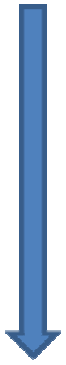
5C Program
Five Counties Salmonid Conservation Program

Navigating the 5C Program's Stormwater Management Guidance

This summary outlines the available guidance on stormwater management through the 5C Program to help ensure that you have all the information you need to plan, design, construct, and maintain best management practices. You can navigate the material in a few different ways: by topic, by specific practice, or by the function you want to achieve.

By Topic

Guidance is organized by overarching topic. In each fact sheet, we've strived to create easy-to-understand text and illustrations on implementation, cost considerations, and relative benefits to watershed and water conservation efforts. In the table below, guidance is ordered by relative cost for new development. In retrofits, where stormwater management is not required, managing stormwater with Low Impact Development (LID) or even with conventional approaches will require an initial investment. However, there are many benefits of stormwater management that are not easy to quantify in dollars. Certain practices, such as those that capture stormwater, can actually save money in the long-term. In some case, effectiveness will probably be the driving factor for decision-making.

Best Management Practices (BMPs)				
	Title	**Content Description**	**Relative Cost**	**Effectiveness***
1	*Minimize Impervious Area*	Learn how to minimize impervious area in new and existing development.	Low	High
2	*Disconnect Impervious Areas*	Learn how to manage: roof runoff by disconnecting your downspouts; and pavement runoff with vegetated filter strips.		High
3	*Restore Disturbed Soils*	Landscape areas can generate a surprising amount of runoff, carrying pollutants like pesticides, fertilizers, and herbicides to downstream waterways. Learn how to uncompact your soil, permanently, to reduce maintenance and watering demand.		High
4	*Build a Rain Garden*	Learn how to design, construct, and maintain a rain garden.		Low to High
5	*Build A Rain Barrel*	Rain barrels are a great way to raise awareness of water conservation and will provide some water quality treatment. Learn how to build your own from scratch to reuse rainwater for outdoor uses.		Low
6	*Harvest Rainwater with a Cistern*	Get more information on rainwater harvesting systems designed to re-use water inside or out using cisterns.	High	Low to High

* This rating refers to the effectiveness of stormwater management. These techniques offer other benefits such as water conservation with a good rate of effectiveness.

Supplemental Information		
7	*Test Your Soils*	Learn how to test your soils to reduce installation & maintenance costs and improve the effectiveness of bioretention facilities (e.g., rain garden, vegetated filter strip).
8	*Site Bioretention for Infiltration*	Reducing runoff volumes is the best way to preserve and restore watershed health. Learn how to find the right place for your rain garden, vegetated filter strip, or disconnected downspout.
9	*Find Native Plants in Your Area*	Not all plants are created equal. Native plants provide superior watershed protection, habitat value, and are resilient. Learn how to navigate the USDA's PLANTS database to find native plants in your county.
10	*Amend Soils for Bioretention*	Learn how to best prepare your native soils for directing runoff to them for stormwater infiltration.
11	*Convey Water in Swales*	Learn how to convey water around your site using overland flow instead of pipes.

Implement Specific Practices

If you're already pretty familiar with using best management practices or have something in mind already for other reasons, refer to the table below to see which guidance topics you'll need to gather before starting your project.

I want to:	**Because it will be good for:**	**Guidance documents you'll need (listed generally in the order of implementation):**
Minimize impervious area.	Water quality & energy savings	Essential:**1** Optional if area remaining will be garden instead of lawn: **9**
Remove some unneeded existing pavement (aka depaving).	Water quality & energy savings	Essential: **1, 3, 9** Optional if impervious pavement will drain to depaved area, see vegetated filter strip: **2, 10**

Disconnect my downspout.	Water quality	Essential: **8, 2** Optional if replacing lawn with garden at mouth of disconnection**: 9, 10**
Disconnect my pavement (aka vegetated filter strip).	Water quality	Essential: **8, 2, 10, 9**
Restore my soil.	Water quality & water conservation	Essential: **3** Optional if resulting area will be garden instead of lawn: **9**
Build a rain garden.	Water quality	Essential: **8, 7, 4, 10, 9** Optional if conveying water to or away from rain garden with overland conveyance instead of a pipe: **11**
Build a swale.	Water quality	Essential: **11, 10, 9**
Harvest rainwater in rain barrels	Water quality & water conservation	Essential: **5**
Harvest rainwater in a cistern.	Water quality & water conservation	Essential: **6**

Functional Checklist Approach

If you have some idea of what practices you'd like to use, but would like to explore additional approaches, then use this checklist approach below. Available resources are listed by how they work to protect watershed health. If best management approaches perform more than one function, they're listed in all relevant categories. Guidance that is essential or optional for implementation is listed with numbers corresponding to the topics table above.

Step 1: Evaluate existing site to prevent runoff.	**Essential**	**Optional**
☐ Assess natural areas.		
☐ Perform infiltration testing to find areas of high and low infiltration rates.	7	
☐ Protect sensitive areas.	8	
☐ Depave unneeded areas of pavement.	1, 3, 9	2, 10

	Essential	Optional
Step 2: Evaluate proposed site to prevent runoff.		
☐ Miminize impervious areas.		
☐ Share driveways.	1	9
☐ Share parking spaces.	1	9
☐ Minimize parking space dimensions and driveway widths.	1	9
☐ Minimize building footprints.	1	9
☐ Minimize setbacks.	1	9
☐ Cluster development.	1	9
Step 3: Prevent pollution of runoff.		
☐ Restore disturbed soils.	3	9
Step 4: Intercept rainfall.		
☐ Depave unneeded areas of pavement.	1, 3, 9	2, 10
☐ Restore disturbed soils.	3	9
☐ Contained planters	2, 9	
Step 5: Mitigate runoff volume.		
☐ Infiltrate.		
☐ Infiltration rain garden	8, 7, 4, 10, 9	11
☐ Disconnect a downspout	8, 2	9, 10
Step 6: Reduce pollutants in runoff.		
☐ Miminize impervious areas.		
☐ Share driveways.	1	9
☐ Share parking spaces.	1	9
☐ Minimize parking space dimensions and driveway widths.	1	9
☐ Minimize building footprints.	1	9
☐ Minimize setbacks.	1	9
☐ Cluster development.	1	9
☐ Depave unneeded areas of pavement.	1	9

	Essential	Optional
☐ Intercept and evaporate.		
☐ Contained planters	2, 9	
☐ Restore disturbed soils.	3	9
☐ Infiltrate.		
☐ Infiltration rain garden	8, 7, 4, 10, 9	11
☐ Infilration vegetated filter strip	8, 2, 10, 9	
☐ Intercept and use.		
☐ Harvest rainwater in a barrel.	5	
☐ Harvest rainwater in a cistern.	6	
☐ Convey and treat.		
☐ Vegetated swale	11, 10, 9	
☐ Filtration rain garden	4, 10, 9	11
☐ Filtration vegetated filter strip	2, 10, 9	11