

Appendix H

Waste Growth and Capacity Projections over the Plan Period and Beyond

Table H.1a Projected Waste Growth over the Plan Period by Waste Stream (2019 – 2038)

Waste Stream	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Imports	3,294,286	3,331,512	3,369,158	3,407,229	3,445,731	3,484,668	3,524,045	3,563,866	3,604,138	3,644,865	3,686,052	3,727,704	3,769,827	3,812,426	3,855,507	3,899,074	3,943,133	3,987,691	4,032,752	4,078,322
Household	465,380	465,144	464,883	464,596	464,283	463,944	463,580	463,190	462,774	462,333	461,866	461,521	461,153	460,760	460,343	459,901	459,436	458,946	458,431	457,893
C & I	301,322	305,026	308,760	312,524	316,318	320,141	323,995	327,880	331,795	335,741	339,719	343,728	347,768	351,840	355,944	360,081	364,250	368,452	372,686	376,954
CD&EW	875,866	882,815	911,166	940,428	970,629	1,001,801	1,033,973	1,067,179	1,101,450	1,136,823	1,173,332	1,211,013	1,249,904	1,290,044	1,331,473	1,374,233	1,418,365	1,463,915	1,510,928	1,559,451
Agricultural	1,649	1,668	1,687	1,706	1,725	1,745	1,765	1,784	1,805	1,825	1,846	1,866	1,888	1,909	1,930	1,952	1,974	1,997	2,019	2,042
Hazardous	172,356	174,303	176,273	178,265	180,279	182,316	184,377	186,460	188,567	190,698	192,853	195,032	197,236	199,465	201,719	203,998	206,303	208,634	210,992	213,376
Total	5,110,860	5,160,469	5,231,927	5,304,748	5,378,965	5,454,615	5,531,734	5,610,359	5,690,529	5,772,285	5,855,666	5,940,864	6,027,775	6,116,444	6,206,916	6,299,239	6,393,462	6,489,634	6,587,809	6,688,038

Table H.1b Projected Waste Growth beyond the Plan Period by Waste Stream (2039 – 2048)

Waste Stream	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Imports	4,124,407	4,171,013	4,218,145	4,265,810	4,314,014	4,362,762	4,412,061	4,461,918	4,512,337	4,563,327
Household	457,135	456,502	455,848	455,173	454,478	453,761	453,024	452,267	451,488	450,688
C & I	381,255	385,589	389,958	394,360	398,797	403,268	407,774	412,315	416,892	421,503
CD&EW	1,609,532	1,661,222	1,714,571	1,769,634	1,826,465	1,885,121	1,945,660	2,008,144	2,072,635	2,139,197
Agricultural	2,065	2,088	2,112	2,136	2,160	2,184	2,209	2,234	2,259	2,285
Hazardous	215,787	218,226	220,692	223,186	225,708	228,258	230,837	233,446	236,084	238,751
Total	6,790,181	6,894,640	7,001,326	7,110,299	7,221,621	7,335,355	7,451,567	7,570,324	7,691,695	7,815,751

Table H.2a Projected Waste Growth for WMS1, by Management Method, over the Plan Period (2019 – 2038)

Management Method	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Recycling	1,972,617	1,992,477	2,016,344	2,040,571	2,065,167	2,090,139	2,115,494	2,141,242	2,167,389	2,193,946	2,220,919	2,248,374	2,276,264	2,304,600	2,333,392	2,362,648	2,392,381	2,422,599	2,453,314	2,484,537
Recovery	1,007,637	1,015,325	1,026,248	1,037,366	1,048,684	1,060,207	1,071,942	1,083,893	1,096,066	1,108,468	1,121,104	1,134,070	1,147,284	1,160,753	1,174,483	1,188,482	1,202,757	1,217,316	1,232,165	1,247,314
Transfer	1,047,799	1,059,303	1,074,653	1,090,277	1,106,181	1,122,371	1,138,855	1,155,638	1,172,729	1,190,134	1,207,862	1,225,919	1,244,314	1,263,055	1,282,150	1,301,608	1,321,438	1,341,649	1,362,250	1,383,252
Disposal	1,082,806	1,093,363	1,114,682	1,136,533	1,158,933	1,181,898	1,205,443	1,229,586	1,254,345	1,279,737	1,305,781	1,332,501	1,359,913	1,388,036	1,416,891	1,446,501	1,476,886	1,508,071	1,540,079	1,572,935
Total	5,110,860	5,160,469	5,231,927	5,304,748	5,378,965	5,454,615	5,531,734	5,610,359	5,690,529	5,772,285	5,855,666	5,940,864	6,027,775	6,116,444	6,206,916	6,299,239	6,393,462	6,489,634	6,587,809	6,688,038

Table H.2b Projected Waste Growth for WMS1, by Management Method, beyond the Plan Period (2039 – 2048)

Management Method	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Recycling	2,516,205	2,548,459	2,581,256	2,614,611	2,648,534	2,683,040	2,718,141	2,753,851	2,790,185	2,827,157
Recovery	1,262,656	1,278,404	1,294,477	1,310,887	1,327,640	1,344,748	1,362,219	1,380,065	1,398,294	1,416,918
Transfer	1,404,664	1,426,496	1,448,758	1,471,463	1,494,621	1,518,243	1,542,341	1,566,928	1,592,015	1,617,617
Disposal	1,606,656	1,641,282	1,676,833	1,713,338	1,750,826	1,789,325	1,828,866	1,869,480	1,911,200	1,954,059
Total	6,790,181	6,894,640	7,001,326	7,110,299	7,221,621	7,335,355	7,451,567	7,570,324	7,691,695	7,815,751

Table H.3a Projected Waste Growth for WMS2, by Management Method, over the Plan Period (2019 – 2038)

Management Method	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Recycling	1,972,617	2,080,657	2,195,120	2,312,432	2,432,679	2,555,947	2,682,327	2,781,186	2,882,873	2,987,481	3,095,109	3,205,944	3,294,785	3,385,342	3,477,647	3,571,738	3,667,648	3,717,264	3,767,798	3,819,274
Recovery	1,007,637	1,029,343	1,055,952	1,084,505	1,115,089	1,147,794	1,182,716	1,216,505	1,252,389	1,290,468	1,330,846	1,373,684	1,384,760	1,396,274	1,408,243	1,420,682	1,433,610	1,461,316	1,489,754	1,518,945
Transfer	1,047,799	1,011,636	977,825	942,750	906,371	868,649	829,542	814,830	799,255	782,781	765,371	746,986	747,556	748,066	748,518	748,910	749,243	759,471	769,867	780,436
Disposal	1,082,806	1,038,833	1,003,030	965,061	924,827	882,225	837,149	797,838	756,012	711,554	664,340	614,249	600,674	586,761	572,508	557,909	542,960	551,584	560,389	569,382
Total	5,110,860	5,160,469	5,231,927	5,304,748	5,378,965	5,454,615	5,531,734	5,610,359	5,690,529	5,772,285	5,855,666	5,940,864	6,027,775	6,116,443	6,206,916	6,299,239	6,393,462	6,489,634	6,587,808	6,688,037

Table H.3b Projected Waste Growth for WMS2, by Management Method, beyond the Plan Period (2039 – 2048)

Management Method	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Recycling	3,871,586	3,924,984	3,979,397	4,034,850	4,091,369	4,148,982	4,207,715	4,267,598	4,328,659	4,390,929
Recovery	1,548,853	1,579,607	1,611,187	1,643,617	1,676,923	1,711,132	1,746,270	1,782,367	1,819,451	1,857,552
Transfer	791,182	802,108	813,219	824,518	836,009	847,697	859,587	871,682	883,989	896,510
Disposal	578,559	587,940	597,523	607,314	617,320	627,544	637,994	648,676	659,595	670,760
Total	6,790,181	6,894,639	7,001,325	7,110,298	7,221,620	7,335,355	7,451,567	7,570,323	7,691,694	7,815,751

Table H.4a Projected Waste Growth for WMS3, by Management Method, over the Plan Period (2019 – 2038)

Management Method	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Recycling	1,972,617	2,048,673	2,130,573	2,214,737	2,301,240	2,390,161	2,481,580	2,575,582	2,672,254	2,771,687	2,873,975	2,979,297	3,065,848	3,154,090	3,244,058	3,335,785	3,429,307	3,476,510	3,524,605	3,573,615
Recovery	1,007,637	1,023,867	1,044,550	1,066,711	1,090,419	1,115,748	1,142,774	1,171,575	1,202,235	1,234,839	1,269,477	1,306,303	1,315,202	1,324,474	1,334,133	1,344,194	1,354,672	1,379,721	1,405,423	1,431,799
Transfer	1,047,799	1,036,916	1,029,030	1,020,539	1,011,419	1,001,642	991,183	980,013	968,104	955,426	941,946	927,632	923,040	918,258	913,284	908,116	902,752	915,252	927,964	940,892
Disposal	1,082,806	1,051,014	1,027,774	1,002,760	975,887	947,064	916,197	883,189	847,936	810,333	770,268	727,632	723,685	719,622	715,441	711,144	706,731	718,151	729,816	741,732
Total	5,110,860	5,160,469	5,231,927	5,304,748	5,378,965	5,454,615	5,531,734	5,610,359	5,690,529	5,772,285	5,855,666	5,940,864	6,027,775	6,116,443	6,206,916	6,299,239	6,393,462	6,489,634	6,587,808	6,688,037

Table H.4b Projected Waste Growth for WMS3, by Management Method, beyond the Plan Period (2039 – 2048)

Management Method	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Recycling	3,623,446	3,674,329	3,726,199	3,779,082	3,833,005	3,887,992	3,944,072	4,001,273	4,059,624	4,119,153
Recovery	1,458,796	1,486,562	1,515,065	1,544,326	1,574,370	1,605,219	1,636,898	1,669,433	1,702,848	1,737,170
Transfer	954,041	967,415	981,021	994,862	1,008,945	1,023,275	1,037,857	1,052,698	1,067,804	1,083,180
Disposal	753,897	766,333	779,041	792,028	805,301	818,869	832,739	846,919	861,419	876,247
Total	6,790,181	6,894,639	7,001,325	7,110,298	7,221,620	7,335,355	7,451,567	7,570,323	7,691,694	7,815,751

Table H.5a Projected Waste Capacity over the Plan Period by Site Category (2019 – 2038)

Waste Stream	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Recycling	10,272,551	9,742,551	9,212,551	8,776,441	8,396,441	8,016,441	7,541,550	7,291,550	7,041,550	6,791,550	6,541,550	6,291,550	6,041,550	5,791,550	5,541,550	5,291,550	5,041,550	4,791,550	4,541,550	4,291,550
Recovery	1,164,468	1,164,468	1,164,468	1,164,468	1,164,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468
Transfer	619,548	619,548	799,548	799,548	799,548	799,548	1,194,548	1,194,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548
Disposal	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954
Total	13,739,520	13,209,520	12,859,520	12,423,410	12,043,410	11,769,410	11,689,519	11,439,519	11,625,519	11,375,519	11,125,519	10,875,519	10,625,519	10,375,519	10,125,519	9,875,519	9,625,519	9,375,519	9,125,519	8,875,519

Table H.5b Projected Waste Capacity beyond the Plan Period by Site Category (2039 – 2048)

Waste Stream	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Recycling	4,041,550	3,791,550	3,541,550	3,291,550	3,041,550	2,791,550	2,541,550	2,291,550	2,041,550	1,791,550
Recovery	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468	1,270,468
Transfer	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548	1,630,548
Disposal	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954	1,682,954
Total	8,625,519	8,375,519	8,125,519	7,875,519	7,625,519	7,375,519	7,125,519	6,875,519	6,625,519	6,375,519

Table H6a Projected Capacity Gaps/surpluses under each WMS over the Plan Period, by Site Category

Site Category	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Recycling																				
WMS1	-289,663	-309,523	-333,390	-357,617	-382,213	-407,185	-432,540	-458,288	-484,435	-510,992	-537,965	-565,420	-593,310	-621,646	-650,438	-679,694	-709,427	-739,645	-770,360	-801,583
WMS2	-289,663	-397,703	-512,166	-629,478	-749,725	-872,993	-999,373	-1,098,232	-1,199,919	-1,304,527	-1,412,155	-1,522,990	-1,611,831	-1,702,388	-1,794,693	-1,888,784	-1,984,694	-2,034,310	-2,084,845	-2,136,320
WMS3	-289,663	-365,719	-447,619	-531,783	-618,286	-707,207	-798,626	-892,628	-989,300	-1,088,733	-1,191,021	-1,296,343	-1,382,894	-1,471,136	-1,561,104	-1,652,831	-1,746,353	-1,793,556	-1,841,651	-1,890,661
Recovery																				
WMS1	-388,090	-395,778	-226,700	-237,818	-249,136	-260,660	122,606	110,655	534,482	522,080	509,444	496,478	483,264	469,795	456,065	442,066	427,791	413,232	398,383	383,234
WMS2	-388,090	-409,795	-256,404	-284,957	-315,541	-348,246	11,832	-21,957	378,159	340,080	299,702	256,864	245,788	234,274	222,305	209,866	196,938	169,232	140,794	111,603
WMS3	-388,090	-404,319	-245,002	-267,163	-290,872	-316,200	51,774	22,973	428,313	395,709	361,071	324,245	315,346	306,074	296,415	286,354	275,876	250,827	225,125	198,749
Transfer																				
WMS1	116,668	105,164	89,814	74,190	58,287	148,097	131,613	114,830	97,739	80,333	62,606	44,549	26,154	7,413	-11,682	-31,140	-50,970	-71,181	-91,783	-112,784
WMS2	116,668	152,831	186,642	221,718	258,096	401,819	440,926	455,637	471,212	487,686	505,096	523,481	522,912	522,402	521,950	521,558	521,225	510,997	500,600	490,031
WMS3	116,668	127,552	135,437	143,928	153,049	268,826	279,285	290,454	302,363	315,042	328,522	342,835	347,428	352,210	357,184	362,352	367,716	355,215	342,503	329,576
Disposal																				
WMS1	9,189,745	8,649,188	8,097,869	7,639,907	7,237,507	6,834,543	6,336,107	6,061,963	5,787,205	5,511,813	5,235,769	4,959,048	4,681,637	4,403,514	4,124,658	3,845,049	3,564,664	3,283,479	3,001,471	2,718,615
WMS2	9,189,745	8,703,718	8,209,521	7,811,380	7,471,614	7,134,216	6,704,401	6,493,712	6,285,538	6,079,996	5,877,210	5,677,300	5,440,876	5,204,788	4,969,042	4,733,641	4,498,590	4,239,966	3,981,161	3,722,168
WMS3	9,189,745	8,691,537	8,184,777	7,773,681	7,420,554	7,069,377	6,625,352	6,408,361	6,193,614	5,981,217	5,771,281	5,563,918	5,317,865	5,071,928	4,826,108	4,580,405	4,334,819	4,073,399	3,811,734	3,549,818

Table H6b Projected Capacity Gaps/surpluses under each WMS beyond the Plan Period, by Site Category

Site Category	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Recycling										
WMS1	-833,251	-865,505	-898,302	-931,657	-965,580	-1,000,086	-1,035,187	-1,070,897	-1,107,231	-1,144,203
WMS2	-2,188,632	-2,242,030	-2,296,443	-2,351,896	-2,408,415	-2,466,028	-2,524,761	-2,584,644	-2,645,706	-2,707,975
WMS3	-1,940,492	-1,991,375	-2,043,245	-2,096,128	-2,150,051	-2,205,038	-2,261,118	-2,318,319	-2,376,670	-2,436,199
Recovery										
WMS1	367,891	352,144	336,070	319,661	302,908	285,800	268,328	250,483	232,254	213,630
WMS2	81,695	50,941	19,361	-13,069	-46,375	-80,584	-115,722	-151,819	-188,903	-227,004
WMS3	171,752	143,986	115,483	86,221	56,178	25,329	-6,350	-38,885	-72,300	-106,623
Transfer										
WMS1	-134,196	-156,028	-178,291	-200,995	-224,153	-247,775	-271,873	-296,460	-321,548	-347,149
WMS2	479,285	468,359	457,249	445,950	434,459	422,770	410,881	398,785	386,479	373,958
WMS3	316,427	303,052	289,447	275,606	261,523	247,193	232,610	217,769	202,664	187,288
Disposal										
WMS1	2,434,894	2,150,268	1,864,717	1,578,211	1,290,724	1,002,225	712,684	422,070	130,350	-162,509
WMS2	3,462,990	3,203,610	2,944,027	2,684,235	2,424,230	2,164,006	1,903,556	1,642,874	1,381,954	1,120,790
WMS3	3,287,653	3,025,217	2,762,509	2,499,522	2,236,249	1,972,681	1,708,811	1,444,630	1,180,130	915,303