HEAD L

MINISTRY OF THE ENVIRONMENT AND WATER RESOURCES

OVERVIEW

Mission Statement

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

FY2018 EXPENDITURE ESTIMATES

Expenditure Estimates by Object Class

Code	Object Class	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018	Change Over FY2017	
	TOTAL EXPENDITURE	$1,884,445,150	$2,834,243,100	$2,812,839,100	$2,216,531,800	-$596,307,300	-21.2%
	Main Estimates						
	OPERATING EXPENDITURE	$1,200,625,615	$1,284,472,100	$1,260,086,500	$1,304,123,800	$44,037,300	3.5%
	RUNNING COSTS	*$1,184,484,122*	*$1,278,861,200*	*$1,253,611,600*	*$1,297,988,600*	*$44,377,000*	*3.5%*
	Expenditure on Manpower	$23,127,491	$24,207,000	$24,464,600	$25,558,000	$1,093,400	4.5%
1200	Political Appointments	1,030,045	1,122,300	1,006,600	1,046,800	40,200	4.0
1500	Permanent Staff	22,073,614	23,050,400	23,426,000	24,478,000	1,052,000	4.5
1600	Temporary, Daily-Rated & Other Staff	23,833	34,300	32,000	33,200	1,200	3.8
	Other Operating Expenditure	$24,751,973	$34,963,200	$34,326,800	$40,267,100	$5,940,300	17.3%
2100	Consumption of Products & Services	20,742,940	32,309,400	30,445,100	37,102,900	6,657,800	21.9
2300	Manpower Development	915,041	841,000	538,900	610,200	71,300	13.2
2400	International & Public Relations, Public Communications	2,919,107	1,765,100	3,243,800	2,412,600	-831,200	-25.6
2700	Asset Acquisition	174,885	47,700	99,000	141,400	42,400	42.8
	Grants, Subventions & Capital Injections to Organisations	$1,136,604,658	$1,219,691,000	$1,194,820,200	$1,232,163,500	$37,343,300	3.1%
3100	Grants, Subventions & Capital Injections to Statutory Boards	1,136,604,658	1,219,691,000	1,194,820,200	1,232,163,500	37,343,300	3.1
	TRANSFERS	*$16,141,492*	*$5,610,900*	*$6,474,900*	*$6,135,200*	*-$339,700*	*-5.2%*
3600	Transfers to Institutions & Organisations	10,268,330	229,200	561,500	221,800	-339,700	-60.5
3800	International Organisations & Overseas Development Assistance	5,873,162	5,381,700	5,913,400	5,913,400	0	0.0
	Development Estimates						
	DEVELOPMENT EXPENDITURE	$683,819,535	$1,549,771,000	$1,552,752,600	$912,408,000	-$640,344,600	-41.2%
5100	Government Development	629,027,541	635,883,900	640,214,100	897,226,400	257,012,300	40.1
5200	Grants & Capital Injections to Organisations	54,791,994	913,887,100	912,538,500	15,181,600	-897,356,900	-98.3

Code	Object Class	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018	Change Over FY2017	
	OTHER DEVELOPMENT FUND OUTLAYS	$0	$9,865,100	$6,821,800	$8,889,500	$2,067,700	30.3%
5500	Land-Related Expenditure	0	9,865,100	6,821,800	8,889,500	2,067,700	30.3

Establishment List

Category/Personnel	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
POLITICAL APPOINTMENTS	2	2	2	2
Minister	1	1	1	1
Senior Minister of State	1	1	1	1
PERMANENT STAFF	146	148	148	148
Accounting Profession (2008)	3	3	3	3
Administrative	7	7	7	7
Information Service (2008)	4	4	4	4
Management Executive Scheme (2008)	105	110	110	110
Management Support Scheme (2008)	23	20	20	20
Operations Support	3	3	3	3
Shorthand Writers	1	1	1	1
OTHERS	4,347	4,405	4,425	4,552
National Environment Agency	4,012	4,050	4,070	4,197
Public Utilities Board	335	355	355	355
TOTAL	4,495	4,555	4,575	4,702

FY2017 BUDGET

The Ministry of the Environment and Water Resources (MEWR)'s revised FY2017 total expenditure is $2.81 billion. This is an increase of $928.39 million or 49.3% higher than the actual FY2016 expenditure. Of the total expenditure, $1.26 billion or 44.8% is for operating expenditure and $1.55 billion or 55.2% is for development expenditure.

Operating Expenditure

The revised FY2017 operating expenditure of $1.26 billion is $59.46 million or 5.0% higher than the actual FY2016 sum of $1.20 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 FY2017 development expenditure of $1.55 billion is $868.93 million or 127.1% higher than the actual FY2016 sum of $683.82 million. This increase is largely due to the provision of an equity injection to NEA for construction of the Integrated Waste Management Facility, and capital grant to PUB for redevelopment of Mandai.

Other Development Fund Outlays

The revised FY2017 other development fund outlays of $6.82 million is for Land-Related Expenditure, which is attributable to the development of sewerage networks in Changi East and NEA's exhumation project at Choa Chu Kang.

FY2018 BUDGET

The total expenditure of MEWR in FY2018 is projected to be $2.22 billion, a decrease of $596.31 million or 21.2% from the revised FY2017 expenditure. Of the total expenditure, $1.30 billion or 58.8% is for operating expenditure and $912.41 million or 41.2% is for development expenditure.

Operating Expenditure

The provision of $1.30 billion for FY2018 operating expenditure represents an increase of $44.04 million or 3.5% above the revised FY2017 expenditure. This is mainly due to higher operating grants to the Public Utilities Board (PUB) and National Environment Agency (NEA). Out of the total operating expenditure, $1.30 billion or 99.5% is for Running Costs and $6.14 million or 0.5% is for Transfers.

The major share of the operating budget, $866.59 million (66.5%) will go towards the NEA Programme. This is followed by the Public Utilities Board (PUB) Programme which will take up $366.89 million (28.1%) and the Administration Programme with $70.64 million (5.4%).

National Environment Agency Programme

NEA aims to promote and sustain a clean and healthy living environment for Singapore. For FY2018, NEA is allocated an operating grant of $866.59 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 FY2018, PUB is allocated an operating grant of $366.89 million mainly for the operations and maintenance of drainage systems, the Active, Beautiful, Clean (ABC) Waters Programme and water infrastructure projects.

Development Expenditure

Development expenditure in FY2018 is expected to be $912.41 million, a decrease of $640.34 million or 41.2% from the revised FY2017 figure of $1.55 billion. The decrease is largely due to the completion of the equity injection to NEA for construction of the Integrated Waste Management Facility in FY2017, and completion of capital grant to PUB for redevelopment of Mandai in FY2017, partially offset by higher FY2018 expenditure for the Deep Tunnel Sewerage System Phase 2.

Major PUB drainage projects to be funded in FY2018 include: 5th Roadside Drains Improvement Programme ($45.92mil), Diversion Canal and Detention Tank to Enhanced Flood Protection of Stamford Canal Catchment ($40.74mil), Improvement to Bukit Timah First Diversion Canal ($31.85mil), Improvement of Bedok Canal (Between Upper Changi Road East and Bedok Junction, and between East Coast Parkway and the Sea) ($23.43mil) and Improvement to Kallang River (Between Bishan Road and Braddell Road) ($22.11mil).

Major PUB sewerage projects to be funded in FY2018 include: Deep Tunnel Sewerage System Phase 2 ($236.50mil), Proposed Sewers in North Woodlands ($32.79mil), Proposed Expansion of Sewerage Networks in Sengkang and Punggol Areas ($28.34mil), Proposed Expansion of Sewerage Networks in Loyang Avenue and Upper Changi Road East Areas ($16.77mil), and Rehabilitation of Sewerage Network System Phase 5 ($14.07mil).

Major NEA projects to be funded in FY2018 include: Development of New Crematorium Complex ($43.23mil), Design and Build Road Access for the Development of Integrated Waste Management Facility ($41.87mil), Redevelopment of Choa Chu Kang Cemetery Phase 3 ($35.00mil), Development of New Hawker Centres in Woodlands, Sengkang, Pasir Ris, Jurong West, Yishun and Sembawang Housing Estates ($13.58mil), and Productive Hawker Centres Scheme ($9.86mil).

Other Development Fund Outlays

The other development fund outlays of $8.89mil for FY2018 is for Land-Related Expenditure, which is for the development of sewerage networks in Changi East and NEA’s exhumation project at Choa Chu Kang.

Total Expenditure by Programme

Code	Programme	Running Costs	Transfers	Operating Expenditure	Development Expenditure	Total Expenditure
L-A	Administration	65,825,100	4,813,800	70,638,900	15,304,500	85,943,400
L-G	Public Utilities Board	366,893,100	0	366,893,100	719,743,200	1,086,636,300
L-H	National Environment Agency	865,270,400	1,321,400	866,591,800	177,360,300	1,043,952,100
	Total	$1,297,988,600	$6,135,200	$1,304,123,800	$912,408,000	$2,216,531,800

Development Expenditure by Project

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2015	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
DEVELOPMENT EXPENDITURE	...	...	$683,819,535	$1,549,771,000	$1,552,752,600	$912,408,000
GOVERNMENT DEVELOPMENT	*...*	*...*	*629,027,541*	*635,883,900*	*640,214,100*	*897,226,400*
Administration Programme						
Repair and Refurbishment of Environment Building	20,790,200	0	720,383	10,091,100	9,976,500	9,791,800
Minor Development Projects	...	...	2,566,541	1,221,800	1,894,600	4,512,700
New Projects	...	...	0	0	0	1,000,000
Public Utilities Board Programme						
Improvement to Bukit Timah First Diversion Canal	335,100,000	129,833,871	64,611,001	45,259,000	45,259,000	31,845,100
Improvement to Outlet Drain from Sin Ming Road to Braddell Road	26,089,000	20,685,711	134,822	95,000	515,000	48,500
Improvement to Tanglin Halt Outlet Drain	56,700,000	52,310,476	300,000	57,000	60,000	38,800
Relief Sewers within Marina Reservoir Catchment	8,000,000	4,929,617	0	247,000	110,000	145,700
Improvement to Old Roadside Drains 5-Year Programme (FY2006 to FY2010)	138,000,000	133,559,453	390,251	475,000	585,000	97,000
New Projects	...	...	0	1,841,700	0	902,700
Active, Beautiful And Clean Waters Programme	101,980,000	89,638,279	1,269,856	480,500	480,500	97,000
Improvement to Geylang River Phase 1 (From Dunman Road to Guillemard Road)	49,700,000	36,485,640	26,627	0	633,500	9,700
Sewer Schemes to Serve Marina South and Pasir Ris/Tampines Areas and Phase Out Nee Soon Pumping Station	287,700,000	225,673,901	9,890,796	5,093,300	5,390,100	9,205,300
Improvement to 3 Outlet Drains in Eastern Singapore	24,200,000	18,008,867	3,338,650	95,000	1,211,000	649,900
Improvement to 4 Outlet Drains in Central Singapore	30,200,000	19,225,607	4,262,219	475,000	800,000	242,500
Rehabilitation of Sewerage Network System Phase 4	395,000,000	316,918,583	21,598,249	18,000,000	20,000,000	9,215,000
Relief and Replacement Sewers for Jalan Senang, Siglap and Jalan Leban Areas	4,500,000	2,968,203	31,760	98,300	0	161,100
Sewer Extension to Phase Out Sewage Treatment Plants Phase 1	29,000,000	18,509,021	2,908	21,400	384,100	5,200
Minor Development Projects	...	...	849,709	2,423,300	2,036,700	3,046,800
Improvement to Drains at Benoi Sector Area	11,800,000	6,523,945	39,761	0	50,000	281,300
Improvement to Rochor Canal (between Jalan Besar and Crawford Street)	42,000,000	36,720,949	174,177	95,000	95,000	873,000

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2015	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
Sewer Extensions to Phase Out Sewage Treatment Plants Phase 2	47,800,000	16,739,493	586,746	117,500	301,000	207,000
Improvement to Drains in Syed Alwi Road Area	27,200,000	19,394,001	350,200	259,400	274,000	310,400
Relief Sewers at Lavender Street Area, Serangoon Central Area and Kaki Bukit Area	31,500,000	16,541,618	16,114	320,400	393,000	459,800
Sewerage Development at Jurong Eastern Catchment and Jurong Lake District	230,000,000	151,787,933	7,472,075	2,483,800	7,819,100	3,104,000
Improvement to Roadside Drains in Batch 6 of the Estate Upgrading Programme	80,000,000	54,138,793	1,419,137	332,500	1,632,500	242,500
Improvement to Old Roadside Drains 5 Year Programme (FY2010 to FY2014)	303,800,000	226,706,176	18,118,421	7,600,000	12,100,000	6,790,000
Expansion of Sewerage Network in International Road and Telok Blangah Road Area	31,900,000	15,555,086	517,821	316,100	301,000	164,500
Expansion of Sewerage Network in Geylang, Jalan Wangi, Woodlands Industrial Park	16,123,800	11,253,023	1,252,426	106,800	892,000	114,500
Expansion of Sewerage Networks in the Bukit Batok Road and Wan Lee Road/Enterprise Road/Kian Teck Lane Areas	45,186,700	23,797,263	4,245,215	1,665,700	2,670,000	313,400
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	7,960,270	621,598	1,299,900	183,000	960,300
Expansion of Sewerage Networks in Jalan Rajah/Sungei Whampoa area	13,700,000	1,925,796	746,900	2,403,000	310,500	177,600
Improvement to Old Roadside Drains in Batch 7 of Estate Upgrading Programme	100,200,000	43,799,890	16,134,581	10,409,200	6,361,600	3,647,200
Proposed Expansion of Sewerage Network in Mandai Road Area	30,000,000	4,119,741	4,140,486	2,221,400	5,248,000	2,764,500
Proposed Expansion of Sewerage Network in Kranji Area	30,400,000	9,108,792	9,453,063	4,156,700	1,970,000	709,000
Improvement to Alexandra Canal Subsidiary Drain F (Between Tiong Bahru Rd and Havelock Rd)	28,200,000	6,962,137	5,395,357	4,750,000	5,360,400	3,377,800
Expansion of Sewerage Networks in Bedok Reservoir and Changi Business Park Areas	23,400,000	2,679,375	4,139,436	4,806,000	7,102,800	698,400
Expansion of Sewerage Networks in Mugliston Park,Buangkok Link and Ang Mo Kio Ave 5 Areas	69,700,000	7,960,349	21,156,574	6,144,400	8,220,000	1,716,900
Proposed Diversion Canal and Detention Tank to Enhance Flood Protection of Stamford Canal Catchment	306,400,000	75,343,242	53,920,968	47,500,000	47,500,000	40,740,000
Expansion of Sewerage Networks in Marina Central Area	17,900,000	3,034,523	2,301,687	803,100	3,590,000	426,800
Proposed Renewal of Equipment and Upgrading of Used Water Pumping Installations	14,770,000	8,148,697	2,702,881	830,000	887,300	9,700
Proposed Expansion of Sewerage Networks in Tagore Drive, Mandai Quarry Road and Lorong Lada Hitam Areas	61,100,000	22,941,334	8,442,667	9,680,900	8,275,000	287,200
Improvement to Siglap Canal (Between East Coast Parkway and the Sea)	31,700,000	14,115,612	7,699,770	475,000	740,300	679,000
Expansion of Sewerage Networks in Tanah Merah Kechil Area	4,840,000	3,147,684	975,195	10,700	121,000	32,100
Proposed 3rd Pumping Main for Choa Chu Kang Pumping Station	9,290,000	4,525,120	2,060,679	267,000	600,200	51,800

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2015	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
Expansion of Sewerage Networks in Lorong Lew Lian and Potong Pasir Avenue 3 Areas	10,710,000	4,763,620	3,001,770	628,000	628,000	276,700
Expansion of Sewerage Networks in Bishan St 11 and Bishan St 13 Areas	14,760,000	908,094	7,431,708	2,992,500	3,120,000	717,800
Expansion of Sewerage Networks in Amber Road, Meyer Road and Playfair Road Areas	17,770,000	1,398,216	770,471	2,563,200	237,000	52,400
Expansion of Sewerage Networks in Yishun Avenue 7, Sembawang Road and Gambas Avenue Areas	39,300,000	2,695,599	3,321,928	7,390,600	7,750,000	7,507,800
Implementation of 16 Projects under Phase 2 of Active, Beautiful and Clean Waters Programme	20,736,601	1,666,429	2,148,400	1,192,500	1,992,700	1,631,600
Enhancement of Leachate control measures for Lorong Halus Landfill	4,650,000	2,183,525	1,587,969	0	0	4,100
Proposed Expansion of Sewerage Networks in Clementi Avenue 4 and Clementi Avenue 6 Areas	9,930,000	1,266,860	3,269,569	390,700	3,117,300	688,700
Expansion of Sewerage Networks in Cuppage Road and Koek Road Areas	6,210,000	124,883	299,253	2,093,300	2,256,600	1,358,000
Engagement of Consultant for Review of Marina Barrage Upgrading Plan and Revamp of MB Gallery	1,250,000	487,904	314,612	242,300	242,300	76,200
Improvement to Kallang River (Between Bishan Road and Braddell Road)	112,000,000	6,159,706	20,466,541	25,547,100	27,797,100	22,112,900
Expansion of Sewerage Networks in Sembawang Road and Sembawang Avenue Areas	41,877,000	1,518,396	6,097,204	6,341,800	4,971,200	6,799,700
Expansion of Sewerage Networks in Tuas Avenue 2 and Tuas Avenue 10 Areas	36,722,000	5,591,397	9,025,166	7,582,800	3,384,000	940,900
Improvement to Bedok Canal(Between Upper Changi Rd East and Bedok Junction and Bet East Coast Parkway and the Sea)	148,800,000	1,982,679	25,934,577	35,300,100	36,042,000	23,431,000
Proposed Expansion of Sewerage Networks in Sophia Road and Middle Road Areas	3,410,000	148,403	72,027	606,600	122,600	107,300
Proposed Expansion of Sewerage Networks in Cairnhill Circle and Newton Circus Areas	10,510,000	1,147,837	3,609,913	2,653,800	2,826,500	57,300
Improvement to Four Outlet Drains in Singapore	61,200,000	1,890,542	8,157,161	7,125,000	5,298,200	6,790,000
DTSS Phase 2 - Engineering Services for Feasibility Study/Preliminary Design and Programme Management	71,300,000	17,084,362	8,627,228	6,632,000	6,611,200	7,063,200
Improvement to Sungei Pandan Kechil - Temp Replacement of Pedestrian Bridge and Vehicular Bridge and Temp Tidal Gate	61,400,000	10,579,203	12,960,566	8,550,000	9,550,000	5,335,000
Implementation of 3 Projects under Phase 2 of Active, Beautiful Clean Waters Programme	23,020,000	371,308	3,429,372	9,025,000	9,500,000	4,673,400
5th Roadside Drains Improvement Programme	227,600,000	2,475,130	9,943,914	29,450,000	28,409,100	45,920,500
Expansion of Sewerage Networks in Leonie Hill Road and River Valley Road	17,350,000	903,662	4,879,217	5,549,300	5,596,000	2,885,000
Proposed Expansion of Sewerage Networks in Tuas View Square Area	7,370,000	4,336,197	1,960,923	53,400	22,100	161,100
Proposed Expansion of Sewerage Networks in St Michael's Road and St. Francis Road Area	6,790,000	448,793	2,059,757	2,039,900	2,830,000	694,900
Improvement to Old Roadside Drains in Batch 8 of the Estate Upgrading Programme	74,500,000	10,244,877	24,699,999	12,289,200	8,778,000	3,637,500

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2015	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
Drainage Improvement Works at Chai Chee Road/ New Upper Changi Road Junction	8,500,000	3,775,263	407,191	427,500	427,500	436,500
Improvement to Sunset Way Outlet Drain (Between PIE and Sungei Ulu Pandan)	16,900,000	2,843,921	5,836,623	3,724,000	3,625,200	1,005,000
Marina South Drainage Scheme	47,700,000	190,956	215,974	570,000	1,170,000	7,857,000
Proposed Sewerage Scheme to Serve Holland Plain and Holland Woods Areas	18,900,000	310,229	38,664	2,990,400	7,900,000	2,192,200
Rehabilitation of Sanitary Drain Lines - Jurong Lake Catchment	19,100,000	1,661,732	4,488,971	3,500,000	3,500,000	1,746,000
Expansion of Sewerage Networks in Loyang Avenue and Upper Changi Road East Areas	135,110,000	778,576	1,028,381	4,920,900	9,820,000	16,771,300
Urgent Flood Alleviation Programme	77,300,000	22,532,120	21,144,107	10,127,000	6,164,500	10,238,600
Expansion of Sewerage Networks in Lorong Chuan and Lim Tua Tow Road Areas	13,530,000	181,452	603,205	2,834,500	5,123,000	3,904,300
Drainage Improvement Works in Tandem with LTA's Rail and Road works	48,500,000	1,775,209	3,698,898	3,895,000	3,895,000	5,598,400
Expansion of Sewerage Networks in East Coast Road and Mountbatten Road Areas	14,610,000	90,943	34,637	2,749,900	0	626,700
Proposed Expansion of Sewerage Networks in Bukit Batok East Ave 3 Area	44,900,000	190,878	835,572	3,743,300	7,162,100	10,283,300
Expansion of Sewage Treatment Plant 1 on Jurong Island by 3 MGD	22,000,000	6,647,495	9,347,322	1,014,600	1,170,000	107,700
Proposed Sewerage Scheme to Serve Sungei Tengah Agrotechnology Park Area	50,360,000	480,797	845,513	7,310,500	7,540,000	8,167,400
Proposed Sewers in North Woodlands	350,600,000	1,009,084	14,239,138	32,162,900	28,836,900	32,786,000
Improvement to Sungei Pandan Kechil (West Coast Road to the Sea)	54,200,000	285,658	7,325,976	8,550,000	11,550,000	10,670,000
Proposed Sewerage Scheme to Serve Lim Chu Kang Area	192,370,000	0	9,856	3,348,200	700,000	12,806,700
Proposed Stormwater Retention Pond for Bidadari Estate	40,400,000	0	0	85,500	85,500	518,000
Improvement to Changi Airport Diversion Drain-Outlet Drain 2 (Between Changi Coast Rd and Changi Airport Diversion Drain)	9,700,000	243,513	4,556,412	1,900,000	1,300,000	291,000
Fund for Rapid Response Mechanism Approved Projects	6,000,000	440,006	1,458,241	2,090,000	2,375,000	1,545,800
Proposed Expansion of Sewerage Networks in Eber Road,Paterson Hill and Pasir Panjang Road Areas	12,880,000	47,422	124,508	555,400	585,000	2,066,100
Proposed Expansion of Sewerage Networks in Stevens Road Area	8,510,000	32,527	33,027	1,253,800	108,000	2,977,900
Proposed Expansion of Sewerage Networks in Merpati Road Area	12,090,000	19,674	88,569	1,634,000	570,000	4,324,300
Proposed Expansion of Sewerage Networks in Sengkang and Punggol Areas	212,100,000	0	685,267	14,463,900	6,320,600	28,341,700
Expansion of Sewerage Networks along LTA's Proposed Thomson-East Coast Line and North-South Expressway	40,500,000	0	279,089	854,400	560,000	3,097,300
Development of Hydrogeological Map of Singapore	14,630,000	0	4,501,783	4,180,000	3,793,600	2,779,100
Improvement to Sungei Tampines (Tampines Avenue 7 to Tampines Expressway)	72,000,000	11,940	256,003	466,100	198,400	2,733,500

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2015	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
Engineering Services for Improvement of Sungei Tongkang between AMK Avenue 3 and Sungei Punggol	8,400,000	0	310,541	781,300	79,800	720,500
Proposed Sewer along Tampines Road	2,136,000	0	1,414,755	203,000	181,000	8,500
Proposed Sewerage Infrastructure at Pulau Punggol Barat	115,900,000	0	210,753	5,456,900	374,000	4,568,400
Expansion of Sewerage Networks in Pasir Ris Drive 3/12 and Jalan Kembangan Areas and Demolition of Pump Sumps	18,900,000	0	186,353	1,484,500	174,100	993,300
Outlet Drains Improvement Programme	90,500,000	0	37,881	3,128,400	1,196,800	15,016,500
Phase 3 of the Active, Beautiful, Clean Waters Programme	19,250,000	0	8,178	910,000	821,200	3,470,700
Construction of Sustainable Singapore Gallery	7,140,000	0	0	5,073,000	5,340,000	1,746,000
Replacement of Supervisory Control and Data Acquisition System at Marina Barrage	4,300,000	0	0	1,140,000	1,140,000	1,076,700
Proposed Expansion of Sewerage Networks at Yuan Ching Road	2,410,000	0	1,557	170,000	171,000	310,400
Deep Tunnel Sewerage System Phase 2-Land Cost	90,000,000	0	0	10,000,000	2,900,000	45,687,000
Deep Tunnel Sewerage System Phase 2-Construction Cost	4,450,000,000	0	0	41,210,100	48,878,100	183,753,100
Improvement to Airport Road Outlet Drain (Between Tai Seng Avenue and Pelton Canal)	13,300,000	0	0	183,200	0	2,425,000
Rapid Response Mechanism Year 3	1,750,000	0	0	285,000	300,000	485,000
Improvement to Old Roadside Drains in Batch 9 of the Estate Upgrading Programme	59,700,000	0	0	363,900	363,900	1,582,900
Rehabilitation of Sewerage Network System - Phase 5	127,100,000	0	0	2,000,000	2,000,000	14,065,000
Upgrading of Sewage Pumping Installations	15,790,000	0	0	125,000	127,000	417,100
Engineering Services for the Proposed Sewers to Serve Tengah New Town	15,820,000	0	0	0	534,000	621,600
Proposed Sewer along Future Road in Punggol North	6,330,000	0	0	0	220,000	100,000
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	0	100,000	208,600
Reconstruction of Alexandra Canal Phase 1	104,200,000	96,538,763	233,777	95,000	95,000	776,000
Punggol Town Sewerage Scheme	90,000,000	61,578,604	522,483	10,700	107,700	62,200
Collector Drains 2 at Changi East Reclamation - Area A	98,000,000	50,034,998	1,026,963	9,500	658,200	4,900
National Environment Agency Programme						
Minor Development Projects	...	...	737,965	0	1,156,000	613,600
New Projects	...	...	0	2,005,000	0	8,490,000
5-Year Programme (FY2011 - 2015) for the Redevelopment of Choa Chu Kang Cemetery	97,500,000	73,478,106	17,641,863	1,942,500	3,261,400	200,000
Development of New Market and Hawker Centre in Bukit Panjang	38,235,000	34,876,272	627,925	200,000	150,000	200,000
Development of New Hawker Centres in Woodlands, Sengkang, Pasir Ris, Jurong West, Yishun and Sembawang	108,200,000	10,077,371	34,896,981	10,224,900	16,733,500	13,582,000

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2015	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
Development of Replacement Hawker Centre at Woodlands	24,300,000	1,176,873	8,511,272	6,893,300	9,265,800	436,200
Development of New Crematorium at Mandai	148,400,000	248,160	1,662,922	4,000,000	4,127,300	43,227,600
Development of New Hawker Centres at Dawson and Bidadari	26,500,000	0	0	500,000	1,000,000	3,880,400
Development of Road Access to Tuas View Basin Site for IWMF and TWRP	99,000,000	3,210,003	16,347,183	27,000,000	26,928,200	41,870,100
Development of New Hawker Centre in Punggol	9,325,300	235,037	0	0	0	1,817,900
Development of New Hawkers Centres at Fernvale, Bukit Panjang North and Anchorvale	59,275,000	0	6,028	210,000	165,200	8,014,700
Redevelopment of Choa Chu Kang Cemetery Phase 3	158,870,000	0	524,071	18,399,400	11,100,000	35,000,000
Hosting of Mobile Xenon Monitoring Station	86,100	0	0	46,200	0	46,200
Productive Hawker Centres Programme	12,660,000	0	0	0	500,000	4,800,000
Completed Projects	…	…	13,888,213	1,213,300	2,169,000	0
GRANTS & CAPITAL INJECTIONS TO ORGANISATIONS	*…*	*…*	*54,791,994*	*913,887,100*	*912,538,500*	*15,181,600*
National Environment Agency Programme						
New Projects	…	…	0	602,130,000	960,000	5,369,300
Environment Technology Research Programme	21,000,000	14,262,377	1,414,558	675,600	392,900	642,400
Extension and Expansion of the Environment Technology Research Programme	6,000,000	0	309,341	219,500	209,100	269,900
Quieter Construction Fund	10,000,000	1,062,723	755,416	700,000	700,000	2,340,000
NEA Scheme for Technology Translation	4,600,000	0	0	0	0	1,500,000
Productive Hawker Centres Programme	30,030,000	0	0	0	500,000	5,060,000
Completed Projects	…	…	52,312,680	310,162,000	909,776,500	0

Other Development Fund Outlays

Project Title	Total Project Cost	Actual Expenditure Up to end of FY2015	Actual FY2016	Estimated FY2017	Revised FY2017	Estimated FY2018
OTHER DEVELOPMENT FUND OUTLAYS	...	...	$0	$9,865,100	$6,821,800	$8,889,500
LAND-RELATED EXPENDITURE	...	...	*0*	*9,865,100*	*6,821,800*	*8,889,500*
Public Utilities Board Programme						
Sewer Network for Changi East Area	149,800,000	0	0	3,997,800	3,100,000	3,104,000
Changi East Drainage Studies	783,000	0	0	0	0	9,700
National Environment Agency Programme						
Exhumation Programme Phase 5	13,150,000	0	0	0	2,555,400	2,436,100
Exhumation Programme Phases 6 and 7 and Related Works	30,810,000	0	0	0	1,166,400	3,339,700
Completed Projects	...	...	0	5,867,300	0	0

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 FY2015	Actual FY2016	Revised FY2017[2]	Estimated FY2018[3]
Clean and healthy environment	% of days in a year where Pollutant Standards Index (PSI) is in the "Good" & "Moderate" range	87.5	99.0	99.5	94.0
	No. of air pollution incidents per million population[4]	0.6	0.0	0.4	3.0
	No. of water pollution incidents per million population[5]	0.7	0.4	0.4	3.0
	No. of local dengue (Dengue Fever and Dengue Haemorrhagic Fever) cases per 100,000 population	196.1	229.9	55.0	153.0[6]
	No. of food outlet related food poisoning outbreaks per 1,000 NEA-licensed food establishments	0.7	2.0	3.5	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[7]	0.83	0.82	0.82
	Accuracy of Nowcast (%)[8]	91.5	90.5	90.5	92.0
	% of Unaccounted-for-Water	5.0	5.0	5.0	5.0
	No. of leaks per 100km of potable water mains per year	5.7	4.6	6.0	6.0
	Size of flood prone area (ha)	32.0	30.5	29.6	29.0
	No. of sewerage service disruptions per 1,000 km of sewer maintained per month	10.6	10.5	10.5	13.0
Shared environmental ownership and values	Per capita household water consumption (litres/day)[9]	151[10]	148[11]	148[11]	147[11]
Long term resource sustainability	Energy Consumption per dollar GDP: Improvement from 2005 levels (%)	25.5	NA[12]	19.6 (By 2020)[13]	19.6 (By 2020)[13]
	Recycling rate (%)	61.0	61.0	62.0	63.0
	Total non-domestic waste disposed of (tonnes per day / $billion GDP)	9.7[7]	9.8	9.2	8.9

[1] All data are reported on calendar year basis.
[2] Data for "Revised FY2017" column refers to projected figures for 2017.
[3] Data for "Estimated FY2018" column refers to targets for 2018.
[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] Figure has been revised due to a waste vehicle reclassification exercise.
[8] Since Jan 2016, Nowcast offers higher resolution forecast, with Singapore being divided into 47 sectors, an increase from 32 sectors previously.
[9] From 2016 onwards, the indicator has been revised from "Per capita domestic water consumption" to "Per capita household water consumption", which refers to water consumption within household premises only (i.e. usage in purpose built dormitories and common areas excluded).
[10] The actual FY2015 performance based on the revised formula is 149.
[11] The actual FY2016, revised FY2017 and estimated FY2018 performances are based on the revised formula.
[12] Data will be available in 2018, due to the lag time for external organisations / agencies to provide their data to NEA.
[13] 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.

Desired Outcome	Performance Indicator[1]	Revised FY2017	Estimated FY2018
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.