

OZONE 8-hr Exceedance Days*

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	2	1	1	2	0	1	4	0	0	0	0	0	0	3	0	0
April	7	6	4	1	3	8	7	1	0	1	7	2	6	5	2	3
May	6	10	3	7	13	5	7	4	5	2	4	7	8	2	3	1
June	20	5	3	7	3	6	7	3	1	7	1	2	1	9	3	6
July	5	3	3	2	2	1	0	4	3	1	2	0	7	2	0	2
August	7	5	6	7	11	10	4	7	4	14	2	1	7	4	9	2
September	12	8	11	5	7	14	7	2	0	3	3	8	4	3	0	8
October	6	7	7	0	8	7	1	3	1	4	4	4	0	2	5	
November	0	5	1	1	0	0	0	0	0	0	0	0	0	0	0	
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	65	50	39	32	47	52	37	24	14	32	23	24	33	30	22	22

*count includes non-regulatory sites for 2006-2015 and are based on an eight-hour maximum average threshold of >75 ppb.

*beginning with 2016, count does not include non-regulatory sites and are based on an eight-hour maximum average threshold of >70 ppb.

Clinton PM Monthly Average*

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	11.99	11.60	10.40	12.07	11.74	10.57	10.64	9.84	8.60	9.87	8.42	7.77	8.18	8.69	8.75	10.05
February	12.65	15.93	12.83	9.43	11.02	12.42	9.92	9.58	10.60	10.52	8.37	9.43	8.64	8.48	7.75	9.21
March	17.09	13.71	13.30	12.20	11.24	14.03	11.43	11.24	10.62	10.57	10.18	9.05	8.72	10.53	10.02	10.02
April	17.55	14.48	14.14	11.95	13.13	14.95	12.54	10.90	11.66	12.20	9.86	9.10	7.74	9.54	10.14	11.08
May	17.00	16.74	16.69	14.08	13.25	13.89	12.26	10.95	11.34	13.23	10.04	9.25	9.37	10.73	8.77	9.41
June	18.57	18.83	12.30	11.57	12.62	13.34	13.87	13.19	14.60	13.53	10.09	8.27	12.15	12.04	11.82	10.01
July	16.23	17.55	16.25	17.24	15.65	13.17	15.33	13.48	16.66	14.73	11.56	10.93	16.40	11.16	13.68	11.59
August	18.83	17.36	16.71	13.86	13.64	12.51	12.78	13.49	12.98	11.62	9.49	10.06	12.62	10.52	11.63	11.88
September	17.81	15.83	11.89	12.70	11.68	12.70	11.10	9.80	9.88	10.10	8.98	10.21	7.45	8.33	10.19	14.61
October	14.97	14.26	14.37	8.12	12.59	10.48	10.57	10.53	10.38	10.49	8.30	9.33	6.84	7.64	11.26	
November	14.44	15.78	12.37	13.25	8.46	8.96	10.76	8.70	8.50	7.38	9.39	9.44	8.06	10.28	9.82	
December	12.83	12.67	9.17	11.37	11.53	10.40	9.90	11.70	9.58	9.49	6.82	9.63	7.88	9.53	7.97	
AVERAGE	15.83	15.40	13.37	12.32	12.21	12.29	11.76	11.12	11.28	11.14	9.29	9.37	9.50	9.79	10.15	10.87
Annual Values from Clinton Regulatory Monitor:					12.30	12.20	11.80	11.30	11.50	11.80	10.10	10.10	9.81			

*based on preliminary non-regulatory continuous data

Compliance with Eight-Hour Ozone Standard

2011-2013 Eight-Hour Ozone Design Value:	87 ppb (Manvel Croix)
2012-2014 Eight-Hour Ozone Design Value:	80 ppb (Manvel Croix)
2013-2015 Eight-Hour Ozone Design Value:	80 ppb (Manvel Croix)
2014-2016 Eight-Hour Ozone Design Value:	79 ppb (Houston Aldine)
2015-2017 Eight-Hour Ozone Design Value:	81 ppb (Houston Aldine)
2016-2018 Eight-Hour Ozone Design Value:	78 ppb (Houston Aldine)
2017-2019 Eight-Hour Ozone Design Value:	81 ppb (Houston Aldine)
2018-2020 Preliminary* Eight-Hour Ozone Design Value:	79 ppb (Houston Aldine)
2019-2021 Preliminary* Eight-Hour Ozone Design Value:	77 ppb (Houston Bayland Park)

*This is the most current data, but it is not official until it has been certified by TCEQ technical staff.

data from: https://www.tceq.texas.gov/cgi-bin/compliance/monops/8hr_attainment.pl

2005-2007 (Non-Regulatory) 15.3

2006-2008 (Non-Regulatory) 14.9

2007-2009 (Non-Regulatory) 13.7

2008-2010 (Non-Regulatory) 12.6

2009-2011 (Non-Regulatory) 12.3

2010-2012 (Non-Regulatory) 12.1

2010-2012 (Regulatory) 12.1

2011-2013 (Non-Regulatory) 11.7

2011-2013 (Regulatory) 11.8

2012-2014 (Non-Regulatory) 11.4

2012-2014 (Regulatory) 11.5

2013-2015 (Non-Regulatory) 11.2

2013-2015 (Regulatory) 11.5

2014-2016 (Non-Regulatory) 10.6

2014-2016 (Regulatory) 11.1

2015-2017 (Non-Regulatory)* 9.9

2015-2017 (Regulatory)* 10.7

2016-2018 (Non-Regulatory)* 9.5

2016-2018 (Regulatory)* 9.81

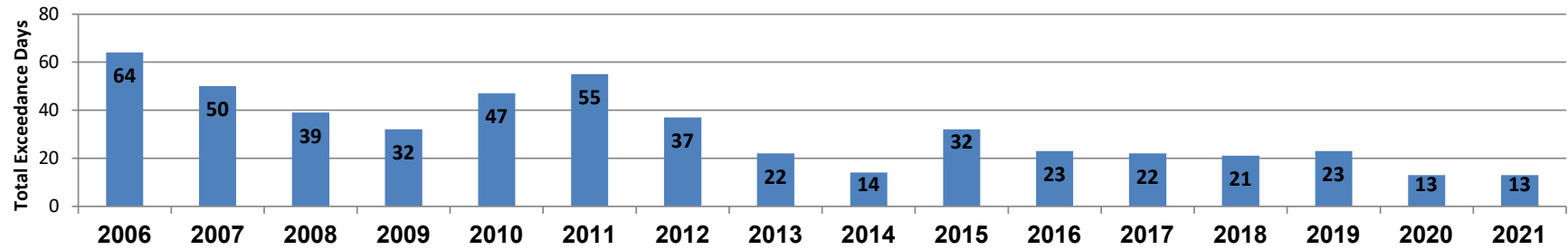
2017-2019 (Non-Regulatory)* 9.81

2017-2019 (Regulatory)* 9.81

*preliminary

Regulatory data from: http://www.epa.gov/airdata/ad_rep_mon.html

OZONE 8-hr Exceedance Days (75 ppb)

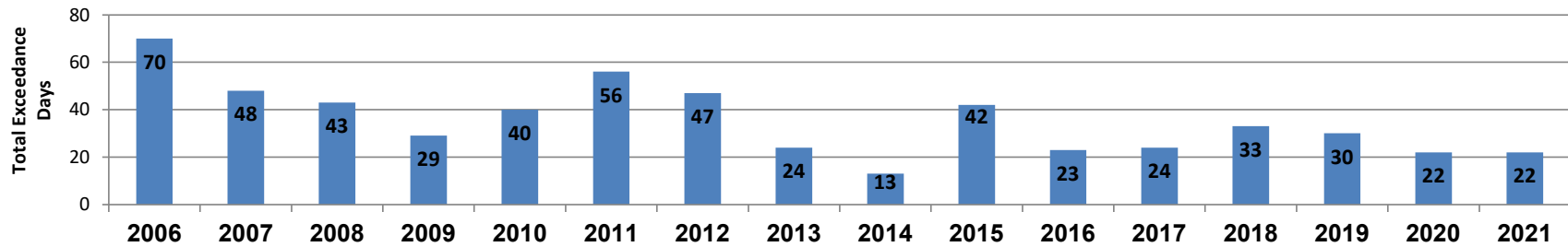


	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	2	1	1	2	0	1	4	0	0	0	0	0	0	2	0	0
April	7	6	4	1	3	8	7	1	0	1	7	2	4	2	0	1
May	6	10	3	7	13	5	7	4	5	2	4	7	3	2	1	1
June	20	5	3	7	3	6	7	2	1	6	1	2	1	8	3	6
July	4	3	3	2	2	1	0	4	1	1	2	0	4	2	0	2
August	7	5	6	7	11	10	4	6	6	15	2	1	6	2	5	0
September	12	8	11	5	7	17	7	2	0	3	3	7	3	4	0	3
October	6	7	7	0	8	7	1	3	1	4	4	3	0	1	4	
November	0	5	1	1	0	0	0	0	0	0	0	0	0	0	0	
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Houston Ozone Season



OZONE 8-hr Exceedance Days (70 ppb)



Month	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	1	1	2	1	0	1	5	0	0	0	0	0	0	3	0	0
April	9	7	5	1	2	8	9	1	0	1	7	2	6	5	2	3
May	8	11	5	7	11	6	8	4	2	3	4	7	8	2	3	1
June	19	3	4	7	0	7	8	2	1	9	1	2	1	9	3	6
July	5	3	5	2	3	1	0	6	2	2	2	0	7	2	0	2
August	8	6	5	6	9	10	6	6	6	15	2	1	7	4	9	2
September	12	8	9	4	6	15	8	2	1	5	3	8	4	3	0	8
October	8	7	7	0	9	8	3	3	1	7	4	4	0	2	5	
November	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



	Values above the 1997 8-hour ozone NAAQS (84 ppb)
	Values above the 2008 8-hour ozone NAAQS (75 ppb)
	Values above the 2015 8-hour ozone NAAQS (70 ppb)

	Fourth Highest Value																				Design Value (3-Year Average)																	
Monitor	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2019-2021	2018-2021				
Baytown Garth C1017									71	61	67	77	65	73	81	69	66	71									66	68	69	71	73	74	72	68				
Channelview C15/AH115	85	85	87	78	76	80	79	81	77	61	64	81	61	65	79	70	62	66	85	83	80	78	78	80	79	73	67	68	68	69	68	71	70	66				
Clinton C403/C304/AH113	92	88	76	74	71	78	79	80	81	67	58	84	65	77	68	73	71	70	85	79	73	74	76	79	80	76	68	69	69	75	70	72	70	71				
Conroe Relocated C78/A321	80	84	93	76	73	65	77	80	82	75	72	73	71	79	75	74	75	65	85	84	80	71	71	74	79	79	76	73	72	74	75	76	74	71				
Galveston 99th St. C1034/A320/X183				87	69	76	80	79	81	64	71	84	74	73	76	79	68	66				77	75	78	80	74	72	73	76	77	74	76	74	71				
Hou.DeerPrk2	97	92	101	86	76	82	85	83	85	69	63	77	62	66	85	76	73	72	96	93	87	81	81	83	84	79	72	69	67	68	71	75	78	73				
Houston Aldine C8/AF108/X150	96	87	81	86	83	80	87	83	75	74	68	95	74	74	88	81	68	70	88	84	83	83	83	83	81	77	72	79	79	81	78	81	79	73				
Houston Bayland Park C53/A146	104	100	106	84	83	86	78	87	77	81	67	80	78	74	77	80	73	78	103	96	91	84	82	83	80	81	75	76	75	77	76	77	76	77				
Houston Croquet C409	95	96	92	74	76	80	77	85	79	79	67	79	71	67	70	75	66	81	94	87	80	76	77	80	80	81	75	75	72	72	69	70	70	74				
Houston East C1/G316	91	68	91	76	73	79	76	88	83	69	66	88	67	70	82	70	67	76	83	78	80	76	76	81	82	80	72	74	73	75	73	74	73	71				
Houston Harvard Street C417																		78																				
Houston Monroe C406	97	102	99	72	72	71	75	76	85	74	65	73	57	59	68	71	62	68	99	91	81	71	72	74	78	78	74	70	65	63	61	66	67	67				
Houston North Wayside C405	84	71	79	78	70	69	76	80	75	70	62	78	62	68	66	67	61	64	78	76	75	72	71	75	77	75	69	70	67	69	65	67	64	64				
Houston Regional Office C81	78	88	87	68	68	80	71	80	75										84	81	74	72	73	77	75													
Houston Texas Avenue C411	93	75	83	76	71	79	75	79	82	72	58	85	70						83	78	76	75	75	77	78	77	70	71	71									
Houston Westhollow C410	97	90	103	84	82	71	72	81	81	77	70	79	79	71	69	73	66	68	96	92	89	79	75	74	78	79	76	75	76	76	73	71	69	69				
Lake Jackson C1016	81	78	80	72	76	76	72	73	71	67	61	65	66	65	67	63	65	69	79	76	76	74	74	73	72	70	66	64	64	65	66	65	65	65				
Lang C408	83	72	86	73	71	81	77	78	81	79	64	91	69	70	74	75	69	70	80	77	76	75	76	78	78	79	74	78	74	76	71	73	72	71				
Lynchburg Ferry C1015/A165	93	88	87	71	65	73	83	73	75	64	59	79	59	46	74	68	61	63	89	82	74	69	73	76	77	70	66	67	65	61	59	62	67	64				
Manvel Croix Park C84	103	93	94	86	75	91	88	90	87	84	71	86	69	77	71	79	70	75	96	91	85	84	84	89	88	87	80	80	75	77	72	75	73	74				
Northwest Harris Co. C26/A110/X154	90	94	90	90	76	86	82	86	82	80	63	78	67	74	77	73	71	68	91	91	85	84	81	84	83	82	75	73	69	73	72	74	73	70				
Park Place C416			106	85	76	73	84	79	77	79	66	87	65	72	77	72	70	78			89	78	77	78	80	78	74	77	72	74	71	73	73	73				
Seabrook Friendship Park C45	97	88	83	85	71	79	77	79	86	67	65	83	64	67	82	64	64	59	89	85	79	78	75	78	80	77	72	71	70	71	71	71	70	62				

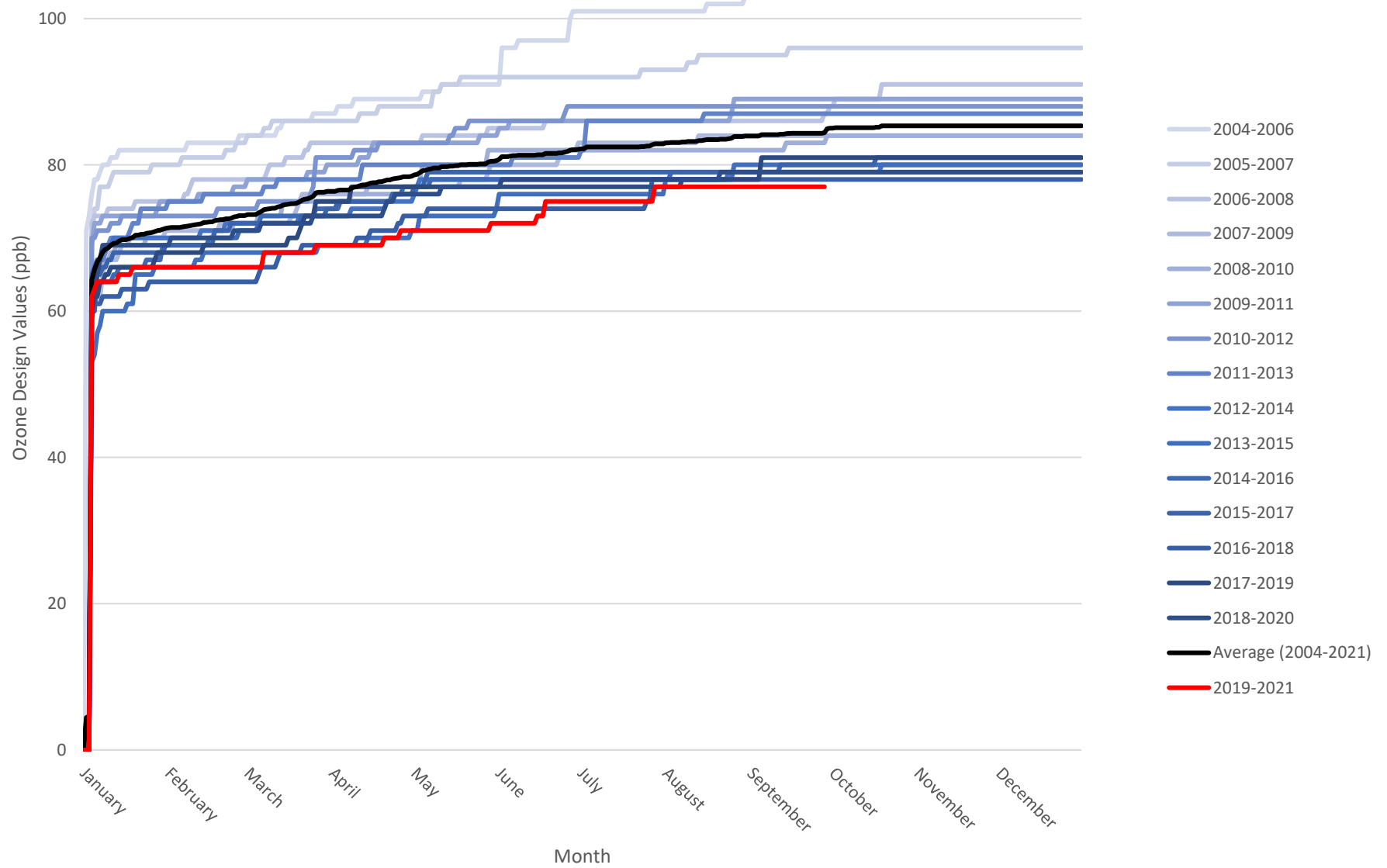
Data Source: TCEQ

Design Source: Houston Regional Monitoring

*Values as of 7/27/2021

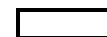
**Unofficial until certified by TCEQ

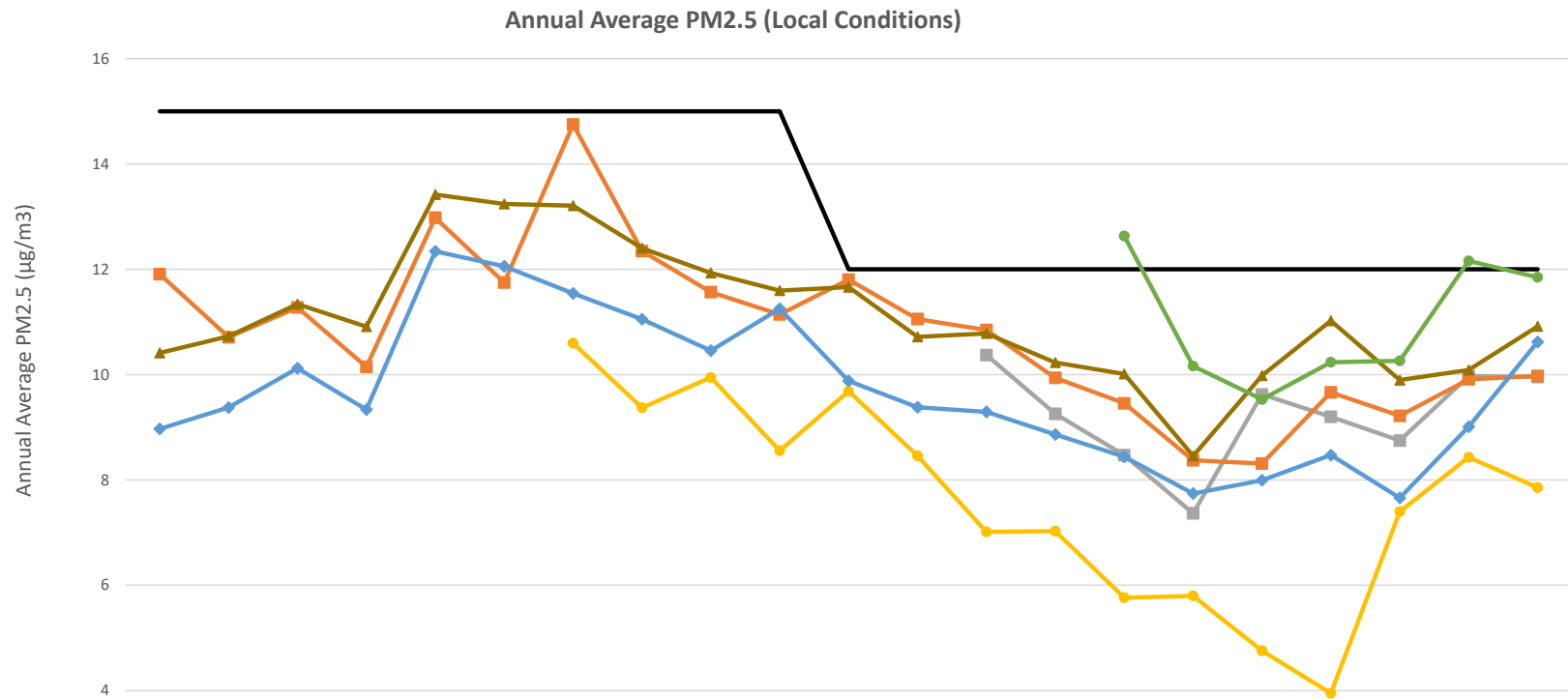
Houston Day-by-Day Design Values (2004-2021)



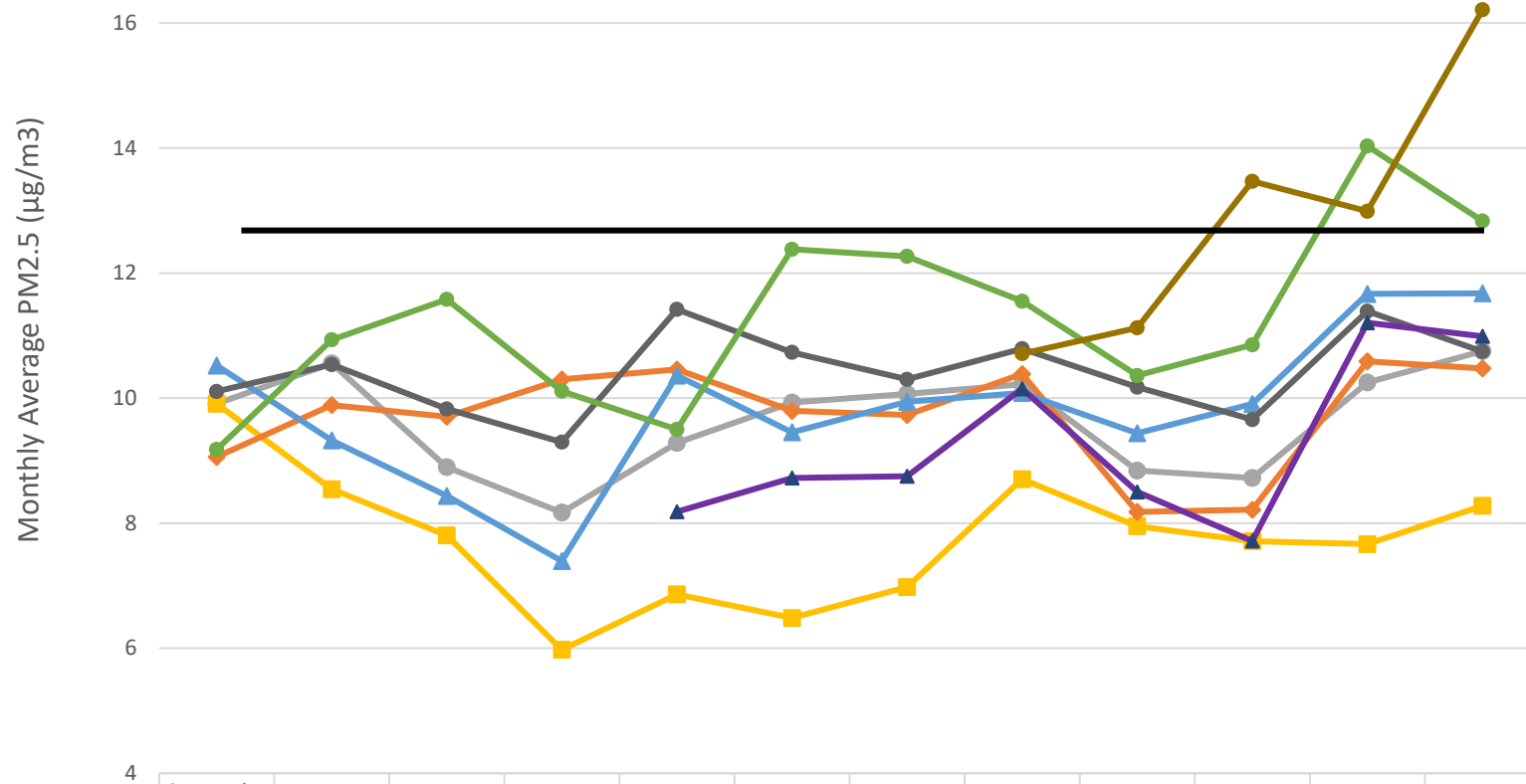
Clinton PM 2.5 Monthly Average (µg/m³)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	11.99	11.60	10.40	12.07	11.74	10.57	10.64	9.84	8.60	9.87	8.42	7.77	8.18	8.69	8.75	10.05
February	12.65	15.93	12.83	9.43	11.02	12.42	9.92	9.58	10.60	10.52	8.37	9.43	8.64	8.48	7.75	9.21
March	17.09	13.71	13.30	12.20	11.24	14.03	11.43	11.24	10.62	10.57	10.18	9.05	8.72	10.53	10.02	10.02
April	17.55	14.48	14.14	11.95	13.13	14.95	12.54	10.90	11.66	12.20	9.86	9.10	7.74	9.54	10.14	11.08
May	17.00	16.74	16.69	14.08	13.25	13.89	12.26	10.95	11.34	13.23	10.04	9.25	9.37	10.73	8.77	9.41
June	18.57	18.83	12.30	11.57	12.62	13.34	13.87	13.19	14.60	13.53	10.09	8.27	12.15	12.04	11.82	10.01
July	16.23	17.55	16.25	17.24	15.65	13.17	15.33	13.48	16.66	14.73	11.56	10.93	16.40	11.16	13.68	11.59
August	18.83	17.36	16.71	13.86	13.64	12.51	12.78	13.49	12.98	11.62	9.49	10.06	12.62	10.52	11.63	11.88
September	17.81	15.83	11.89	12.70	11.68	12.70	11.10	9.80	9.88	10.10	8.98	10.21	7.45	8.33	10.19	14.61
October	14.97	14.26	14.37	8.12	12.59	10.48	10.57	10.53	10.38	10.49	8.30	9.33	6.84	7.64	11.26	
November	14.44	15.78	12.37	13.25	8.46	8.96	10.76	8.70	8.50	7.38	9.39	9.44	8.06	10.28	9.82	
December	12.83	12.67	9.17	11.37	11.53	10.40	9.90	11.70	9.58	9.49	6.82	9.63	7.88	9.53	7.97	
AVERAGE	15.83	15.40	13.37	12.32	12.21	12.29	11.76	11.12	11.28	11.14	9.29	9.37	9.50	9.79	10.15	10.87
Ann. Values from Regulatory Monitor:					12.30	12.20	11.80	11.30	11.50	11.80	10.10	10.10	9.81			



[illegible]

Monthly Average PM2.5 (Local Conditions) - Last 12 Months



	September	October	November	December	January	February	March	April	May	June	July	August
Baytown	9.91	10.56	8.90	8.17	9.28	9.93	10.07	10.22	8.84	8.72	10.25	10.75
Galveston 99th St.	9.91	8.54	7.80	5.98	6.86	6.48	6.98	8.70	7.95	7.71	7.67	8.28
Houston Aldine	9.06	9.89	9.70	10.30	10.46	9.80	9.73	10.39	8.18	8.21	10.59	10.47
Houston Deer Park 2	10.52	9.32	8.44	7.40	10.36	9.45	9.94	10.08	9.44	9.91	11.67	11.68
Houston East	10.11	10.54	9.83	9.30	11.42	10.73	10.30	10.79	10.18	9.66	11.39	10.75
Houston North Loop	9.18	10.93	11.58	10.11	9.50	12.38	12.27	11.55	10.36	10.85	14.03	12.83
Houston North Wayside								10.71	11.12	13.47	12.99	16.21
Houston Westhollow					8.18	8.72	8.75	10.15	8.50	7.72	11.21	10.99

Month