Homework 2
MTH 3240, Spring 2020
Due Thursday, Feb. 13

Reading: *Environmental Statistics*:

- Chapter 4 (but Section 4.6 is **optional**)
- Chapter 5

Problems: Please do the following problems from the Problems sections of *Environmental Statistics*:

Chapter in *Environmental Statistics*	**Problems**
Ch. 4	4.1, 4.10, 4.11, 4.13*****
Ch. 5	5.1******, 5.3******, 5.4******

***** For **Problem 4.13**, **Parts *a***, ***b***, and ***c***, you can compute the normal distribution probabilities using the **`pnorm()`** function in R. For example, in **Part *a***, to obtain the *upper tail* probability P(X > 35) from the N(37.5, 15.3) distribution, type:

```
> pnorm(q=35, mean=37.5, sd=15.3, lower.tail=FALSE)
```

****** For **Problem 5.1**, **Parts *e*** and ***f***, **Problem 5.2**, **Part *c***, and **Problem 5.3**, **Part *c***, you can compute the normal distribution probabilities using the **`pnorm()`** function in R. For example, in **Problem 5.1**, **Parts *e***, to obtain P($37 < \bar{X} < 43$) from the N(40, 4) distribution,, type:

```
> pnorm(q=43, mean=40, sd=4, lower.tail=TRUE) - pnorm(q=37,
    mean=40, sd=4, lower.tail=TRUE)
```

Extra Credit Problems

The following problems are *extra credit* (2 points each. You must **show your work**).

Chapter in *Environmental Statistics, Fall 2018*	**Extra Credit Problems**
Ch. 4	4.2, 4.3, 4.6, 4.7, 4.14