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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.

FY2012 EXPENDITURE ESTIMATES

Expenditure Estimates by Object Class

Code	Object Class	Actual FY2010	Estimated FY2011	Revised FY2011	Estimated FY2012	Change over FY2011	
	TOTAL EXPENDITURE	\$1,126,028,981	\$1,137,994,900	\$1,125,560,800	\$1,303,960,600	\$178,399,800	15.8%
	Main Estimates						
	OPERATING EXPENDITURE	\$719,981,348	\$727,030,500	\$726,970,700	\$829,926,000	\$102,955,300	14.2%
	<i>RUNNING COSTS</i>	<i>\$716,694,135</i>	<i>\$721,736,900</i>	<i>\$718,832,100</i>	<i>\$821,914,900</i>	<i>\$103,082,800</i>	<i>14.3%</i>
	Expenditure on Manpower	\$16,272,788	\$16,915,000	\$15,254,400	\$18,184,900	\$2,930,500	19.2%
1200	Political Appointments	2,037,866	1,874,100	1,284,100	946,600	-337,500	-26.3
1500	Permanent Staff	14,220,526	15,040,900	13,970,300	17,238,300	3,268,000	23.4
1600	Temporary, Daily-Rated & Other Staff	14,397	0	0	0	0	0.0
	Other Operating Expenditure	\$22,280,611	\$29,251,700	\$30,547,000	\$29,911,400	-\$635,600	-2.1%
2100	Consumption of Products & Services	19,686,608	25,887,500	27,388,700	26,342,600	-1,046,100	-3.8
2300	Manpower Development	1,100,608	1,369,300	1,351,700	1,283,400	-68,300	-5.1
2400	International & Public Relations, Public Communications	1,379,826	1,951,400	1,713,600	2,221,600	508,000	29.6
2700	Asset Acquisition	113,570	43,500	93,000	63,800	-29,200	-31.4
	Grants, Subventions & Capital Injections to Organisations	\$678,140,735	\$675,570,200	\$673,030,700	\$773,818,600	\$100,787,900	15.0%
3100	Grants, Subventions & Capital Injections to Statutory Boards	678,140,735	675,570,200	673,030,700	773,818,600	100,787,900	15.0
	<i>TRANSFERS</i>	<i>\$3,287,214</i>	<i>\$5,293,600</i>	<i>\$8,138,600</i>	<i>\$8,011,100</i>	<i>-\$127,500</i>	<i>-1.6%</i>
3600	Transfers to Institutions & Organisations	0	0	3,500,000	3,100,000	-400,000	-11.4
3800	International Organisations & Overseas Development Assistance	3,287,214	5,293,600	4,638,600	4,911,100	272,500	5.9
	Development Estimates						
	DEVELOPMENT EXPENDITURE	\$406,047,632	\$410,964,400	\$398,590,100	\$474,034,600	\$75,444,500	18.9%
5100	Government Development	403,021,667	408,591,500	394,069,400	468,095,600	74,026,200	18.8
5200	Grants & Capital Injections to Organisations	3,025,966	2,372,900	4,520,700	5,939,000	1,418,300	31.4

Establishment List

Category/Personnel	Actual FY2010	Estimated FY2011	Revised FY2011	Estimated FY2012
POLITICAL APPOINTMENTS	2	2	2	2
Minister	1	1	1	1
Senior Minister of State	0	0	1	1
Parliamentary Secretary	1	1	0	0
PERMANENT STAFF	98	115	141	141
Accounting Profession (2008)	1	1	1	1
Administrative	6	8	8	8
Corporate Support	22	22	22	22
Information Service (2008)	2	2	2	2
Management Executive Scheme (2008)	58	70	93	93
Management Support Scheme (2008)	3	6	9	9
Operations Support	3	3	3	3
Shorthand Writers	3	3	3	3
OTHERS	3,895	3,969	3,933	4,384
National Environment Agency	3,673	3,735	3,690	4,099
Public Utilities Board	222	234	243	285
TOTAL	3,995	4,086	4,076	4,527

FY2011 BUDGET

The Ministry of the Environment and Water Resources (MEWR)'s revised FY2011 total expenditure is \$1.13 billion. This is a decrease of \$0.47 million or 0.04% lower than the actual FY2010 expenditure. Of the total expenditure, \$726.97 million or 64.6% is for operating expenditure and \$398.59 million or 35.4% is for development expenditure.

Operating Expenditure

The revised FY2011 operating expenditure of \$726.97 million is \$6.99 million or 1.0% higher than the actual FY2010 sum of \$719.98 million. This increase is largely due to higher expenditure for increased operating cost and expanded work scope in environmental services.

Development Expenditure

The revised FY2011 development expenditure of \$398.59 million is \$7.46 million or 1.8% lower than the actual FY2010 sum of \$406.05 million. The decrease is mainly due to higher payments for major projects completed in FY2010.

FY2012 BUDGET

The total expenditure of MEWR in FY2012 is projected to be \$1.30 billion, an increase of \$178.40 million or 15.8% above the revised FY2011 expenditure. Of the total expenditure, \$829.92 million or 63.6% is for operating expenditure and \$474.04 million or 36.4% is for development expenditure.

Operating Expenditure

The provision of \$829.92 million for operating expenditure represents an increase of \$102.95 million or 14.2% above the revised FY2011 expenditure. Out of the total operating expenditure, \$821.91 million or 99.0% is for running costs and \$8.01 million or 1.0% is for transfers.

The major share of the operating budget, \$549.78 million (66.2%) will go towards the National Environment Agency Programme. This is followed by the Public Utilities Board Programme which will take up \$225.36 million (27.2%) and the Administration Programme with \$54.78 million (6.6%).

National Environment Agency Programme

The National Environment Agency (NEA) aims to promote and maintain a sustainable clean and healthy environment for Singapore.

For FY2012, the NEA is allocated an operating grant of \$549.78 million. This grant is mainly for the implementation of key programmes to ensure that Singapore continues to have clean air, clean land, clean water and a high standard of public health.

Working in partnership with the people, private and public (3P) sectors, the NEA will continue to take the leading role in promoting energy efficiency in the households, transport, building, industry and power generation sectors, and the use of cleaner energy technologies. NEA will also continue to place emphasis on promoting waste minimisation and recycling and ensure the efficient disposal of waste at incineration plants and landfill facility.

NEA will keep public areas free of litter and ensure a high standard of environmental public health. Vector and food-borne diseases will be kept under control through comprehensive ground surveillance and appropriate preventive measures as well as enhanced vector research.

NEA will build new hawker centres to cater to the needs of the community. NEA will focus its hawker centre building efforts on new estates which may currently face an under-provision of eating options.

Public Utilities Board Programme

The Public Utilities Board (PUB) aims to secure an efficient, adequate and sustainable supply of water. For FY2012, PUB is allocated an operating grant of \$225.36 million mainly for the operations and maintenance of drainage systems, ABC Waters and water infrastructure projects.

Development Expenditure

Development expenditure in FY2012 is expected to be \$474.04 million, an increase of \$75.45 million or 18.9% above the revised FY2011 figure of \$398.59 million.

The major drainage projects to be funded in FY2012 are Improvement to Old Roadside Drains [FY10-FY14] (\$43.71 million), Improvement to Bukit Timah First Diversion Canal (\$32.00 million), Improvement to Old Roadside Drains – Batch 6 of Estate Upgrading Programme (\$27.00 million), and Improvement to Geylang River Phase 1 from Dunman Road to Guillemard Road (\$17.00 million) and commencement of works on Stamford Canal.

The major sewerage projects to be funded in FY2012 are Sewer Schemes to Serve Marina South, Pasir Ris/Tampines Areas and Phase out Nee Soon Pumping Station (\$72.20 million), Sewerage Schemes to Serve Developments in Jurong Eastern Catchment and Jurong Lake District and Phase Out Jalan Bahar, Corporation, Jurong West and International Pumping Stations (\$50.00 million), and Rehabilitation of Sewerage Network System Phase 4 (\$37.50 million).

Total Expenditure by Programme

Code	Programme	Running Costs	Transfers	Operating Expenditure	Development Expenditure	Total Expenditure
LA	Administration	48,096,300	6,689,700	54,786,000	3,030,000	57,816,000
LG	Public Utilities Board	225,360,000	0	225,360,000	408,892,200	634,252,200
LH	National Environment Agency	548,458,600	1,321,400	549,780,000	62,112,400	611,892,400
Total		\$821,914,900	\$8,011,100	\$829,926,000	\$474,034,600	\$1,303,960,600

Development Expenditure by Project

Project Title	Total Project Cost	Actual Expenditure up to end of FY2009	Actual FY2010	Estimated FY2011	Revised FY2011	Estimated FY2012
DEVELOPMENT EXPENDITURE	...	...	\$406,047,632	\$410,964,400	\$398,590,100	\$474,034,600
<i>GOVERNMENT DEVELOPMENT</i>	...	...	<i>403,021,667</i>	<i>408,591,500</i>	<i>394,069,400</i>	<i>468,095,600</i>
Administration Programme						
Minor Development Projects	...	...	428,904	2,333,200	3,070,300	3,030,000
Public Utilities Board Programme						
Inspection and Rehabilitation of Pumping Mains	49,000,000	37,171,168	2,962,483	615,000	680,000	1,000
Improvement to Bukit Timah First Diversion Canal	177,600,000	3,298,660	207,919	10,000,000	13,500,000	32,000,000
Improvement to Outlet Drain from Sin Ming Road to Braddell Road	26,089,000	3,026,841	0	6,000,000	6,000,000	9,000,000
Improvement to Tanglin Halt Outlet Drain	47,000,000	30,906,356	8,182,392	2,000,000	2,000,000	1,000,000
Improvement to Aljunied Road Outlet Drain	3,770,000	1,918,753	0	0	0	1,400,000
Upgrading of Pumping Installations	16,000,000	8,329,363	132,974	1,000,000	1,000,000	2,200,000
Extension of Sewerage Reticulation System to Serve Tengah Airbase Area	5,700,000	2,493,852	2,519,040	500,000	142,000	10,000
Construction of a Barrage Across Marina Channel	277,000,000	259,718,691	6,003,363	1,000,000	3,900,000	3,500,000
Relief Sewers for MacPherson Area	4,800,000	2,160,753	75,468	1,000	190,000	101,000
Relief Sewers within Marina Reservoir Catchment	8,000,000	4,196,202	395,643	1,000	165,000	101,000
Rehabilitation of Sewers Phase 3	153,000,000	120,613,008	11,497,744	7,000,000	16,000,000	800,000
Rehabilitation of Sanitary Drain-Lines in Marina Reservoir Catchment	42,200,000	35,562,675	1,489,070	1,600,000	1,200,000	800,000
Phasing Out of Sewage Treatment Plants in Seletar Air Base	12,500,000	4,857,501	58,594	10,000	600,000	1,000
Improvement to Old Roadside Drains 5-Year Programme FY2006-FY2010	150,000,000	102,041,692	17,293,283	5,000,000	7,350,000	1,000,000
Sewer Extension to Service Old Yio Chu Kang Road Areas	2,060,000	1,783,168	170,817	0	100,400	2,000
New Projects	...	...	0	7,350,000	4,230,500	1,664,200
Active, Beautiful And Clean Waters Programme	101,980,000	41,706,906	36,651,985	11,530,000	12,730,000	230,000
Demolition of Pumping Stations at Tuas and Loyang Avenue	4,500,000	1,480,206	1,209,255	430,000	1,266,000	54,000
Improvement to Geylang River Phase 1 - From Dunman Road to Guillemard Road	49,700,000	168,588	2,119,700	21,000,000	21,000,000	17,000,000

Project Title	Total Project Cost	Actual Expenditure up to end of FY2009	Actual FY2010	Estimated FY2011	Revised FY2011	Estimated FY2012
Consultancy Services for Marina Reservoir Predictive Water Quality Modeling and Study	5,670,600	2,327,722	1,621,694	152,000	126,900	508,000
Enhancement and Upgrading of Used Water Pumping Installations	11,400,000	4,158,049	3,060,493	2,600,000	2,100,000	400,000
Sewer Schemes to serve Marina South & Pasir Ris/Tampines Areas & Phase out Nee Soon Pumping Station	253,700,000	24,065,556	37,318,873	31,215,000	38,000,000	72,200,000
Improvement to Three Outlet Drains in the Western Part of Singapore	33,000,000	15,951,792	12,526,170	5,000,000	4,013,000	80,000
Sewer Extension for North Coast Wafer Fabrication Park Area	24,500,000	11,624,937	4,350,721	215,000	600,000	15,000
Improvement to Old Roadside Drains in Batch 5 of Estate Upgrading Programme FY2008-FY2012	87,200,000	36,612,576	17,398,436	8,000,000	2,400,000	300,000
Improvement to Sungei Kallang Between Upper Thomson Road and Bishan Road	49,700,000	4,989,895	28,025,106	19,000,000	11,741,000	10,000
Improvement to 3 Outlet Drains in Eastern Singapore	24,200,000	2,447,072	5,978,210	5,000,000	4,080,000	100,000
Improvement to 4 Outlet Drains in Central Singapore	30,200,000	291,115	4,999,111	10,000,000	8,000,000	1,300,000
Improvement to Geylang River Phase 2	36,000,000	0	0	1,000,000	270,000	6,000,000
Rehabilitation of Sewerage Network System Phase 4	395,000,000	47,404,606	64,121,630	70,800,000	70,500,000	37,500,000
Relief and Replacement Sewers for Jalan Senang, Siglap and Jalan Leban Areas	4,500,000	422,555	685,809	1,690,000	1,690,000	150,000
Sewer Extension to Phase Out Sewage Treatment Plants Phase 1	29,000,000	3,578,357	6,342,660	5,400,000	6,000,000	3,701,000
Marina East Drainage Scheme Phase 1	3,500,000	0	0	1,000,000	0	500,000
Remote VOC Monitoring System for Trade Effluent Surveillance	2,625,000	0	0	1,973,800	1,500,000	1,000,000
Minor Development Projects	...	...	107,071	500,000	1,227,000	4,493,000
Improvement to Drains at Benoi Sector Area	11,800,000	0	79,192	5,000,000	3,500,000	4,000,000
Improvement to Rochor Canal (between Jalan Besar and Crawford Street)	42,000,000	36,053	9,000	15,800,000	15,800,000	14,000,000
Sewer Extensions to Phase Out Sewage Treatment Plants Phase 2	47,800,000	301,796	1,969,408	10,630,000	8,160,000	4,976,000
Improvement to Drains in Syed Alwi Road Area	27,200,000	0	103,597	9,100,000	6,500,000	9,000,000
Relief Sewers at Lavender Street Area, Serangoon Central Area and Kaki Bukit Area	31,500,000	0	591,721	8,550,000	6,500,000	6,300,000
Renewal and Relocation of Central Monitoring System for Water Reclamation Network	7,900,000	0	172,480	3,400,000	3,100,000	1,000,000
Sewerage Improvement at Jalan Terusan Area	14,000,000	0	36,305	3,000,000	500,000	2,400,000
Sewerage Development at Jurong Eastern Catchment and Jurong Lake District	230,000,000	0	870,593	8,000,000	8,000,000	50,000,000
Improvement to Roadside Drains in Batch 6 of the Estate Upgrading Programme	80,000,000	0	0	15,000,000	10,000,000	27,000,000
Improvement to Old Roadside Drains 5 Year Programme (FY2010-FY2014)	303,800,000	0	725,382	20,000,000	25,043,000	43,706,000
Rehabilitation of sanitary drains-lines Punggol Serangoon Reservoir Catchment	28,400,000	0	738,149	8,100,000	8,100,000	6,000,000
Expansion of Sewerage Network in International Road and Telok Blangah Road Area	31,900,000	0	0	1,000,000	1,000,000	4,000,000
Road Raising at Orchard Road	28,600,000	0	6,683,518	20,600,000	13,600,000	500,000

Project Title	Total Project Cost	Actual Expenditure up to end of FY2009	Actual FY2010	Estimated FY2011	Revised FY2011	Estimated FY2012
Expansion of Sewerage Network in Geylang, Jalan Wangi, Woodlands Industrial Park	16,123,800	0	0	500,000	500,000	2,300,000
Consultancy Services for Detailed Study and Conceptual Design of Drainage Improvement Projects for Stamford Canal Catchment	1,470,000	0	0	870,000	363,000	1,107,000
Sewer Network for Changi East Area	49,677,400	0	0	0	500,000	4,000,000
Consultancy Services for Detailed Study and Conceptual Design for Improvement to Bedok Canal (Between Bedok Reservoir and the sea)	1,330,000	0	0	0	300,000	1,030,000
Consultancy Services for Detailed Study and Conceptual Design for Improvement to Siglap Canal (Between Changi Road and the sea)	960,000	0	0	0	370,000	590,000
Expansion of Sewerage Networks in the Bukit Batok Road and Wan Lee Road/Enterprise Road/ Kian Teck Lane Areas	45,186,700	0	0	0	50,000	2,000,000
Expansion of Sewerage Networks in Siglap Road, Whampoa East/Towner Road and Kaki Bukit Areas and Upgrading of Mugliston Park Pumping Station	21,397,900	0	0	0	50,000	2,000,000
Expansion of Sewerage Networks in Jalan Rajah/ Sungei Whampoa area	13,700,000	0	0	0	50,000	750,000
Improvement to Old Roadside Drains - Batch 7 of Estate Upgrading Programme	...	...	0	0	0	2,000,000
Reconstruction of Alexandra Canal Phase 1	104,200,000	54,956,900	21,550	10,000,000	10,000,000	16,800,000
Punggol Town Sewerage Scheme	90,000,000	49,618,227	5,010,352	4,000,000	3,700,000	1,300,000
Sewerage Works for Additional Reclamation off Tuas Hockey Stick	80,000,000	42,190,599	195,218	5,000	106,000	2,000
Collector Drains 2 at Changi East Reclamation - Area "A"	98,000,000	18,997,650	7,054	0	0	3,000,000
Deep Tunnel Sewerage System Phase 1	3,584,000,000	3,188,440,381	100,053,899	3,459,400	3,460,000	10,000
National Environment Agency Programme						
New Projects	...	...	0	15,500,000	0	31,420,000
Consultancy Services for the Development of Semakau Landfill Phase 2	8,000,000	0	12,750	181,100	330,300	373,400
5-Year Programme(FY2011 - 2015) for the Redevelopment of Chua Chu Kang Cemetery	20,086,700	0	0	0	10,000,000	24,380,000
Completed Projects	...	...	7,806,885	4,980,000	7,115,000	0
GRANTS & CAPITAL INJECTIONS TO ORGANISATIONS	...	...	3,025,966	2,372,900	4,520,700	5,939,000
National Environment Agency Programme						
Innovation For Environmental Sustainability (IES) Fund	0	9,867,846	2,109,391	381,500	604,500	256,000
Grant for Energy Efficient Technologies	22,000,000	0	554,672	775,400	1,916,200	2,800,000
Environment Technology Research Programme	15,000,000	0	361,903	1,216,000	2,000,000	2,883,000

KEY PERFORMANCE INDICATORS

Desired Outcomes

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

Key Performance Indicators

Desired Outcome	Performance Indicator	Actual FY2009	Actual FY2010	Revised FY2011	Estimated FY2012
Clean & healthy environment	% of days in a year where PSI is in the "Good" range ¹	91.0	93.2	95.0	>85
	Number of air pollution incidents per million population ¹	2.3	2.6	2.2	<5
	Number of water pollution incidents per million population ¹	2.3	1.8	3.1	<5
	Number of local dengue (Dengue Fever and Dengue Haemorrhagic Fever) cases per 100,000 population ¹	83.9	98.1	108.0	<130
	Number of food outlet related food poisoning outbreaks per 1,000 food outlets ¹	5.4	6.5	6.2	<3.5
Access to clean water	% of tests meeting WHO drinking water quality guidelines	100	100	100	100
	Access to improved drinking water sources (%) ²	100	100	100	100
Good environmental & water infrastructure & services	Total waste incinerated (mil tons/year) ¹	2.48	2.59	2.66	<2.67
	Accuracy of 3-hourly Nowcast (%) ¹	89.8	89.1	90.5	>90
	% of Unaccounted-for-Water	4.6	5.2	5.5	<5
	Number of leaks per 100km of potable water pipelines per year ¹	7.1	5.9	6.5	<6.0
	Size of flood prone area (ha)	66	56	48	40
	Number of sewerage service disruptions per 1,000 km of sewer maintained per month	17	15	<19	<18
	Access to improved sanitation (%) ³	100	100	100	100
Shared environmental ownership	Per capita domestic water consumption (litres/day)	154.9	154.0	153.1	152.2
Long term resource sustainability	Energy Consumption per dollar GDP: Improvement from 2005 levels (%) ¹	12.1	16.0	NA ⁴	NA ⁵
	Recycling rate (%) ¹	57	58	58	60

¹ Data for this KPI is reported in calendar year basis.

² Includes piped water into premises, public tap/standpipe, borehole/tube well, protected dug well, etc.

³ Includes flush/pour flush toilets or latrines connected to a sewer, septic tank, etc.

⁴ Data for 2011 will be available in the latter half of 2012. Energy consumption data are collected from many sources and require time to compile.

⁵ Given the dependency of energy intensity on GDP levels, and the uncertain GDP forecasts, it is difficult to make reasonable short term annual projections for energy intensity. However, under the Sustainable Singapore Blueprint (SSB), Singapore is committed to a 35% improvement in energy intensity from 2005 levels by 2030, with an intermediate target of 20% from 2005 levels by 2020.

Desired Outcome	Performance Indicator	Revised FY2011	Estimated FY2012
Advancement of Singapore's environment and water strategic and economic interests	Fulfill Singapore's obligations to regional and international environmental agreements and conventions ¹	(i) Participated in the international committee to consider a legally binding instrument to address the harmful effects of mercury. (ii) Involved in the international preparatory process to review the global sustainable development agenda since the Earth Summit in 1992. (iii) Participated in the regional review of the ASEAN Haze Agreement on Transboundary Haze.	(i) To continue participating in the international committee on mercury with a view to become a party to the proposed international instrument. (ii) To continue to be involved in the global sustainable development review process with a view to participate in the international summit in mid-2012. (iii) To continue doing Singapore's part in the regional actions towards addressing the transboundary haze issue.
Advance Singapore's environment and water strategic and economic interests through bilateral relations and regional/international initiatives ¹		(i) Chaired the ASEAN Sub-regional Ministerial Steering Committee (MSC) on Transboundary Haze Pollution and led in the strategic review of the committee. (ii) Hosted the annual bilateral meetings with Brunei, Indonesia and Malaysia to reaffirm relations and address issues of mutual interest.	(i) To complete chairmanship of the MSC by overseeing the implementation of the strategic review and working with other MSC member States on the 2nd MSC Forum as a platform for government and civil society participation in haze prevention collaboration. (ii) To continue to reaffirm relations through bilateral meetings with Brunei, Indonesia and Malaysia under established platforms. (iii) To explore and follow up on various initiatives to establish closer collaboration with other countries.