

Exercise 1A - Instructions

Given a site with the following characteristics:

- ◆ Project Area = 6.7 acres
- ◆ Post Development Land Cover:
 - ◇ Managed Turf = 4.75 Acres
 - ◇ Impervious Cover = 1.95 Acres
- ◆ Assume “C” soils throughout

Evaluate for New Development:

- Total Post-Development Phosphorus Load
- Target T_v
- Pollutant Removal Requirement (Load Reduction Required)
- Average Efficiency Required (Removal Requirement/Total Load)

Instructions:

1. Use the “given” information above to enter the site data into the Site Data tab of the spreadsheet.
2. Determine the results using the summary information at the bottom of the site data tab.
3. Save the spreadsheet for further use as “EX1A.xls” or similar.

Helpful Hints: *Make sure you are using the New Development Spreadsheet and refer to Pages 20-21 of Module 4 of this Participant Guide for a description of the Site Data tab.*

Exercise 1B - Instructions

Assume that 3 acres of the managed turf from the previous example can be preserved or restored as “open space/forest”.

- ◆ Project Area = 6.7 acres
- ◆ Post Development Land Cover:
 - ◇ Open Space/Forest = 3 Acres
 - ◇ Managed Turf = 1.75 Acres
 - ◇ Impervious Cover = 1.95 Acres
- ◆ Assume “C” soils throughout

Evaluate for New Development:

- Total Post-Development Phosphorus Load
- Target T_v
- Pollutant Removal Requirement (Load Reduction Required)
- Average Efficiency Required (Removal Requirement/Total Load)

Instructions:

1. Modify the site data you entered in EX1A.
2. Determine the results using the summary information at the bottom of the site data tab.
3. Save the spreadsheet for further use as “EX1B.xls” or similar.

Helpful Hints:

1. *Make sure you are using the New Development Spreadsheet and refer to Pages 20-21 of Module 4 of this Participant Guide for a description of the Site Data tab.*
2. *Make sure the site data still adds up to 6.7 acres as in the previous exercise.*

Exercise 1C – Instructions

Using (as a starting point) the original site data and spreadsheet from EX1B, evaluate the following three treatment approaches (scenarios I, II, and III below). **Assume each of the practices given in each of the treatment scenarios treat the entire site area. (Assume “C” soils throughout)**

		Start with Exercise 1B	Exercise 1C Scenarios		
			I. ED2	II. CAGC	III. CAGC to ED2
Site Data	Forest/Open Space:	3 acres			
	Managed Turf:	1.75 acres			
	Impervious Cover:	1.95 acres			
Results	Total Phosphorus Load Reduction:				
	Total Phosphorus Load Reduction Requirement:				
	Water quality treatment requirements met?				

I. Extended Detention Level 2 (0.25 acres surface area)

Evaluate for New Development:

- Enter data into spreadsheet (fill in the table above as you go)
- What is the Total Load Reduction under Scenario I (ED2)?
- Does the scenario meet the water quality treatment required?

Instructions:

1. Start with the site data from EX1B (see table above) and review the helpful hints provided on the next page.
2. Make sure to “shift” the appropriate BMP surface acreage from “turf” to “forest/open space” in the Site Data tab (*see Module 4, Section 4b for additional information*).
3. Copy the land cover from the site data to the Drainage Area tab (use DA A).
4. Enter the appropriate acreage treated for the BMP.
5. Check and record the results at the bottom of the “Drainage Area” Tab or “Water Quality Compliance” tab.
6. Save the spreadsheet for further use as “EX1C_I.xls” or similar.

7. Make sure to clear all of the treatment information and check the site data and drainage area data as you move to the next scenario.
8. Repeat these steps for each of the following 2 scenarios: II. Compost-Amended Grass Channel (CAGC) and III. CAGC to Extended Detention Level 2 (ED2).
9. Save the spreadsheet from scenario III for further use (EX1C_III.xls or similar).

II. Compost-amended Grass Channel (0.25 ac surface area)

Evaluate for New Development:

- Enter data into spreadsheet (fill in the table above as you go)
- What is the Total Load Reduction under Scenario I (CAGS)?
- Does the scenario meet the water quality treatment required?

III. Compost-amended Grass Channel draining to Extended Detention L2 (0.5 ac surface area total)

Evaluate for New Development:

- Enter data into spreadsheet (fill in the table above as you go)
- What is the Total Load Reduction under Scenario I (CAGS to ED2)?
- Does the scenario meet the water quality treatment required?

Helpful Hints:

1. *Make sure you are using the New Development Spreadsheet and refer to Page 34 of Module 4 in this Participant Guide for information about the Drainage Area tab.*
2. *Check and update the land cover in both the "Site Data" tab for each scenario.*
3. *Make sure the "Drainage Area" data for each scenario is also adjusted for each scenario.*
4. *Make sure to clear the Acres treated for each BMP in the drainage area tab, as appropriate, as you evaluate the different scenarios.*
5. *Use the pull-down menu for "Downstream Treatment to be Employed" for the third scenario.*
6. *Check the Water Quality Compliance tab or scroll down on the drainage area tab to check for water quality requirements.*
7. *All managed turf and impervious cover acreage are directed to BMP(s) for treatment.*