Capital Cost Curve

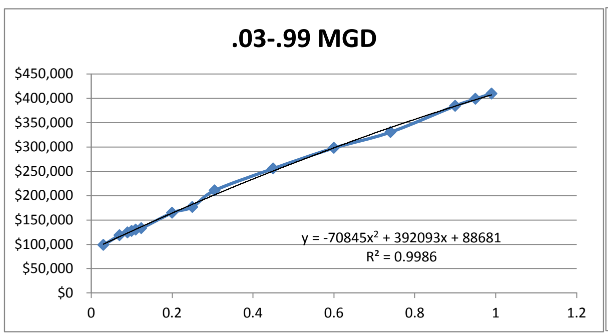
Design Flow (MGD)	Total Capital Cost	Flow Range	Slope	Y-int	Capital Cost Equation	0.03	0.07	0.09	0.1	0.11	0.124	0.2	0.25	0.305	0.45	0.6
0.03	$98,419	<0.03		98419	cost = 98419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419
0.07	$118,427	0.03 - <0.07	500204	83413	cost = 500204Q + 83413	$98,419	$118,427	$128,432	$133,434	$138,436	$145,438	$183,454	$208,464	$235,975	$308,505	$383,536
0.09	$124,249	0.07 - <0.09	291078	98052	cost = 291078Q + 98052	$106,784	$118,427	$124,249	$127,160	$130,071	$134,146	$156,268	$170,822	$186,831	$229,037	$272,699
0.1	$127,160	0.09 - <0.1	291100	98050	cost = 291100Q + 98050	$106,783	$118,427	$124,249	$127,160	$130,071	$134,146	$156,270	$170,825	$186,836	$229,045	$272,710
0.11	$130,069	0.1 - <0.11	290947	98065	cost = 290947Q + 98065	$106,794	$118,432	$124,251	$127,160	$130,069	$134,143	$156,255	$170,802	$186,804	$228,991	$272,633
0.124	$132,928	0.11 - <0.124	204182	107609	cost = 204182Q + 107609	$113,735	$121,902	$125,986	$128,028	$130,069	$132,928	$148,446	$158,655	$169,885	$199,491	$230,119
0.2	$164,612	0.124 - <0.2	416894	81233	cost = 416894Q + 81233	$93,740	$110,416	$118,754	$122,923	$127,091	$132,928	$164,612	$185,457	$208,386	$268,836	$331,370
0.25	$176,615	0.2 - <0.25	240060	116600	cost = 240060Q + 116600	$123,802	$133,404	$138,205	$140,606	$143,007	$146,367	$164,612	$176,615	$189,818	$224,627	$260,636
0.305	$210,587	0.25 - <0.305	617673	22197	cost = 617673Q + 22197	$40,727	$65,434	$77,787	$83,964	$90,141	$98,788	$145,731	$176,615	$210,587	$300,150	$392,800
0.45	$255,605	0.305 - <0.45	310469	115894	cost = 310469Q + 115894	$125,208	$137,627	$143,836	$146,941	$150,046	$154,392	$177,988	$193,511	$210,587	$255,605	$302,175
0.6	$297,930	0.45 - <0.6	282169	128629	cost = 282169Q + 128629	$137,094	$148,381	$154,024	$156,846	$159,668	$163,618	$185,063	$199,171	$214,691	$255,605	$297,930
0.74	$330,538	0.6 - <0.74	232912	158183	cost = 232912Q + 158183	$165,170	$174,487	$179,145	$181,474	$183,803	$187,064	$204,765	$216,411	$229,221	$262,993	$297,930
0.9	$384,534	0.74 - <0.9	337475	80807	cost = 337475Q + 80807	$90,931	$104,430	$111,179	$114,554	$117,929	$122,653	$148,302	$165,175	$183,736	$232,670	$283,292
0.95	$398,830	0.9 - <0.95	285915	127210	cost = 285915Q + 127210	$135,788	$147,224	$152,943	$155,802	$158,661	$162,664	$184,393	$198,689	$214,414	$255,872	$298,759
0.99	$409,690	0.95 - <0.99	271517	140889	cost = 271517Q + 140889	$149,034	$159,895	$165,325	$168,041	$170,756	$174,557	$195,192	$208,768	$223,701	$263,071	$303,799
1	$1,275,084	0.99 - 1.0			cost = 1275084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084
1.5	$1,528,884	1.0 - <1.5	507600	767484	cost = 507600Q + 767484	$782,712	$803,016	$813,168	$818,244	$823,320	$830,426	$869,004	$894,384	$922,302	$995,904	$1,072,044
2.152	$1,847,243	1.5 - <2.152	488280	796464	cost = 488280Q + 796464	$811,112	$830,644	$840,409	$845,292	$850,175	$857,011	$894,120	$918,534	$945,389	$1,016,190	$1,089,432
3	$2,189,971	2.152 - <3.0	404161	977488	cost = 404161Q + 977488	$989,613	$1,005,780	$1,013,863	$1,017,905	$1,021,946	$1,027,604	$1,058,321	$1,078,529	$1,100,758	$1,159,361	$1,219,985
5	$3,081,241	3.0 - <5.0	445635	853066	cost = 445635Q + 853066	$866,435	$884,261	$893,173	$897,630	$902,086	$908,325	$942,193	$964,475	$988,985	$1,053,602	$1,120,447
7.365	$3,848,761	5.0 - <7.365	324533	1458578	cost = 324533Q + 1458578	$1,468,314	$1,481,295	$1,487,786	$1,491,031	$1,494,276	$1,498,820	$1,523,484	$1,539,711	$1,557,560	$1,604,618	$1,653,297
10	$4,656,524	7.365 - 10	306551	1591011	cost = 306551Q + 1591011	$1,600,208	$1,612,470	$1,618,601	$1,621,666	$1,624,732	$1,629,023	$1,652,321	$1,667,649	$1,684,509	$1,728,959	$1,774,942

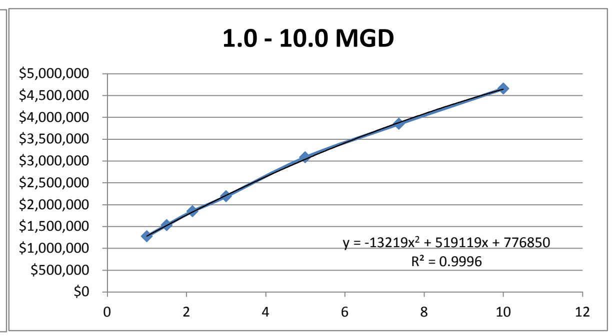
Design Flows generated from pre-built flows in the U.S. EPA cost model and user-generated flows. Total Capital Cost values generated from the U.S. EPA cost model.

LINEST was run on the cost vs flow values for each flow range to derive miniature cost curves - if the full-spectrum cost curves were unable to sufficiently calculate costs each of these linear curves could be used for final cost estimation.

Cells highlighted in blue represent where the derived curves intersect; if the formula is correct then the values should be identical between two equations at the same flow. The non-shaded cells represent further estimates of the curves but are not likely to be useful, and are mostly artifcats of doing a big copy/paste instead of individual cells.

Based on LINEST	0.3-.99	320867	97613	cost = 320867Q + 97613	$107,239	$120,073	$126,491	$129,699	$132,908	$137,400	$161,786	$177,829	$195,477	$242,003	$290,133
	percent higher than specific flow range				8.96	1.39	1.80	2.00	2.18	3.36	(1.72)	0.69	(7.18)	(5.32)	(2.62)
Based on LINEST	1.0 - 10.0	376971	1016026	cost = 376971Q + 1016026											
	percent higher than specific flow range														
Based on trendline	0.3-.99	see below			$100,380	$115,780	$123,396	$127,182	$130,954	$136,211	$164,266	$182,276	$201,679	$250,777	$298,433
	percent higher than specific flow range				1.99	(2.24)	(0.69)	0.02	0.68	2.47	(0.21)	3.21	(4.23)	(1.89)	0.17
Based on trendline	1.0 - 10.0	see below													
	percent higher than specific flow range														





Known flow rates were inserted into the LINEST and polynomial trendline equations to verify the predictive accuracy of the equations. The percentage indicates how much above or below the calculated cost is from the actual number. Based on the percentages the polynomial trendlines are more accurate than the linear trendlines.

The EPA cost model uses flow rates of 1 MGD to separate SMALL from MEDIUM sources, and a significant increase in cost estimate occurs when that threshold is crossed. Separate cost curves were modeled for those flow rate ranges for capital cost,O&M cost, and GAC recharge in order to produce more reliable curve equations.

The final trendlines were used to estimate capital costs at estimated flow rates from sources identified as likely requiring treatment for 1,2,3-TCP.

Design Flow (MGD)	q^2	q	y-int
0.3-0.99	-70845	392093	88681
1.0-10.0	-13219	519119	776850

XY plots based off the flow and cost data with a polynomial trendline. The goal is to get a trendline that closely matches the known data points to predict costs based on flow.

The numbers to the left are copied from the calculated trendlines for ease in Excel calculations.

Capital Cost Curve

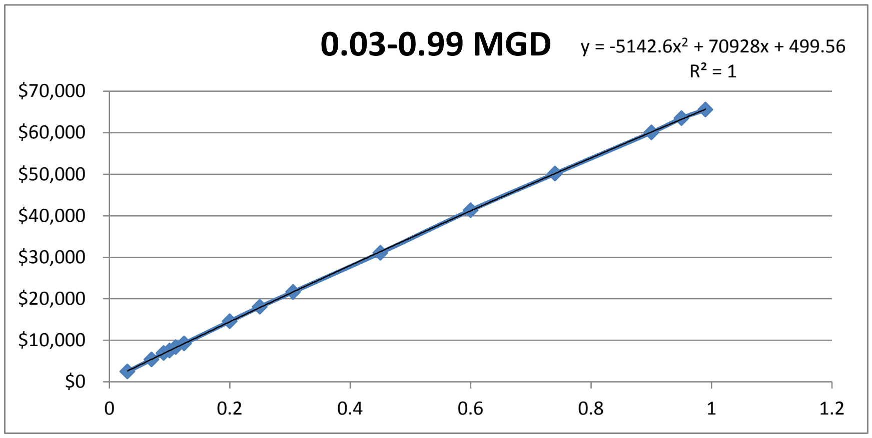
0.74	0.9	0.95	0.99	1	1.5	2.152	3	5	7.365	10
$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419	$98,419
$453,564	$533,597	$558,607	$578,616	$583,618	$833,720	$1,159,853	$1,584,027	$2,584,435	$3,767,419	$5,085,458
$313,450	$360,022	$374,576	$386,219	$389,130	$534,669	$724,452	$971,286	$1,553,443	$2,241,843	$3,008,833
$313,464	$360,040	$374,595	$386,239	$389,150	$534,700	$724,497	$971,350	$1,553,550	$2,242,002	$3,009,050
$313,366	$359,917	$374,465	$386,103	$389,012	$534,486	$724,183	$970,906	$1,552,799	$2,240,889	$3,007,533
$258,704	$291,373	$301,582	$309,750	$311,792	$413,883	$547,009	$720,156	$1,128,520	$1,611,411	$2,149,431
$389,735	$456,438	$477,283	$493,959	$498,128	$706,575	$978,390	$1,331,917	$2,165,706	$3,151,661	$4,250,178
$294,244	$332,654	$344,657	$354,259	$356,660	$476,690	$633,209	$836,780	$1,316,900	$1,884,642	$2,517,200
$479,275	$578,102	$608,986	$633,693	$639,870	$948,706	$1,351,429	$1,875,215	$3,110,560	$4,571,356	$6,198,924
$345,641	$395,316	$410,839	$423,258	$426,363	$581,597	$784,023	$1,047,301	$1,668,239	$2,402,498	$3,220,584
$337,434	$382,581	$396,689	$407,976	$410,798	$551,882	$735,856	$975,135	$1,539,472	$2,206,801	$2,950,315
$330,538	$367,804	$379,450	$388,766	$391,095	$507,551	$659,410	$856,920	$1,322,744	$1,873,582	$2,487,305
$330,538	$384,534	$401,408	$414,907	$418,282	$587,019	$807,053	$1,093,232	$1,768,182	$2,566,310	$3,455,557
$338,788	$384,534	$398,830	$410,266	$413,126	$556,083	$742,500	$984,956	$1,556,787	$2,232,977	$2,986,364
$341,811	$385,254	$398,830	$409,690	$412,406	$548,164	$725,193	$955,439	$1,498,472	$2,140,609	$2,856,056
$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084	$1,275,084
$1,143,108	$1,224,324	$1,249,704	$1,270,008	$1,275,084	$1,528,884	$1,859,840	$2,290,285	$3,305,485	$4,505,960	$5,843,487
$1,157,791	$1,235,916	$1,260,330	$1,279,861	$1,284,744	$1,528,884	$1,847,243	$2,261,304	$3,237,864	$4,392,647	$5,679,265
$1,276,568	$1,341,233	$1,361,441	$1,377,608	$1,381,649	$1,583,730	$1,847,243	$2,189,971	$2,998,293	$3,954,134	$5,019,098
$1,182,836	$1,254,138	$1,276,419	$1,294,245	$1,298,701	$1,521,519	$1,812,073	$2,189,971	$3,081,241	$4,135,168	$5,309,416
$1,698,732	$1,750,657	$1,766,884	$1,779,865	$1,783,111	$1,945,377	$2,156,972	$2,432,176	$3,081,241	$3,848,761	$4,703,905
$1,817,859	$1,866,907	$1,882,235	$1,894,497	$1,897,562	$2,050,838	$2,250,709	$2,510,665	$3,123,767	$3,848,761	$4,656,524

Continuation from other page

$335,054	$386,393	$402,437	$415,271							
1.37	0.48	0.90	1.36							
				$ 1,392,996	$ 1,581,482	$ 1,827,267	$ 2,146,938	$ 2,900,879	$ 3,792,414	$ 4,785,732
				9.25	3.44	(1.08)	(1.97)	(5.85)	(1.46)	2.77
$340,035	$384,180	$397,232	$407,418							
2.87	(0.09)	(0.40)	(0.55)							
				$1,282,750	$1,525,786	$1,832,776	$2,215,236	$3,041,970	$3,883,120	$4,646,140
				0.60	(0.20)	(0.78)	1.15	(1.27)	0.89	(0.22)

GAC Recharge Cost Curve

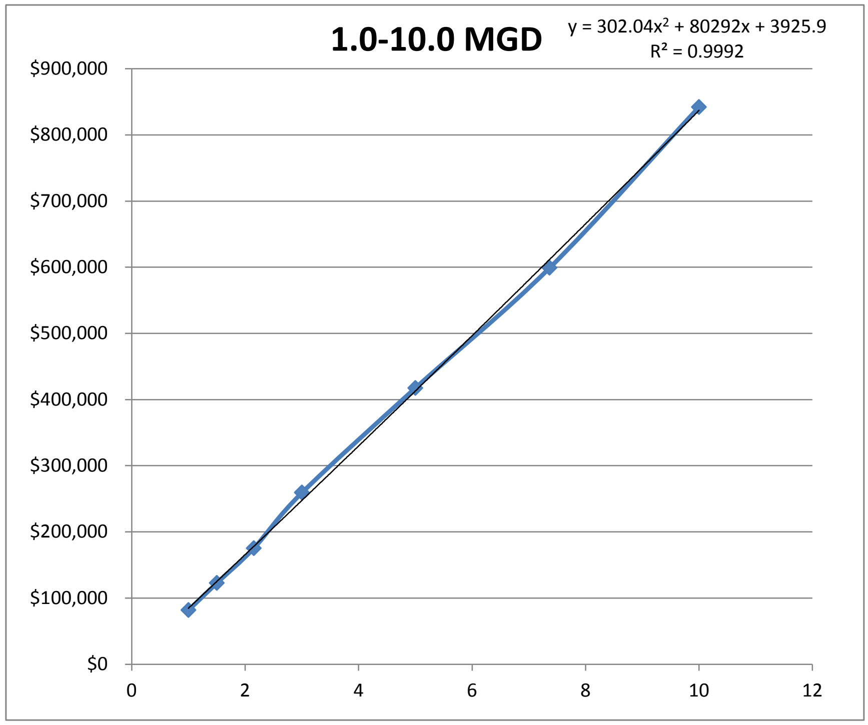
Design Flow (MGD)	Cost ($)	weight (lb)	$/lb
0.03	$2,454	854	$2.87
0.07	$5,387	1963	$2.74
0.09	$6,933	2564	$2.70
0.1	$7,509	2790	$2.69
0.11	$8,340	3117	$2.68
0.124	$9,212	3464	$2.66
0.2	$14,579	5630	$2.59
0.25	$18,075	7069	$2.56
0.305	$21,642	8553	$2.53
0.45	$31,075	12543	$2.48
0.6	$41,334	16965	$2.44
0.74	$50,134	20810	$2.41
0.9	$60,056	25192	$2.38
0.95	$63,489	26719	$2.38
0.99	$65,563	27644	$2.37
1	$81,586	34842	$2.34
1.5	$122,648	52779	$2.32
2.152	$175,211	75398	$2.32
3	$259,093	111495	$2.32
5	$417,386	179613	$2.32
7.365	$598,866	257709	$2.32
10	$842,054	362359	$2.32



The above data was extracted from the EPA cost model outputs. Design Flows were generated from pre-built flows in the U.S. EPA cost model and user-generated flows. The data for flow vs cost was plotted and trendlines developed, again with a separation at the 1 MGD line (described in Capital Cost Curves).

Estimated weight and price per pound are for informative purposes only.

The final trendlines were used to estimate capital costs at estimated flow rates from sources identified as likely requiring treatment for 1,2,3-TCP and with GAC treatment already installed.



Design Flow (MGD)	q^2	q	y-int
0.3-0.99	-5142.6	70928	499.56
1.0-10.0	302.04	80292	3925.9

Operations And Maintenance Cost Curve

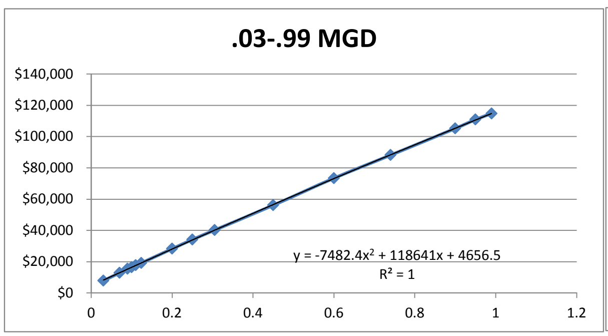
Design Flow (MGD)	Total O&M Cost	Flow Range	Slope	Y-int	O&M Cost Equation	0.03	0.07	0.09	0.1	0.11	0.124	0.2	0.25	0.305	0.45	0.6
0.03	$7,836	<0.03		7836	cost = 7836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836
0.07	$12,860	0.03 - <0.07	125603	4068	cost = 500204Q + 83413	$7,836	$12,860	$15,372	$16,628	$17,884	$19,642	$29,188	$35,468	$42,377	$60,589	$79,429
0.09	$15,507	0.07 - <0.09	132368	3594	cost = 291078Q + 98052	$7,565	$12,860	$15,507	$16,831	$18,155	$20,008	$30,068	$36,686	$43,966	$63,160	$83,015
0.1	$16,461	0.09 - <0.1	95394	6922	cost = 291100Q + 98050	$9,784	$13,599	$15,507	$16,461	$17,415	$18,751	$26,001	$30,770	$36,017	$49,849	$64,158
0.11	$17,738	0.1 - <0.11	127664	3695	cost = 290947Q + 98065	$7,525	$12,631	$15,185	$16,461	$17,738	$19,525	$29,228	$35,611	$42,632	$61,144	$80,293
0.124	$19,178	0.11 - <0.124	102841	6425	cost = 204182Q + 107609	$9,511	$13,624	$15,681	$16,709	$17,738	$19,178	$26,994	$32,136	$37,792	$52,704	$68,130
0.2	$28,239	0.124 - <0.2	119229	4393	cost = 416894Q + 81233	$7,970	$12,739	$15,124	$16,316	$17,508	$19,178	$28,239	$34,200	$40,758	$58,046	$75,930
0.25	$34,115	0.2 - <0.25	117520	4735	cost = 240060Q + 116600	$8,261	$12,961	$15,312	$16,487	$17,662	$19,307	$28,239	$34,115	$40,579	$57,619	$75,247
0.305	$40,197	0.25 - <0.305	110582	6470	cost = 617673Q + 22197	$9,787	$14,210	$16,422	$17,528	$18,634	$20,182	$28,586	$34,115	$40,197	$56,231	$72,819
0.45	$56,094	0.305 - <0.45	109634	6758	cost = 310469Q + 115894	$10,048	$14,433	$16,626	$17,722	$18,818	$20,353	$28,685	$34,167	$40,197	$56,094	$72,539
0.6	$73,383	0.45 - <0.6	115260	4227	cost = 282169Q + 128629	$7,685	$12,295	$14,600	$15,753	$16,906	$18,519	$27,279	$33,042	$39,381	$56,094	$73,383
0.74	$88,139	0.6 - <0.74	105400	10143	cost = 232912Q + 158183	$13,305	$17,521	$19,629	$20,683	$21,737	$23,212	$31,223	$36,493	$42,290	$57,573	$73,383
0.9	$105,205	0.74 - <0.9	106663	9209	cost = 337475Q + 80807	$12,409	$16,675	$18,808	$19,875	$20,942	$22,435	$30,541	$35,874	$41,741	$57,207	$73,206
0.95	$110,898	0.9 - <0.95	113867	2725	cost = 285915Q + 127210	$6,141	$10,695	$12,973	$14,111	$15,250	$16,844	$25,498	$31,191	$37,454	$53,965	$71,045
0.99	$114,746	0.95 - <0.99	96198	19510	cost = 271517Q + 140889	$22,396	$26,244	$28,168	$29,130	$30,092	$31,439	$38,750	$43,560	$48,851	$62,799	$77,229
1	$123,824	0.99 - 1.0			cost = 1275084	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824
1.5	$167,990	1.0 - <1.5	88331	35493	cost = 507600Q + 767484	$38,143	$41,676	$43,443	$44,326	$45,210	$46,446	$53,159	$57,576	$62,434	$75,242	$88,492
2.152	$222,393	1.5 - <2.152	83440	42830	cost = 488280Q + 796464	$45,333	$48,671	$50,340	$51,174	$52,008	$53,176	$59,518	$63,690	$68,279	$80,378	$92,894
3	$293,582	2.152 - <3.0	83949	41734	cost = 404161Q + 977488	$44,252	$47,610	$49,289	$50,129	$50,968	$52,144	$58,524	$62,721	$67,338	$79,511	$92,104
5	$468,265	3.0 - <5.0	87342	31557	cost = 445635Q + 853066	$34,177	$37,671	$39,418	$40,291	$41,165	$42,388	$49,025	$53,393	$58,196	$70,861	$83,962
7.365	$667,488	5.0 - <7.365	84238	47074	cost = 324533Q + 1458578	$49,602	$52,971	$54,656	$55,498	$56,341	$57,520	$63,922	$68,134	$72,767	$84,982	$97,617
10	$889,163	7.365 - 10	84127	47892	cost = 306551Q + 1591011	$50,415	$53,781	$55,463	$56,304	$57,146	$58,323	$64,717	$68,923	$73,550	$85,749	$98,368

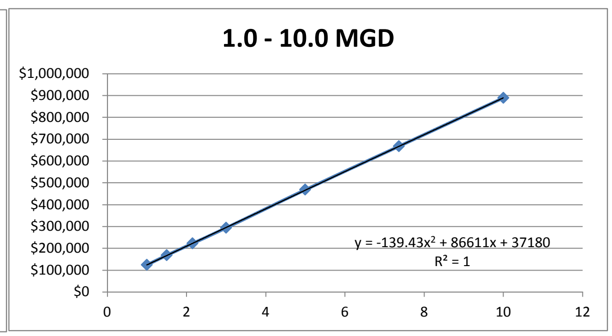
Design Flows generated from pre-built flows in the U.S. EPA cost model and user-generated flows. Total O&M Cost values

LINEST was run on the cost vs flow values for each flow range to derive miniature cost curves - if the full-spectrum cost curves were unable to sufficiently calculate costs each of these linear curves could

Cells highlighted in blue represent where the derived curves intersect; if the formula is correct then the values should be identical between two equations at the same flow. The non-shaded cells represent further estimates of the curves but are not likely to be useful, and are mostly artifcats of doing a big copy/paste instead of individual cells.

						0.03	0.07	0.09	0.1	0.11	0.124	0.2	0.25	0.305	0.45	0.6
Based on LINEST	0.3-.99	111118	5600	cost = 111118Q + 5600		$8,933	$13,378	$15,601	$16,712	$17,823	$19,379	$27,824	$33,379	$39,491	$55,603	$72,271
	percent higher than specific flow range					14.01	4.03	0.60	1.52	0.48	1.05	(1.47)	(2.16)	(1.76)	(0.88)	(1.52)
Based on LINEST	1.0 - 10.0	85111	39703	cost = 85111Q + 39703												
	percent higher than specific flow range															
Based on trendline	0.3-.99		see below			$8,209	$12,925	$15,274	$16,446	$17,616	$19,253	$28,085	$33,849	$40,146	$56,530	$73,147
	percent higher than specific flow range					4.76	0.50	(1.51)	(0.09)	(0.68)	0.39	(0.54)	(0.78)	(0.13)	0.78	(0.32)
Based on trendline	1.0 - 10.0		see below													
	percent higher than specific flow range															





Known flow rates were inserted into the LINEST and polynomial trendline equations to verify the predictive accuracy of the equations. The percentage indicates how much above or below the calculated cost is from the actual number. Based on the percentages the polynomial trendlines are more accurate than the linear trendlines.

The EPA cost model uses flow rates of 1 MGD to separate SMALL from MEDIUM sources, and a significant increase in cost estimate occurs when that threshold is crossed. Separate cost curves were modeled for those flow rate ranges for capital cost,O&M cost, and GAC recharge in order to produce more reliable curve equations.

The final trendlines were used to estimate O&M costs at estimated flow rates from sources identified as likely requiring treatment for 1,2,3-TCP.

Design flow (MGD)	q^2	q	y-int
0.3-0.99	-7482.4	118641	4656.5
1.0-10.0	-139.43	86611	37180

XY plots based off the flow and cost data with a polynomial trendline. The goal is to get a trendline that closely matches the known data points to predict costs based on flow.

The numbers to the left are copied from the calculated trendlines for ease in Excel calculations.

Operations And Maintenance Cost Curve

0.74	0.9	0.95	0.99	1	1.5	2.152	3	5	7.365	10
$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836	$7,836
$97,014	$117,110	$123,390	$128,415	$129,671	$192,472	$274,365	$380,876	$632,082	$929,133	$1,260,096
$101,546	$122,725	$129,344	$134,638	$135,962	$202,146	$288,450	$400,697	$665,433	$978,483	$1,327,271
$77,513	$92,776	$97,546	$101,362	$102,316	$150,013	$212,209	$293,103	$483,891	$709,498	$960,860
$98,166	$118,593	$124,976	$130,082	$131,359	$195,191	$278,428	$386,687	$642,016	$943,941	$1,280,336
$82,527	$98,982	$104,124	$108,238	$109,266	$160,686	$227,738	$314,947	$520,628	$763,846	$1,034,831
$92,622	$111,699	$117,660	$122,430	$123,622	$183,236	$260,973	$362,079	$600,536	$882,511	$1,196,679
$91,700	$110,503	$116,379	$121,080	$122,255	$181,015	$257,638	$357,295	$592,335	$870,270	$1,179,935
$88,300	$105,993	$111,522	$115,946	$117,051	$172,342	$244,442	$338,215	$559,379	$820,905	$1,112,288
$87,888	$105,430	$110,911	$115,297	$116,393	$171,210	$242,692	$335,662	$554,931	$814,216	$1,103,103
$89,519	$107,961	$113,724	$118,334	$119,487	$177,117	$252,266	$350,006	$580,526	$853,115	$1,156,825
$88,139	$105,003	$110,273	$114,489	$115,543	$168,243	$236,964	$326,344	$537,144	$786,416	$1,064,145
$88,139	$105,205	$110,538	$114,805	$115,871	$169,203	$238,746	$329,196	$542,521	$794,778	$1,075,834
$86,986	$105,205	$110,898	$115,453	$116,592	$173,525	$247,767	$344,326	$572,060	$841,356	$1,141,396
$90,697	$106,088	$110,898	$114,746	$115,708	$163,807	$226,529	$308,105	$500,501	$728,010	$981,492
$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824	$123,824
$100,858	$114,991	$119,408	$122,941	$123,824	$167,990	$225,582	$300,487	$477,149	$686,053	$918,805
$104,576	$117,926	$122,098	$125,436	$126,270	$167,990	$222,393	$293,150	$460,030	$657,366	$877,230
$103,856	$117,288	$121,486	$124,844	$125,683	$167,658	$222,393	$293,582	$461,480	$660,020	$881,227
$96,190	$110,165	$114,532	$118,025	$118,899	$162,569	$219,516	$293,582	$468,265	$674,828	$904,973
$109,411	$122,889	$127,101	$130,470	$131,313	$173,432	$228,355	$299,789	$468,265	$667,488	$889,455
$110,146	$123,606	$127,812	$131,177	$132,019	$174,082	$228,933	$300,273	$468,527	$667,488	$889,163

Continuation from other page

$87,827	$105,606	$111,162	$115,607							
(0.35)	0.38	0.24	0.75							
				$124,814	$167,370	$222,862	$295,037	$465,259	$666,547	$890,815
				0.80	(0.37)	0.21	0.50	(0.64)	(0.14)	0.19
$88,353	$105,373	$110,613	$114,778							
0.24	0.16	(0.26)	0.03							
				$123,652	$166,783	$222,921	$295,758	$466,749	$667,507	$889,347
				(0.14)	(0.72)	0.24	0.74	(0.32)	0.00	0.02