Objectives

In this field inquiry, you team up with fellow students to do a stormwater assessment of your campus. Such assessments are done by landscape architects, water resource professionals, and home owners as a first step in determining optimal stormwater solutions for properties. Your objectives follow.

1. Record the sources and patterns of stormwater runoff on your campus.
2. Identify areas that contribute to stormwater pollution, such as eroding hillsides, patches of bare lawn, or trash sources.
3. Identify landscape features.
4. List two or three possible locations for YOUR Stormwater Action Project.

Materials for Each Team

— Map of the school (from the computer or drawn).
— Paper to sketch on
— Directions and the Map Key
— Pencils or colored pens
— Clip board or hard writing surface
— Container of water
— Camera (optional)

Instructions: Observe Stormwater Runoff Flow Paths and Problems

Observing stormwater flow and stormwater problems is easiest – and most fun – during or after it rains. Most likely, that won't be possible for your class, so tips on determining this information follow.

- **Find and mark the following on your map, using the symbols in your map key (page 2):**
    - Stormwater downspouts on your building
    - Stormwater ditches, gutters, or gullies, where rainwater collects and flows
    - Stormwater drains, into which water flows
    - Impermeable areas, such as parking lots
    - Hills
    - Places in the lawn where the grass is flattened and may be leaning in the direction of flow.
    - Areas where dirt has collected from erosion.
    - Areas that remain wet.
    - Places that are eroding.

- **Mark the direction of the water flow for all the identified areas.**
    - If you cannot tell the slope of the surface, pour water on it to see which direction the water flows.

MAP KEY	
G	Garden (outline the shape)
T	Tree (or draw a stick tree)
Woods	Woods (or draw multiple stick trees)
SD	Storm drains
Dwn	Downspouts on the school (Draw an arrow showing the direction of flow on the ground.)
→	Stormwater flow path
IM	Impervious surfaces on the ground. Draw an arrow for the direction of flow.
PND	Areas where stormwater ponds on the grounds. (Draw the area.)
ER	Areas of erosion (including bare patches on the lawn).
Dch	Stormwater ditches
Hill	Hills or steep slopes
SAP	Possible Stormwater Action Project locations
Ut	Any marked underground utilities, if known.
Tsh	Trash source

Mark your observations on your map, using the abbreviations and symbols in the Map Key. If the area you are assessing does not show up well on the map, make a simple line drawing of the area, keeping features in proportion as much as possible. You can add items to the key that are not on it.

Field Notes:

Put additional observations here.

Discussion Questions

1. Were there any areas that had stormwater runoff problems? If so, describe them and the location.

2. Where did most of the stormwater runoff come from?

3. What areas could be possible sites for a Stormwater Action Project to reduce stormwater runoff on the campus? Why would these areas be good sites?