

Stormwater Management

What is Stormwater?

Stormwater is water from rain or melting snow that runs off across the land instead of being absorbed into the ground. This “runoff” can occur on various soil and surface types, but is most common on hardened surfaces like pavement, rooftops, and lawns. Highly porous or “permeable” surfaces like sand, porous pavement, and vegetated landscapes made up of a variety of deep-rooted plants, allow rainwater to soak into the soil.

Why do we need to manage stormwater?

Stormwater washes off our lawns and “impermeable” hard surfaces picking up a variety of harmful **pollutants** that are carried into our waterbodies (streams, lakes, ponds, and ocean) either directly or by stormwater drains. These pollutants impair water quality, pose health risks to humans and wildlife, and can lead to closures of beaches to swimming and areas to shellfishing. In addition to concerns of human and environmental health, both federal and state agencies such as the Environmental Protection Agency (EPA) have set standards that require communities to manage stormwater to meet specific water quality goals defined in the Clean Water Act.



Common Stormwater Pollutants: sediment, fertilizers, bacteria from pet and wildlife waste, automobile fluids, heavy metals, pesticides, and herbicides.

The Solution: Stormwater Management

Traditionally, stormwater management was exclusively focused on capturing runoff to reduce flooding. Now, with our modern understanding of the problems associated with polluted runoff entering our waterbodies, we work to implement various techniques to minimize and remove pollutants from stormwater runoff before it enters our waters.

Good housekeeping: **cleaning out catch basins** and **street sweeping** to keep them clear of debris.



Low impact design alternatives including **infiltration systems** such as porous pavement shown below.



Capturing and treating runoff through installation of **rain gardens** (left) or **bio-swales** (right).



Proprietary biofiltration systems that incorporate plants and soils to capture and filter out pollutants.



What does APCC do to help manage stormwater?

APCC works with partners to provide workshops for Cape municipal officials and other interested groups on the techniques for and benefits of managing stormwater. In addition, APCC's **Cape Cod Restoration Coordination Center (RCC)** works with partners to permit, fund, design, build, and monitor stormwater restoration projects around the Cape. The RCC's primary goal and purpose is to facilitate ecological restoration for the benefit of the environment, the local economy, and Cape Cod communities. With this goal in mind, the RCC works with Cape towns to implement top priority restoration projects including salt marsh restorations, fish run improvements, and stormwater management strategies.

You can be part of the solution!

Community members can help protect and improve water quality through responsible living practices and community activism. Here is a list of things YOU can do to help.

1. **Design your landscape to absorb rainwater** where it falls by maximizing planted areas, reducing lawn cover, and minimizing hard surfaces.
2. **Don't use fertilizers, pesticides, and other lawn chemicals.**
3. Manage driveway, rooftop, and walkway runoff by **installing rain gardens, or permeable pavement** such as porous asphalt, porous concrete, permeable pavers. There are many alternatives to traditional pavement.
4. Capture roof runoff from gutters in **rain barrels** and use the water to irrigate your garden and/or install rain gardens.
5. **Dispose of harmful fluids**, oil, fuel, paint, and others, properly – never dump down storm drains or on the ground.
6. **Replace leaky engine gaskets** or catch leaking fluids in appropriate automotive fluid containers.
7. Collect and **dispose of pet waste properly** to keep bacteria out of our waterways.
8. **Be an active community member.** Attend local meetings, write letters, and speak out about your concerns about stormwater management and associated water quality issues.
9. Encourage local officials to **support low impact development and green infrastructure** design.
10. **Support local environmental organizations** like APCC to help us continue our efforts in improving stormwater management practices around the Cape.



www.APCC.org/stormwatermanagement