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MINISTRY OF THE ENVIRONMENT AND WATER RESOURCES

OVERVIEW

Mission Statement

To ensure a clean, sustainable environment and water supply for Singapore.

FY2019 EXPENDITURE ESTIMATES

Expenditure Estimates by Object Class

Code	Object Class	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019	Change Over FY2018	
	TOTAL EXPENDITURE	\$2,797,397,041	\$2,216,531,800	\$2,142,558,900	\$2,752,273,400	\$609,714,500	28.5%
	Main Estimates						
	OPERATING EXPENDITURE	\$1,248,303,173	\$1,304,123,800	\$1,299,236,100	\$1,589,781,200	\$290,545,100	22.4%
	<i>RUNNING COSTS</i>	<i>\$1,241,782,484</i>	<i>\$1,297,988,600</i>	<i>\$1,293,090,500</i>	<i>\$1,580,272,400</i>	<i>\$287,181,900</i>	<i>22.2%</i>
	Expenditure on Manpower	\$23,827,236	\$25,558,000	\$25,414,100	\$28,897,300	\$3,483,200	13.7%
1200	Political Appointments	1,085,755	1,046,800	1,097,300	1,141,200	43,900	4.0
1500	Permanent Staff	22,723,951	24,478,000	24,292,600	27,735,400	3,442,800	14.2
1600	Temporary, Daily-Rated & Other Staff	17,530	33,200	24,200	20,700	-3,500	-14.5
	Other Operating Expenditure	\$23,404,405	\$40,267,100	\$42,232,800	\$54,846,400	\$12,613,600	29.9%
2100	Consumption of Products & Services	20,571,684	37,102,900	37,336,700	51,295,200	13,958,500	37.4
2300	Manpower Development	601,747	610,200	681,800	737,200	55,400	8.1
2400	International & Public Relations, Public Communications	2,140,208	2,412,600	4,090,600	2,730,000	-1,360,600	-33.3
2700	Asset Acquisition	90,722	141,400	123,700	84,000	-39,700	-32.1
2800	Miscellaneous	45	0	0	0	0	n.a.
	Grants, Subventions & Capital Injections to Organisations	\$1,194,550,843	\$1,232,163,500	\$1,225,443,600	\$1,496,528,700	\$271,085,100	22.1%
3100	Grants, Subventions & Capital Injections to Statutory Boards	1,194,550,843	1,232,163,500	1,225,443,600	1,496,528,700	271,085,100	22.1
	<i>TRANSFERS</i>	<i>\$6,520,689</i>	<i>\$6,135,200</i>	<i>\$6,145,600</i>	<i>\$9,508,800</i>	<i>\$3,363,200</i>	<i>54.7%</i>
3600	Transfers to Institutions & Organisations	501,591	221,800	221,800	84,300	-137,500	-62.0
3800	International Organisations & Overseas Development Assistance	6,019,098	5,913,400	5,923,800	9,424,500	3,500,700	59.1
	OTHER CONSOLIDATED FUND OUTLAYS	\$0	\$0	\$0	\$15,000	\$15,000	n.a.
4600	Loans and Advances (Disbursement)	0	0	0	15,000	15,000	n.a.

Code	Object Class	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019	Change Over FY2018	
Development Estimates							
	DEVELOPMENT EXPENDITURE	\$1,549,093,868	\$912,408,000	\$843,322,800	\$1,162,492,200	\$319,169,400	37.8%
5100	Government Development	637,381,634	897,226,400	836,506,100	1,125,011,500	288,505,400	34.5
5200	Grants & Capital Injections to Organisations	911,712,234	15,181,600	6,816,700	37,480,700	30,664,000	449.8
	OTHER DEVELOPMENT FUND OUTLAYS	\$7,011,934	\$8,889,500	\$6,964,000	\$8,024,400	\$1,060,400	15.2%
5500	Land-Related Expenditure	7,011,934	8,889,500	6,964,000	8,024,400	1,060,400	15.2

Establishment List

Category/Personnel	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
POLITICAL APPOINTMENTS	2	2	2	2
Minister	1	1	1	1
Senior Minister of State	1	1	1	1
PERMANENT STAFF	148	148	149	179
Accounting Profession (2008)	3	3	3	3
Administrative	7	7	7	7
Information Service (2008)	4	4	4	4
Management Executive Scheme (2008)	110	110	111	141
Management Support Scheme (2008)	20	20	20	20
Operations Support	3	3	3	3
Shorthand Writers	1	1	1	1
OTHERS	4,387	4,552	4,342	5,344
National Environment Agency	4,070	4,197	3,990	4,158
Public Utilities Board	317	355	352	347
Singapore Food Agency	0	0	0	839
TOTAL	4,537	4,702	4,493	5,525

FY2018 BUDGET

The Ministry of the Environment and Water Resources (MEWR)'s revised FY2018 total expenditure is \$2.14 billion. This is a decrease of \$654.84 million or 23.4% lower than the actual FY2017 total expenditure. Of the total expenditure, \$1.30 billion or 60.6% is for operating expenditure and \$843.32 million or 39.4% is for development expenditure.

Operating Expenditure

The revised FY2018 operating expenditure of \$1.30 billion is \$50.93 million or 4.1% higher than the actual FY2017 operating expenditure of \$1.25 billion. This increase is largely due to increased operating costs and expanded work scope in environmental services, and higher expenditure for potable water operations.

Development Expenditure

The revised FY2018 development expenditure of \$843.32 million is \$705.77 million or 45.6% lower than the actual FY2017 development expenditure of \$1.55 billion. This is largely due to the provision in FY2017 of an equity injection to the National Environment Agency (NEA) for the construction of the Integrated Waste Management Facility and a capital grant to the Public Utilities Board (PUB) for the redevelopment of Mandai.

Other Development Fund Outlays

The revised FY2018 other development fund outlays of \$6.96 million relates to Land-Related Expenditure for the development of sewerage networks in Changi East and NEA's exhumation projects at Choa Chu Kang.

FY2019 BUDGET

The total expenditure of MEWR in FY2019 is projected to be \$2.75 billion, an increase of \$609.71 million or 28.5% from the revised FY2018 total expenditure. Of the total expenditure, \$1.59 billion or 57.8% is for operating expenditure and \$1.16 billion or 42.2% is for development expenditure.

Operating Expenditure

The provision of \$1.59 billion for FY2019 operating expenditure represents an increase of \$290.55 million or 22.4% over the revised FY2018 operating expenditure. This is mainly due to the formation of the Singapore Food Agency (SFA) under the Ministry, as well as higher operating grants to PUB and NEA. Out of the total operating expenditure, \$1.58 billion or 99.4% is for Running Costs and \$9.51 million or 0.6% is for Transfers.

The major share of the operating budget, \$876.05 million (55.1%), will go towards the National Environment Agency Programme. This is followed by the Public Utilities Board Programme which will take up \$461.48 million (29.0%), the Singapore Food Agency Programme with \$163.54 million (10.3%) and the Administration Programme with \$88.71 million (5.6%).

National Environment Agency Programme

NEA aims to promote and sustain a clean and healthy living environment for Singapore. For FY2019, NEA is allocated an operating grant of \$876.05 million. This grant is mainly for the implementation of key programmes to ensure that Singapore continues to have high standards of public health, a clean and sustainable environment, timely and reliable meteorological services, and to promote resource efficiency and conservation in collaboration with NEA's partners and the community.

Public Utilities Board Programme

PUB aims to secure an efficient, adequate and sustainable supply of water. For FY2019, PUB is allocated an operating grant of \$461.48 million mainly for the operations and maintenance of drainage systems, the Active, Beautiful and Clean (ABC) Waters Programme, and water infrastructure projects.

Singapore Food Agency Programme

As the lead agency overseeing food security and safety from farm to fork, SFA aims to ensure and secure a supply of safe food for Singapore. For FY2019, SFA is allocated an operating grant of \$163.54 million to implement key programmes to strengthen the resilience of Singapore's food supply and strengthen food safety assurance in partnership with industry and consumers.

Other Consolidated Fund Outlays

Advances for FY2019 are projected to be \$15,000, catered for officers on overseas work trips.

Development Expenditure

Development expenditure in FY2019 is expected to be \$1.16 billion, an increase of \$319.17 million or 37.8% from the revised FY2018 figure of \$843.32 million. This is largely due to higher expected expenditure in FY2019 for the Deep Tunnel Sewerage System Phase 2 project.

Major PUB drainage projects to be funded in FY2019 include: 5th Roadside Drains Improvement Programme (\$50.36 million), Improvement of Bedok Canal (Between Upper Changi Road East and Bedok Junction, and between East Coast Parkway and the Sea) (\$28.37 million), Improvement to Bukit Timah First Diversion Canal (\$17.00 million), Improvement to Old Roadside Drains under Batch 9 of the Estate Upgrading Programme (\$16.00 million), and Outlet Drains Improvement Programme (\$14.83 million).

Major PUB sewerage projects to be funded in FY2019 include: Deep Tunnel Sewerage System Phase 2 (\$610.47 million), Proposed Expansion of Sewerage Networks in Sengkang and Punggol Areas (\$38.66 million), Proposed Expansion of Sewerage Networks in Loyang Avenue and Upper Changi Road East Areas (\$24.96 million), Proposed Sewers in North Woodlands (\$24.30 million), and Rehabilitation of Sewerage Network System Phase 5 (\$22.00 million).

Major NEA projects to be funded in FY2019 include: Development of New Crematorium at Mandai (\$34.00 million), Redevelopment of Choa Chu Kang Cemetery Phase 3 (\$20.00 million), Development of New Hawker Centres in Woodlands, Sengkang, Pasir Ris, Jurong West, Yishun and Sembawang Housing Estates (\$7.87 million), Development of New Hawker Centres at Fernvale, Bukit Panjang North and Anchorvale (\$7.18 million), and Development of New Hawker Centre at Punggol (\$2.73 million).

Major SFA projects to be funded in FY2019 include: Development Works for Farm Sites in Lim Chu Kang and Sungei Tengah (\$5.50 million) and Transforming SFA's Food Safety Regulatory Approach Through Smart Technology (\$5.19 million).

Other Development Fund Outlays

The other development fund outlays of \$8.02 million for FY2019 relates to Land-Related Expenditure for the development of sewerage networks in Changi East and NEA's exhumation projects at Choa Chu Kang.

Total Expenditure by Programme

Code	Programme	Running Costs	Transfers	Operating Expenditure	Development Expenditure	Total Expenditure
L-A	Administration	83,743,700	4,966,700	88,710,400	9,627,100	98,337,500
L-G	Public Utilities Board	461,479,200	0	461,479,200	1,037,084,800	1,498,564,000
L-H	National Environment Agency	874,728,600	1,321,400	876,050,000	86,415,400	962,465,400
L-I	Singapore Food Agency	160,320,900	3,220,700	163,541,600	29,364,900	192,906,500
	Total	\$1,580,272,400	\$9,508,800	\$1,589,781,200	\$1,162,492,200	\$2,752,273,400

Development Expenditure by Project

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2016	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
DEVELOPMENT EXPENDITURE	...	...	\$1,551,472,759	\$912,408,000	\$843,322,800	\$1,162,492,200
<i>GOVERNMENT DEVELOPMENT</i>	...	...	<i>639,760,525</i>	<i>897,226,400</i>	<i>836,506,100</i>	<i>1,125,011,500</i>
Administration Programme						
Repair and Refurbishment of ENV Building	21,660,500	720,383	10,233,663	9,791,800	8,996,100	197,600
Minor Development Projects	...	...	1,361,857	4,512,700	6,595,100	2,659,500
New Projects	...	...	0	1,000,000	0	6,770,000
Public Utilities Board Programme						
Improvement to Bukit Timah First Diversion Canal	335,100,000	194,444,872	41,648,114	31,845,100	31,845,100	17,000,000
Improvement to Outlet Drain from Sin Ming Road to Braddell Road	26,089,000	20,820,533	599,472	48,500	0	150,000
Relief Sewers within Marina Reservoir Catchment	8,000,000	4,929,617	5,268	145,700	0	225,000
Improvement to Old Roadside Drains 5-Year Programme FY2006-FY2010	138,000,000	133,949,703	73,435	97,000	747,000	168,200
New Projects	...	...	0	902,700	63,000	11,743,300
Active, Beautiful And Clean Waters Programme	101,980,000	90,908,135	285,417	97,000	100,000	700,000
Improvement to Geylang River Phase 1 - From Dunman Road to Guillemard Road	49,700,000	36,512,267	610,347	9,700	9,700	10,000
Sewer Schemes to Serve Marina South and Pasir Ris/Tampines Areas and Phase Out Nee Soon Pumping Station	287,700,000	235,564,698	9,669,965	9,205,300	6,766,900	4,279,000
Improvement to 4 Outlet Drains in Central Singapore	30,200,000	23,487,826	787,526	242,500	242,500	1,000,000
Improvement to Geylang River Phase 2	36,000,000	18,864,724	8,730	0	2,000,000	1,318,100
Rehabilitation of Sewerage Network System Phase 4	395,000,000	338,516,832	24,695,493	9,215,000	9,215,000	3,900,000
Relief and Replacement Sewers for Jalan Senang, Siglap and Jalan Leban Areas	4,500,000	2,999,964	5,613	161,100	0	332,000
Sewer Extension to Phase Out Sewage Treatment Plants Phase 1	21,000,000	18,511,929	255,896	5,200	99,400	1,300
Minor Development Projects	...	...	1,313,052	3,046,800	4,258,200	1,094,000
Improvement to Rochor Canal (between Jalan Besar and Crawford Street)	42,000,000	36,895,125	49,494	873,000	900,000	800,000
Sewer Extensions to Phase Out Sewage Treatment Plants Phase 2	47,800,000	17,326,239	520,665	207,000	106,300	2,536,000
Relief Sewers at Lavender Street Area, Serangoon Central Area and Kaki Bukit Area	184,200,000	16,557,733	355,806	459,800	539,000	323,000

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2016	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
Sewerage Development at Jurong Eastern Catchment and Jurong Lake District	184,200,000	159,260,008	7,930,556	3,104,000	3,410,800	580,100
Improvement to Roadside Drains in Batch 6 of the Estate Upgrading Programme	80,000,000	55,557,929	1,599,645	242,500	1,000,000	10,000
Improvement to Old Roadside Drains 5 Year Programme (FY2010-FY2014)	303,800,000	244,824,597	12,197,235	6,790,000	6,790,000	8,000,000
Expansion of Sewerage Network in Geylang, Jalan Wangi, Woodlands Industrial Park	16,123,800	12,505,449	1,306,319	114,500	11,000	65,500
Expansion of Sewerage Networks in Siglap Road, Whampoa East/Towner Road and Kaki Bukit Areas and Upgrading of Mugliston Park Pumping Station	26,140,000	8,581,868	218,635	960,300	173,400	1,524,000
Expansion of Sewerage Networks in Jalan Rajah/Sungei Whampoa area	13,700,000	2,672,697	351,666	177,600	137,000	158,000
Improvement to Old Roadside Drains in Batch 7 of the Estate Upgrading Programme	100,200,000	59,934,471	7,140,738	3,647,200	3,647,200	1,050,000
Proposed Expansion of Sewerage Network in Mandai Road Area	25,000,000	8,260,227	5,325,845	2,764,500	1,954,900	915,000
Proposed Expansion of Sewerage Network in Kranji Area	26,400,000	18,561,855	3,343,156	709,000	416,600	194,000
Improvement to Alexandra Canal Subsidiary Drain F (Between Tiong Bahru Rd and Havelock Rd)	28,200,000	12,357,495	5,445,681	3,377,800	3,377,800	1,100,000
Expansion of Sewerage Networks in Bedok Reservoir and Changi Business Park Areas	23,400,000	6,818,811	6,736,726	698,400	1,556,000	54,000
Expansion of Sewerage Networks in Mugliston Park, Buangkok Link and Ang Mo Kio Ave 5 Areas	69,700,000	29,116,924	6,848,438	1,716,900	4,847,000	625,000
Proposed Diversion Canal and Detention Tank to Enhance Flood Protection of Stamford Canal Catchment	306,400,000	129,264,210	53,461,288	40,740,000	40,740,000	500,000
Expansion of Sewerage Networks in Marina Central Area	17,900,000	5,336,210	2,025,392	426,800	539,000	539,000
Proposed Expansion of Sewerage Networks in Tagore Drive, Mandai Quarry Road and Lorong Lada Hitam Areas	47,700,000	31,384,001	9,209,163	287,200	1,406,500	293,900
Expansion of Sewerage Networks in Tanah Merah Kechil Area	4,840,000	4,122,879	119,317	32,100	44,000	55,000
Proposed 3rd Pumping Main for Choa Chu Kang Pumping Station	7,790,000	6,585,799	313,605	51,800	271,100	111,000
Expansion of Sewerage Networks in Lorong Lew Lian and Potong Pasir Avenue 3 Areas	10,710,000	7,765,390	751,727	276,700	242,000	22,000
Expansion of Sewerage Networks in Bishan St 11 and Bishan St 13 Areas	14,760,000	8,339,802	4,594,222	717,800	113,000	215,000
Expansion of Sewerage Networks in Amber Road, Meyer Road and Playfair Road Areas	17,770,000	2,168,688	236,106	52,400	11,000	22,000
Expansion of Sewerage Networks in Yishun Avenue 7, Sembawang Road and Gambas Avenue Areas	39,300,000	6,017,527	11,514,109	7,507,800	3,362,000	1,435,000
Implementation of 16 Projects under Phase 2 of Active, Beautiful and Clean Waters (ABC Waters) Programme	20,736,601	3,814,829	1,686,230	1,631,600	1,593,700	1,707,200
Proposed Expansion of Sewerage Networks in Clementi Avenue 4 and Clementi Avenue 6 Areas	9,930,000	4,536,429	2,208,514	688,700	901,000	55,000
Expansion of Sewerage Networks in Cuppage Road and Koek Road Areas	6,210,000	424,136	3,069,027	1,358,000	1,128,000	100,000
Improvement to Kallang River (Between Bishan Road and Braddell Road)	112,000,000	26,626,247	30,711,269	22,112,900	22,455,400	5,928,800

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2016	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
Expansion of Sewerage Networks in Sembawang Road and Sembawang Avenue Areas	26,977,000	7,615,600	4,347,705	6,799,700	7,063,000	2,225,000
Expansion of Sewerage Networks in Tuas Avenue 2 and Tuas Avenue 10 Areas	36,722,000	14,616,562	7,538,946	940,900	2,013,000	54,000
Improvement to Bedok Canal (Between Upper Changi Rd East and Bedok Junction and Between East Coast Parkway and the Sea)	148,800,000	27,917,257	32,885,120	23,431,000	23,431,000	28,367,300
Proposed Expansion of Sewerage Networks in Sophia Road and Middle Road Areas	3,410,000	220,430	15,620	107,300	111,000	55,000
Proposed Expansion of Sewerage Networks in Cairnhill Circle and Newton Circus Areas	10,510,000	4,757,750	2,369,537	57,300	713,000	285,000
Improvement to Four Outlet Drains in Singapore	61,200,000	10,047,703	7,295,496	6,790,000	6,790,000	3,000,000
DTSS Phase 2-Engineering Services for Feasibility Study/Preliminary Design and Programme Management	71,300,000	25,711,589	3,018,848	7,063,200	7,043,500	6,080,900
Improvement to Sungei Pandan Kechil - Temp Replacement of Pedestrian Bridge and Vehicular Bridge and Temp Tidal Gate	61,400,000	23,539,769	9,308,855	5,335,000	5,500,000	865,000
Implementation of 3 Projects under Phase 2 of Active, Beautiful and Clean Waters (ABC Waters) Programme	23,020,000	3,800,680	7,470,976	4,673,400	5,318,000	840,000
5th Roadside Drains Improvement Programme	227,600,000	12,419,044	34,743,499	45,920,500	47,303,800	50,359,100
Expansion of Sewerage Networks in Leonie Hill Road and River Valley Road	17,350,000	5,782,879	4,772,502	2,885,000	2,470,800	215,000
Proposed Expansion of Sewerage Networks in St Michael's Road and St Francis Road Area	6,790,000	2,508,550	2,346,385	694,900	686,200	221,000
Improvement to Old Roadside Drains in Batch 8 of the Estate Upgrading Programme	74,500,000	34,944,877	9,295,261	3,637,500	3,637,500	400,000
Drainage Improvement Works at Chai Chee Road/ New Upper Changi Road Junction	8,500,000	4,182,454	265,994	436,500	400,000	400,000
Improvement to Sunset Way Outlet Drain (Between PIE and Sungei Ulu Pandan)	16,900,000	8,680,544	4,757,782	1,005,000	1,036,000	475,000
Marina South Drainage Scheme	47,700,000	406,930	769,937	7,857,000	7,857,000	8,600,000
Proposed Sewerage Scheme to Serve Holland Plain and Holland Woods Areas	18,900,000	348,893	5,050,735	2,192,200	3,564,500	2,367,500
Rehabilitation of Sanitary Drain Lines - Jurong Lake Catchment	11,200,000	6,150,703	3,074,163	1,746,000	1,746,000	229,200
Expansion of Sewerage Networks in Loyang Avenue and Upper Changi Road East Areas	135,110,000	1,806,957	11,025,879	16,771,300	24,600,200	24,959,000
Improvement to Bukit Timah Canal (Between Rifle Range Road and Jalan Kampong Chantek)	79,200,000	592,828	0	0	65,000	4,870,000
Urgent Flood Alleviation Programme	77,300,000	43,676,226	4,693,397	10,238,600	8,900,000	2,200,000
Expansion of Sewerage Networks in Lorong Chuan and Lim Tua Tow Road Areas	13,530,000	784,657	5,688,459	3,904,300	4,658,300	355,000
Drainage Improvement Works in Tandem with LTA's Rail and Road Works	48,500,000	5,474,107	2,042,870	5,598,400	5,598,400	1,961,800
Expansion of Sewerage Networks in East Coast Road and Mountbatten Road Areas	14,610,000	125,580	125,934	626,700	240,000	2,438,500
Proposed Expansion of Sewerage Networks in Bukit Batok East Ave 3 Area	44,900,000	1,026,449	9,207,970	10,283,300	13,008,500	6,268,200
Proposed Sewerage Scheme to Serve Sungei Tengah Agrotechnology Park Area	50,360,000	1,326,311	7,788,618	8,167,400	7,992,600	6,184,400
Proposed Sewers in North Woodlands	387,500,000	15,248,221	18,463,695	32,786,000	22,833,600	24,297,000

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2016	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
Improvement to Sungei Pandan Kechil (West Coast Road to the Sea)	54,200,000	7,611,634	12,834,483	10,670,000	10,670,000	2,100,000
Proposed Sewerage Scheme to Serve Lim Chu Kang Area	192,370,000	9,856	4,683,777	12,806,700	14,860,000	19,212,800
Proposed Stormwater Retention Pond for Bidadari Estate	40,400,000	0	0	518,000	100,000	3,674,000
Fund for Rapid Response Mechanism (RRM) Approved Projects	6,000,000	1,898,247	1,355,831	1,545,800	1,550,000	550,000
Proposed Expansion of Sewerage Networks in Eber Road, Paterson Hill and Pasir Panjang Road Areas	12,880,000	171,929	610,831	2,066,100	2,138,000	2,520,000
Proposed Expansion of Sewerage Networks in Stevens Road Area	8,510,000	65,554	48,098	2,977,900	1,548,000	1,438,000
Proposed Expansion of Sewerage Networks in Merpati Road Area	12,090,000	108,243	30,689	4,324,300	431,000	2,693,000
Proposed Expansion of Sewerage Networks in Sengkang and Punggol Areas	212,100,000	685,267	1,509,236	28,341,700	21,280,600	38,662,000
Expansion of Sewerage Networks along LTA's Proposed Thomson-East Coast Line and North-South Expressway	40,500,000	279,089	116,882	3,097,300	592,000	2,163,000
Development of Hydrogeological Map of Singapore	14,630,000	4,501,783	3,779,951	2,779,100	2,779,100	3,043,100
Improvement to Sungei Tampines (Tampines Avenue 7 to Tampines Expressway)	72,000,000	267,943	271,466	2,733,500	3,733,500	10,500,000
Proposed Sewerage Infrastructure at Pulau Punggol Barat	115,900,000	210,753	306,612	4,568,400	3,576,000	9,146,000
Expansion of Sewerage Networks in Pasir Ris Drive 3/12 and Jalan Kembangan Areas and Demolition of Pasir Ris and East Coast Parkway Pump Sumps	18,900,000	186,353	0	993,300	338,400	2,719,000
Outlet Drains Improvement Programme	90,500,000	37,881	642,759	15,016,500	7,340,000	14,827,000
Phase 3 of the Active, Beautiful, and Clean Waters (ABC Waters) Programme	23,150,000	8,178	496,784	3,470,700	2,778,300	3,058,400
Replacement of Supervisory Control and Data Acquisition (SCADA) System at Marina Barrage	4,300,000	0	1,387,475	1,076,700	1,110,000	200,000
Proposed Expansion of Sewerage Networks at Yuan Ching Road	2,410,000	1,557	14,646	310,400	310,600	1,440,000
Deep Tunnel Sewerage System (DTSS) Phase 2- Land Cost	90,000,000	0	94,336	45,687,000	5,000,000	10,000,000
Deep Tunnel Sewerage System (DTSS) Phase 2- Construction Cost	4,450,000,000	0	50,274,047	183,753,100	231,568,100	594,387,700
Improvement to Airport Road Outlet Drain (Between Tai Seng Avenue to Pelton Canal)	13,300,000	0	23,452	2,425,000	1,000,000	1,900,000
Rapid Response Mechanism Year 3	1,750,000	0	34,885	485,000	150,000	65,200
Improvement to Old Roadside Drains in Batch 9 of the Estate Upgrading Programme (EUP 9)	59,700,000	0	412,187	1,582,900	3,700,000	16,000,100
Rehabilitation of Sewerage Network System - Phase 5	127,100,000	0	1,264,142	14,065,000	14,065,000	22,000,000
Upgrading of Sewage Pumping Installations	15,790,000	0	0	417,100	140,000	722,000
Engineering Services for the Proposed Sewers to Serve Tengah New Town	15,820,000	0	70,021	621,600	1,081,100	498,700
Proposed Sewer along Future Road in Punggol North	6,330,000	0	0	100,000	11,000	901,000
Engineering Services for the Proposed Expansion of Sewerage Network in Ang Mo Kio Avenue 3 and Phasing Out of Thomson Hill Pump Sump	1,790,000	0	0	208,600	55,000	451,000

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2016	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
Professional Engineering Services For Preliminary Design of the Inlet Pumping Station and Outfall Component of Jurong Island Water Reclamation Plant (5 MGD)	1,420,000	0	0	0	0	78,700
Engineering Services for Improvement of PA Camp Outlet Drain (Between East Coast Parkway and the Sea)	3,700,000	0	0	0	118,000	409,400
Consultancy Services for the Implementation of a Detention Tank cum Pumping Facility for Syed Alwi Catchment	3,530,000	0	0	0	112,000	549,000
Engineering Services for Improvement of Benoi Road Outlet Drain	2,900,000	0	0	0	0	1,002,000
Improvement of Parbury Outlet Drain (At Upper East Coast Road and between East Coast Parkway and the Sea)	1,900,000	0	0	0	0	618,400
Engineering Services for the Improvement of Drains at Pulau Punggol Barat	2,600,000	0	0	0	0	802,000
Engineering Services for Proposed Expansion of Sewerage Networks in Senoko Way, Woodlands Avenue 6 and Upper Bukit Timah Areas	3,900,000	0	0	0	0	670,000
Engineering Services for the Improvement of Sungei Selarang and Sungei Selarang Subsidiary Drain A	3,900,000	0	0	0	0	784,000
Implementation of Projects under the Local Infrastructure Projects (LIP) Scheme	3,600,000	0	0	0	0	130,000
Engineering Services for Improvement of Drains at Admiralty Road West	900,000	0	0	0	0	47,000
Engineering Services for Proposed Sewers in Tuas View Area	9,880,000	0	0	0	0	310,000
Reconstruction of Alexandra Canal Phase 1	104,200,000	96,772,540	89,251	776,000	1,000,000	200,000
National Environment Agency Programme						
New Projects	...	...	0	8,490,000	0	268,000
Development of New Market/Hawker Centre in Bukit Panjang	38,235,000	35,504,196	149,962	200,000	200,000	250,000
Development of New Hawker Centres at Woodlands, Sengkang, Pasir Ris, Jurong West, Yishun and Sembawang	108,200,000	44,974,352	15,647,341	13,582,000	14,301,300	7,873,600
Development of Replacement Hawker Centre at Woodlands St 12	24,300,000	9,688,145	8,512,191	436,200	436,200	624,700
Development of New Crematorium at Mandai	148,400,000	1,911,083	2,083,968	43,227,600	11,400,000	34,000,000
Development of New Hawker Centres at Dawson and Bidadari	26,500,000	0	997,710	3,880,400	3,207,100	996,300
Consultancy Study on Development of Storage Sites for Radioactive Contaminated Wastes	10,810,000	0	0	0	4,320,800	2,500,000
Development of Road Access to Tuas View Basin Site for IWMF and TWRP	99,000,000	19,557,186	36,111,566	41,870,100	36,081,300	250,000
Development of New Hawker Centre at Punggol	9,325,300	235,037	0	1,817,900	1,817,900	2,726,800
Development of New Hawker Centres at Fernvale, Bukit Panjang North and Anchorvale	59,275,000	6,028	164,403	8,014,700	5,292,000	7,179,000
Redevelopment of Choa Chu Kang Cemetery (CCKC) Phase 3	158,870,000	524,071	4,971,959	35,000,000	30,800,000	20,000,000
Productive Hawker Centres Programme	17,179,300	0	586,600	4,800,000	1,600	1,020,000

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2016	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
Singapore Food Agency Programme						
Development Works for Farm Sites in Lim Chu Kang and Sungei Tengah	25,597,500	0	0	0	0	5,500,000
Redevelopment of Landing Facility at Lim Chu Kang	7,567,300	0	0	0	0	75,000
New Projects	...	...	0	0	0	12,236,200
Completed Projects	...	...	20,994,385	6,489,000	8,319,600	0
<i>GRANTS & CAPITAL INJECTIONS TO ORGANISATIONS</i>	...	...	<i>911,712,234</i>	<i>15,181,600</i>	<i>6,816,700</i>	<i>37,480,700</i>
Public Utilities Board Programme						
New Projects	...	...	0	0	0	17,200,000
National Environment Agency Programme						
New Projects	...	...	0	5,369,300	340,000	3,495,600
Quieter Construction Fund	10,000,000	1,818,139	794,355	2,340,000	3,340,000	450,000
Establishment of the NEA Scheme for Technology Translation	4,600,000	0	0	1,500,000	755,300	1,197,300
Productive Hawker Centres Programme	10,094,700	0	0	5,060,000	0	450,000
NEA One Stop Portal	1,496,000	0	0	0	261,000	940,500
Enhanced Measurement and Reporting Requirements and Preparation for Implementation of Carbon Pricing	1,027,200	0	570,811	0	335,300	55,000
Development of NEA Business Intelligence System	3,140,000	0	0	0	1,035,300	1,858,300
Enhanced Energy Efficiency Fund (E2F) – Energy Efficient Technologies	11,464,700	0	0	0	0	229,300
Minimum Energy Performance Standard (MEPS) for Common Industrial Equipment and Systems	151,000	0	0	0	0	51,000
Singapore Food Agency						
Transforming SFA's Food Safety Regulatory Approach through Smart Technology	6,920,000	0	0	0	0	5,190,000
Minor Development Projects	...	...	0	0	0	1,523,700
New Projects	...	...	0	0	0	4,840,000
Completed Projects	...	...	910,347,068	912,300	749,800	0

Other Development Fund Outlays

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2016	Actual FY2017	Estimated FY2018	Revised FY2018	Estimated FY2019
OTHER DEVELOPMENT FUND OUTLAYS	...	...	\$7,011,934	\$8,889,500	\$6,964,000	\$8,024,400
<i>LAND-RELATED EXPENDITURE</i>	...	...	<i>7,011,934</i>	<i>8,889,500</i>	<i>6,964,000</i>	<i>8,024,400</i>
Public Utilities Board Programme						
Sewer Network for Changi East Area	149,800,000	0	3,303,619	3,104,000	2,795,400	2,947,000
Changi East Drainage Studies	783,000	0	0	9,700	80,000	130,000
National Environment Agency Programme						
Exhumation Programme Phase 5	13,150,000	0	2,572,855	2,436,100	1,069,500	315,700
Exhumation Programme Phases 6 and 7 and Related Works	30,810,000	0	1,135,460	3,339,700	3,019,100	4,631,700

KEY PERFORMANCE INDICATORS

Desired Outcomes

- Clean and healthy environment
- Access to clean water
- Good environmental and water infrastructure and services
- Shared environmental ownership and values
- Long term resource sustainability
- Advancement of Singapore's strategic and economic interests relating to the environment and water

Key Performance Indicators

Desired Outcome	Performance Indicator ¹	Actual FY2016	Actual FY2017	Revised FY2018 ²	Estimated FY2019 ³
Clean and healthy environment	% of days in a year where Pollutant Standards Index (PSI) is in the "Good" & "Moderate" range	99.0	99.5	99.5	94.0
	No. of air pollution incidents per million population ⁴	0.0	0.2	0.2	2.0
	No. of water pollution incidents per million population ⁵	0.4	0.4	0.3	2.0
	No. of local dengue (Dengue Fever and Dengue Haemorrhagic Fever) cases per 100,000 population	229.9	45.1	56.0	126.0 ⁶
	No. of food outlet related food poisoning outbreaks per 1,000 NEA-licensed food establishments	2.0	5.0	6.0	3.5
Access to clean water	% of tests meeting World Health Organisation (WHO) drinking water quality guidelines	100	100	100	100
Good environmental and water infrastructure and services	Total domestic waste disposed of per capita (kg/day/person)	0.83	0.81	0.80	0.80
	Accuracy of Nowcast (%) ⁷	90.5	88.3	90.1	90.0
	% of Unaccounted-for-Water	5.0	5.1	5.4	5.0
	No. of leaks per 100km of potable water mains per year	4.6	6.0	4.7	6.0
	Size of flood prone area (ha)	30.5	29.6	29.0	29.0
	No. of sewerage service disruptions per 1,000 km of sewer maintained per month	10.5	10.2	10.8	13.0
Shared environmental ownership and values	Household water consumption per capita (litres/day)	148	143	142	141
Long term resource sustainability	Energy Consumption per dollar GDP: Improvement from 2005 levels (%)	28.4	NA ⁸	19.6 (By 2020) ⁹	19.6 (By 2020) ⁹
	Recycling rate (%)	61.0	61.0	63.0	63.5
	Total non-domestic waste disposed of (tonnes per day / \$billion GDP)	9.8	9.2	9.6	8.9

¹ All data is reported on calendar year basis.

² Data in "Revised FY2018" column refers to projected figures for 2018.

³ Data in "Estimated FY2019" column refers to targets for 2019.

⁴ Pollution incidents only include substantiated air pollution cases which have significant impacts on the environment and/or public health.

⁵ Pollution incidents refer to substantiated water pollution cases which have resulted in significant water pollution in open drains and/or waterways.

⁶ NEA has reviewed the target of this indicator from 2017, taking into consideration the new baseline of notified dengue cases adopted by MOH.

⁷ Since Jan 2016, Nowcast offers higher resolution forecasts, with Singapore being divided into 47 sectors, an increase from 32 sectors previously.

⁸ Data will be available in 2019, due to the lag time for external organisations / agencies to provide their data to NEA.

⁹ These are 3-year targets set by MEWR for the 2017-2019 periods based on steady progress to achieve the final target of 35% improvement by 2030, under the Sustainable Singapore Blueprint.

Key Performance Indicators – continued

Desired Outcome	Performance Indicator	Revised FY2018	Estimated FY2019
Advancement of Singapore's strategic and economic interests relating to the environment and water	Fulfil Singapore's obligations to regional and international environmental agreements and conventions	Ensured that international commitments are fulfilled to uphold Singapore as a responsible global environmental citizen.	Continue to ensure that international commitments are fulfilled.
		Ensured that international obligations are not inimical to Singapore with regard to our environmental and water interests.	Continue to ensure that international obligations are not inimical to Singapore, with regard to our environmental and water interests.
Advance Singapore's strategic and economic interests relating to the environment and water through bilateral, regional and international platforms		Engaged key bilateral partners to pursue strategic interests in addressing environmental, water and other transboundary environmental issues.	Continue to engage bilateral partners to pursue strategic interests in addressing environmental, water and other transboundary environmental issues.
		Pursued collaborations with international partners to advance our interests on issues relating to the environment and water.	Continue to pursue collaborations with international partners on environment and water issues.
		Profiled Singapore's efforts and achievements in sustainable development and water management.	Continue to profile Singapore's efforts and achievements in sustainable development and water management.
		Leveraged bilateral, regional and international platforms to strengthen global awareness on Singapore's environmental and water issues, including transboundary ones.	Continue to leverage various platforms to strengthen global awareness on Singapore's environmental and water issues, including transboundary ones.