

Student Name: \_\_\_\_\_

### Worksheet to Determine Local Nutrient Runoff Potential

Use the land use data below for the watershed surrounding your high school to determine the approximate contribution your sub-watershed has on nutrient inputs to the Bay.

Land Use Cover Class	Northern High School Watershed (km <sup>2</sup> )	Patuxent High School Watershed (km <sup>2</sup> )	Huntingtown High School Watershed (km <sup>2</sup> )	Calvert High School Watershed (km <sup>2</sup> )
Sub- watershed	Graham Creek	Mill Creek	Hunting Creek	Hunting Creek
Deciduous Forest	5.08	4.03	51.24	51.24
Evergreen Forest	0.14	0.95	1.81	1.81
Mixed Forest	0.06	0.17	0.41	0.41
High Intensity Urban	0.50	1.76	2.97	2.97
Low Intensity Urban	2.64	19.70	13.13	13.13
Pasture / Hay	2.19	0.29	9.14	9.14
Cropland	0.93	0.19	4.91	4.91
Woody Wetlands	0.19	0.35	2.10	2.10
Emergent Wetlands	0.17	--	1.54	1.54
Barren	0.06	0.13	0.65	0.65
Open Water	0.02	3.09	1.18	1.18
<b>TOTAL</b>	<b>12.00</b>	<b>30.70</b>	<b>89.10</b>	<b>89.10</b>

#### Summarizing Land Use Areas into Major Classifications

Using the Table provided above, compile the land use classes from FieldScope into three major groups: Forested, Agricultural, and Urban. Total the areas for each of these uses in the Table below. (We will not consider the wetland, barren or open water classifications in our summary since they make up a very small portion of each watershed.)

Forested Land Uses		Agricultural Land Uses		Urban Land Uses	
Deciduous Forest		Pasture or Hay		High Intensity Urban	
Evergreen Forest		Cropland		Low Intensity Urban	
Mixed Forest		—		—	
<b>TOTAL</b>					

## PLANS for the Chesapeake Bay – Student Worksheet

Transfer the values for total area of each major land use into column A in the tables below. Calculate the annual nutrient input from each land use by multiplying the total land use area for each category by the corresponding approximate nutrient input values. To estimate the total nutrient input for nitrogen and phosphorus, calculate the sum of the annual nutrient input from each land use.

### Nitrogen Inputs from the Local Watershed

Area of Each Land Use (Km <sup>2</sup> )			Approximate Nitrogen Input (Kg per Km <sup>2</sup> per Yr)		Annual Nitrogen Input from Each Land Use (Kg)
A					
Forested Land Use		X	0.30	=	
Agricultural Land Use		X	0.50	=	
Urban Land Use		X	0.60	=	
<b>TOTAL Nitrogen Input</b>					

### Phosphorus Inputs from the Local Watershed

Area of Each Land Use (Km <sup>2</sup> )			Approximate Phosphorus Input (Kg per Km <sup>2</sup> per Yr)		Annual Phosphorus Input from Each Land Use (Kg)
A					
Forested Land Use		X	0.01	=	
Agricultural Land Use		X	0.09	=	
Urban Land Use		X	0.11	=	
<b>TOTAL Phosphorus Input</b>					

What type of land use in your local watershed contributes the most / least nitrogen?

\_\_\_\_\_ / \_\_\_\_\_

What type of land use in your local watershed contributes the most / least

phosphorus? \_\_\_\_\_ / \_\_\_\_\_