Name: Date: Period:

Water Quality Analysis:

Each member of the group will create a line graph of the Calcium ion [Ca^{2+}] concentration for one of the watersheds. For each graph, the x-axis should be time (dates) and the y-axis should represent concentration in mg/L.

The five watershed sites are:

- Baisman Run (BARN)
- Gywnns Falls-Delight (GFGB)
- Gywnns Falls- Glyndon(GFGL)
- McDonogh (MCDN)
- Pond Branch (POBR)

Before you begin creating your graphs, set the scale for the x and y-axis that everyone will use. All graphs should be to the same scale and numbering convention to aid in comparison.

Data:

Date (Year)	Ca ion **BARN**	Ca ion **POBR**	Ca ion **MCDN**	Ca ion **GFGL**	Ca ion **GFGB**
1998	-	0.7		48.6	14.8
1999	6.2	1		48.6	18.7
2000	4.6	0.6	9.2	44.7	18.6
2001	5.5	0.6	9.1	56.6	19.2
2002	6.4	1.3	10.6	57.2	21.8
2003	6.6	1.2	12.4	50.3	22.4
2004	4.5	0.7	10.2	55.1	21.8
2005	4.9	0.6	10.4	55.3	20.9
2006	6	1.2	11.4	33.7	20.5
2007	5.8	1	11.9	53.3	22.6
2008	7	1.1	11.7	54.6	21.4
2009	6.9	1.1	11.7	56.9	24.4
2010	5.5	0.8	11.3	56.6	23.1
2011	7.6	0.9	12.1	53.7	28.7
2012	6.4	0.8	11.2	54.9	24.5
2013	5.9	0.9	10.9	57	25.2
2014	5.7	1	10.7	62.2	26.3

Name: Date: Period:

Analysis I:

1. Which site produced the greatest amount of calcium ions as measured in the water samples.

2. Which site produced the smallest amount of calcium ions as measured in the water samples.

3. Order the sites from greatest to least in terms of calcium ion concentration.

4. How does this sequence compare to the sequence of sites based on quantity of impermeable surfaces as discussed earlier? Is there a correlation? If so, describe what you found.

Ask your instructor for the pH graph based on each watershed site.

Examine the graph and compare it to your graphed calcium ion data.

5. Which site produced the highest pH?

6. Which site produced the lowest pH?

7. Sequence the sites from highest to lowest pH.

8. Compare this list to the list you made in # 3. Is there a correlation? If so, describe what you see.

9. Is there a way that you can combine the two lists so that the sequence matches? If so, write the sequence and explain how you matched the two lists.