

Rubbish & Debris in Gutters, Ditches and Swales



In this Chapter

- ▶ **What are gutters, ditches and swales?**
- ▶ **What do I do with rubbish, litter and debris in the rights-of-way?**
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What are gutters, ditches and swales?

Gutter: Gutters are usually concrete-lined channels at the edge of a street or road for carrying off surface water. Often they are associated with curbs and sidewalks.

Ditch: Ditches are steep-sided (slope greater than 2:1) open drainages to receive and conduct excess surface water and stormwater runoff. Ditches may flow water continuously or intermittently.

Swale: Swales are vegetated, gradually sloped (slope less than 2:1) open drainage channels that are designed to capture and passively treat run-off from roads. Vegetation in swales helps to capture sediment and pollutants, and prevent erosion; they may be dry or wet most of the time but are normally without flowing water.



A steep-sided ditch helps conduct excess water runoff.



A gently sloped swale is usually vegetated to help prevent erosion.



What do I do with rubbish, litter and debris in the rights-of-way?

Your maintenance of gutters, ditches and swales contributes to the safety of the roadside and protects the aquatic environment.

- ▶ Keep all gutters, ditches and swales in the rights-of-way free of litter, rubbish and debris.
- ▶ Clear and maintain all landscaped areas, shoulders, gutters, drainage ditches, and swales free of debris (rocks, mud) and trash (papers, bottles, cans, etc.).
- ▶ Remove debris and trash twice per month before mowing or as advised by the Engineer; always maintain a neat and clean appearance at your worksite.
- ▶ Remove all rubbish and debris which originates from landscape maintenance work before the end of each work day, or immediately if it creates a traffic hazard.
- ▶ Stabilize and replant any eroding areas immediately.

Gutters, ditches and swales help move excess water off the road, downstream and out to sea. This keeps the road safe during storms, but may also allow materials, sediment, rubbish and pollutants to be carried downstream to the ocean and eventually onto our reefs. Swales can actually filter pollutants through soils and vegetation.

Do not allow rubbish and materials to accumulate in gutters, ditches or swales. If these roadside structures are blocked, flooding may occur and spill onto the roadway or neighboring properties.

Remember

Environmental Protection Agency (EPA) officials monitor gutters, ditches and swales and may fine the Hawaii Department of Transportation as much as \$25,000 per day for failure to comply with EPA standards.



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- ▶ Maintain earth drainage ditches and swales with vegetative cover. Maintain the vegetation in ditches and swales similar to other landscape vegetation standards. If grassed, then mow according to the standards set in Chapter 5, “Mowing & Edging in Landscape Maintenance Zones.” If planted with other ground cover, shrubs and trees, maintain them according to the vegetation management standards discussed in this manual.
- ▶ The vegetation in swales and ditches should not block the flow of water because the main purpose of ditches and swales is to carry excess water away from roadways. Remove or kill only vegetation that will block water flow during storm events.
- ▶ Keep all curbs and gutters free of vegetation. You may use herbicides to spot treat pockets of vegetation along curbs and gutters; however, you must follow all safety and reporting protocols when spraying herbicides on curbs and gutters. Do not spray herbicides in or around drainage structures, ditches or swales with water in them. You may spray herbicides if there is no water in them and no rain is expected. See Chapter 10, “Use of Pesticides in Vegetation Maintenance.” Read label about rainfastness – four hours without rain is best.
- ▶ Immediately notify the State Engineer in charge of maintenance about any blocked gutters, ditches and swales detected during landscape maintenance work.
- ▶ Report unusually severe instances of rubbish dumping onto the roadside to the Engineer in charge of maintenance.
- ▶ Maintain all drainage culverts under roadways and embankments, if you are HDOT maintenance staff. As a contractor, you are not expected to maintain these areas; however, you are expected to report any blockages to the Engineer immediately.

Burning rubbish and debris in highway rights-of-way is prohibited. Do not stockpile debris, soil or garbage within highway rights-of-way.

Contractors will be fined for stockpiling materials in the rights-of-way.



Am I required to get training?



Everyone who does vegetation maintenance on the roadside should attend specialized HDOT courses covering best practices related to stormwater. Contact the HDOT Engineer in charge of maintenance in your area to find out about the training schedule.

The manual for the course is available at:

http://www.stormwaterhawaii.com/program_plan/pdfs/app_h1.pdf

Reporting & Inspection

Report the time and effort spent removing and disposing rubbish and debris. Report blocked gutters, ditches and swales to the Engineer even if you are not contracted to maintain them. Your work will be inspected for compliance with HDOT and EPA standards. See Chapters 14 and 15.



In a Nutshell

1. No stockpiling of rubbish, litter or debris in the ROW.
2. Vegetated swales will become progressively the norm to address stormwater sediments because swales are the most effective means to remove sediments from water.
3. If a maintenance crew does not remove blockages, contact the supervisor.
4. Your maintenance of gutters, ditches and swales contributes to the safety of the roadside and protects the aquatic environment.