

**KEEP IT ON SITE!**

Residential Builder's Guide to Small Site  
Erosion Control  
and  
Stormwater Management

Prepared by O'Brien & Company

for

*Kitsap County*  
*City of Bainbridge Island*  
*City of Bremerton*

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## BMPs

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# Introduction

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## PLANNING FOR PROFIT

This Handbook is for residential contractors and developers for use on small sites. It provides Best Management Practices (BMPs) to control erosion and sedimentation and to provide stormwater management during construction. It does not provide BMPs for permanent stormwater management. Your local jurisdiction can assist you with those.

The benefit of implementing Best Management Practices (BMPs) for the building professional is savings in money, time, and worry. By practicing *erosion prevention* instead of *erosion repair*, potential problems are avoided. The headache of dealing with negative publicity or private party lawsuits is avoided up front.

SEDIMENT IN  
LOCAL  
STREAMS  
THREATENS  
FISH

Growing public awareness of the impact construction site activity has on water *quality* and *quantity* can put you in the line of fire. This handbook's intent is to help you protect your business and the environmental health of the community.

The BMPs featured in this Handbook have been chosen for their demonstrated ability to protect water quality and keep sediment from leaving the construction site. In some cases, you may determine that combining a number of BMPs will provide the insurance you need against sedimentation and water degradation during construction.

As this Handbook is being written, there are additional BMPs being developed for small sites, some temporary and some permanent, that may be particularly appropriate for your site, or that may provide improvements in performance, such as projected life or cost-effectiveness. For that reason, we advise you to keep abreast of developments and modifications of your local County or City stormwater policies and manuals.

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In addition, since this Handbook is intended to be a quick reference in the field, it does not include the level of detail available in your jurisdiction's Stormwater Manual or other resources named in the Handbook's Appendix. Make sure you have the most recent version of the stormwater manual applicable to your job.

This Handbook is by necessity a dynamic document. Because of rapid changes in water conservation and water quality policies, it will be updated from time to time. Please provide feedback on its content and ease of use, so we can incorporate your suggestions in those updates.

## YOUR ROLE AS EDUCATOR

### Educate Subcontractors

Get the message to all subcontractors about these BMPs – they are critical for correct installation and maintenance of erosion control devices. Communicate what is expected of them through fencing, flagging, job-site signs, discussion, and contract attachments.

Warn all subcontractors about “illicit discharges,” which are any improper dumping or spillage of oils, concrete, paints, or any construction materials. Provide a protocol for accidental spills as well as for clean up and disposal of construction waste. (See JOB SITE PROTOCOL on pages 8 and 9.)

### Inform Homeowners

Homeowner maintenance of permanent stormwater management devices installed begins with you, the one who arranged for their installation. This is addressed further as a BMP (EDUCATE OWNER on page 48) in the second section.

## INNOVATION

The intent of this handbook is to provide approved guidelines, not to limit alternative methods that are equally effective.

You will encounter sites where a combination of BMPs will control erosion and stormwater better than only one BMP, or where modifications to materials and methods must be implemented to be effective. *Remember, it's the results that count.*

Except in the case of emergencies, modifications to these BMPs must be approved first. Minor modifications must first meet requirements of your local government plan approval authority. New and/or innovative practices must be submitted for consideration and adoption.

**NOTE: IF YOU HAVE A DIFFICULT SITE, SEE *BEYOND THESE BMPS* IN THE APPENDICES OF THIS HANDBOOK.**

## SEE THE APPENDICES FOR:

*Tipsheet*

*Beyond These BMPs*

*Additional Resources*

*BMP Maintenance Checklist*

# LIST OF BMPs IN THIS DOCUMENT

## BY CONSTRUCTION SEQUENCE

### 1) Limit Site Disturbance

- Preservation of existing natural vegetation
- Topsoil protection

### 2) Establish Construction Access

- Stabilized construction entrance and tire wash

### 3) Install Sediment Controls

- Silt fence/filter fabric fence
- Sediment traps

### 4) Control Flows On-Site

- Storm drain inlet protection
- Interceptor dike and swale
- Check dams
- Grass-lined channels
- Rip Rap-lined channels
- Gravel filter berms

### 5) Stabilize Soils

- Mulching
- Nets and blankets
- Plastic sheeting
- Temporary seeding

### 6) Install Permanent Measures

- Soil Amendment
- Permanent seeding
- Sodding

### 7) Educate Owner

- Owner information

## 1. Limit Site Disturbance

*Preserve existing natural vegetation*  
*Topsoil protection*

- Identify vegetation to be preserved.
- Maintain flagging and fencing.
- Phase construction so no more than 60% of site is disturbed at a time.
- Balance cut and fill to avoid importing or exporting topsoil; save on-site topsoil for final stabilization. However, avoid radically altering the basic topography of the site.
- No dumping of any kind in preserved areas.
- Cover stockpiles.
- Keep stockpiles and vehicles away from areas marked for preservation.
- Make sure all workers are aware of areas to be protected.

## 2. Establish Construction Access

*Stabilize construction entrance*

- Stabilize entrance before clearing or grading.
- Restrict all vehicle access to one entrance.
- Prevent tracking of sediment off-site.
- Sweep mud from streets
- Make sure all workers are aware of areas to be protected.

## 3. Install Sediment Controls

*Silt fence/filter fabric fence*  
*Sediment traps*

- Install perimeter controls before any earth moving activities begin.
- Install fencing and traps at appropriate locations.
- Keep sediments on-site.
- Make sure all workers are aware of areas to be protected.

## 4. Control Flows On-Site

*Storm drain inlet protection*  
*Interceptor dike and swale*  
*Check dams*  
*Grass-lined channels*  
*Rip Rap-lined channels*  
*Gravel filter berms*

- Install runoff control measures during grading as needed.
- Divert runoff away from exposed areas whenever possible.
- Incorporate natural drainage features wherever possible.
- Use adequate buffers and protect areas where flow enters the drainage system.
- Keep clean water clean.
- Reduce runoff velocities to prevent channel erosion.
- Protect adjacent downstream properties from runoff.
- Direct runoff to pass through a sediment pond or other sediment filtration measure before leaving the site.
- Make sure all workers are aware of areas to be protected.

## 5. Stabilize Soils

*Mulching*  
*Nets and blankets*  
*Plastic sheeting*  
*Temporary seeding*

- Cover all surfaces where sediment-laden runoff could leave the construction site.
- Stabilize disturbed slopes.
- Stabilize streambanks in the project as early as possible.
- Comply with seasonal timing restrictions for seeding, if any.
- Make sure all workers are aware of areas to be protected.

**NO ILLICIT DISCHARGES** — No dumping, burying or washing construction materials (solids or  
**In case of accidental spills,**

# PROTOCOL

## 6. Install Permanent Measures

*Soil amendments*  
*Permanent seeding*  
*Sodding*

- Reuse saved topsoil.
- Comply with seasonal timing restrictions for sod and seeding, if any.
- Promote establishment of vegetation with soil amendments (also reduces water demand).
- Remove temporary erosion prevention devices when site is stabilized.
- Avoid leaving any portion of site bare after construction is complete.

## 7. Educate Owner








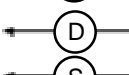
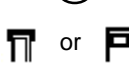

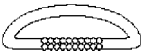
*Owner Information*

- Inform owner of all erosion protection devices still installed.
- Provide adequate information for owner to maintain erosion protection measures.

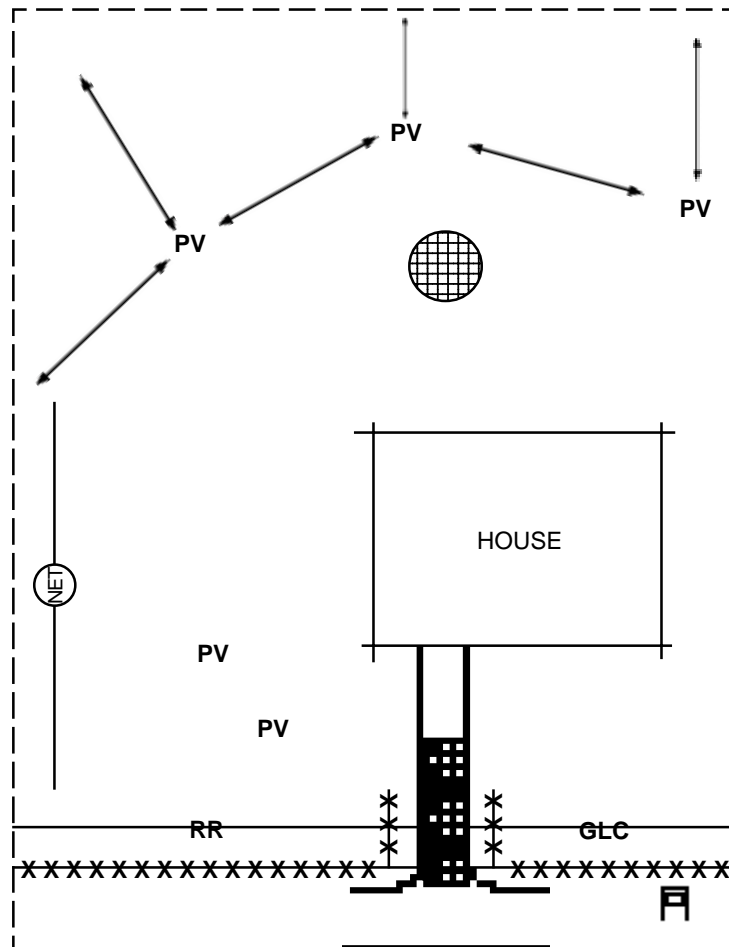
*A good Spill Response Plan will:*

- identify an individual or team responsible for handling spills,
- identify a procedure for notifying appropriate authorities (police, fire, hospital, publicly-owned treatment works) in the event of a spill,
- identify specific spill containment, diversion, isolation, and clean up practices,
- train employees on spill response procedures, and
- require prompt clean up.

### EROSION CONTROL PLAN LEGEND

Preserve Vegetation	PV
Protect Topsoil	
Construction Entrance	
Seeding	
Mulching	
Nets and Blankets	
Plastic Covering	
Sodding	
Interceptor Dike and Swale	
Storm Drain Inlet Protection	
Silt Fence	
Sediment Trap	
Check Dam	CD
Rip Rap	RR
Grass-lined Channel	GLC
Gravel Filter Berm	GFB

### Sample Erosion Control Site Plan for a Single Family Dwelling



liquids) into the ground, into wetlands, or into drains!!! Haul them all off site for proper disposal. promptly follow clean up protocol.

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