5%	0.4%	0.1%
Selangor	7.2%	7.7%	7.5%	6.7%	6.7%
Terengganu	1.1%	3.4%	4.6%	4.7%	3.7%
Pen. Malaysia & F.T. Labuan	14.2%	15.3%	13.0%	8.9% ^r	9.4%

% COMPLAINTS TO TOTAL ACCOUNTS (OTHERS)

Unit (%)	2020	2021	2022	2023	2024
Johor	0.7%	0.5%	0.4%	0.4%	0.2%
Kedah	0.4%	0.4%	0.3%	0.3%	0.4%
Kelantan	0.4%	0.3%	0.4%	0.4%	1.0%
F.T. Labuan	0.0%	0.5%	6.6%	10.9%	4.7%
Melaka	0.7%	0.5%	2.5%	3.0%	3.4%
N.Sembilan	0.6%	0.2%	0.2%	0.2%	0.3%
Pulau Pinang	19.5%	21.8%	15.7%	7.7% ^r	9.7%
Pahang	0.6%	0.5%	0.3%	0.4%	0.2%
Perak	0.1%	0.0%	0.0%	0.0%	0.0%
Perlis	0.1%	0.0%	0.0%	0.0%	0.0%
Selangor	1.9%	2.0%	1.9%	1.8%	1.8%
Terengganu	0.1%	0.3%	0.4%	0.6%	0.5%
Pen. Malaysia & F.T. Labuan	2.5%	2.7%	2.2%	1.6% ^r	1.7%

Note:

- Data is based on complaints received by the Customer Service Departments of the respective State Water Operators.
- Other complaints include issues such as illegal connections, asset vandalism, and related matters.



NO. OF INTERRUPTIONS : SCHEDULED

Unit (Nos)	2020	2021	2022	2023	2024
Johor	62	217	315	225	181
Kedah	16	110	44	51	37
Kelantan	82	57	85	61	125
F.T. Labuan	15	38	4	5	6
Melaka	13	14	4	67	34
N.Sembilan	23	24	19	26	19
Pulau Pinang	55	40	34	29	38
Pahang	195	120	188	177	186
Perak	168	167	190	206	10
Perlis	8	14	9	7	44
Selangor	1,302	1,575	1,030	1,723	1,954
Terengganu	87	259	13	7	3
Pen. Malaysia & F.T. Labuan	2,026	2,635	1,935	2,584	2,637



NO. OF INTERRUPTIONS : UNSCHEDULED

Unit (Nos)	2020	2021	2022	2023	2024
Johor	7,406	6,576	6,175	5,659	5,721
Kedah	92	183	270	327	355
Kelantan	355	468	499	421	537
F.T. Labuan	1	322	376	190	432
Melaka	35	32	4	132	56
N.Sembilan	5,378	5,747	5,403	5,519	5,211
Pulau Pinang	6,717	5,228	7,266	6,330	8,914
Pahang	4,100	3,589	3,836	4,012	3,959
Perak	5,200	6,122	7,302	7,428	264
Perlis	4	32	14	12	33
Selangor	17,719	15,905	10,518	10,490	10,312
Terengganu	1,105	1,821	2,293	1,776	2,242
Pen. Malaysia & F.T. Labuan	48,112	46,025	43,956	42,296	38,036



NO. OF STAFF : GRAND TOTAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	2,225	2,218	2,208	2,187	2,427
Kedah	1,432	1,506	1,452	1,429	1,423
Kelantan	780	771	785	772	775
F.T. Labuan	121	121	121	119 ^r	128
Melaka	778	814	738	728	743
N.Sembilan	1,074	1,038	1,071	1,162	1,038
Pulau Pinang	1,417	1,423	1,373	1,418	1,508
Pahang	1,566	1,486	1,486	1,690	1,722
Perak	1,085	1,085	1,091	974	1,070
Perlis	156	153	169	169	202
Selangor	5,022	4,962	5,066	5,084	5,066
Terengganu	418	559	569	574 ^r	566
Pen. Malaysia & F.T. Labuan	16,074	16,136	16,129	16,306	16,668



NO. OF STAFF : MANAGEMENT

Unit (Nos)	2020	2021	2022	2023	2024
Johor	153	149	147	159	165
Kedah	33	35	45	40	41
Kelantan	40	37	34	41	44
F.T. Labuan	1	1	1	1	1
Melaka	26	29	31	29	26
N.Sembilan	28	29	27	18	19
Pulau Pinang	14	14	34	15	15
Pahang	54	52	52	62	72
Perak	46	44	42	40	44
Perlis	15	15	11	11	7
Selangor	262	265	283	278	279
Terengganu	31	24	27	31	36
Pen. Malaysia & F.T. Labuan	703	694	734	725	749



NO. OF STAFF: EXECUTIVE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	173	168	176	185	215
Kedah	128	129	141	128	135
Kelantan	81	76	72	71	71
F.T. Labuan	4	4	4	3	4
Melaka	41	41	39	58	65
N.Sembilan	74	69	76	87	101
Pulau Pinang	88	89	129	96	112
Pahang	32	28	28	39	56
Perak	217	206	204	187	197
Perlis	15	12	22	22	41
Selangor	1,122	1,130	1,166	1,176	1,149
Terengganu	30	44	47	38 ^r	40
Pen. Malaysia & F.T. Labuan	2,005	1,996	2,104	2,090 ^r	2,186



NO. OF STAFF: NON-EXECUTIVE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,669	1,658	1,644	1,598	1,797
Kedah	1,125	1,201	1,120	1,100	1,097
Kelantan	587	587	608	589	595
F.T. Labuan	105	105	105	109	117
Melaka	648	654	621	592	601
N.Sembilan	881	860	892	961	835
Pulau Pinang	1,227	1,232	1,070	1,226	1,293
Pahang	1,350	1,279	1,279	1,452	1,432
Perak	665	658	668	584	652
Perlis	108	108	118	118	137
Selangor	3,241	3,180	3,248	3,259	3,276
Terengganu	258	392	391	403 ^r	391
Pen. Malaysia & F.T. Labuan	11,864	11,914	11,764	11,991 ^r	12,223



NO. OF STAFF : METER READERS

Unit (Nos)	2020	2021	2022	2023	2024
Johor	230	243	241	245	250
Kedah	146	141	146	161	150
Kelantan	72	71	71	71	65
F.T. Labuan	11	11	11	6 ^r	6
Melaka	63	90	47	49	51
N.Sembilan	91	80	76	96	83
Pulau Pinang	88	88	140	81	88
Pahang	130	127	127	137	162
Perak	157	177	177	163	177
Perlis	18	18	18	18	17
Selangor	397	387	369	371	362
Terengganu	99	99	104	102 ^r	99
Pen. Malaysia & F.T. Labuan	1,502	1,532	1,527	1,500 ^r	1,510





PHYSICAL PERFORMANCE INDICATOR: TOTAL POPULATION SERVED PER KM PIPELINE

Unit (Population Served / km)	2020	2021	2022	2023	2024
Johor	162	160	168	170	173
Kedah	154	167	165	161 ^r	162
Kelantan	235	268	258	252 ^r	257
F.T. Labuan	167	168	162	161 ^r	166
Melaka	173	170	182	176 ^r	178
N.Sembilan	124	122	129	126 ^r	130
Pulau Pinang	382	378	367	364 ^r	375
Pahang	111	112	107	105 ^r	108
Perak	167	160	150	150 ^r	152
Perlis	132	131	148	144 ^r	147
Selangor	285	281	299	296 ^r	306
Terengganu	160	159	143	141 ^r	144
Pen. Malaysia & F.T. Labuan	192	193	195	193 ^r	198



PHYSICAL PERFORMANCE INDICATOR: NETWORK DENSITY

Unit (Km Pipeline Per Sq. Km Area)	2020	2021	2022	2023	2024
Johor	1.22	1.24	1.25	1.26	1.26
Kedah	1.50	1.38	1.39	1.42	1.44
Kelantan	0.54	0.48	0.47	0.48	0.49
F.T. Labuan	6.48	6.47	6.48	6.54	6.61
Melaka	3.15	3.23	3.24	3.34	3.43
N.Sembilan	1.37	1.39	1.41	1.44	1.43
Pulau Pinang	4.42	4.48	4.51	4.55	4.58
Pahang	0.42	0.42	0.42	0.43 ^r	0.43
Perak	0.71	0.74	0.79	0.79	0.80
Perlis	2.36	2.38	2.39	2.45	2.46
Selangor	3.58	3.64	3.69	3.73	3.79
Terengganu	0.60	0.62	0.64	0.65	0.65
Pen. Malaysia & F.T. Labuan	1.02	1.02	1.04	1.05	1.06



PHYSICAL PERFORMANCE INDICATOR: DOMESTIC CONNECTION DENSITY

Unit (Domestic Connection / km)	2020	2021	2022	2023	2024
Johor	45	45	45	46	46
Kedah	39	43	43	43	43
Kelantan	28	32	33	33	32
F.T. Labuan	28	28	29	29	29
Melaka	51	51	52	52	52
N.Sembilan	42	42	43	42	45
Pulau Pinang	120	122	124	124	126
Pahang	26	26	27	27	27
Perak	47	47	44	44	45
Perlis	35	35	35	34 ^r	35
Selangor	73	74	74	76	77
Terengganu	35	35	34	34	34
Pen. Malaysia & F.T. Labuan	49	51	50	51	52



PHYSICAL PERFORMANCE INDICATOR: POPULATION PER DOMESTIC CONNECTION

Unit (Population/ Domestic Connection)	2020	2021	2022	2023	2024
Johor	3.62	3.57	3.71	3.72 ^r	3.75
Kedah	3.97	3.90	3.84	3.77 ^r	3.79
Kelantan	8.35	8.28	7.77	7.68 ^r	8.03
F.T. Labuan	6.07	5.96	5.62	5.53 ^r	5.74
Melaka	3.38	3.30	3.47	3.38 ^r	3.41
N.Sembilan	2.93	2.88	3.02	2.99 ^r	2.91
Pulau Pinang	3.17	3.11	2.97	2.93 ^r	2.97
Pahang	4.31	4.28	3.98	3.94 ^r	4.01
Perak	3.52	3.45	3.45	3.38 ^r	3.38
Perlis	3.76	3.71	4.27	4.22 ^r	4.24
Selangor	3.89	3.77	4.02	3.90 ^r	3.97
Terengganu	4.62	4.57	4.24	4.16 ^r	4.24
Pen. Malaysia & F.T. Labuan	3.89	3.81	3.87	3.80 ^r	3.84



OPERATIONAL PERFORMANCE INDICATOR: NRW PER CONNECTION

Unit (m3 / connection / day)	2020	2021	2022	2023	2024
Johor	0.42	0.37	0.40	0.38	0.37
Kedah	1.17	1.22	1.28	1.25	1.23
Kelantan	0.99	0.98	1.01	1.03	1.04
F.T. Labuan	1.42	1.58	1.50	1.46	1.52
Melaka	0.54	0.57	0.64	0.71	0.68
N.Sembilan	0.56	0.57	0.64	0.72	0.65
Pulau Pinang	0.40	0.40	0.46	0.46	0.48
Pahang	1.43	1.40	1.37	1.34 ^r	1.33
Perak	0.51	0.49	0.51	0.49	0.53
Perlis	2.19	2.04	2.01	2.23	2.01
Selangor	0.57	0.54	0.55	0.54	0.52
Terengganu	0.75	0.68	0.87	0.92	0.94
Pen. Malaysia & F.T. Labuan	0.66	0.64	0.67	0.68	0.66



OPERATIONAL PERFORMANCE INDICATOR: NRW IN DISTRIBUTION SYSTEM

Unit (m3 / km / day)	2020	2021	2022	2023	2024
Johor	21.7	19.5	20.9	20.1	19.9
Kedah	50.7	58.6	62.3	60.4	59.8
Kelantan	32.3	36.8	39.1	39.1	38.4
F.T. Labuan	46.4	52.9	51.2	50.3	51.7
Melaka	32.2	34.1	38.9	42.5	40.9
N.Sembilan	27.7	28.3	31.6	35.3	33.5
Pulau Pinang	56.2	56.6	65.5	67.1	70.4
Pahang	42.3	41.9	42.3	41.2 ^r	41.4
Perak	27.9	26.2	25.6	25.5	27.8
Perlis	85.7	81.0	80.3	88.4 ^r	80.9
Selangor	48.0	45.8	46.7	47.2	45.8
Terengganu	30.7	28.0	34.8	37.6	38.5
Pen. Malaysia & F.T. Labuan	37.7	37.4	39.3	39.8 ^r	39.5



SERVICE PERFORMANCE INDICATOR: AVERAGE CONSUMPTION PER DOMESTIC CONNECTION PER MONTH

Unit (m ³ / Nos / Month)	2020	2021	2022	2023	2024
Johor	25.3	25.1	24.4	24.4	24.5
Kedah	31.7	31.9	30.1	27.0	26.0
Kelantan	22.7	22.3	21.0	20.3	21.2
F.T. Labuan	31.0	36.6	33.5	32.6	32.9
Melaka	23.7	24.7	23.9	24.0	24.0
N.Sembilan	25.1	25.3	23.3	23.3	23.1
Pulau Pinang	29.0	29.1	27.7	25.8 ^r	24.8
Pahang	28.7	30.2	29.0	28.6 ^r	27.7
Perak	30.1	29.4	29.1	24.4	24.0
Perlis	35.0	35.4	35.9	28.1	27.8
Selangor	30.7	31.3	30.0	29.3	28.9
Terengganu	31.9	32.9	31.1	30.8	30.8
Pen. Malaysia & F.T. Labuan	28.8	29.1	27.9	26.7 ^r	26.3



SERVICE PERFORMANCE INDICATOR: AVERAGE CONSUMPTION PER NON-DOMESTIC CONNECTION PER MONTH

Unit (m ³ / Nos / Month)	2020	2021	2022	2023	2024
Johor	92.8	88.9	91.9	94.9	94.9
Kedah	89.6	80.9	87.4	110.4	111.4
Kelantan	60.7	53.9	61.1	63.1	64.5
F.T. Labuan	396.9	312.5	323.7	306.1	305.9
Melaka	135.5	127.5	138.0	141.4	136.5
N.Sembilan	103.6	104.1	105.2	101.5	112.8
Pulau Pinang	109.8	108.6	111.3	119.0 ^r	115.3
Pahang	139.7	133.6	138.3	137.7 ^r	135.6
Perak	78.5	76.2	73.3	96.3	97.6
Perlis	44.8	41.4	52.8	95.0	97.3
Selangor	127.4	122.3	136.0	138.7	144.4
Terengganu	100.9	94.1	97.2	99.8	98.8
Pen. Malaysia & F.T. Labuan	108.5	103.7	109.5	116.1 ^r	117.9



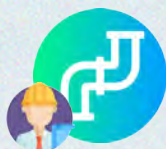
SERVICE PERFORMANCE INDICATOR: AVERAGE CONSUMPTION PER TOTAL CONNECTION PER MONTH

Unit (m ³ / Nos / Month)	2020	2021	2022	2023	2024
Johor	34.8	34.0	33.9	34.4	35.0
Kedah	37.8	37.2	36.9	36.8	35.9
Kelantan	28.0	26.8	26.6	26.1	27.2
F.T. Labuan	88.0	80.0	78.3	74.4	74.3
Melaka	38.6	38.4	39.2	39.7	39.2
N.Sembilan	36.5	36.5	35.0	34.5	34.7
Pulau Pinang	39.9	39.7	39.0	38.9 ^r	37.5
Pahang	43.0	43.7	43.4	43.4 ^r	42.4
Perak	36.2	35.4	35.3	34.5	34.3
Perlis	36.0	36.0	38.2	37.3	37.4
Selangor	43.3	42.9	43.3	42.9	43.0
Terengganu	42.6	42.5	41.8	42.3	42.5
Pen. Malaysia & F.T. Labuan	39.4	38.9	38.8	38.7 ^r	38.6



SERVICE PERFORMANCE INDICATOR: NUMBER OF CONNECTION PER EMPLOYEE PER MONTH

Unit (No. of Acc./ Employee/Month)	2020	2021	2022	2023	2024
Johor	46	46	48	49	45
Kedah	36	35	37	38	39
Kelantan	28	29	29	30	29
F.T. Labuan	13	14	14	14	13
Melaka	34	34	38	39	40
N.Sembilan	35	37	36	34	39
Pulau Pinang	38	39	41	41 ^r	39
Pahang	24	25	26	23	23
Perak	63	64	65	74	69
Perlis	40	42	39	39 ^r	34
Selangor	41	43	43	44	45
Terengganu	64	49	49	50	52
Pen. Malaysia & F.T. Labuan	40	41	41	42 ^r	42



SERVICE PERFORMANCE INDICATOR: AVERAGE PIPE LENGTH PER EMPLOYEE

Unit (Km / Employee)	2020	2021	2022	2023	2024
Johor	10.5	10.7	10.9	11.0	10.0
Kedah	9.9	8.7	9.1	9.4	9.6
Kelantan	10.4	9.3	9.0	9.4	9.5
F.T. Labuan	4.9	4.9	4.9	5.1 ^r	4.7
Melaka	6.9	6.8	7.5	7.9	7.9
N.Sembilan	8.5	8.9	8.8	8.3	9.2
Pulau Pinang	3.3	3.3	3.4	3.4 ^r	3.2
Pahang	9.6	10.2	10.2	9.1 ^r	9.0
Perak	13.9	14.4	15.4	17.2	15.8
Perlis	12.4	12.7	11.6	11.9 ^r	10.0
Selangor	5.9	6.0	6.0	6.0	6.2
Terengganu	18.8	14.4	14.6	14.7	15.1
Pen. Malaysia & F.T. Labuan	8.4	8.4	8.5	8.5 ^r	8.4



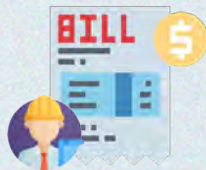
SERVICE PERFORMANCE INDICATOR: AVERAGE TOTAL PRODUCTION PER EMPLOYEE PER DAY

Unit (m3 / Employee/Day)	2020	2021	2022	2023	2024
Johor	823	833	832	854	824
Kedah	1,038	1,021	1,100	1,121	1,124
Kelantan	650	653	658	676	679
F.T. Labuan	680	694	685	676 ^r	640
Melaka	743	740	880	950	939
N.Sembilan	740	782	792	752	848
Pulau Pinang	782	792	858	845 ^r	801
Pahang	811	862	899	789	763
Perak	1,283	1,277	1,300	1,454	1,374
Perlis	1,556	1,545	1,438	1,550 ^r	1,242
Selangor	989	1,005	1,010	1,028	1,048
Terengganu	1,572	1,174	1,265	1,346 ^r	1,390
Pen. Malaysia & F.T. Labuan	928	933	964	972 ^r	967



SERVICE PERFORMANCE INDICATOR: AVERAGE MONTHLY NUMBER OF CONNECTION PER METER READER

Unit (No. of Accounts/ Meter Reader)	2020	2021	2022	2023	2024
Johor	5,288	5,088	5,231	5,247	5,250
Kedah	4,224	4,469	4,388	4,051	4,417
Kelantan	3,690	3,820	3,857	3,890	4,194
F.T. Labuan	1,768	1,812	1,850	3,445 ^r	3,449
Melaka	5,056	3,647	7,148	7,014	6,962
N.Sembilan	4,950	5,721	6,145	4,910	5,906
Pulau Pinang	7,338	7,488	4,835	8,516	8,017
Pahang	3,435	3,563	3,671	3,457 ^r	2,973
Perak	5,202	4,710	4,806	5,330	5,003
Perlis	4,212	4,289	4,351	4,419	4,778
Selangor	6,277	6,608	7,016	7,175	7,578
Terengganu	3,255	3,349	3,210	3,356 ^r	3,539
Pen. Malaysia & F.T. Labuan	5,117	5,127	5,235	5,444 ^r	5,537



SERVICE PERFORMANCE INDICATOR: AVERAGE MONTHLY NUMBER OF BILLS PER METER READER

Unit (No. of Bills/ Meter Reader/Month)	2020	2021	2022	2023	2024
Johor	5,982	5,023	5,131	5,168	5,166
Kedah	4,224	4,429	4,388	4,021	4,388
Kelantan	3,697	3,788	3,853	3,882	4,237
F.T. Labuan	1,763	1,751	1,791	1,903 ^r	2,087
Melaka	5,056	3,596	7,074	6,935	6,854
N.Sembilan	4,975	5,491	5,929	4,819	5,861
Pulau Pinang	7,338	7,434	4,785	4,227	3,968
Pahang	3,435	3,918	3,863	2,853	2,952
Perak	2,562	2,329	2,329	2,642	2,485
Perlis	4,203	4,257	4,326	4,388	4,719
Selangor	6,297	6,608	6,930	7,175	7,578
Terengganu	3,188	3,244	3,165	3,307 ^r	3,487
Pen. Malaysia & F.T. Labuan	4,950	4,840	4,906	4,830 ^r	4,973

SEWERAGE SECTOR

STATISTICS

01

SEWERAGE FACILITIES

02

STP POLLUTION

03

CUSTOMER SERVICE

04

WORKFORCE



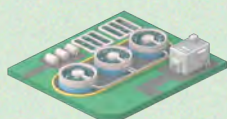
SEWAGE TREATMENT PLANT : (MULTI POINT STP + REGIONAL PLANT)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	878	1,007	1,032	1,065	1,092
Kedah	630	636	653	673	696
Kelantan	32	36	40	43	48
F.T. Labuan	31	32	33	33	34
Melaka	617	624	586	595	610
N.Sembilan	494	499	508	522	533
Pulau Pinang	602	607	619	627	679
Pahang	583	604	619	659	1,209
Perak	1,139	1,170	1,194	1,219 ^r	64
Perlis	54	56	60	61	629
Selangor	1,964	1,986	1,969	1,944 ^r	1,992
Terengganu	179	183	190	204	208
Pen. Malaysia & F.T. Labuan	7,203	7,440	7,503	7,645 ^r	7,794



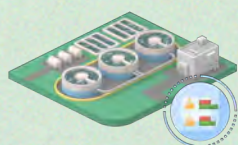
POPULATION EQUIVALENT: (MULTI POINT STP + REGIONAL PLANT)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	3,514,517	4,758,436	5,130,360	5,295,777	5,460,293
Kedah	1,130,040	1,157,678	1,180,381	1,236,670 ^r	1,304,271
Kelantan	73,090	82,004	86,879	89,723	93,858
F.T. Labuan	60,078	61,090	63,301	63,608	68,851
Melaka	1,098,853	1,134,432	1,172,226	1,214,620 ^r	1,259,945
N.Sembilan	1,542,915	1,603,428	1,625,864	1,703,309 ^r	1,779,493
Pulau Pinang	2,944,290	3,040,514	3,096,482	3,314,139 ^r	3,403,000
Pahang	646,745	679,337	697,365	741,949 ^r	769,694
Perak	2,070,514	2,130,291	2,174,742	2,400,507 ^r	2,354,608
Perlis	70,943	70,501	75,311	77,291 ^r	82,669
Selangor	14,167,166	14,648,047	15,897,356	15,722,143 ^r	16,360,984
Terengganu	206,511	211,309	217,437	232,098	238,591
Pen. Malaysia & F.T. Labuan	27,525,662	29,577,067	31,417,704	32,091,834 ^r	33,176,257



SEWAGE TREATMENT PLANT: MULTI POINT STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	860	988	1,012	1,045	1,082
Kedah	626	632	648	668	692
Kelantan	32	36	40	43	48
F.T. Labuan	30	31	32	32	34
Melaka	615	621	583	592	607
N.Sembilan	484	489	498	512	529
Pulau Pinang	591	596	608	616	623
Pahang	579	600	615	655	679
Perak	1,136	1,167	1,190	1,213	1,206
Perlis	53	55	59	60	63
Selangor	1,916	1,938	1,920	1,894	1,967
Terengganu	179	183	190	204	208
Pen. Malaysia & F.T. Labuan	7,101	7,336	7,395	7,534	7,738

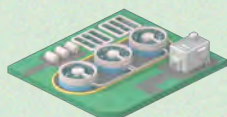


POPULATION EQUIVALENT: MULTI POINT STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	2,701,511	3,836,620	4,055,962	4,184,213	4,830,547
Kedah	1,054,175	1,080,114	1,100,288	1,151,760	1,239,503
Kelantan	73,090	82,004	86,879	89,723	93,858
F.T. Labuan	32,024	33,036	35,138	35,445	68,851
Melaka	1,016,202	1,043,920	973,299	996,584	1,040,256
N.Sembilan	1,051,407	1,073,022	1,093,373	1,137,956	1,321,672
Pulau Pinang	1,193,737	1,265,550	1,298,047	1,349,371	1,657,966
Pahang	569,276	601,886	619,294	663,872	769,694
Perak	1,999,977	2,059,604	2,097,573	2,147,221	2,183,975
Perlis	51,594	51,152	55,722	56,622	60,745
Selangor	8,372,323	8,543,621	8,553,001	8,464,121	10,269,608
Terengganu	206,511	211,309	217,437	232,098	238,591
Pen. Malaysia & F.T. Labuan	18,321,827	19,881,838	20,186,013	20,508,986	23,775,266

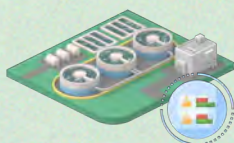
Note:

- Regional plant: STPs identified in the Sewerage Catchment Study to serve designated sewerage catchment areas.



SEWAGE TREATMENT PLANT: REGIONAL PLANT

Unit (Nos)	2020	2021	2022	2023	2024
Johor	18	19	20	20	10
Kedah	4	4	5	5	4
Kelantan	0	0	0	0	0
F.T. Labuan	1	1	1	1	0
Melaka	2	3	3	3	3
N.Sembilan	10	10	10	10	4
Pulau Pinang	11	11	11	11	0
Pahang	4	4	4	4	3
Perak	3	3	4	6 ^r	1
Perlis	1	1	1	1	6
Selangor	48	48	49	50 ^r	25
Terengganu	0	0	0	0	0
Pen. Malaysia & F.T. Labuan	102	104	108	111 ^r	56

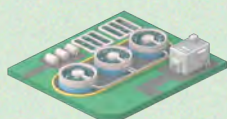


POPULATION EQUIVALENT: REGIONAL PLANT

Unit (Nos)	2020	2021	2022	2023	2024
Johor	813,006	921,816	1,074,398	1,111,564	629,746
Kedah	75,865	77,564	80,093	84,910 ^r	64,768
Kelantan	0	0	0	0	0
F.T. Labuan	28,054	28,054	28,163	28,163	0
Melaka	82,651	90,512	198,927	218,036 ^r	219,689
N.Sembilan	491,508	530,406	532,491	565,353 ^r	457,821
Pulau Pinang	1,750,553	1,774,964	1,798,435	1,964,768 ^r	1,745,034
Pahang	77,469	77,451	78,071	78,077 ^r	0
Perak	70,537	70,687	77,169	253,286 ^r	170,633
Perlis	19,349	19,349	19,589	20,669 ^r	21,924
Selangor	5,794,843	6,104,426	7,344,355	7,258,022 ^r	6,091,376
Terengganu	0	0	0	0	0
Pen. Malaysia & F.T. Labuan	9,203,835	9,695,229	11,231,691	11,582,848 ^r	9,400,991

Note:

- 1) Regional plants refer to Sewage Treatment Plants (STPs) identified in the Sewerage Catchment Study to serve specific sewerage catchment areas.
- 2) The number of regional plants in 2024 has significantly decreased due to a rectification of the criteria used to define regional plants.



SEWAGE TREATMENT PLANT: LESS THAN 2,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	595	629	644	664	682
Kedah	501	504	519	534	549
Kelantan	14	20	23	26	30
F.T. Labuan	26	27	28	28	29
Melaka	472	473	443	448	456
N.Sembilan	361	366	373	382	388
Pulau Pinang	443	443	453	457	457
Pahang	512	529	543	574	591
Perak	864	889	907	923	922
Perlis	46	48	50	51	53
Selangor	1,147	1,169	1,177	1,187	1,228
Terengganu	154	157	164	175	179
Pen. Malaysia & F.T. Labuan	5,135	5,254	5,324	5,449	5,564

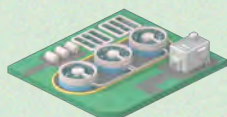


CONNECTED PE: LESS THAN 2,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	392,646	426,496	437,663	453,836	473,789
Kedah	332,139	335,395	345,364	362,326	369,438
Kelantan	7,690	11,501	13,261	17,305	17,823
F.T. Labuan	14,949	15,956	16,310	16,577	16,877
Melaka	371,347	371,361	350,138	348,900	353,686
N.Sembilan	278,938	283,779	290,772	296,832	300,004
Pulau Pinang	315,166	316,611	327,298	328,867	329,939
Pahang	322,222	331,646	342,959	361,463	371,405
Perak	646,193	664,587	674,920	685,045	690,334
Perlis	30,055	31,227	31,507	32,132	33,143
Selangor	788,791	797,844	806,120	796,779	816,058
Terengganu	77,670	77,719	81,347	89,312	92,368
Pen. Malaysia & F.T. Labuan	3,577,806	3,664,122	3,717,659	3,789,374	3,864,864

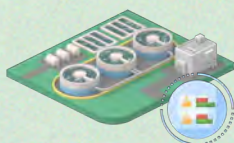
Note: The reduction in the number of STPs within certain population equivalent (PE) ranges is due to:

- Reclassification of PE ranges; and
- Rationalisation and decommissioning of STPs



SEWAGE TREATMENT PLANT : 2,001 – 5,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	116	141	142	150	155
Kedah	82	83	84	87	95
Kelantan	13	12	13	13	14
F.T. Labuan	3	3	2	2	1
Melaka	112	115	111	114	116
N.Sembilan	71	70	70	74	76
Pulau Pinang	91	90	91	90	91
Pahang	58	60	60	69	70
Perak	199	203	207	212	209
Perlis	6	7	9	9	10
Selangor	333	332	313	293	295
Terengganu	20	22	21	23	23
Pen. Malaysia & F.T. Labuan	1,104	1,138	1,123	1,136	1,155

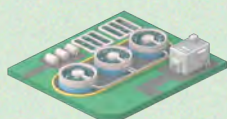


CONNECTED PE: 2,001 – 5,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	321,023	412,621	413,864	435,293	456,276
Kedah	246,559	248,216	250,148	260,340	291,811
Kelantan	47,200	36,758	39,221	38,021	40,878
F.T. Labuan	10,766	10,771	6,871	6,911	2,265
Melaka	342,387	351,005	342,192	354,738	359,599
N.Sembilan	215,802	215,677	210,205	220,881	224,461
Pulau Pinang	287,472	283,618	285,814	285,298	287,346
Pahang	173,862	181,528	179,995	204,964	207,355
Perak	596,920	612,907	619,833	637,354	631,798
Perlis	16,135	19,925	24,215	24,490	27,602
Selangor	1,069,245	1,077,970	1,017,870	950,717	957,166
Terengganu	55,874	60,623	56,343	62,625	62,960
Pen. Malaysia & F.T. Labuan	3,383,245	3,511,619	3,446,571	3,481,632	3,549,517

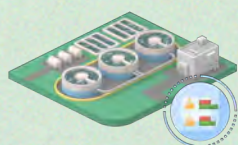
Note: The reduction in the number of STPs within certain population equivalent (PE) ranges is due to:

- Reclassification of PE ranges; and
- Rationalisation and decommissioning of STPs



SEWAGE TREATMENT PLANT: 5,001 – 10,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	72	102	102	107	105
Kedah	31	32	33	34	28
Kelantan	1	2	2	2	2
F.T. Labuan	1	1	2	2	3
Melaka	22	24	21	22	26
N.Sembilan	38	39	38	37	38
Pulau Pinang	44	46	47	51	51
Pahang	8	9	10	10	12
Perak	44	44	46	48	43
Perlis	1	0	0	0	0
Selangor	210	209	198	188	186
Terengganu	5	5	5	5	5
Pen. Malaysia & F.T. Labuan	477	513	504	506	499

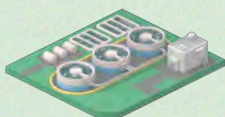


CONNECTED PE: 5,001 – 10,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	423,400	640,488	631,779	669,711	653,306
Kedah	217,939	223,793	232,771	240,598	186,121
Kelantan	5,200	12,265	12,917	12,917	12,917
F.T. Labuan	6,309	6,309	11,957	11,957	19,135
Melaka	147,554	158,113	135,485	146,889	176,547
N.Sembilan	257,134	268,382	252,154	244,086	246,941
Pulau Pinang	299,071	303,035	311,024	337,134	339,562
Pahang	56,378	61,749	67,257	67,822	78,812
Perak	302,712	301,993	317,356	335,346	297,228
Perlis	5,404	0	0	0	0
Selangor	1,441,477	1,440,877	1,370,924	1,309,131	1,296,106
Terengganu	30,819	30,819	27,446	27,796	28,286
Pen. Malaysia & F.T. Labuan	3,193,397	3,447,823	3,371,070	3,403,387	3,334,961

Note: The reduction in the number of STPs within certain population equivalent (PE) ranges is due to:

- Reclassification of PE ranges; and
- Rationalisation and decommissioning of STPs



SEWAGE TREATMENT PLANT : 10,001 – 20,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	59	87	92	88	92
Kedah	10	11	11	11	17
Kelantan	4	2	2	2	2
F.T. Labuan	0	0	0	0	0
Melaka	8	9	7	7	9
N.Sembilan	14	14	17	19	21
Pulau Pinang	11	14	13	14	13
Pahang	3	4	4	4	4
Perak	25	27	27	27	25
Perlis	1	1	1	0	0
Selangor	143	139	146	141	143
Terengganu	0	0	1	1	1
Pen. Malaysia & F.T. Labuan	278	308	321	314	327

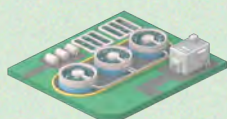


CONNECTED PE: 10,001 – 20,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	522,045	909,557	993,089	934,995	987,287
Kedah	134,505	147,066	145,995	140,482	214,531
Kelantan	54,980	21,480	21,480	21,480	22,240
F.T. Labuan	0	0	0	0	0
Melaka	105,813	119,460	96,113	96,641	123,710
N.Sembilan	197,248	199,509	233,524	265,679	302,673
Pulau Pinang	153,941	191,460	177,292	196,746	178,204
Pahang	39,041	49,190	51,930	52,470	56,704
Perak	330,318	354,996	357,293	357,995	331,780
Perlis	19,349	19,349	19,589	0	0
Selangor	1,962,325	1,904,888	2,005,390	1,956,415	2,014,391
Terengganu	0	0	10,217	10,217	12,829
Pen. Malaysia & F.T. Labuan	3,519,565	3,916,955	4,111,912	4,033,120	4,244,349

Note: The reduction in the number of STPs within certain population equivalent (PE) ranges is due to:

- Reclassification of PE ranges; and
- Rationalisation and decommissioning of STPs



SEWAGE TREATMENT PLANT: 20,001 – 50,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	27	34	36	38	40
Kedah	5	5	5	6	6
Kelantan	0	0	0	0	0
F.T. Labuan	1	1	1	1	1
Melaka	2	2	2	2	1
N.Sembilan	8	7	7	7	7
Pulau Pinang	7	8	8	8	10
Pahang	2	2	2	2	2
Perak	7	7	7	7	9
Perlis	0	0	0	1	1
Selangor	88	94	91	89	94
Terengganu	0	0	0	0	0
Pen. Malaysia & F.T. Labuan	147	160	159	161	171

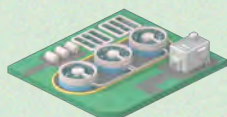


CONNECTED PE: 20,001 – 50,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	553,227	734,574	791,618	817,824	887,834
Kedah	136,663	138,362	138,362	162,063	166,959
Kelantan	0	0	0	0	0
F.T. Labuan	28,054	28,054	28,163	28,163	30,574
Melaka	55,883	56,153	56,153	56,198	33,496
N.Sembilan	226,066	192,194	193,566	214,610	228,442
Pulau Pinang	249,464	281,348	247,907	251,317	312,155
Pahang	55,242	55,224	55,224	55,230	55,418
Perak	194,371	195,808	205,340	210,283	282,380
Perlis	0	0	0	20,669	21,924
Selangor	2,592,641	2,797,193	2,792,681	2,714,286	2,881,109
Terengganu	0	0	0	0	0
Pen. Malaysia & F.T. Labuan	4,091,611	4,478,910	4,509,014	4,530,643	4,900,291

Note: The reduction in the number of STPs within certain population equivalent (PE) ranges is due to:

- Reclassification of PE ranges; and
- Rationalisation and decommissioning of STPs



SEWAGE TREATMENT PLANT : MORE THAN 50,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	9	14	16	18	18
Kedah	1	1	1	1	1
Kelantan	0	0	0	0	0
F.T. Labuan	0	0	0	0	0
Melaka	1	1	2	2	2
N.Sembilan	2	3	3	3	3
Pulau Pinang	6	6	7	7	7
Pahang	0	0	0	0	0
Perak	0	0	0	2	1
Perlis	0	0	0	0	0
Selangor	43	43	44	46	46
Terengganu	0	0	0	0	0
Pen. Malaysia & F.T. Labuan	62	68	73	79	78



CONNECTED PE : MORE THAN 50,000 PE

Unit (Nos)	2020	2021	2022	2023	2024
Johor	519,743	852,267	1,079,914	1,201,685	1,219,368
Kedah	62,235	64,846	67,741	70,861	75,411
Kelantan	0	0	0	0	0
F.T. Labuan	0	0	0	0	0
Melaka	75,869	78,340	192,145	211,254	212,907
N.Sembilan	367,727	443,887	445,643	461,221	476,972
Pulau Pinang	1,639,176	1,664,442	1,747,147	1,914,777	1,955,794
Pahang	0	0	0	0	0
Perak	0	0	0	174,484	121,088
Perlis	0	0	0	0	0
Selangor	6,312,687	6,629,275	7,904,371	7,994,815	8,396,154
Terengganu	0	0	0	0	0
Pen. Malaysia & F.T. Labuan	8,977,437	9,733,057	11,436,961	12,029,097	12,457,694

Note: The reduction in the number of STPs within certain population equivalent (PE) ranges is due to:

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- Rationalisation and decommissioning of STPs

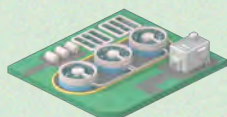
PUBLIC SEWAGE TREATMENT PLANTS BY CATEGORY AND TYPE 2024

MECHANICAL PLANTS

 AERATED LAGOON (AL) 141 PLANTS 1,002,794 CONNECTED PE	 ANAEROBIC-ANOXIC AEROBIC (AAO) 1 PLANT 1,423,000 CONNECTED PE	 ANOXIC OXIC ANOXIC OXIC ((AAO/O)) 1 PLANT 920,000 CONNECTED PE	 BIO DRUM (BD) 23 PLANTS 77,464 CONNECTED PE
 BIO FILTER (BF) 63 PLANTS 177,009 CONNECTED PE	 BIO SOIL (BS) 3 PLANTS 45,050 CONNECTED PE	 CONVENTIONAL ACTIVATED SLUDGE (CAS) 172 PLANTS 1,495,199 CONNECTED PE	 EXTENDED AERATION (EA) 5,590 PLANTS 16,207,284 CONNECTED PE
 OXIDATION DITCH (OD) 179 PLANTS 3,971,210 CONNECTED PE	 MOVING BED BIO REACTOR (MBBR) 6 PLANTS 671,415 CONNECTED PE	 ROTATING BIOLOGICAL CONTACTOR (RBC) 26 PLANTS 81,567 CONNECTED PE	 SEQUENTIAL BATCH REACTOR (SBR) 458 PLANTS 13,668,550 CONNECTED PE
	 TRICKLING FILTER (TF) 25 PLANTS 132,086 CONNECTED PE	 UPFLOW AEROBIC SLUDGE BLANKET (UASB) 3 PLANTS 7,295 CONNECTED PE	

MECHANICAL PLANTS

 IMHOFF TANK (IT) 88 PLANTS 41,620 CONNECTED PE	 IMHOFF TANKS WITH PUMP STATION (ITPS) 457 PLANTS 217,336 CONNECTED PE	 OXIDATION PONDS (OP) 149 PLANTS 513,182 CONNECTED PE
	 OXIDATION PONDS WITH PUMP STATION (OPPS) 235 PLANTS 824,824 CONNECTED PE	 BIO-ACT SUPER DISSOLVED OXYGEN (Bi-Act SDO) 8 PLANTS 80,731 CONNECTED PE



SEWAGE TREATMENT PLANT : PRIVATE STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	424	450	490	537	575
Kedah	343	355	366	371	399
Kelantan	192	294	299	300	310
F.T. Labuan	56	59	59	59	59
Melaka	438	446	452	490	505
N.Sembilan	245	249	260	264	275
Pulau Pinang	195	206	215	236	252
Pahang	555	567	576	581	602
Perak	501	521	539	550	566
Perlis	71	72	73	73	73
Selangor	878	915	973	1,012	1,067
Terengganu	317	330	339	349	360
Pen. Malaysia & F.T. Labuan	4,215	4,464	4,641	4,822	5,043



POPULATION EQUIVALENT: PRIVATE STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,211,935	1,221,653	1,258,481	1,280,331	1,301,153
Kedah	228,961	230,304	231,704	233,552	241,680
Kelantan	196,642	420,063	420,903	420,963	433,437
F.T. Labuan	59,862	60,069	60,069	60,069	60,069
Melaka	284,706	291,256	292,432	301,651	314,104
N.Sembilan	167,987	168,507	169,369	171,154	172,356
Pulau Pinang	191,435	192,885	194,854	196,801	200,122
Pahang	609,244	617,684	619,342	621,536	642,660
Perak	270,113	276,128	279,480	289,083	292,668
Perlis	47,554	47,629	47,689	47,689	47,689
Selangor	1,058,860	1,164,458	1,188,112	1,203,234	1,227,447
Terengganu	185,497	191,664	194,902	196,371	199,481
Pen. Malaysia & F.T. Labuan	4,512,796	4,882,300	4,957,337	5,022,434	5,132,866



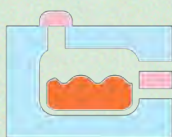
SEPTIC TANK (COMMUNAL SEPTIC TANK (CST) + INDIVIDUAL SEPTIC TANK (IST))

Unit (Nos)	2020	2021	2022	2023	2024
Johor	271,691	271,834	271,958	272,654 ^r	273,016
Kedah	158,868	158,938	159,013	159,062 ^r	159,124
Kelantan	47,352	47,556	47,292	47,398 ^r	48,253
F.T. Labuan	8,630	8,634	8,639	8,639	8,639
Melaka	58,769	58,798	58,851	59,646 ^r	59,826
N.Sembilan	77,406	77,442	77,504	77,526 ^r	77,583
Pulau Pinang	14,023	14,042	14,063	14,880 ^r	15,049
Pahang	141,962	142,055	142,157	141,616 ^r	141,750
Perak	223,126	223,288	223,458	223,640 ^r	223,869
Perlis	20,102	20,114	20,132	20,226 ^r	20,226
Selangor	243,436	243,629	243,864	244,853 ^r	245,249
Terengganu	100,679	101,785	103,068	103,167 ^r	104,492
Pen. Malaysia & F.T. Labuan	1,366,044	1,368,115	1,369,999	1,373,307 ^r	1,377,076



POPULATION EQUIVALENT: SEPTIC TANK (CST) + (IST)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,407,239	1,408,607	1,414,536	1,419,779 ^r	1,429,622
Kedah	847,548	849,366	852,519	853,318 ^r	855,449
Kelantan	509,990	511,191	397,618	398,390 ^r	404,730
F.T. Labuan	44,402	44,445	44,686	44,686	44,686
Melaka	325,898	326,373	328,977	333,134 ^r	336,451
N.Sembilan	431,949	432,461	433,999	434,259 ^r	436,024
Pulau Pinang	87,289	87,628	88,073	91,349 ^r	95,273
Pahang	832,934	834,947	842,986	746,144 ^r	756,832
Perak	1,130,189	1,131,418	1,136,952	1,150,304 ^r	1,155,806
Perlis	115,732	116,063	116,958	201,750 ^r	197,858
Selangor	1,326,650	1,328,935	1,340,684	1,347,113 ^r	1,361,277
Terengganu	535,102	540,642	550,370	550,650 ^r	561,282
Pen. Malaysia & F.T. Labuan	7,594,922	7,612,076	7,548,358	7,570,876 ^r	7,635,290



COMMUNAL SEPTIC TANK (CST)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	528	528	528	528 ^r	528
Kedah	410	410	410	410 ^r	410
Kelantan	738	738	0 ^r	0 ^r	0
F.T. Labuan	5	5	5	5	5
Melaka	304	304	304	295 ^r	295
N.Sembilan	452	452	452	452 ^r	452
Pulau Pinang	176	176	175	572 ^r	564
Pahang	581	581	576	16 ^r	16
Perak	16	16	16	81 ^r	81
Perlis	81	81	81	175 ^r	175
Selangor	794	793	791	786 ^r	786
Terengganu	145	145	145	145 ^r	145
Pen. Malaysia & F.T. Labuan	4,230	4,229	3,483	3,465 ^r	3,457



POPULATION EQUIVALENT: CST

Unit (Nos)	2020	2021	2022	2023	2024
Johor	46,290	46,290	46,290	46,290 ^r	46,290
Kedah	43,782	44,172	44,172	44,172 ^r	44,172
Kelantan	117,728	117,728	0 ^r	0 ^r	0
F.T. Labuan	790	790	790	790	790
Melaka	30,440	30,440	30,440	29,825 ^r	29,825
N.Sembilan	41,705	41,705	41,705	41,705 ^r	41,705
Pulau Pinang	15,028	15,343	15,358	14,243 ^r	14,243
Pahang	100,659	100,659	99,779	2,665 ^r	2,665
Perak	2,665	2,665	2,665	15,398 ^r	15,411
Perlis	14,398	14,398	14,243	99,035 ^r	95,143
Selangor	85,371	85,361	85,211	83,051 ^r	83,051
Terengganu	15,963	15,963	15,963	15,963 ^r	15,963
Pen. Malaysia & F.T. Labuan	514,819	515,514	396,616	393,135 ^r	389,258

Note: The significant changes in CST data from 2022 to 2023 are attributed to the registration of newly CSTs, based on site verifications conducted by the Utility Operator (UO) and the Regional Planning Unit.



INDIVIDUAL SEPTIC TANK (IST)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	271,163	271,306	271,430	272,126	272,488
Kedah	158,458	158,528	158,603	158,652	158,714
Kelantan	46,614	46,818	47,292	47,398	48,253
F.T. Labuan	8,625	8,629	8,634	8,634	8,634
Melaka	58,465	58,494	58,547	59,351	59,531
N.Sembilan	76,954	76,990	77,052	77,074	77,131
Pulau Pinang	13,847	13,866	13,888	14,308	14,485
Pahang	141,381	141,474	141,581	141,600	141,734
Perak	223,110	223,272	223,442	223,559	223,788
Perlis	20,021	20,033	20,051	20,051	20,051
Selangor	242,642	242,836	243,073	244,067	244,463
Terengganu	100,534	101,640	102,923	103,022	104,347
Pen. Malaysia & F.T. Labuan	1,361,814	1,363,886	1,366,516	1,369,842	1,373,619



POPULATION EQUIVALENT: IST

Unit (Nos)	2020	2021	2022	2023	2024
Johor	1,360,949	1,362,317	1,368,246	1,373,489	1,383,332
Kedah	803,766	805,194	808,347	809,146	811,277
Kelantan	392,262	393,463	397,618	398,390	404,730
F.T. Labuan	43,612	43,655	43,896	43,896	43,896
Melaka	295,458	295,933	298,537	303,309	306,626
N.Sembilan	390,244	390,756	392,294	392,554	394,319
Pulau Pinang	72,261	72,285	72,715	77,106	81,030
Pahang	732,275	734,288	743,207	743,479	754,167
Perak	1,127,524	1,128,753	1,134,287	1,134,908	1,140,395
Perlis	101,334	101,665	102,715	102,715	102,715
Selangor	1,241,279	1,243,574	1,255,473	1,264,062	1,278,226
Terengganu	519,139	524,679	534,407	534,687	545,319
Pen. Malaysia & F.T. Labuan	7,080,103	7,096,562	7,151,742	7,177,741	7,246,032



TRADITIONAL SYSTEM / POUR FLUSH

Unit (Nos)	2020	2021	2022	2023	2024
Johor	108,684	108,719	108,742	110,376	110,354
Kedah	200,114	202,541	201,921	199,834	203,106
Kelantan	214,215	214,633	212,122	213,196	208,938
F.T. Labuan	0	0	0	0	0
Melaka	59,889	60,041	60,028	60,062	63,035
N.Sembilan	60,615	60,650	61,212	61,994	58,037
Pulau Pinang	59,663	59,895	60,515	62,139	65,059
Pahang	90,260	90,396	91,535	90,675	86,182
Perak	124,041	124,334	124,784	124,413	125,811
Perlis	33,053	33,075	33,092	25,209	33,317
Selangor	69,731	69,769	69,796	69,811	67,006
Terengganu	134,993	132,261	128,599	122,843	114,913
Pen. Malaysia & F.T. Labuan	1,155,258	1,156,314	1,152,346	1,140,552	1,135,758



POPULATION EQUIVALENT: TRADITIONAL SYSTEM / POUR FLUSH

Unit (Nos)	2020	2021	2022	2023	2024
Johor	543,420	543,595	543,710	551,880	551,770
Kedah	1,000,570	1,012,705	1,009,605	999,170	1,015,530
Kelantan	1,071,075	1,073,165	1,060,610	1,065,980	1,044,690
F.T. Labuan	0	0	0	0	0
Melaka	299,445	300,205	300,140	300,310	315,175
N.Sembilan	303,075	303,250	306,060	309,970	290,185
Pulau Pinang	298,315	299,475	302,575	310,695	325,295
Pahang	451,300	451,980	457,675	453,375	430,910
Perak	620,205	621,670	623,920	622,065	629,055
Perlis	165,265	165,375	165,460	126,045	166,585
Selangor	348,655	348,845	348,980	349,055	335,030
Terengganu	674,965	661,305	642,995	614,215	574,565
Pen. Malaysia & F.T. Labuan	5,776,290	5,781,570	5,761,730	5,702,760	5,678,790

Note:

- Sources data from Ministry of Health of Malaysia (KKM)



NETWORK PUMP STATION (NPS)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	214	275	292	302	310
Kedah	51	56	58	60	73
Kelantan	14	14	15	15	16
F.T. Labuan	9	9	9	9	9
Melaka	32	32	32	34	36
N.Sembilan	108	114	116	122	127
Pulau Pinang	32	32	76	76	77
Pahang	105	107	32	35	37
Perak	16	16	113	123	121
Perlis	74	76	17	18	19
Selangor	641	659	677	684	700
Terengganu	17	17	17	17	17
Pen. Malaysia & F.T. Labuan	1,313	1,407	1,454	1,495	1,542



LENGTH OF SEWER NETWORK: STP

Unit (KM)	2020	2021	2022	2023	2024
Johor	3,400	3,499	3,581	3,630	3,740
Kedah	1,615	1,648	1,677	1,743	1,839
Kelantan	95	88	92	97	105
F.T. Labuan	43	43	45	45	47
Melaka	1,246	1,266	1,185	1,149	1,205
N.Sembilan	1,943	1,968	2,002	2,049	2,116
Pulau Pinang	2,521	2,565	2,573	2,163	2,193
Pahang	849	861	885	920	949
Perak	2,326	2,383	2,472	2,561	2,742
Perlis	164	171	174	179	191
Selangor	6,385	6,507	6,638	6,800	7,137
Terengganu	282	287	293	297	301
Pen. Malaysia & F.T. Labuan	20,868	21,283	21,615	21,631	22,564



LENGTH OF SEWER NETWORK: CST

Unit (KM)	2020	2021	2022	2023	2024
Johor	49	49	49	49	49
Kedah	39	39	39	39	39
Kelantan	0	0	0	0	0
F.T. Labuan	0	0	0	0	0
Melaka	27	27	27	26	26
N.Sembilan	37	37	37	37	37
Pulau Pinang	20	20	20	20	20
Pahang	9	9	9	9	9
Perak	103	103	102	101	95
Perlis	1	1	1	1	1
Selangor	50	50	49	49	49
Terengganu	14	14	14	14	14
Pen. Malaysia & F.T. Labuan	348	350	349	347	341





NO. OF CONNECTED ACCOUNTS STP: GRAND TOTAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	394,105	433,187	600,586	674,008	697,159
Kedah	179,211	183,799	190,504	205,397	209,362
Kelantan	8,018	9,223	10,291	12,378	12,918
F.T. Labuan	6,824	6,953	7,395	7,470	7,675
Melaka	155,436	165,839	175,619	193,985	199,490
N.Sembilan	234,899	243,790	254,663	271,593	282,491
Pulau Pinang	481,085	495,400	515,136	538,729	552,093
Pahang	99,604	112,202	116,351	131,227	134,793
Perak	336,779	345,548	360,426	397,019	406,394
Perlis	9,206	9,670	10,069	10,904	11,066
Selangor	2,214,314	2,299,123	2,399,575	2,597,934	2,701,141
Terengganu	24,335	25,548	26,720	29,924	30,551
Pen. Malaysia & F.T. Labuan	4,143,816	4,330,282	4,667,335	5,070,568	5,245,133





NO. OF CONNECTED ACCOUNTS STP: DOMESTIC

Unit (Nos)	2020	2021	2022	2023	2024
Johor	357,624	383,754	541,903	604,769	622,053
Kedah	164,187	167,790	173,395	186,438	189,782
Kelantan	6,855	8,236	8,924	10,724	11,129
F.T. Labuan	4,550	4,681	4,981	5,031	5,147
Melaka	139,432	147,903	155,123	170,195	173,783
N.Sembilan	210,475	219,064	228,118	243,056	253,197
Pulau Pinang	429,231	441,553	458,409	480,277	491,722
Pahang	89,926	101,901	105,273	118,037	121,182
Perak	309,359	316,902	327,092	360,588	369,354
Perlis	7,494	7,819	8,054	8,728	8,881
Selangor	1,889,208	1,961,760	2,042,263	2,210,528	2,299,104
Terengganu	20,074	21,038	21,928	24,632	25,143
Pen. Malaysia & F.T. Labuan	3,628,415	3,782,401	4,075,463	4,423,003	4,570,477



% DOMESTIC CONNECTED ACCOUNTS TO TOTAL NO. OF CONNECTED ACCOUNTS STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	90.7%	88.6%	90.2%	89.7%	89.2%
Kedah	91.6%	91.3%	91.0%	90.8%	90.6%
Kelantan	85.5%	89.3%	86.7%	86.6%	86.2%
F.T. Labuan	66.7%	67.3%	67.4%	67.3%	67.1%
Melaka	89.7%	89.2%	88.3%	87.7%	87.1%
N.Sembilan	89.6%	89.9%	89.6%	89.5%	89.6%
Pulau Pinang	89.2%	89.1%	89.0%	89.2%	89.1%
Pahang	90.3%	90.8%	90.5%	89.9%	89.9%
Perak	91.9%	91.7%	90.8%	90.8%	90.9%
Perlis	81.4%	80.9%	80.0%	80.0%	80.3%
Selangor	85.3%	85.3%	85.1%	85.1%	85.1%
Terengganu	82.5%	82.3%	82.1%	82.3%	82.3%
Pen. Malaysia & F.T. Labuan	87.6%	87.3%	87.3%	87.2%	87.1%



NO. OF CONNECTED ACCOUNTS STP: COMMERCIAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	31,325	43,453	49,106	56,961	59,662
Kedah	11,843	12,819	13,790	14,568	15,141
Kelantan	1,004	833	1,057	1,335	1,472
F.T. Labuan	1,088	1,128	1,168	1,213	1,240
Melaka	13,481	15,358	17,747	20,863	22,690
N.Sembilan	18,963	19,276	20,645	22,221	22,903
Pulau Pinang	41,877	43,808	46,488	48,086	49,835
Pahang	7,825	8,463	9,064	10,457	10,642
Perak	23,474	24,708	29,165	31,507	32,105
Perlis	711	835	904	1,122	1,130
Selangor	206,431	218,562	237,135	262,224	277,700
Terengganu	1,370	1,633	1,863	2,167	2,251
Pen. Malaysia & F.T. Labuan	359,392	390,876	428,132	472,724	496,771



% COMMERCIAL CONNECTED ACCOUNTS TO TOTAL NO. OF CONNECTED ACCOUNTS STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	7.9%	10.0%	8.2%	8.5%	8.6%
Kedah	6.6%	7.0%	7.2%	7.1%	7.2%
Kelantan	12.5%	9.0%	10.3%	10.8%	11.4%
F.T. Labuan	15.9%	16.2%	15.8%	16.2%	16.2%
Melaka	8.7%	9.3%	10.1%	10.8%	11.4%
N.Sembilan	8.1%	7.9%	8.1%	8.2%	8.1%
Pulau Pinang	8.7%	8.8%	9.0%	8.9%	9.0%
Pahang	7.9%	7.5%	7.8%	8.0%	7.9%
Perak	7.0%	7.2%	8.1%	7.9%	7.9%
Perlis	7.7%	8.6%	9.0%	10.3%	10.2%
Selangor	9.3%	9.5%	9.9%	10.1%	10.3%
Terengganu	5.6%	6.4%	7.0%	7.2%	7.4%
Pen. Malaysia & F.T. Labuan	8.7%	9.0%	9.2%	9.3%	9.5%



NO. OF CONNECTED ACCOUNTS STP: GOVERNMENT QUARTERS

Unit (Nos)	2020	2021	2022	2023	2024
Johor	2,598	2,598	5,555	7,688	10,441
Kedah	2,786	2,786	2,866	3,920	3,950
Kelantan	154	154	303	311	309
F.T. Labuan	1,074	1,074	1,119	1,098	1,155
Melaka	2,121	2,121	2,180	2,283	2,306
N.Sembilan	4,963	4,963	5,292	5,682	5,741
Pulau Pinang	8,147	8,147	8,265	8,277	8,354
Pahang	1,573	1,573	1,745	2,399	2,620
Perak	3,639	3,639	3,845	4,543	4,536
Perlis	943	943	1,045	994	994
Selangor	112,646	112,646	113,484	118,167	117,272
Terengganu	2,700	2,700	2,691	2,899	2,915
Pen. Malaysia & F.T. Labuan	143,344	143,344	148,390	158,261	160,593



% GOVERNMENT QUARTERS CONNECTED ACCOUNTS TO TOTAL NO. OF CONNECTED ACCOUNTS STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	0.7%	0.6%	0.9%	1.1%	1.5%
Kedah	1.6%	1.5%	1.5%	1.9%	1.9%
Kelantan	1.9%	1.7%	2.9%	2.5%	2.4%
F.T. Labuan	15.7%	15.4%	15.1%	14.7%	15.0%
Melaka	1.4%	1.3%	1.2%	1.2%	1.2%
N.Sembilan	2.1%	2.0%	2.1%	2.1%	2.0%
Pulau Pinang	1.7%	1.6%	1.6%	1.5%	1.5%
Pahang	1.6%	1.4%	1.5%	1.8%	1.9%
Perak	1.1%	1.1%	1.1%	1.1%	1.1%
Perlis	10.2%	9.8%	10.4%	9.1%	9.0%
Selangor	5.1%	4.9%	4.7%	4.5%	4.3%
Terengganu	11.1%	10.6%	10.1%	9.7%	9.5%
Pen. Malaysia & F.T. Labuan	3.5%	3.3%	3.2%	3.1%	3.1%



NO. OF CONNECTED ACCOUNTS STP: GOVERNMENT PREMISES

Unit (Nos)	2020	2021	2022	2023	2024
Johor	439	398	566	631	690
Kedah	274	270	305	312	313
Kelantan	5	0	6	7	7
F.T. Labuan	71	26	81	82	87
Melaka	314	314	363	390	400
N.Sembilan	335	312	418	425	450
Pulau Pinang	862	826	818	828	900
Pahang	258	243	246	313	328
Perak	227	217	225	267	287
Perlis	58	73	66	60	60
Selangor	3,023	2,911	3,157	3,272	3,287
Terengganu	188	170	229	214	230
Pen. Malaysia & F.T. Labuan	6,054	5,760	6,480	6,801	7,039



% GOVERNMENT PREMISES CONNECTED ACCOUNTS TO TOTAL NO. OF CONNECTED ACCOUNTS STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	0.1%	0.1%	0.1%	0.1%	0.1%
Kedah	0.2%	0.1%	0.2%	0.2%	0.1%
Kelantan	0.1%	0.0%	0.1%	0.1%	0.1%
F.T. Labuan	1.0%	0.4%	1.1%	1.1%	1.1%
Melaka	0.2%	0.2%	0.2%	0.2%	0.2%
N.Sembilan	0.1%	0.1%	0.2%	0.2%	0.2%
Pulau Pinang	0.2%	0.2%	0.2%	0.2%	0.2%
Pahang	0.3%	0.2%	0.2%	0.2%	0.2%
Perak	0.1%	0.1%	0.1%	0.1%	0.1%
Perlis	0.6%	0.8%	0.7%	0.6%	0.5%
Selangor	0.1%	0.1%	0.1%	0.1%	0.1%
Terengganu	0.8%	0.7%	0.9%	0.7%	0.8%
Pen. Malaysia & F.T. Labuan	0.1%	0.1%	0.1%	0.1%	0.1%



NO. OF CONNECTED ACCOUNTS STP: INDUSTRIAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	2,119	2,984	3,456	3,959	4,313
Kedah	121	134	148	159	176
Kelantan	0	0	1	1	1
F.T. Labuan	41	44	46	46	46
Melaka	88	143	206	254	311
N.Sembilan	163	175	190	209	200
Pulau Pinang	968	1,066	1,156	1,261	1,282
Pahang	22	22	23	21	21
Perak	80	82	99	114	112
Perlis	0	0	0	0	1
Selangor	3,006	3,244	3,536	3,743	3,778
Terengganu	3	7	9	12	12
Pen. Malaysia & F.T. Labuan	6,611	7,901	8,870	9,779	10,253



% INDUSTRIAL CONNECTED ACCOUNTS TO TOTAL NO. OF CONNECTED ACCOUNTS STP

Unit (Nos)	2020	2021	2022	2023	2024
Johor	0.5%	0.7%	0.6%	0.6%	0.6%
Kedah	0.1%	0.1%	0.1%	0.1%	0.1%
Kelantan	0.0%	0.0%	0.0%	0.0%	0.0%
F.T. Labuan	0.6%	0.6%	0.6%	0.6%	0.6%
Melaka	0.1%	0.1%	0.1%	0.1%	0.2%
N.Sembilan	0.1%	0.1%	0.1%	0.1%	0.1%
Pulau Pinang	0.2%	0.2%	0.2%	0.2%	0.2%
Pahang	0.0%	0.0%	0.0%	0.0%	0.0%
Perak	0.0%	0.0%	0.0%	0.0%	0.0%
Perlis	0.0%	0.0%	0.0%	0.0%	0.0%
Selangor	0.1%	0.1%	0.1%	0.1%	0.1%
Terengganu	0.0%	0.0%	0.0%	0.0%	0.0%
Pen. Malaysia & F.T. Labuan	0.2%	0.2%	0.2%	0.2%	0.2%



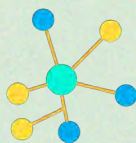
BIOCHEMICAL OXYGEN DEMAND (BOD): ALLOWABLE LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	34,956	42,113	46,265	48,036	49,768
Kedah	13,198	10,857	11,017	11,502	12,110
Kelantan	n/a	798	859	879	913
F.T. Labuan	1,125	687	712	716	775
Melaka	13,573	11,044	11,567	11,961	12,360
N.Sembilan	9,736	8,473	9,615	10,084	10,485
Pulau Pinang	39,497	33,765	34,561	36,994	5,950
Pahang	6,274	5,417	5,561	5,919	25,035
Perak	30,859	22,709	23,230	25,650	747
Perlis	709	668	720	706	37,962
Selangor	159,405	134,660	149,824	147,070	142,431
Terengganu	2,120	1,887	1,947	2,107	2,180
Pen. Malaysia & F.T. Labuan	311,452	273,079	295,880	301,623	300,715



BIOCHEMICAL OXYGEN DEMAND (BOD): ACTUAL LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	10,326	16,261	19,210	21,799	23,203
Kedah	4,440	4,379	4,383	3,983	4,414
Kelantan	n/a	197	190	211	196
F.T. Labuan	158	166	264	176	207
Melaka	4,254	3,744	3,612	3,196	3,300
N.Sembilan	4,078	4,278	3,700	4,134	3,990
Pulau Pinang	14,495	13,409	13,245	14,436	2,010
Pahang	2,085	2,268	2,060	2,240	7,445
Perak	9,568	8,716	7,937	8,078	152
Perlis	146	164	155	127	20,692
Selangor	45,324	40,800	40,836	38,715	31,150
Terengganu	474	529	499	630	738
Pen. Malaysia & F.T. Labuan	95,347	94,912	96,092	97,727	97,497



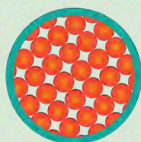
CHEMICAL OXYGEN DEMAND (COD): ALLOWABLE LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	131,884	171,941	188,593	195,961	202,884
Kedah	51,284	46,318	47,160	49,221	51,836
Kelantan	n/a	3,359	3,594	3,689	3,842
F.T. Labuan	3,624	2,749	2,849	2,862	3,098
Melaka	52,371	45,765	48,428	50,116	51,832
N.Sembilan	48,976	43,774	50,029	52,440	54,630
Pulau Pinang	147,443	135,320	138,610	148,376	27,178
Pahang	26,195	24,634	25,290	26,913	101,982
Perak	108,803	92,513	94,627	104,409	3,232
Perlis	2,938	2,839	3,050	3,041	152,277
Selangor	628,423	570,222	637,992	628,779	608,247
Terengganu	7,969	7,569	7,822	8,467	8,760
Pen. Malaysia & F.T. Labuan	1,209,910	1,147,004	1,248,044	1,274,274	1,269,798



CHEMICAL OXYGEN DEMAND (COD): ACTUAL LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	42,428	68,992	80,845	97,026	100,489
Kedah	14,714	15,653	15,632	23,807	25,069
Kelantan	n/a	809	862	1,801	1,873
F.T. Labuan	893	950	916	1,431	1,549
Melaka	18,115	16,608	16,501	24,490	25,318
N.Sembilan	18,998	20,339	16,458	23,194	24,143
Pulau Pinang	50,830	52,010	51,552	74,088	12,745
Pahang	9,197	9,013	9,263	12,647	50,530
Perak	35,443	32,817	32,052	51,753	1,555
Perlis	640	674	689	1,466	76,031
Selangor	185,341	173,659	177,165	304,265	298,689
Terengganu	1,839	2,213	2,122	4,224	4,370
Pen. Malaysia & F.T. Labuan	378,436	393,737	404,056	620,191	622,361



SUSPENDED SOLID (SS): ALLOWABLE LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	62,536	85,098	93,414	97,026	100,489
Kedah	24,222	22,437	22,807	23,807	25,069
Kelantan	n/a	1,638	1,757	1,801	1,873
F.T. Labuan	1,581	1,375	1,424	1,431	1,549
Melaka	25,341	23,060	23,674	24,490	25,318
N.Sembilan	21,561	21,765	22,123	23,194	24,143
Pulau Pinang	71,477	67,872	69,213	74,088	12,745
Pahang	12,045	11,575	11,884	12,647	50,530
Perak	50,524	45,838	46,887	51,753	1,555
Perlis	1,424	1,378	1,483	1,466	76,031
Selangor	300,436	284,245	309,322	304,265	298,689
Terengganu	3,922	3,779	3,903	4,224	4,370
Pen. Malaysia & F.T. Labuan	575,070	570,060	607,891	620,191	622,361



BIOCHEMICAL OXYGEN DEMAND (BOD): ACTUAL LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	15,585	27,250	31,498	38,609	41,459
Kedah	5,794	6,022	5,864	5,475	6,295
Kelantan	n/a	269	310	423	376
F.T. Labuan	515	518	357	269	388
Melaka	6,563	5,970	5,869	5,212	5,025
N.Sembilan	6,989	7,271	6,408	7,528	6,708
Pulau Pinang	22,683	23,208	21,193	22,127	3,120
Pahang	3,278	3,097	3,554	3,763	10,532
Perak	14,072	12,610	11,874	11,531	281
Perlis	265	269	260	261	23,557
Selangor	74,289	66,832	62,853	57,447	39,570
Terengganu	685	800	836	846	1,005
Pen. Malaysia & F.T. Labuan	150,718	154,117	150,876	153,489	138,315



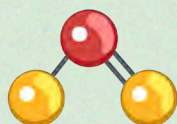
OIL AND GREASE (O&G): ALLOWABLE LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	7,460	8,510	9,341	9,703	10,049
Kedah	2,778	2,244	2,281	2,381	2,507
Kelantan	n/a	164	176	180	187
F.T. Labuan	229	137	142	143	155
Melaka	3,122	2,306	2,367	2,449	2,532
N.Sembilan	2,332	2,177	2,212	2,319	2,414
Pulau Pinang	8,456	6,787	6,921	7,409	1,274
Pahang	1,411	1,158	1,188	1,265	5,053
Perak	6,578	4,584	4,689	5,175	155
Perlis	151	138	148	147	7,603
Selangor	35,016	28,425	30,932	30,426	29,869
Terengganu	464	378	390	422	437
Pen. Malaysia & F.T. Labuan	67,998	57,006	60,789	62,019	62,236



OIL AND GREASE (O&G): ACTUAL LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	2,408	3,518	3,788	4,756	5,245
Kedah	791	810	718	799	902
Kelantan	n/a	39	40	58	56
F.T. Labuan	47	66	28	41	26
Melaka	847	792	811	820	856
N.Sembilan	1,050	1,034	1,006	1,081	1,017
Pulau Pinang	2,644	2,504	2,346	2,999	424
Pahang	380	415	417	484	1,577
Perak	1,437	1,568	1,304	1,580	43
Perlis	53	48	44	43	3,910
Selangor	13,292	13,945	12,478	10,763	8,185
Terengganu	99	108	94	147	168
Pen. Malaysia & F.T. Labuan	23,048	24,847	23,075	23,571	22,408



AMMONIACAL NITROGEN (AMN): ALLOWABLE LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	19,705	17,020	18,683	19,405	20,098
Kedah	7,022	4,487	4,561	4,761	5,014
Kelantan	n/a	328	351	360	375
F.T. Labuan	796	275	285	286	310
Melaka	8,164	4,459	4,735	4,898	5,056
N.Sembilan	5,257	3,727	4,425	4,639	4,829
Pulau Pinang	21,832	13,501	13,843	14,818	2,549
Pahang	3,582	2,315	2,377	2,529	10,106
Perak	19,616	9,168	9,377	10,351	311
Perlis	331	276	297	293	15,206
Selangor	88,373	54,974	61,864	60,853	58,679
Terengganu	1,184	756	781	845	874
Pen. Malaysia & F.T. Labuan	175,861	111,284	121,578	124,038	123,406



AMMONIACAL NITROGEN (AMN): ACTUAL LOAD

Unit (Kg/Day)	2020	2021	2022	2023	2024
Johor	9,063	13,248	16,215	16,081	16,107
Kedah	2,903	3,052	3,068	3,097	3,087
Kelantan	n/a	174	176	202	201
F.T. Labuan	111	118	70	98	135
Melaka	3,919	3,450	3,736	3,242	3,254
N.Sembilan	3,705	3,921	3,340	3,846	3,938
Pulau Pinang	9,477	9,677	9,731	10,919	1,898
Pahang	2,013	2,005	1,824	1,971	5,814
Perak	6,954	6,862	6,657	6,737	155
Perlis	134	152	152	143	12,115
Selangor	34,309	32,968	34,428	32,763	30,816
Terengganu	424	489	494	634	656
Pen. Malaysia & F.T. Labuan	73,011	76,115	79,891	79,734	78,175



NO. OF ENQUIRIES AND COMPLAINTS: GRAND TOTAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	63,417	72,470	102,380	127,230	111,504
Kedah	31,280	32,071	36,431	39,901	33,557
Kelantan	5,833	6,907	6,449	5,896	5,373
F.T. Labuan	982	787	800	756	759
Melaka	20,915	26,599	30,842	35,065	32,298
N.Sembilan	36,273	42,828	51,037	51,901	41,136
Pulau Pinang	54,407	63,254	77,749	77,366	69,052
Pahang	16,455	18,338	22,887	22,761	21,162
Perak	48,013	51,095	62,273	63,895	63,556
Perlis	2,285	2,846	2,833	2,798	2,583
Selangor	419,377	440,960	451,574	466,031	379,301
Terengganu	10,083	9,658	10,319	12,361	10,573
Pen. Malaysia & F.T. Labuan	709,320	767,813	855,574	905,961	770,854



% ENQUIRIES AND COMPLAINTS TO TOTAL CONNECTED ACCOUNT

Unit (%)	2020	2021	2022	2023	2024
Johor	16.1%	16.7%	17.0%	18.9%	16.0%
Kedah	17.5%	17.4%	19.1%	19.4%	16.0%
Kelantan	72.7%	74.9%	62.7%	47.6%	41.6%
F.T. Labuan	14.4%	11.3%	10.8%	10.1%	9.9%
Melaka	13.5%	16.0%	17.6%	18.1%	16.2%
N.Sembilan	15.4%	17.6%	20.0%	19.1%	14.6%
Pulau Pinang	11.3%	12.8%	15.1%	14.4%	12.5%
Pahang	16.5%	16.3%	19.7%	17.3%	15.7%
Perak	14.3%	14.8%	17.3%	16.1%	15.6%
Perlis	24.8%	29.4%	28.1%	25.7%	23.3%
Selangor	18.9%	19.2%	18.8%	17.9%	14.0%
Terengganu	41.4%	37.8%	38.6%	41.3%	34.6%
Pen. Malaysia & F.T. Labuan	17.1%	17.7%	18.3%	17.9%	14.7%



NO. OF ENQUIRIES AND COMPLAINTS : BILLING

Unit (Nos)	2020	2021	2022	2023	2024
Johor	50,267	59,544	86,884	112,662	96,324
Kedah	18,910	20,639	26,272	29,718	23,717
Kelantan	0	374	1,365	1,365	1,020
F.T. Labuan	313	176	299	210	191
Melaka	15,855	21,409	24,680	29,152	25,807
N.Sembilan	27,861	34,639	42,595	44,706	33,660
Pulau Pinang	44,033	52,758	66,784	65,704	57,544
Pahang	9,760	11,260	14,707	15,719	14,208
Perak	29,182	32,363	42,942	45,917	44,764
Perlis	707	966	1,339	1,463	1,236
Selangor	381,474	402,488	412,169	427,729	342,590
Terengganu	1,915	1,640	3,185	5,745	4,143
Pen. Malaysia & F.T. Labuan	580,277	638,256	723,221	780,090	645,204



% ENQUIRIES AND COMPLAINTS TO TOTAL ENQUIRIES AND COMPLAINTS (BILLING)

Unit (%)	2020	2021	2022	2023	2024
Johor	79.3%	82.2%	84.9%	88.5%	86.4%
Kedah	60.5%	64.4%	72.1%	74.5%	70.7%
Kelantan	0.0%	5.4%	21.2%	23.2%	19.0%
F.T. Labuan	31.9%	22.4%	37.4%	27.8%	25.2%
Melaka	75.8%	80.5%	80.0%	83.1%	79.9%
N.Sembilan	76.8%	80.9%	83.5%	86.1%	81.8%
Pulau Pinang	80.9%	83.4%	85.9%	84.9%	83.3%
Pahang	59.3%	61.4%	64.3%	69.1%	67.1%
Perak	60.8%	63.3%	69.0%	71.9%	70.4%
Perlis	30.9%	33.9%	47.3%	52.3%	47.9%
Selangor	91.0%	91.3%	91.3%	91.8%	90.3%
Terengganu	19.0%	17.0%	30.9%	46.5%	39.2%
Pen. Malaysia & F.T. Labuan	81.8%	83.1%	84.5%	86.1%	83.7%



% ENQUIRIES AND COMPLAINTS TO TOTAL CONNECTED ACCOUNT (BILLING)

Unit (%)	2020	2021	2022	2023	2024
Johor	12.8%	13.7%	14.5%	16.7%	13.8%
Kedah	10.6%	11.2%	13.8%	14.5%	11.3%
Kelantan	0.0%	4.1%	13.3%	11.0%	7.9%
F.T. Labuan	4.6%	2.5%	4.0%	2.8%	2.5%
Melaka	10.2%	12.9%	14.1%	15.0%	12.9%
N.Sembilan	11.9%	14.2%	16.7%	16.5%	11.9%
Pulau Pinang	9.2%	10.6%	13.0%	12.2%	10.4%
Pahang	9.8%	10.0%	12.6%	12.0%	10.5%
Perak	8.7%	9.4%	11.9%	11.6%	11.0%
Perlis	7.7%	10.0%	13.3%	13.4%	11.2%
Selangor	17.2%	17.5%	17.2%	16.5%	12.7%
Terengganu	7.9%	6.4%	11.9%	19.2%	13.6%
Pen. Malaysia & F.T. Labuan	14.0%	14.7%	15.5%	15.4%	12.3%



NO. OF ENQUIRIES AND COMPLAINTS: (DESLUDGING SERVICES)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	9,732	9,844	11,006	9,507	9,389
Kedah	10,017	9,051	8,044	7,536	7,483
Kelantan	4,224	6,194	4,722	4,124	3,954
F.T. Labuan	511	503	379	455	517
Melaka	3,526	3,171	3,810	3,419	3,922
N.Sembilan	6,152	5,799	5,955	4,798	5,017
Pulau Pinang	4,661	4,677	5,381	5,072	5,136
Pahang	5,557	5,779	6,611	5,561	5,755
Perak	13,112	12,976	13,184	12,087	12,641
Perlis	1,477	1,802	1,407	1,235	1,249
Selangor	12,481	12,244	13,204	12,279	12,018
Terengganu	7,712	7,343	6,229	5,833	5,716
Pen. Malaysia & F.T. Labuan	79,162	79,383	79,932	71,906	72,797



% ENQUIRIES AND COMPLAINTS TO TOTAL ENQUIRIES AND COMPLAINTS (DESLUDGING SERVICES)

Unit (%)	2020	2021	2022	2023	2024
Johor	15.3%	13.6%	10.8%	7.5%	8.4%
Kedah	32.0%	28.2%	22.1%	18.9%	22.3%
Kelantan	72.4%	89.7%	73.2%	69.9%	73.6%
F.T. Labuan	52.0%	63.9%	47.4%	60.2%	68.1%
Melaka	16.9%	11.9%	12.4%	9.8%	12.1%
N.Sembilan	17.0%	13.5%	11.7%	9.2%	12.2%
Pulau Pinang	8.6%	7.4%	6.9%	6.6%	7.4%
Pahang	33.8%	31.5%	28.9%	24.4%	27.2%
Perak	27.3%	25.4%	21.2%	18.9%	19.9%
Perlis	64.6%	63.3%	49.7%	44.1%	48.4%
Selangor	3.0%	2.8%	2.9%	2.6%	3.2%
Terengganu	76.5%	76.0%	60.4%	47.2%	54.1%
Pen. Malaysia & F.T. Labuan	11.2%	10.3%	9.3%	7.9%	9.4%



% ENQUIRIES AND COMPLAINTS TO TOTAL CONNECTED ACCOUNT (DESLUDGING SERVICES)

Unit (%)	2020	2021	2022	2023	2024
Johor	2.5%	2.3%	1.8%	1.4%	1.3%
Kedah	5.6%	4.9%	4.2%	3.7%	3.6%
Kelantan	52.7%	67.2%	45.9%	33.3%	30.6%
F.T. Labuan	7.5%	7.2%	5.1%	6.1%	6.7%
Melaka	2.3%	1.9%	2.2%	1.8%	2.0%
N.Sembilan	2.6%	2.4%	2.3%	1.8%	1.8%
Pulau Pinang	1.0%	0.9%	1.0%	0.9%	0.9%
Pahang	5.6%	5.2%	5.7%	4.2%	4.3%
Perak	3.9%	3.8%	3.7%	3.0%	3.1%
Perlis	16.0%	18.6%	14.0%	11.3%	11.3%
Selangor	0.6%	0.5%	0.6%	0.5%	0.4%
Terengganu	31.7%	28.7%	23.3%	19.5%	18.7%
Pen. Malaysia & F.T. Labuan	1.9%	1.8%	1.7%	1.4%	1.4%



NO. OF ENQUIRIES AND COMPLAINTS : SEWAGE TREATMENT PLANT

Unit (Nos)	2020	2021	2022	2023	2024
Johor	264	245	418	480	612
Kedah	417	320	288	322	358
Kelantan	0	5	2	2	0
F.T. Labuan	1	4	3	1	1
Melaka	356	402	300	347	417
N.Sembilan	263	180	115	172	206
Pulau Pinang	987	633	552	630	595
Pahang	361	335	345	268	289
Perak	991	684	760	837	945
Perlis	37	23	9	10	15
Selangor	4,305	3,699	3,831	1,868	2,581
Terengganu	24	18	24	31	28
Pen. Malaysia & F.T. Labuan	8,006	6,548	6,647	4,968	6,047



% ENQUIRIES AND COMPLAINTS TO TOTAL ENQUIRIES AND COMPLAINTS (SEWAGE TREATMENT PLANT)

Unit (%)	2020	2021	2022	2023	2024
Johor	0.4%	0.3%	0.4%	0.4%	0.5%
Kedah	1.3%	1.0%	0.8%	0.8%	1.1%
Kelantan	0.0%	0.1%	0.0%	0.0%	0.0%
F.T. Labuan	0.1%	0.5%	0.4%	0.1%	0.1%
Melaka	1.7%	1.5%	1.0%	1.0%	1.3%
N.Sembilan	0.7%	0.4%	0.2%	0.3%	0.5%
Pulau Pinang	1.8%	1.0%	0.7%	0.8%	0.9%
Pahang	2.2%	1.8%	1.5%	1.2%	1.4%
Perak	2.1%	1.3%	1.2%	1.3%	1.5%
Perlis	1.6%	0.8%	0.3%	0.4%	0.6%
Selangor	1.0%	0.8%	0.8%	0.4%	0.7%
Terengganu	0.2%	0.2%	0.2%	0.3%	0.3%
Pen. Malaysia & F.T. Labuan	1.1%	0.9%	0.8%	0.5%	0.8%



% ENQUIRIES AND COMPLAINTS TO TOTAL CONNECTED ACCOUNT (SEWAGE TREATMENT PLANT)

Unit (%)	2020	2021	2022	2023	2024
Johor	0.1%	0.1%	0.1%	0.1%	0.1%
Kedah	0.2%	0.2%	0.2%	0.2%	0.2%
Kelantan	0.0%	0.1%	0.0%	0.0%	0.0%
F.T. Labuan	0.0%	0.1%	0.0%	0.0%	0.0%
Melaka	0.2%	0.2%	0.2%	0.2%	0.2%
N.Sembilan	0.1%	0.1%	0.0%	0.1%	0.1%
Pulau Pinang	0.2%	0.1%	0.1%	0.1%	0.1%
Pahang	0.4%	0.3%	0.3%	0.2%	0.2%
Perak	0.3%	0.2%	0.2%	0.2%	0.2%
Perlis	0.4%	0.2%	0.1%	0.1%	0.1%
Selangor	0.2%	0.2%	0.2%	0.1%	0.1%
Terengganu	0.1%	0.1%	0.1%	0.1%	0.1%
Pen. Malaysia & F.T. Labuan	0.2%	0.2%	0.1%	0.1%	0.1%



NO. OF ENQUIRIES AND COMPLAINTS: (SEWER NETWORK & NETWORK PUMPING STATION)

Unit (Nos)	2020	2021	2022	2023	2024
Johor	2,937	2,496	3,607	3,866	3,739
Kedah	1,685	1,689	1,445	1,501	1,374
Kelantan	0	265	222	170	119
F.T. Labuan	148	65	34	48	36
Melaka	997	1,413	1,684	1,659	1,645
N.Sembilan	1,967	2,107	2,222	2,027	2,048
Pulau Pinang	4,463	4,768	4,160	4,185	4,264
Pahang	704	886	1,004	997	778
Perak	4,494	4,751	4,781	4,432	4,326
Perlis	48	44	64	66	39
Selangor	19,729	20,534	20,605	21,541	19,456
Terengganu	119	104	243	95	61
Pen. Malaysia & F.T. Labuan	37,291	39,122	40,071	40,587	37,885



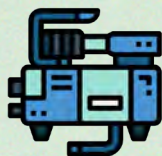
% ENQUIRIES AND COMPLAINTS TO TOTAL ENQUIRIES AND COMPLAINTS (SEWER NETWORK & NETWORK PUMPING STATION)

Unit (%)	2020	2021	2022	2023	2024
Johor	4.6%	3.4%	3.5%	3.0%	3.4%
Kedah	5.4%	5.3%	4.0%	3.8%	4.1%
Kelantan	0.0%	3.8%	3.4%	2.9%	2.2%
F.T. Labuan	15.1%	8.3%	4.3%	6.3%	4.7%
Melaka	4.8%	5.3%	5.5%	4.7%	5.1%
N.Sembilan	5.4%	4.9%	4.4%	3.9%	5.0%
Pulau Pinang	8.2%	7.5%	5.4%	5.4%	6.2%
Pahang	4.3%	4.8%	4.4%	4.4%	3.7%
Perak	9.4%	9.3%	7.7%	6.9%	6.8%
Perlis	2.1%	1.5%	2.3%	2.4%	1.5%
Selangor	4.7%	4.7%	4.6%	4.6%	5.1%
Terengganu	1.2%	1.1%	2.4%	0.8%	0.6%
Pen. Malaysia & F.T. Labuan	5.3%	5.1%	4.7%	4.5%	4.9%



% ENQUIRIES AND COMPLAINTS TO TOTAL CONNECTED ACCOUNT (SEWER NETWORK & NETWORK PUMPING STATION)

Unit (%)	2020	2021	2022	2023	2024
Johor	0.7%	0.6%	0.6%	0.6%	0.5%
Kedah	0.9%	0.9%	0.8%	0.7%	0.7%
Kelantan	0.0%	2.9%	2.2%	1.4%	0.9%
F.T. Labuan	2.2%	0.9%	0.5%	0.6%	0.5%
Melaka	0.6%	0.9%	1.0%	0.9%	0.8%
N.Sembilan	0.8%	0.9%	0.9%	0.7%	0.7%
Pulau Pinang	0.9%	1.0%	0.8%	0.8%	0.8%
Pahang	0.7%	0.8%	0.9%	0.8%	0.6%
Perak	1.3%	1.4%	1.3%	1.1%	1.1%
Perlis	0.5%	0.5%	0.6%	0.6%	0.4%
Selangor	0.9%	0.9%	0.9%	0.8%	0.7%
Terengganu	0.5%	0.4%	0.9%	0.3%	0.2%
Pen. Malaysia & F.T. Labuan	0.9%	0.9%	0.9%	0.8%	0.7%



NO. OF ENQUIRIES AND COMPLAINTS : OTHERS -POUR FLUSH, SLUDGE, OTHERS

Unit (Nos)	2020	2021	2022	2023	2024
Johor	217	341	465	715	1,440
Kedah	251	372	382	824	625
Kelantan	1,609	69	138	235	280
F.T. Labuan	9	39	85	42	14
Melaka	181	204	368	488	507
N.Sembilan	30	103	150	198	205
Pulau Pinang	263	418	872	1,775	1,513
Pahang	73	78	220	216	132
Perak	234	321	606	622	880
Perlis	16	11	14	24	44
Selangor	1,388	1,995	1,765	2,614	2,656
Terengganu	313	553	638	657	625
Pen. Malaysia & F.T. Labuan	4,584	4,504	5,703	8,410	8,921



% ENQUIRIES AND COMPLAINTS TO TOTAL ENQUIRIES AND COMPLAINTS (OTHERS -POUR FLUSH, SLUDGE, OTHERS)

Unit (%)	2020	2021	2022	2023	2024
Johor	0.3%	0.5%	0.5%	0.6%	1.3%
Kedah	0.8%	1.2%	1.0%	2.1%	1.9%
Kelantan	27.6%	1.0%	2.1%	4.0%	5.2%
F.T. Labuan	0.9%	5.0%	10.6%	5.6%	1.8%
Melaka	0.9%	0.8%	1.2%	1.4%	1.6%
N.Sembilan	0.1%	0.2%	0.3%	0.4%	0.5%
Pulau Pinang	0.5%	0.7%	1.1%	2.3%	2.2%
Pahang	0.4%	0.4%	1.0%	0.9%	0.6%
Perak	0.5%	0.6%	1.0%	1.0%	1.4%
Perlis	0.7%	0.4%	0.5%	0.9%	1.7%
Selangor	0.3%	0.5%	0.4%	0.6%	0.7%
Terengganu	3.1%	5.7%	6.2%	5.3%	5.9%
Pen. Malaysia & F.T. Labuan	0.6%	0.6%	0.7%	0.9%	1.2%



% ENQUIRIES AND COMPLAINTS TO TOTAL CONNECTED ACCOUNT (OTHERS -POUR FLUSH, SLUDGE, OTHERS)

Unit (%)	2020	2021	2022	2023	2024
Johor	0.1%	0.1%	0.1%	0.1%	0.2%
Kedah	0.1%	0.2%	0.2%	0.4%	0.3%
Kelantan	20.1%	0.7%	1.3%	1.9%	2.2%
F.T. Labuan	0.1%	0.6%	1.1%	0.6%	0.2%
Melaka	0.1%	0.1%	0.2%	0.3%	0.3%
N.Sembilan	0.0%	0.0%	0.1%	0.1%	0.1%
Pulau Pinang	0.1%	0.1%	0.2%	0.3%	0.3%
Pahang	0.1%	0.1%	0.2%	0.2%	0.1%
Perak	0.1%	0.1%	0.2%	0.2%	0.2%
Perlis	0.2%	0.1%	0.1%	0.2%	0.4%
Selangor	0.1%	0.1%	0.1%	0.1%	0.1%
Terengganu	1.3%	2.2%	2.4%	2.2%	2.0%
Pen. Malaysia & F.T. Labuan	0.1%	0.1%	0.1%	0.2%	0.2%



NO OF STAFF: GRAND TOTAL

Unit (Nos)	2020	2021	2022	2023	2024
Johor	243	228	232	236	240
Kedah	229	224	216	222	217
Kelantan	50	48	52	53	55
F.T. Labuan	28	29	29	29	28
Melaka	181	178	170	175	177
N.Sembilan	176	183	181	176	177
Pulau Pinang	330	323	313	311	306
Pahang	140	144	143	144	145
Perak	316	319	317	311	309
Perlis	19	19	19	19	19
Selangor	1,579	1,580	1,618	1,639	1,007
Terengganu	116	116	117	118	114
Pen. Malaysia & F.T. Labuan	3,407	3,391	3,407	3,433	2,794



NO OF STAFF: SEWAGE TREATMENT PLANTS & TREATMENT SERVICES

Unit (Nos)	2020	2021	2022	2023	2024
Johor	117	100	100	104	106
Kedah	105	101	99	99	94
Kelantan	9	7	9	10	11
F.T. Labuan	13	13	13	13	12
Melaka	75	77	74	75	76
N.Sembilan	103	108	107	103	104
Pulau Pinang	166	160	155	152	148
Pahang	69	72	72	73	75
Perak	133	133	130	131	128
Perlis	8	8	8	8	8
Selangor	580	578	571	577	584
Terengganu	40	41	39	40	39
Pen. Malaysia & F.T. Labuan	1,418	1,398	1,377	1,385	1,385



NO OF STAFF: NETWORK SERVICES

Unit (Nos)	2020	2021	2022	2023	2024
Johor	25	27	27	28	28
Kedah	24	24	22	23	24
Kelantan	2	3	3	3	3
F.T. Labuan	2	2	2	2	2
Melaka	14	15	15	15	15
N.Sembilan	19	17	18	17	18
Pulau Pinang	38	36	37	36	37
Pahang	13	13	13	13	13
Perak	26	28	29	29	28
Perlis	0	0	0	0	0
Selangor	95	98	120	125	120
Terengganu	7	7	7	7	6
Pen. Malaysia & F.T. Labuan	265	270	293	298	294



NO OF STAFF: DESLUDGING SERVICES

Unit (Nos)	2020	2021	2022	2023	2024
Johor	44	43	42	40	42
Kedah	49	47	46	50	49
Kelantan	9	21	22	22	22
F.T. Labuan	6	6	6	6	6
Melaka	21	17	17	19	21
N.Sembilan	22	25	23	24	23
Pulau Pinang	27	27	26	25	25
Pahang	31	32	31	31	31
Perak	66	67	68	68	64
Perlis	9	11	9	9	9
Selangor	72	70	69	72	73
Terengganu	31	31	33	32	31
Pen. Malaysia & F.T. Labuan	387	397	392	398	396



NO OF STAFF: OPERATING & PLANNING

Unit (Nos)	2020	2021	2022	2023	2024
Johor	41	41	40	42	43
Kedah	42	43	40	42	41
Kelantan	11	11	11	11	11
F.T. Labuan	6	7	7	7	7
Melaka	23	23	22	22	22
N.Sembilan	25	25	25	24	24
Pulau Pinang	49	50	48	47	46
Pahang	20	20	20	20	19
Perak	60	59	58	57	57
Perlis	2	0	2	2	2
Selangor	730	730	753	761	127
Terengganu	18	17	18	18	18
Pen. Malaysia & F.T. Labuan	1,027	1,026	1,044	1,053	417



NO OF STAFF: REGIONAL, LABORATORY SERVICES AND CAPITAL WORKS & REFURBISHMENT

Unit (Nos)	2020	2021	2022	2023	2024
Johor	16	17	23	22	21
Kedah	9	9	9	8	9
Kelantan	19	6	7	7	8
F.T. Labuan	1	1	1	1	1
Melaka	48	46	42	44	43
N.Sembilan	7	8	8	8	8
Pulau Pinang	50	50	47	51	50
Pahang	7	7	7	7	7
Perak	31	32	32	26	32
Perlis	0	0	0	0	0
Selangor	102	104	105	104	103
Terengganu	20	20	20	21	20
Pen. Malaysia & F.T. Labuan	310	300	301	299	302



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