

## **USE OF SUMP PUMPS FOR SURFACE AND SUBSURFACE DRAINAGE**

Section 7013.10 for site drainage in the Los Angeles Building Code (LABC) states: "All pads with cut or fill shall slope a minimum of 2 percent to an approved drainage device or facility, or to a public street. Where used, the drainage device shall be an adequately designed system of catch basins and drain lines, which conducts the water to a street." Section 7013.9 requires that drainage from roof gutters be conducted by gravity flow to an approved location. The code does not specifically address the use of sump pumps for control of site drainage.

Furthermore, Section 7013.10 of LABC only has language regarding site drainage of graded pads. There are no code sections regulating the subsurface drainage, and surface drainage collected from light wells, stair wells, or driveways sloping toward basement garages. The purpose of this Information Bulletin is to clarify the Department's policy regarding the use of sump pumps to divert drainage to streets.

### **1. Subsurface Drainage from Retaining/Basement Walls**

A Request for Modification is not required for using a sump pump to divert subsurface water collected from behind retaining/basement walls, to streets. Where the historic high water table is above the bottom of the retaining/basement wall footing, a geology and/or soil report addressing the dewatering of the site shall be approved by the Grading Division. Sites that require permanent dewatering and are located in the San Fernando Valley will require approval from the Upper Los Angeles River Area Watermaster.

### **2. Surface Drainage from Light Wells, Stair Wells, and Driveways**

A Request for Modification is not required for the use of a sump pump to divert surface water to the street, where the water is collected from light wells, stair wells, and driveways sloping toward basements/subterranean garages.

### **3. Surface Drainage to Street from Best Management Practices (BMP) Devices**

A Request for Modification is not required for the use of a sump pump to divert water collected from BMP devices (cisterns, rain gardens, planter boxes, infiltration basins, rain barrels, etc.), where the water would normally flow to the street via gravity and the overflow of any BMP device would also flow to the street via gravity.

### **4. Other Surface Drainage**

A Request for Modification shall be required for using a sump pump to divert other surface water to streets. Such Request for Modification shall be processed by the Grading Division. The Grading Division may require the permit applicant to pay a site inspection fee for the purpose of verifying the site topography and the suitability of using the sump pump. In addition, the Grading Division will require the permit applicant to file an affidavit agreeing to maintain the sump pump in proper working conditions at all times.

### **5. Sump Pumps Adjacent to Descending Slopes**

**a. General Conditions**

Back-up dispersal wall structures, or alternatively, a natural gas/propane powered back-up power generator, may be required where the slope of the ground surface below or adjacent to the sump pump is steeper than 5:1 horizontal:vertical (H:V).

**b. Dispersal Wall Approval Conditions:**

- i. Where the slope of the ground surface is steeper than 5:1 (H:V), the dispersal wall shall be supported by a footing founded in competent material as determined by the geologist/soils engineer and approved by the Grading Division.
- ii. The dispersal wall shall be designed in compliance with LABC Section 7013.7 or an equivalent design recommended by a licensed engineer and approved by the Grading Division.
- iii. The dispersal wall shall be located a minimum of 10 feet up-slope of any property line. Greater setbacks may be warranted where irrigation water from landscaped areas drains through the dispersal wall.
- iv. Water shall not be dispersed onto uncertified fill, landslide areas or slopes with a factor of safety for stability that is less than 1.5.
- v. Where the slope of the ground surface is steeper than 3:1 (H:V), a geology/soil engineering report addressing the stability of the slopes, potential impacts of the dispersal of collected water on the slopes, and specifying the foundation bearing material for the dispersal wall to prevent settlement shall be submitted to the Grading Division.

**c. Back-up Natural Gas/Propane Powered Generator Approval Conditions:**

- i. The generator shall be designed to start automatically in the event of an electrical power outage.
- ii. The generator shall be powered by the same fuel source that services the site structures.
- iii. In the case of a propane-powered generator, the supply of propane shall be sufficient to keep the generator in operation for a minimum of 8 hours.

**6. General**

Plumbing and electrical permits are required for sump pumps. Explosion-proof boxes and equipment may be required in hazardous locations.

A Request for Modification form to use a sump pump and the affidavit (general or back-up power generator) to maintain the sump pump in working conditions may be downloaded from the LADBS website at <http://ladbs.org> or obtained from the Grading Division.

**7. Forms:**

Instructions for Grading Sump Pump Building Code Modification GGI-20

Request for Modification of Building Ordinances - Sump Pump PC-GRAD-Req.Mod.20

Maintenance Affidavit for Sump Pump PC-GRAD-Aff.09

Maintenance Affidavit for Sump Pump and Natural Gas/Propane-Powered "Back-Up" Generator System PC-GRAD-Aff.09A