# Water Resources - Experiment #1

## *Results - Measuring pH*

**pH measures: Cambridge, Lexington, N. Eastham MA samples**

| Group | Cambridge | Lexington | N. Eastham | slope V/pH | intercept,[a] $V_{offset}$ |
|---|---|---|---|---|---|
| B8 | 8.88 | 9.41 | 7.24 | .058 | .375 |
| B7 | 5.48[b] | 9.98 | 6.73 | .052 | .384 |
| B6 | 7.32 | 9.56 | 7.44 | .056 | .392 |
| B5 | 8.69 | 9.51 | 6.29 | .057 | .412 |
| B4 | 8.40 | 9.10 | 6.0 | .058 | .353 |
| B3 | 7.3 | 7.2 | 7.4 | .057 | .42 |
| B2 | 9.06 | 9.18 | 6.36 | .055 | .409 |
| B1 | 8.66 | 9.02 | 6.41 | .056 | .4 |
| A7 | 8.81 | 9.16 | 5.81 | .057 | .409 |
| A6 | 8.48 | 9.10 | 5.72 | .058 | .4 |
| A5 | 8.0 | 9.4 | 6.2 | .055 | .4 |
| A4 | 9.2 | 9.7 | 6.4 | .053 | .333 |
| A3 | 9.04 | 9.46 | 6.12 | .057 | .423 |
| A2 | 8.9 | 9.5 | 6.2 | .056 | .405 |
| A1 | 9.1 | 9.4 | 6.0 | .055 | .40 |

a. slope and intercept are those of $V = -(slope)*pH + Voffset$

b. Shaded values are questionable.

**Bar Graphs of Results with Mean and Std. Deviation**

| Interval | Cambridge | | | | | | Lexington | | | | | | | | | | | N. Eastham | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.5 - 6.0 | X | | | | | | | | | | | | | | | | | X | X | | | | | | | |
| 6.0 - 6.5 | | | | | | | | | | | | | | | | | | X | X | X | X | X | X | X | X | X |
| 6.5 - 7.0 | | | | | | | | | | | | | | | | | | X | | | | | | | | |
| 7.0 - 7.5 | X | X | | | | | X | | | | | | | | | | | X | X | X | | | | | | |
| 7.5 - 8.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 - 8.5 | X | X | X | | | | | | | | | | | | | | | | | | | | | | | |
| 8.5 - 9.0 | X | X | X | X | X | | | | | | | | | | | | | | | | | | | | | |
| 9.0 - 9.5 | X | X | X | X | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | |
| 9.5 - 10. | | | | | | | X | X | X | X | X | | | | | | | | | | | | | | | |
| mean<br>std. deviatn | $\mu = 8.66$<br>$s = 0.52$ | | | | | | $\mu = 9.35$<br>$s = 0.20$ | | | | | | | | | | | $\mu = 6.32$<br>$s = 0.5$ | | | | | | | | |