Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Relationship between land use (watershed) and water quality**

**Choptank River Case Study**

Click on **Get Started**

**Read the Choptank Watershed and answer the following questions.**

1. What counties are part of the Choptank watershed?
2. What rivers are part of the Choptank watershed?
3. Describe the population changes in the Choptank watershed?
4. **Click on Map 1**, and follow a river that is part of the watershed and write all the different ways land is used around the river.

Click on **Learn**

**Read the paragraph and summarize the relationship between changes in the land use and water quality.**

Click on **Explore**

**Click on the map, drag the bar to see land use changes between recent land use and 2002 land use.**

List all the land use changes that you observe.

**Click on the any land use and record data the area for each land use.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Land use Type** | **2002 (hectare)** | **Recent (hectare)** | **Land use Change (hectare)** |
| Developed |  |  |  |
| Agriculture |  |  |  |
| Forest |  |  |  |
| Wetland |  |  |  |
| Barren |  |  |  |

**Based on your observation and calculations, explain the land use changes (Use CER)**

**Graphing the relationship between land use and water quality**

**To understand the relationship between land use and water quality, graph the land use and water quality data collected by Dr. Fisher.**

**Follow the instructions below to complete your graph.**

**Go to:** [**http://www.onlinecharttool.com/graph**](http://www.onlinecharttool.com/graph)

Select: Line graph

Click: Next

* **Type the title of the graph (Relationship between % agriculture and nutrients)**
* X axis: **Sub watershed**
* Y axis: **Agriculture and Nitrate**

Under data set: **Item = 15 and groups =3**

Under group label: Agriculture (%), TN (mg/L) and TP (mg/L)

Type the data under each column.

Click next to complete your graph.

**Print you graph**

**Conclusion**

Explain the relationship between Percent agriculture and nutrients (TN, TP) use CER format to write your conclusion.