

Storm Water Management and the HOA Manager

The focus on storm water is becoming more important and the governmental enforcement is increasing. In fact, the EPA has identified “keeping contaminated storm water out of our nation’s waters” as their number one enforcement initiative for the Fiscal Year 2011-2013. They are beginning to back up this enforcement need with inspections and even large fines for non-compliant sites. Third party environmental groups are beginning to take note, too, and file suits against private entities found to be polluting. You need to know how to take care of your storm drainage system and how to avoid contamination of the storm water on your sites. So how is this done? To do an adequate job, managers and community leaders should become familiar with three requirements of a storm drainage system – Post-Construction Maintenance, Good Housekeeping, and Pollution Prevention.

Post-Construction Maintenance means keeping a storm drainage system clean once the contractor has left the project. When a project is under construction, there are several measures put in place to keep silt and pollutants out of the storm drainage system. During construction, it is the contractor’s job to maintain these measures. However, once the contractor has left the site, it becomes the owner or manager’s responsibility.

When assuming this responsibility, get to know the storm drainage system. Get the as-builts and the Operation and Maintenance Manual for the project. These are available from the contractor if the system was recently built, or from the County or City in which the project resides if it was built later. These can be re-created by an engineer if they cannot be found, but this is typically an expensive proposition.

Reading as-built documents is not really a difficult thing to do, and you will be able to tell quickly what components make up your system. Because a storm drainage system is mostly underground, many of the components cannot be seen from the surface and you will use the as-builts to find out what is below the surface that you can’t see. A one-hour walk of the system with the as-builts in hand is an excellent way to begin to understand the system. You can also ask the engineer, if the system was designed recently, to explain the system to you so you understand it better. Also, read the Operations and Maintenance Manual as it will explain the maintenance required for the system.

Using the as-built documents, walk the site and find each of the components shown on the plan. You should find catch basins, manholes, and maybe a pond, swale, or filter system. Take pictures of each component that you find and check for broken lids and debris on the lid that may impede drainage. If the lid is broken, replace it. Also go out once a month and after any significant storm and remove any built up leaves, needles, or trash that has accumulated around the grate inlet. Also verify that there is a “Dump No Waste” marking, either with a plastic marker or a painted stencil. They can be ordered from several on-line vendors and need to be in place for compliance.

Keeping sediment levels under control in catch basins and manholes is a big piece of storm drainage maintenance. Look in the catch basins and manholes and check, using a long rod or a tape measure, for sediment in the bottom of the basins and manholes. It collects quickly and needs to be removed before it gets too deep. The research shows that the sediment should be removed when it exceeds 60% of the

depth of the sump. A good rule of thumb, however, is to always remove it when it gets 3" or deeper. There are several options for getting a system clean. If you choose to hire someone, there is good news. Several options to the very expensive vactor truck are beginning to surface – keep your eye out for one of those options.

One important thing to check for is the presence of storm drain “socks” or “witches hats.” These are used during construction but are not meant for use afterward. They are identifiable by a black fabric sticking out from the side of the lid and a black, inverted cone immediately under the catch basin grate. Some people leave them in place, incorrectly believing they can be used to keep sediments out of the catch basin, but that is not how they work. They are for construction only. If left in, they do nothing to catch sediments because they quickly become full and overflow. In addition, they can plug the storm drainage and cause flooding and water damage. Remove them by stepping on the edge of the fabric while removing the lid. Once removed, dispose of them.

A much better way to easily and inexpensively remove sediment from a catch basin is a Storm Drain Maintenance Insert, also available on-line. These are a great way to avoid the extremely high cost of regular vactor service and keep the sediments from accumulating in catch basins. Lastly, you must keep records of the regular inspections, cleanings, and other maintenance done. These records must include the As-Builts and the Operations & Maintenance Manual, as these are a part of most jurisdictional compliance requirements.

Good housekeeping includes several areas, mostly having to do with preventing pollution from ever going into the storm drainage system in the first place. Instructing tenants and/or homeowners and how to handle grass clippings, not to put trash into the storm system, and not to pour pollutants into the storm system make up the lion’s share of these requirements. Educate the homeowners and tenants on the operation of the storm system and how to do day-to-day maintenance to keep the storm system flowing properly. Paper drink cups are typically the biggest culprit of trash in the storm system, so instruct the tenants and owners to throw trash away properly. Keeping driveways swept and clean also helps. A sweeping service can be hired on a regular basis for sweeping the main streets and parking areas and will make a huge difference in how much sediment gets into the storm drainage system.

Lastly, keep an eye on Pollution Prevention. This term is typically reserved for keeping more hazardous materials out of the storm drainage system, such as paint, oil, and/or pesticides. Put together a Spill Prevention Plan – the web has excellent resources for putting together a simple one. The Spill Prevention Plan will give you excellent information on how a spill is to be avoided, such as storing chemicals in proper containers and in a specific location, and how spills are to be handled if they happen. There are inexpensive and effective systems sold for containing and/or cleaning up spills (check out newpig.com) that every site owner or manager should consider. It is advisable to have these products on hand before you need them. They are typically not sold at most hardware stores, and you will be hard-pressed to find them in a timely manner when you are faced with a spill.

Lastly, there are several companies available to help you with these requirements or even to take over the whole project. Whatever your solution, make sure you have one in place . The price you'll pay for waiting will make the fee for maintenance services look like peanuts.

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