

Highway Maintenance Manual

Bureau of Highway Maintenance

July 2015

Chapter 04 Roadway Maintenance

Section 15 Drainage

Subject 30 Detention and Retention Areas

1.0 Terms and Definitions

<u>Detention Basin</u> – A detention basin or area is a depression or low area of land to collect storm water without damaging or flooding adjacent land and to release the storm water at a slower rate. (The detention basin is used for the purpose of increasing the time of concentration of water flow to any point of discharge.) A detention basin, unlike a retention basin, does not hold water for infiltration into the subsoil but is self-draining and after a period of time will be completely free of water. For more details about detention basins, retention basins and sediment traps, see Chapter 13-35-1 (Special Hydraulic Structures) of the Facilities Development Manual.

2.0 Maintenance

Simple maintenance functions of detention basins on highway right of way include:

- Keep the water course free of accumulations of debris, large vegetation and other obstructions to ensure the flow of water.
- Repair erosion or install erosion control measures to maintain the function of the basin.
- Repair damage to the fence (if present). When the damage to the fence is from a crash, the damage claim / yellow tag process should be used.

Complex maintenance of detention basins may not be able to be performed by county service providers. Complex maintenance items will not be able to be identified from a drive-by inspection. Complex maintenance of detention basins would include:

- Dredging of accumulated sediment to maintain the desired hydraulic purpose. This may be an event that occurs approximately every 15 years depending upon major storm events or soil disturbances upstream of the detention basin.
- Replace conveyance infrastructure such as rusted pipes, cracked PVC pipes and settlement.

Detention basins should not be mowed. Long grass and small vegetation is part of the design of a detention basin and is what helps slow down the flow of storm water.

A drive-by inspection is usually all that is needed to see if simple detention basin maintenance is needed.

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