

## Water-Data Report 2011

**01409146 EAST THOROFARE AT SHIP BOTTOM, NJ**

## BARNEGAT BAY

LOCATION.--Lat 39°39'14", long 74°11'09" referenced to North American Datum of 1983, Ship Bottom Borough, Ocean County, NJ, Hydrologic Unit 02040301, on south side of bridge carrying State Route 72 across East Thorofare (Manahawkin Bay) between Bonnet Island and Long Beach Island, 2.0 mi southeast of Bayside, 9.0 mi southwest of Barnegat Inlet, and 11.5 mi northeast of Little Egg Inlet.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Unpublished fragmentary gage-height record, July 1997 to May 5, 2000. Continuous-record tide gage, May 5, 2000 to current year.

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 1.25 ft.

REMARKS.--Missing gage-height record on Dec 21, 23 and 26-31, Jan 3 and 6, Apr 16-17, and short portions of other days. 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, 3.52 ft, Oct 25, 2005; minimum elevation, -2.27 ft, Nov 14, 2003, although a lower tide likely occurred during period of missing record on Feb 16, 2007.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3.17 ft, Aug 28; minimum elevation, -1.77 ft, Feb 9.

Statistics of Tide Elevations, in feet  
 Water Year October 2010 to September 2011  
 [e, estimated]

| Month              | Mean High Tide | Mean Water Level | Mean Low Tide |
|--------------------|----------------|------------------|---------------|
| October            | 1.18           | 0.39             | -0.39         |
| November           | 1.22           | 0.41             | -0.38         |
| December           | ---            | ---              | ---           |
| CALENDAR YEAR 2010 | 1.17           | 0.39             | -0.39         |
| January            | e0.8           | ---              | ---           |
| February           | 0.77           | -0.05            | -0.82         |
| March              | 1.00           | 0.17             | -0.60         |
| April              | 1.00           | e0.2             | e-0.6         |
| May                | 1.39           | 0.59             | -0.20         |
| June               | 1.40           | 0.60             | -0.18         |
| July               | 1.29           | 0.49             | -0.28         |
| August             | 1.43           | 0.60             | -0.19         |
| September          | 1.50           | 0.69             | -0.09         |
| WATER YEAR 2011    | 1.18           | 0.37             | -0.40         |

## 01409146 EAST THOROFARE AT SHIP BOTTOM, NJ—Continued

**GAGE HEIGHT, FEET**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

| Day        | High-high      | Mean  | Low-low | High-high | Mean            | Low-low | High-high | Mean  | Low-low         | High-high | Mean  | Low-low |
|------------|----------------|-------|---------|-----------|-----------------|---------|-----------|-------|-----------------|-----------|-------|---------|
|            | <b>October</b> |       |         |           | <b>November</b> |         |           |       | <b>December</b> |           |       |         |
| <b>1</b>   | 1.75           | 0.88  | 0.32    | 0.94      | -0.08           | -1.21   | 1.59      | 0.73  | -0.64           | 0.90      | ---   | ---     |
| <b>2</b>   | 1.29           | 0.47  | -0.37   | 0.95      | 0.07            | -0.82   | 1.44      | 0.38  | -0.42           | 1.15      | ---   | ---     |
| <b>3</b>   | 2.01           | 0.83  | -0.34   | 1.14      | 0.18            | -0.80   | 1.48      | 0.40  | -0.75           | ---       | ---   | ---     |
| <b>4</b>   | 2.92           | 1.79  | 0.54    | 2.03      | 0.91            | -0.64   | 1.65      | 0.45  | -0.53           | 0.65      | ---   | ---     |
| <b>5</b>   | 2.70           | 1.55  | 0.55    | 2.33      | 1.13            | 0.23    | 1.74      | 0.49  | -0.60           | 0.22      | ---   | ---     |
| <b>6</b>   | 1.85           | 0.91  | -0.02   | 1.72      | 0.54            | -0.38   | 1.35      | 0.10  | -0.72           | ---       | ---   | ---     |
| <b>7</b>   | 1.69           | 0.64  | -0.32   | 1.64      | 0.41            | -0.61   | 0.63      | -0.46 | -1.23           | ---       | ---   | ---     |
| <b>8</b>   | 1.51           | 0.37  | -0.54   | 1.37      | 0.17            | -0.71   | 0.88      | -0.32 | -1.18           | 1.93      | 0.96  | 0.17    |
| <b>9</b>   | 1.45           | 0.33  | -0.73   | 1.66      | 0.50            | -0.57   | 0.66      | -0.47 | -1.23           | 1.37      | 0.13  | -0.98   |
| <b>10</b>  | 1.90           | 0.72  | -0.30   | 2.00      | 0.99            | -0.13   | 0.66      | -0.37 | -1.19           | 0.13      | -0.68 | -1.45   |
| <b>11</b>  | 1.47           | 0.44  | -0.49   | 2.92      | 1.94            | 1.22    | 0.70      | -0.17 | -0.86           | 0.46      | -0.33 | -1.01   |
| <b>12</b>  | 1.69           | 0.65  | -0.26   | 2.64      | 1.92            | 1.04    | 1.46      | 0.47  | -0.34           | 1.20      | -0.01 | -0.29   |
| <b>13</b>  | 1.64           | 0.68  | -0.16   | 1.98      | 1.21            | 0.27    | 1.66      | 0.85  | -0.30           | -0.49     | -1.08 | -1.58   |
| <b>14</b>  | 1.53           | 0.64  | -0.20   | 1.44      | 0.78            | 0.05    | 0.94      | 0.10  | -0.95           | 0.41      | -0.32 | -0.75   |
| <b>15</b>  | 1.49           | 0.67  | 0.11    | 1.48      | 0.86            | 0.32    | 0.53      | -0.32 | -1.23           | 0.65      | -0.24 | -1.00   |
| <b>16</b>  | 0.66           | -0.32 | -0.91   | 1.25      | 0.53            | -0.15   | 0.31      | -0.34 | -0.87           | 0.65      | -0.34 | -1.03   |
| <b>17</b>  | 1.17           | 0.19  | -0.81   | 1.56      | 0.55            | -0.20   | 1.05      | 0.07  | -0.83           | 0.85      | -0.22 | -1.20   |
| <b>18</b>  | 0.97           | 0.22  | -0.52   | 0.17      | -0.59           | -1.29   | 0.99      | 0.01  | -0.89           | 1.77      | 0.67  | -0.86   |
| <b>19</b>  | 1.02           | 0.24  | -0.58   | 0.63      | -0.29           | -1.28   | 1.29      | 0.28  | -0.74           | 1.88      | 0.68  | -0.22   |
| <b>20</b>  | 1.22           | 0.34  | -0.52   | 0.96      | -0.19           | -0.94   | ---       | ---   | -0.28           | 1.46      | 0.26  | -0.64   |
| <b>21</b>  | 1.42           | 0.46  | -0.33   | 0.72      | -0.30           | -1.31   | ---       | ---   | ---             | 1.81      | 0.46  | -0.54   |
| <b>22</b>  | 1.20           | 0.11  | -0.73   | 1.43      | 0.22            | -0.77   | 1.56      | ---   | ---             | 1.02      | -0.06 | -1.02   |
| <b>23</b>  | 0.30           | -0.59 | -1.37   | 1.32      | 0.18            | -0.76   | ---       | ---   | ---             | 1.01      | -0.09 | -0.99   |
| <b>24</b>  | 0.84           | -0.25 | -1.33   | 1.19      | -0.02           | -0.85   | 1.90      | ---   | ---             | 0.80      | -0.14 | -0.95   |
| <b>25</b>  | 1.31           | 0.22  | -0.63   | 1.21      | 0.01            | -1.06   | 1.51      | ---   | ---             | 0.68      | -0.33 | -1.20   |
| <b>26</b>  | 1.23           | 0.17  | -0.69   | 1.85      | 0.70            | -0.17   | ---       | ---   | ---             | 1.22      | 0.29  | -0.72   |
| <b>27</b>  | 1.18           | 0.22  | -0.65   | 1.22      | 0.18            | -0.85   | ---       | ---   | ---             | 2.21      | 0.94  | -0.56   |
| <b>28</b>  | 1.15           | 0.11  | -0.65   | 0.86      | -0.13           | -0.98   | ---       | ---   | ---             | 1.07      | 0.13  | -0.54   |
| <b>29</b>  | 1.24           | -0.01 | -0.76   | 0.76      | -0.06           | -0.93   | ---       | ---   | ---             | 1.18      | 0.18  | -0.73   |
| <b>30</b>  | 0.76           | -0.15 | -0.94   | 0.96      | 0.10            | -0.71   | ---       | ---   | ---             | 1.18      | 0.14  | -0.72   |
| <b>31</b>  | 0.42           | -0.57 | -1.24   | ---       | ---             | ---     | ---       | ---   | ---             | 0.98      | -0.08 | -0.87   |
| <b>Max</b> | 2.92           | 1.79  | 0.55    | 2.92      | 1.94            | 1.22    | ---       | 0.85  | -0.28           | 2.21      | 0.96  | 0.17    |
| <b>Min</b> | 0.30           | -0.59 | -1.37   | 0.17      | -0.59           | -1.31   | 0.31      | -0.47 | ---             | -0.49     | -1.08 | -1.58   |

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**GAGE HEIGHT, FEET**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

| Day        | High-high       | Mean  | Low-low | High-high    | Mean  | Low-low | High-high    | Mean  | Low-low | High-high  | Mean | Low-low |
|------------|-----------------|-------|---------|--------------|-------|---------|--------------|-------|---------|------------|------|---------|
|            | <b>February</b> |       |         | <b>March</b> |       |         | <b>April</b> |       |         | <b>May</b> |      |         |
| <b>1</b>   | 1.30            | 0.24  | -0.88   | 1.30         | 0.26  | -0.62   | 2.06         | 1.13  | 0.35    | 1.11       | 0.09 | -0.74   |
| <b>2</b>   | 1.93            | 0.68  | -0.40   | 1.04         | 0.03  | -0.82   | 1.03         | 0.27  | -0.62   | 1.29       | 0.21 | -0.63   |
| <b>3</b>   | 0.99            | -0.04 | -0.89   | 0.62         | -0.27 | -1.13   | 0.67         | -0.19 | -0.96   | 1.56       | 0.39 | -0.41   |
| <b>4</b>   | 1.08            | -0.05 | -0.84   | 0.80         | -0.16 | -0.99   | 0.88         | 0.08  | -0.94   | 1.11       | 0.43 | -0.42   |
| <b>5</b>   | 0.98            | -0.25 | -1.16   | 0.94         | 0.00  | -0.83   | 1.46         | 0.39  | -0.40   | 1.32       | 0.09 | -0.80   |
| <b>6</b>   | 0.46            | -0.33 | -1.24   | 1.26         | 0.20  | -0.62   | 1.12         | -0.31 | -1.18   | 1.12       | 0.07 | -0.76   |
| <b>7</b>   | 0.59            | -0.29 | -1.12   | 1.01         | 0.30  | -0.69   | 0.64         | -0.11 | -0.86   | 1.30       | 0.27 | -0.46   |
| <b>8</b>   | 1.47            | 0.30  | -0.86   | 0.56         | -0.18 | -0.91   | 1.17         | 0.06  | -0.79   | 1.44       | 0.35 | -0.43   |
| <b>9</b>   | -0.24           | -1.09 | -1.77   | 0.87         | 0.20  | -0.68   | 1.32         | 0.19  | -0.61   | 1.47       | 0.48 | -0.25   |
| <b>10</b>  | -0.07           | -0.71 | -1.27   | 1.62         | 0.98  | 0.26    | 1.16         | 0.09  | -0.77   | 1.76       | 1.02 | 0.21    |
| <b>11</b>  | 0.34            | -0.38 | -1.01   | 2.35         | 1.15  | 0.11    | 1.01         | 0.08  | -0.68   | 1.96       | 1.17 | 0.36    |
| <b>12</b>  | 0.57            | -0.42 | -1.44   | 1.47         | 0.28  | -0.77   | 0.82         | -0.08 | -0.81   | 2.07       | 1.25 | 0.32    |
| <b>13</b>  | 0.07            | -0.73 | -1.23   | 0.82         | -0.04 | -1.01   | 1.44         | 0.60  | -0.64   | 1.80       | 1.00 | 0.02    |
| <b>14</b>  | 0.41            | -0.44 | -1.34   | 0.51         | -0.32 | -0.91   | 1.48         | 0.53  | -0.38   | 1.97       | 0.87 | -0.14   |
| <b>15</b>  | 0.27            | -0.58 | -1.30   | 0.74         | -0.12 | -1.03   | ---          | ---   | ---     | 2.05       | 0.96 | -0.05   |
| <b>16</b>  | 0.86            | -0.29 | -1.29   | 1.30         | 0.18  | -0.79   | ---          | ---   | ---     | 2.20       | 1.00 | 0.00    |
| <b>17</b>  | 0.92            | -0.14 | -1.13   | 0.99         | -0.02 | -0.91   | ---          | ---   | ---     | 2.40       | 1.11 | 0.11    |
| <b>18</b>  | 1.39            | 0.24  | -0.81   | 1.08         | 0.05  | -0.86   | ---          | ---   | ---     | 1.77       | 1.14 | 0.10    |
| <b>19</b>  | 1.48            | 0.17  | -0.82   | 1.27         | 0.12  | -0.84   | 1.68         | 0.40  | -0.62   | 2.21       | 0.91 | -0.15   |
| <b>20</b>  | 0.78            | -0.25 | -1.25   | 1.23         | 0.12  | -0.84   | 1.69         | 0.52  | -0.36   | 1.94       | 0.71 | -0.18   |
| <b>21</b>  | 1.83            | 0.65  | -0.53   | 1.27         | 0.23  | -0.87   | 1.69         | 0.34  | -0.73   | 1.83       | 0.67 | -0.22   |
| <b>22</b>  | 2.03            | 0.68  | -0.49   | 1.68         | 0.39  | -0.68   | 1.39         | 0.04  | -0.89   | 1.62       | 0.68 | -0.13   |
| <b>23</b>  | 1.41            | 0.26  | -0.71   | 1.60         | 0.74  | -0.26   | 1.11         | 0.17  | -0.69   | 1.80       | 0.87 | 0.05    |
| <b>24</b>  | 1.20            | 0.20  | -0.56   | 2.34         | 1.27  | 0.18    | 1.11         | 0.02  | -0.76   | 1.46       | 0.56 | -0.20   |
| <b>25</b>  | 1.51            | 0.66  | 0.05    | 1.89         | 0.78  | -0.30   | 0.90         | 0.05  | -0.65   | 1.25       | 0.48 | -0.30   |
| <b>26</b>  | 0.68            | -0.37 | -1.06   | 1.24         | 0.20  | -0.75   | 1.09         | 0.17  | -0.52   | 1.26       | 0.51 | -0.35   |
| <b>27</b>  | 1.20            | 0.13  | -0.60   | 0.91         | -0.10 | -0.76   | 0.88         | 0.10  | -0.68   | 1.13       | 0.42 | -0.37   |
| <b>28</b>  | 1.66            | 0.72  | -0.53   | 0.43         | -0.50 | -1.12   | 1.05         | 0.25  | -0.56   | 1.12       | 0.24 | -0.59   |
| <b>29</b>  | ---             | ---   | ---     | 0.39         | -0.38 | -1.29   | 1.04         | 0.29  | -0.45   | 1.08       | 0.17 | -0.61   |
| <b>30</b>  | ---             | ---   | ---     | 0.45         | -0.35 | -1.06   | 1.00         | 0.13  | -0.69   | 1.08       | 0.09 | -0.70   |
| <b>31</b>  | ---             | ---   | ---     | 1.62         | 0.36  | -0.74   | ---          | ---   | ---     | 1.19       | 0.09 | -0.73   |
| <b>Max</b> | 2.03            | 0.72  | 0.05    | 2.35         | 1.27  | 0.26    | ---          | 1.13  | 0.35    | 2.40       | 1.25 | 0.36    |
| <b>Min</b> | -0.24           | -1.09 | -1.77   | 0.39         | -0.50 | -1.29   | 0.64         | -0.31 | -1.18   | 1.08       | 0.07 | -0.80   |

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| Day        | High-high   | Mean  | Low-low | High-high   | Mean | Low-low | High-high     | Mean | Low-low | High-high        | Mean | Low-low |
|------------|-------------|-------|---------|-------------|------|---------|---------------|------|---------|------------------|------|---------|
|            | <b>June</b> |       |         | <b>July</b> |      |         | <b>August</b> |      |         | <b>September</b> |      |         |
| <b>1</b>   | 1.26        | 0.09  | -0.69   | 1.61        | 0.45 | -0.44   | 1.38          | 0.56 | -0.43   | 1.64             | 0.63 | -0.31   |
| <b>2</b>   | 0.72        | 0.11  | -0.62   | 1.10        | 0.46 | -0.48   | 1.69          | 0.61 | -0.25   | 1.87             | 0.82 | -0.19   |
| <b>3</b>   | 1.14        | -0.02 | -0.83   | 1.58        | 0.55 | -0.36   | 1.69          | 0.78 | -0.16   | 1.62             | 0.73 | -0.13   |
| <b>4</b>   | 1.30        | 0.24  | -0.54   | 1.73        | 0.65 | -0.22   | 1.95          | 1.00 | 0.07    | 1.40             | 0.46 | -0.40   |
| <b>5</b>   | 1.42        | 0.39  | -0.40   | 1.65        | 0.59 | -0.29   | 1.60          | 0.74 | -0.16   | 1.39             | 0.39 | -0.44   |
| <b>6</b>   | 1.46        | 0.43  | -0.38   | 1.50        | 0.55 | -0.24   | 1.45          | 0.57 | -0.34   | 1.60             | 0.57 | -0.30   |
| <b>7</b>   | 1.48        | 0.51  | -0.30   | 1.29        | 0.45 | -0.40   | 1.63          | 0.53 | -0.39   | 1.75             | 0.86 | 0.06    |
| <b>8</b>   | 1.37        | 0.48  | -0.35   | 1.41        | 0.52 | -0.44   | 1.79          | 0.77 | -0.14   | 1.92             | 0.93 | 0.13    |
| <b>9</b>   | 1.37        | 0.57  | -0.31   | 1.61        | 0.71 | -0.21   | 1.98          | 0.90 | -0.04   | 1.74             | 0.95 | 0.13    |
| <b>10</b>  | 1.38        | 0.53  | -0.35   | 1.55        | 0.56 | -0.33   | 1.80          | 0.87 | -0.01   | 1.73             | 0.85 | 0.09    |
| <b>11</b>  | 1.75        | 0.66  | -0.29   | 1.48        | 0.43 | -0.48   | 1.80          | 0.76 | -0.13   | 1.90             | 1.02 | 0.15    |
| <b>12</b>  | 1.84        | 0.84  | -0.13   | 1.68        | 0.50 | -0.38   | 1.55          | 0.62 | -0.28   | 1.70             | 0.87 | -0.04   |
| <b>13</b>  | 2.00        | 0.87  | -0.13   | 1.74        | 0.55 | -0.36   | 1.47          | 0.41 | -0.47   | 1.52             | 0.67 | -0.20   |
| <b>14</b>  | 2.13        | 0.92  | -0.06   | 1.89        | 0.73 | -0.23   | 1.68          | 0.54 | -0.36   | 1.53             | 0.64 | -0.14   |
| <b>15</b>  | 2.06        | 0.93  | -0.09   | 1.73        | 0.74 | -0.25   | 1.66          | 0.86 | 0.02    | 1.55             | 0.59 | -0.20   |
| <b>16</b>  | 1.57        | 0.87  | -0.19   | 1.35        | 0.59 | -0.38   | 1.83          | 0.85 | 0.01    | 1.33             | 0.42 | -0.32   |
| <b>17</b>  | 1.87        | 0.78  | -0.15   | 1.49        | 0.30 | -0.60   | 1.58          | 0.53 | -0.32   | 1.17             | 0.35 | -0.40   |
| <b>18</b>  | 1.93        | 0.80  | -0.08   | 1.19        | 0.12 | -0.68   | 1.16          | 0.34 | -0.39   | 1.58             | 0.66 | -0.21   |
| <b>19</b>  | 1.79        | 0.77  | -0.04   | 0.93        | 0.20 | -0.58   | 1.18          | 0.40 | -0.38   | 1.72             | 1.00 | 0.18    |
| <b>20</b>  | 1.73        | 0.67  | -0.20   | 1.33        | 0.51 | -0.24   | 1.24          | 0.43 | -0.32   | 1.42             | 0.63 | -0.09   |
| <b>21</b>  | 1.46        | 0.52  | -0.22   | 1.19        | 0.34 | -0.40   | 1.03          | 0.32 | -0.43   | 1.24             | 0.44 | -0.25   |
| <b>22</b>  | 1.25        | 0.51  | -0.28   | 0.82        | 0.08 | -0.64   | 1.22          | 0.37 | -0.35   | 1.33             | 0.42 | -0.29   |
| <b>23</b>  | 1.47        | 0.68  | -0.13   | 1.00        | 0.19 | -0.57   | 1.21          | 0.26 | -0.46   | 1.42             | 0.44 | -0.42   |
| <b>24</b>  | 1.69        | 0.90  | 0.10    | 1.20        | 0.34 | -0.44   | 1.00          | 0.12 | -0.65   | 1.40             | 0.48 | -0.34   |
| <b>25</b>  | 1.72        | 0.95  | 0.17    | 1.45        | 0.47 | -0.36   | 1.26          | 0.16 | -0.59   | 1.46             | 0.44 | -0.39   |
| <b>26</b>  | 1.58        | 0.77  | -0.02   | 1.61        | 0.66 | -0.17   | 1.28          | 0.20 | -0.61   | 1.61             | 0.59 | -0.32   |
| <b>27</b>  | 1.42        | 0.53  | -0.30   | 1.55        | 0.60 | -0.26   | 2.62          | 0.57 | -0.43   | 1.78             | 0.77 | -0.23   |
| <b>28</b>  | 1.56        | 0.53  | -0.35   | 1.56        | 0.51 | -0.36   | 3.17          | 1.91 | 0.83    | 2.07             | 1.02 | -0.06   |
| <b>29</b>  | 1.65        | 0.59  | -0.23   | 1.90        | 0.55 | -0.34   | 1.62          | 0.48 | -0.55   | 2.31             | 1.18 | 0.22    |
| <b>30</b>  | 1.59        | 0.48  | -0.42   | 1.68        | 0.62 | -0.32   | 1.56          | 0.59 | -0.29   | 1.95             | 0.91 | -0.07   |
| <b>31</b>  | ---         | ---   | ---     | 1.67        | 0.54 | -0.37   | 1.56          | 0.57 | -0.31   | ---              | ---  | ---     |
| <b>Max</b> | 2.13        | 0.95  | 0.17    | 1.90        | 0.74 | -0.17   | 3.17          | 1.91 | 0.83    | 2.31             | 1.18 | 0.22    |
| <b>Min</b> | 0.72        | -0.02 | -0.83   | 0.82        | 0.08 | -0.68   | 1.00          | 0.12 | -0.65   | 1.17             | 0.35 | -0.44   |

**01409146 EAST THOROFARE AT SHIP BOTTOM, NJ—Continued**