

Water-Data Report 2009

01411355 INGRAM THOROFARE AT AVALON, NJ

INGRAM THOROFARE

LOCATION.--Lat 39°06'39", long 74°44'02" referenced to North American Datum of 1983, Avalon Borough, Cape May County, NJ, Hydrologic Unit 02040302, on fishing pier at east end of Old Avalon Boulevard, 0.5 mi east of bridge carrying County Route 601 (Avalon Boulevard) over Ingram Thorofare, 1.0 mi west of Avalon, 1.0 mi southwest of Townsends Inlet, and 1.6 mi east of Upper Island in Great Sound.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Continuous-record tide gage, October 1977 to May 1978, May 13, 2000 to current year. Annual maximum tide, water years 1979 to 1981, 1984 and 1993. Unpublished fragmentary gage-height record, May 1997 to May 2000.

GAGE.--Tide level recorder and tidal crest-stage gage. Datum of gage is at 0.00 ft NAVD of 1988. To determine approximate elevations to NGVD of 1929, add 1.29 ft. To determine approximate elevations in Mean Lower Low Water datum, add 2.26 ft, (revised to Tidal Epoch 1983-2001). From October 1977 to May 1978, tide level recorder located 200 ft south of current station and datum of gage at 0.00 ft NGVD of 1929. From 1978 to 1981, tidal crest-stage gage located 200 ft south of current station and datum of gage at 0.00 ft NGVD of 1929. Data published to NGVD of 1929 can be adjusted to NAVD of 1988 by subtracting 1.29 ft. Online annual tidal peaks have been adjusted to current datum.

REMARKS.--Missing gage-height record on short portions of days. Gage cannot measure tide levels below -4.45 ft. Tide levels below -4.45 ft have been estimated. From Nov 28, 2006 to Aug 15, 2008, gage could not measure tide levels below -3.60 ft and above +3.66 ft. From Apr 6, 2005 to Nov 28, 2006, gage could measure entire tidal range; prior to Apr 6, 2005, gage could not measure tide levels below -3.39 ft or above +3.69 ft. Summaries for months with short periods of missing gage-height record have been estimated with little or no loss of accuracy. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 6.29 ft (from tidal crest-stage gage, adjusted to NAVD of 1988), Mar 29, 1984; minimum elevation recorded, undetermined, likely occurred Feb 17, 2007 as indicated by nearby reference gages.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4.23 ft, Sep 11; minimum elevation, estimated at -4.9 ft, Jan 8.

Statistics of Tide Elevations, in feet
Water Year October 2008 to September 2009

Month	Mean High Tide	Mean Water Level	Mean Low Tide
October	1.94	0.06	-1.91
November	1.84	-0.08	-2.05
December	1.21	-0.70	-2.72
CALENDAR YEAR 2008	1.79	-0.16	-2.15
January	1.39	-0.63	-2.69
February	1.45	-0.56	-2.64
March	1.71	-0.25	-2.23
April	1.85	-0.17	-2.23
May	1.78	-0.21	-2.25
June	2.39	0.44	-1.60
July	2.13	0.18	-1.86
August	1.98	0.05	-1.97
September	2.37	0.50	-1.46
WATER YEAR 2009	1.84	-0.11	-2.13

01411355 INGRAM THOROFARE AT AVALON, NJ—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
[e, estimated]

Day	High-high	Mean	Low-low	High-high	Mean	Low-low	High-high	Mean	Low-low	High-high	Mean	Low-low
	October				November				December			
1	2.92	0.53	-1.61	1.58	-0.78	-2.87	2.55	0.05	-2.03	1.20	-0.82	-2.86
2	2.32	-0.04	-2.06	2.46	0.19	-1.55	1.02	-1.11	-2.92	0.86	-1.00	-3.02
3	1.88	-0.49	-2.30	1.83	-0.19	-1.75	1.36	-0.89	-2.41	0.59	-1.33	-3.17
4	1.70	-0.43	-2.07	1.72	-0.31	-1.81	0.76	-1.21	-2.95	0.48	-1.32	-3.07
5	1.15	-0.56	-2.10	2.26	0.65	-1.27	1.22	-0.80	-2.31	1.20	-0.64	-2.47
6	1.81	-0.06	-1.40	2.82	1.35	-0.58	1.45	-0.30	-1.98	1.65	-0.26	-1.95
7	1.59	-0.10	-1.52	2.13	0.46	-1.30	1.57	-0.83	-3.63	2.65	0.36	-2.42
8	1.52	-0.24	-1.65	2.06	0.30	-1.71	0.62	-1.31	-3.25	1.76	e-1.7	e-4.9
9	1.34	-0.43	-2.08	1.98	0.01	-2.36	1.62	-0.92	-3.22	1.14	-1.67	-4.26
10	1.78	-0.28	-2.08	2.03	-0.32	-2.88	2.07	-0.86	-3.56	2.29	-0.52	-3.17
11	2.11	-0.08	-1.78	2.04	-0.40	-2.65	2.65	0.23	-2.43	3.07	-0.05	-2.96
12	2.13	-0.10	-2.22	2.56	-0.25	-2.91	3.42	---	-2.72	2.84	-0.16	-3.24
13	2.05	-0.22	-2.78	3.09	0.22	-2.96	2.45	-0.74	-3.70	2.88	-0.11	-3.00
14	2.84	0.25	-2.33	3.50	0.33	-2.39	2.74	-0.67	-3.58	2.44	-0.60	-3.30
15	2.86	0.14	-2.54	3.86	0.42	-2.37	2.38	-0.98	-3.60	1.58	-0.74	-2.99
16	3.16	0.18	-2.49	2.43	-0.85	-3.87	1.78	-1.07	-3.89	1.46	---	---
17	3.44	0.41	-2.22	1.82	-1.04	-3.84	2.52	-0.27	-2.58	0.93	---	---
18	3.73	0.86	-1.77	2.60	-0.03	-2.28	1.68	-0.57	-2.59	1.19	-0.61	-2.33
19	4.14	1.54	-0.86	2.68	0.41	-1.56	1.87	-0.10	-2.09	1.78	0.18	-1.47
20	3.64	1.36	-0.70	2.18	0.17	-2.16	2.51	0.79	-1.02	1.96	0.04	-1.73
21	2.69	0.41	-2.06	1.96	-0.05	-1.95	2.98	0.78	-1.58	2.14	---	---
22	2.17	-0.03	-2.11	1.59	-0.78	-2.82	0.23	e-2.4	e-4.6	1.44	-0.97	-3.01
23	2.88	0.92	-1.19	0.90	-1.18	-3.15	-0.26	---	---	0.99	-0.86	-2.70
24	2.28	0.41	-1.81	1.56	-0.59	-2.49	1.44	-0.90	-2.40	1.94	-0.47	-2.30
25	2.77	0.67	-1.27	2.08	-0.15	-2.07	0.44	-1.73	-3.58	1.87	-0.58	-2.63
26	2.53	0.39	-2.12	1.83	-0.40	-2.52	1.36	-0.83	-3.51	1.80	-0.77	-3.00
27	2.53	0.27	-2.22	2.45	-0.06	-2.16	2.18	-0.43	-2.30	2.08	-0.49	-2.83
28	2.87	-0.51	-3.26	2.39	-0.20	-2.49	1.94	-0.90	-2.96	2.56	-0.03	-2.22
29	0.93	-1.78	-4.23	2.31	-0.20	-2.26	1.68	-0.90	-3.32	1.44	-1.03	-3.29
30	2.00	-0.65	-2.99	2.94	0.73	-1.68	1.11	-1.03	-3.04	1.64	-0.71	-2.78
31	2.06	-0.60	-2.66	---	---	---	2.02	-0.51	-3.25	1.30	-0.78	-2.92
Max	4.14	1.54	-0.70	3.86	1.35	-0.58	3.42	0.79	-1.02	3.07	0.36	-1.47
Min	0.93	-1.78	-4.23	0.90	-1.18	-3.87	-0.26	-2.40	-4.60	0.48	-1.70	-4.90

01411355 INGRAM THOROFARE AT AVALON, NJ—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
[*e*, estimated]

Day	High-high	Mean	Low-low	High-high	Mean	Low-low	High-high	Mean	Low-low	High-high	Mean	Low-low
	February			March			April			May		
1	0.46	-1.14	-3.08	3.50	0.87	-1.39	2.51	0.11	-1.83	2.13	-0.59	-2.50
2	1.30	-0.37	-2.16	2.74	1.09	-1.23	2.49	-0.14	-2.11	1.66	-0.58	-2.86
3	2.36	0.81	-0.77	2.44	-0.69	-2.88	2.57	0.53	-1.57	1.84	-0.08	-2.29
4	3.03	0.51	-2.00	1.49	-1.02	-2.89	2.33	-0.54	-2.92	2.30	0.24	-1.94
5	2.07	-0.51	-2.81	1.27	-1.03	-2.86	1.55	-0.62	-3.06	2.29	0.20	-2.11
6	2.20	-0.51	-2.94	1.34	-1.10	-3.19	2.92	0.43	-2.01	2.53	0.08	-2.43
7	2.39	-0.56	-3.50	1.70	-0.79	-3.10	2.34	-0.13	-2.71	2.31	-0.27	-2.77
8	2.25	-0.70	-3.43	2.00	-0.43	-2.88	2.06	-0.63	-3.26	2.74	-0.08	-2.44
9	2.20	-0.83	-3.90	2.77	0.20	-2.61	2.44	-0.37	-3.26	2.71	0.02	-2.23
10	2.69	-0.29	-3.72	2.91	0.20	-2.60	2.55	-0.36	-3.00	2.05	-0.52	-2.60
11	2.79	-0.06	-2.90	2.50	-0.23	-2.88	2.98	0.20	-2.61	2.13	-0.54	-2.66
12	1.83	-0.88	-3.76	1.58	-0.94	-3.69	2.25	-0.21	-2.43	2.10	-0.26	-2.16
13	1.93	-1.37	-3.98	2.02	-0.77	-3.54	1.47	-0.69	-2.71	0.76	-0.42	-2.23
14	1.80	-0.26	-2.32	1.86	-0.66	-2.81	0.97	-0.26	-2.49	1.86	-0.58	-2.20
15	1.59	-0.64	-2.75	1.07	-0.60	-2.56	2.66	1.30	-0.54	1.45	-0.69	-2.41
16	1.99	0.00	-1.57	1.76	-0.46	-2.30	2.73	0.44	-0.99	1.47	-0.44	-2.05
17	1.73	-0.04	-1.40	2.12	0.12	-1.34	1.64	-0.30	-1.84	1.45	-0.23	-1.96
18	1.71	0.08	-1.24	1.54	-0.45	-1.77	0.98	-0.63	-1.96	1.53	-0.06	-1.61
19	2.27	0.21	-2.66	0.94	-0.59	-1.86	1.49	0.16	-1.32	1.27	-0.40	-2.19
20	1.18	-1.36	-3.45	1.33	-0.09	-1.70	2.41	0.78	-0.86	1.35	-0.69	-2.70
21	0.20	-1.54	-3.30	1.61	-0.03	-1.62	2.47	0.57	-1.44	1.68	-0.71	-2.96
22	1.56	-0.66	-3.35	1.45	-0.54	-2.28	2.46	0.15	-2.00	1.97	-0.73	-3.16
23	1.05	-1.67	-3.89	1.45	-0.40	-2.33	1.78	-0.72	-3.28	2.74	-0.48	-3.20
24	0.80	-1.42	-4.05	2.03	-0.03	-2.19	2.15	-0.71	-3.34	2.70	-0.29	-3.00
25	1.74	-0.68	-3.33	2.76	0.38	-2.07	2.51	-0.53	-3.13	3.01	-0.40	-3.13
26	1.68	-0.71	-3.10	2.81	0.52	-1.84	2.54	-0.59	-3.25	3.45	0.47	-2.69
27	1.78	-0.56	-2.92	2.63	0.12	-2.36	2.58	-0.62	-3.16	3.08	0.14	-2.27
28	2.36	-0.54	-3.02	2.93	0.37	-2.26	1.96	-0.84	-3.23	1.98	0.26	-2.24
29	---	---	---	2.84	0.39	-1.99	1.34	-0.58	-3.19	3.32	0.55	-1.63
30	---	---	---	2.14	-0.63	-3.05	2.31	-0.35	-2.41	2.88	0.25	-1.97
31	---	---	---	1.14	-0.47	-2.78	---	---	---	2.31	0.18	-1.97
Max	3.03	0.81	-0.77	3.50	1.09	-1.23	2.98	1.30	-0.54	3.45	0.55	-1.61
Min	0.20	-1.67	-4.05	0.94	-1.10	-3.69	0.97	-0.84	-3.34	0.76	-0.73	-3.20

01411355 INGRAM THOROFARE AT AVALON, NJ—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
[*e*, estimated]

Day	High-high	Mean	Low-low	High-high	Mean	Low-low	High-high	Mean	Low-low	High-high	Mean	Low-low
	June			July			August			September		
1	1.93	-0.02	-2.09	2.83	0.79	-1.28	2.00	-0.17	-1.76	2.69	0.53	-1.58
2	1.94	-0.23	-2.49	2.79	0.75	-1.21	2.25	0.09	-1.74	2.52	0.45	-1.36
3	2.50	0.10	-2.03	2.59	0.41	-1.51	2.37	0.02	-1.91	2.79	0.54	-1.60
4	2.76	0.44	-1.80	2.60	0.22	-1.71	2.30	-0.05	-1.93	2.56	0.58	-1.33
5	3.28	0.71	-1.61	2.62	0.22	-1.72	2.33	-0.14	-2.15	2.26	0.15	-2.00
6	2.71	0.58	-1.65	2.78	0.20	-1.77	2.52	0.03	-2.31	2.78	0.40	-2.06
7	2.65	0.07	-1.96	2.68	0.25	-1.68	2.15	-0.08	-2.04	2.70	0.64	-1.38
8	2.85	0.05	-2.10	2.72	0.32	-1.75	2.21	-0.10	-2.25	2.66	0.46	-1.52
9	2.78	0.31	-1.70	2.92	0.42	-1.81	2.19	-0.11	-2.25	2.93	0.75	-1.51
10	2.87	0.45	-1.56	2.45	0.32	-1.50	2.02	-0.03	-2.06	3.90	2.03	0.01
11	2.83	0.61	-1.29	2.06	-0.03	-1.82	2.04	0.01	-1.96	4.23	2.04	-0.81
12	1.58	0.40	-1.36	1.65	-0.08	-2.46	2.33	0.27	-1.88	2.68	0.39	-1.54
13	2.44	0.41	-1.33	2.15	0.21	-1.71	2.63	0.60	-1.42	2.90	0.61	-1.26
14	2.44	0.53	-1.30	1.99	0.07	-1.67	2.18	0.10	-1.73	2.97	0.65	-1.56
15	2.38	0.55	-1.18	1.91	-0.18	-2.08	2.26	-0.05	-2.00	3.11	0.49	-1.81
16	2.18	0.49	-1.33	2.03	-0.08	-2.07	2.41	-0.09	-2.23	3.90	0.97	-1.89
17	2.22	0.41	-1.37	2.60	0.37	-1.74	2.61	-0.11	-2.47	3.65	1.50	-0.90
18	2.45	0.46	-1.45	2.84	0.38	-1.96	2.81	-0.17	-2.84	2.90	0.31	-2.57
19	2.90	0.50	-1.72	2.91	0.09	-2.29	3.06	-0.14	-3.09	2.71	0.10	-2.82
20	3.52	0.59	-1.88	3.21	0.15	-2.52	3.11	0.07	-2.84	2.77	0.05	-2.68
21	3.98	0.84	-1.76	3.33	0.35	-2.54	2.83	0.02	-2.75	2.63	-0.06	-2.55
22	3.99	0.91	-1.71	3.22	0.05	-2.88	2.97	0.26	-2.55	2.53	-0.04	-2.27
23	3.71	0.72	-2.03	4.04	0.41	-2.71	3.04	0.42	-2.02	2.33	-0.16	-2.10
24	3.50	0.34	-2.38	2.98	0.63	-2.32	2.44	-0.14	-2.45	1.91	-0.29	-2.13
25	3.24	0.30	-2.29	2.68	0.17	-2.58	2.38	-0.05	-2.31	2.50	0.40	-1.49
26	2.27	0.23	-2.32	2.31	0.06	-2.41	1.86	-0.30	-2.30	2.52	0.81	-0.68
27	3.07	0.40	-2.08	2.24	-0.16	-2.61	2.24	0.02	-1.95	2.25	0.57	-1.12
28	2.81	0.63	-1.82	2.17	-0.16	-2.21	2.24	0.29	-1.40	1.91	0.08	-1.65
29	2.65	0.67	-1.59	1.89	-0.13	-1.93	2.72	0.65	-1.02	1.65	0.05	-2.12
30	2.73	0.67	-1.36	1.98	-0.14	-1.99	2.40	0.33	-1.34	2.13	-0.02	-1.63
31	---	---	---	1.90	-0.20	-2.17	2.13	0.11	-1.48	---	---	---
Max	3.99	0.91	-1.18	4.04	0.79	-1.21	3.11	0.65	-1.02	4.23	2.04	0.01
Min	1.58	-0.23	-2.49	1.65	-0.20	-2.88	1.86	-0.30	-3.09	1.65	-0.29	-2.82

01411355 INGRAM THOROFARE AT AVALON, NJ—Continued