

RESIDENTIAL SITE REDESIGN ACTIVITY

USVI Watershed Management Workshop

August 14-16, 2006

Purpose of Exercise

The purpose of this exercise is to get you thinking about how Better Site Design (BSD) techniques can be used in residential development to reduce stormwater runoff and environmental impacts while maintaining a marketable product.

Instructions and Timeline

- 10 Minutes Step 1 – Split into teams and get to know your site.
- 20 Minutes Step 2 – Critique the current site plan. Were any BSD principles used?
- 45 Minutes Step 3 – Redesign the site plan; include stormwater, BSD and ESC
- 15 Minutes Step 4 – Present redesigned site to whole group – Name your site, identify your important design elements, and the biggest challenges to implementation

Step 1 - Review Proposed Site Plan

Take the next 10 minutes to review the site plan provided. Become familiar with the proposed development, the site layout, the proposed ESC and stormwater plans, and any potential impacts to natural resources. Once you have reviewed the site plan, your group should select a spokesperson and a note taker.

Step 2 - Critique the Proposed Site Plan

Take the next 20 minutes to critique the current site plan in the context of better site design. Indicate which BSD techniques are included on the proposed site plan and decide which BSD techniques could be used at this site. Not all techniques will be applicable to residential development.

Development Feature	Does current design use BSD? (Y/N/NA)	How could it be incorporated?
Street Width		
Street Length		
Right-of-Way (ROW) Width		
Cul-de-sacs/ Alternative Turnarounds		

Development Feature	Does current design use BSD? (Y/N/NA)	How could it be incorporated?
Vegetated Open Channels/ Open Section Roads		
Parking Ratios		
Parking Codes – Shared Parking and Mass Transit		
Setbacks and Frontages		
Sidewalks		
Driveways		
Rooftop Runoff		
Stream Buffers		
Tree Conservation/Reforestation		
Conservation Incentives		
Stormwater Management		

Comments:

Step 3 - Redesign the Site Plan

Take the next 45 minutes and use the tracing paper and markers provided to sketch a conceptual redesign of the site that incorporates as many BSD techniques as practical.

Keep in mind the following guidelines while redesigning the site:

- The marketability and site value should remain the same (so consider keeping the approximately the same number of dwelling units).
- You are not limited to the BSD techniques that are acceptable by local zoning.

Use your creativity and experience to integrate the BSD techniques. If needed, some suggested approaches are below.

Site Redesign Goals:

- Minimize impervious cover
- Maximize open space
- Maintain a marketable product
- Maintain the same number of lots as the proposed plan
- Modify the hydraulic conveyance system to promote more infiltration, attenuation and filtering of runoff throughout the site
- Select and locate stormwater management practices to be used on the site

Ways to Achieve These Goals:

- Conserve natural areas and floodplains
- Reduce street lengths and widths
- Reduce the lot sizes.
- Reduce the cul-de-sacs
- Consider using open section roads

Critique your plan based on the site design principles and answer the questions below.

How will the redesign affect your infrastructure costs?

How will it affect your hydrology calculations? How will it affect the required stormwater management?

How would this redesign benefit the...

Developer?

Engineer/designer?

Elected officials?

Plan reviewer?

Neighbor?

Others?

What are the obstacles to implementing this plan in your community?

Development Feature	Does your re-design use BSD? (Y/N/NA)
Street Width	
Street Length	
Right-of-Way (ROW) Width	
Cul-de-sacs/ Alternative Turnarounds	
Vegetated Open Channels/ Open Section Roads	
Parking Ratios	
Parking Codes – Shared Parking and Mass Transit	
Parking Lot Design (Stall Dimensions, Pervious Materials)	
Structured Parking	
Parking Lot Runoff	
Open Space Design	
Setbacks and Frontages	
Sidewalks	
Driveways	
Rooftop Runoff	
Stream Buffers	
Tree Conservation/ Reforestation	
Conservation Incentives	
Stormwater Management	

Step 4 – Present Your Design to the Group

Select a spokesperson, and be prepared to discuss the better site design techniques that your group used and be prepared to “sell” your development to the other workshop participants.