

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 Phosphorous Load
- Target Tv
- Pollutant Removal Requirement (Load Redux 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 the Module 4 Participant Guide for a description of the Site Data tab.*

Exercise 1B - Instructions

Now assume that 3 acres of the turf from the previous example can be preserved or restored as “open space/forest”, etc.

- Open Space/Forest = 3 Acres
- Managed Turf = 1.75 Acres
- Impervious Cover = 1.95 Acres

Evaluate for New Development:

- Total Post-Development Phosphorous Load
- Target Tv
- 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: *Make sure you are using the New Development Spreadsheet and refer to Pages 20-21 of the Module 4 Participant Guide for a description of the Site Data tab. Make sure the site data still adds up to the 6.7 acres from 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.

Site Data from Exercise 1B:		I. ED2	II. CAGC	III. CAGC to ED2
Forest/Open Space	3 acres			
Managed Turf	1.75 acres			
Impervious Cover	1.95 acres			

I. Extended Detention Level 2 (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 (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
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. 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
7. Save the spreadsheet for further use as “EX1C_I.xls” or similar
8. Repeat these steps for each of the following 2 scenarios: II. Compost-Amended Grass Swale (CAGC) and III. CAGC to Extended Detention Level 2 (ED2)

II. Compost-amended Grass Swales (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: *Make sure you are using the New Development Spreadsheet and refer to Page 34 of the Module 4 PG for information about the Drainage Area tab. Check and update the land cover in both the “Site Data” tab for each scenario. Make sure the “Drainage Area” data for each scenario is also adjusted for each scenario. Make sure to clear the Acres treated for each BMP in the drainage area tab, as appropriate, as you evaluate the different scenarios. Use the pull-down menu for “Downstream Treatment to be Employed” for the third scenario.*