

	Environmental Analysis Teaching and Research Laboratory	Date: 8/18/2017	Number: 31
	Standard Operating Procedure	Title: Random Sampling	
	Approved By: TBD	Revision Date: August 20, 2017	

## 1. Scope and Application

**1.1** The scope of this SOP provides resources to design random sampling procedures that can be used in the field or laboratory.

**1.2** This SOP can be applied to any circumstances where a sampling universe is spatially defined, including stratified random sampling.

## 2. Summary of Method

**2.1** This SOP does this...

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### **3. Acknowledgements**

### **4. Definitions**

4.1 Term1: is...

### **5. Biases and Interferences**

5.1 Representative sampling, where population estimates are the goal, can be obtained with random sampling procedures.

### **6. Health and Safety**

6.1 Describe the risk...

### **Safety and Personnel Protective Equipment**

### **7. Personnel & Training Responsibilities**

7.1 Researchers training is required before this the procedures in this method can be used...

7.2 Researchers using this SOP should be trained for the following SOPs:

- SOP01 Laboratory Safety
- SOP02 Field Safety

### **8. Required Materials and Apparati**

8.1 Item 1 w/catalog number!

8.2 Item 2

### **9. Reagents and Standards**

### **10. Estimated Time**

10.1 This procedure requires XX minutes...

## 11. Sample Collection, Preservation, and Storage

## 12. Procedure

**12.1** Define the area to be sampled and if it will be stratified.

**12.2** To obtain a random sample from a known x and y distance, using the following Rmd file: XY\_Random.R

```
## Error: <text>:4:0: unexpected end of input
## 2:  source(YX_Random.R)
## 3:  print(xtable(LocationOrdered))
##    ^
```

### 12.3

## 13. Data Analysis and Calculations

## 14. QC/QA Criteria

## 15. Trouble Shooting

## 16. References

**16.1** APHA, AWWA. WEF. (2012) Standard Methods for examination of water and wastewater. 22nd American Public Health Association (Eds.). Washington. 1360 pp. (2014).