



**STORMWATER MANAGEMENT COMMISSION
REGULATORY GUIDANCE MEMORANDUM #2023-01**

April 20, 2023

To: Lake County Enforcement Officers (EO) and Other Interested Parties
From: Brian Frank, Chief Engineer, Lake County Stormwater Management Commission (SMC)
Subject: SMC Guidance on Lowest Adjacent Grade (LAG) determinations for Lake County, IL, prior to March 16, 2023

This guidance memorandum supersedes all previous guidance memoranda issued by the SMC regarding Lowest Adjacent Grade Determinations in Lake County, Illinois. This document clarifies lowest adjacent grade determinations prior to March 16, 2023. Technical Bulletin 10 was updated March 2023. See Regulatory Guidance Memo Building Protection Requirements (#2023-02).

Lowest Adjacent Grade (prior to March 16, 2023) definition: “*The lowest finished grade adjacent to a structure, **not including the bottom of window wells.***” per Appendix A of the Lake County Watershed Development Ordinance¹ (WDO) is the focal point of this Memorandum. In preparation to amend the WDO it was brought to the attention of SMC staff that the WDO definition of LAG conflicts with FEMA’s MT-1 Technical Guidance Document² (MT-1 Guidance) definition: “*Lowest Adjacent Grade (LAG) is the elevation of the lowest ground touching a structure, **including attached patios, stairs, window wells, loading docks, deck supports, or garages.***” As of March 16, 2023 the LAG definition will be the lowest finished grade adjacent to the structure.

During the Technical Advisory Committee (TAC) meeting on February 16, 2023, multiple concerns were raised on how this definition might affect houses previously permitted under the WDO following guidance from a January 26, 2007 SMC Memorandum (2007 memo) titled “Building Protection Requirements” or similar WDO guidance (prior to or after this point). This 2007 memo references FEMA Technical Bulletin 10-01³ and provides WDO permit process guidance. Below are some clips from Technical Bulletin 10-01 for easy reference.

Basement Foundation in Fill Placed Above BFE

Placing fill to a level higher than the BFE has the effect of reducing the depth of the basement floor below the BFE (see Figure 6). It is recommended that fill be placed to a level at least 1 foot above the BFE. In general, the higher the basement floor the lower the risk of damage from seepage and hydrostatic pressure caused by flood-related groundwater. Where possible, enough fill should be properly placed so that the lowest grade adjacent to the structure is raised to an elevation greater than the BFE. An added benefit of fill placed above the BFE is that it helps protect the building from floods greater than the Base Flood. These floods are less likely to reach the structure.

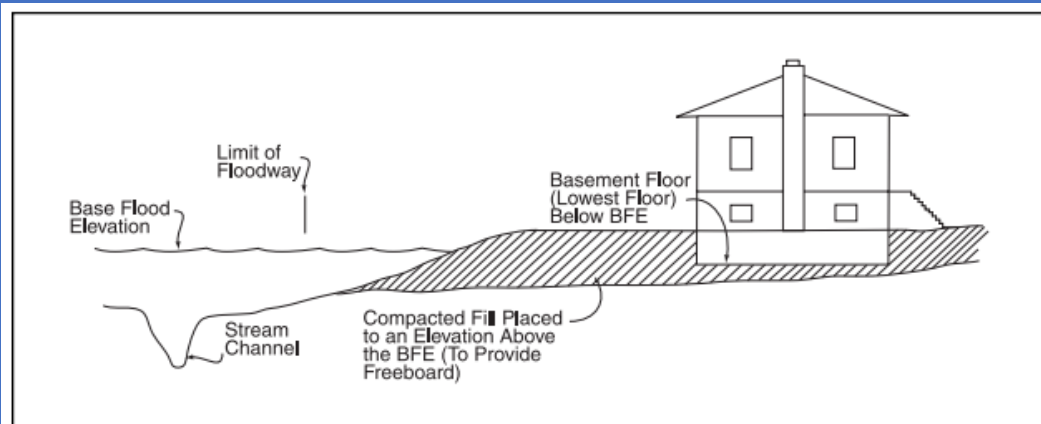
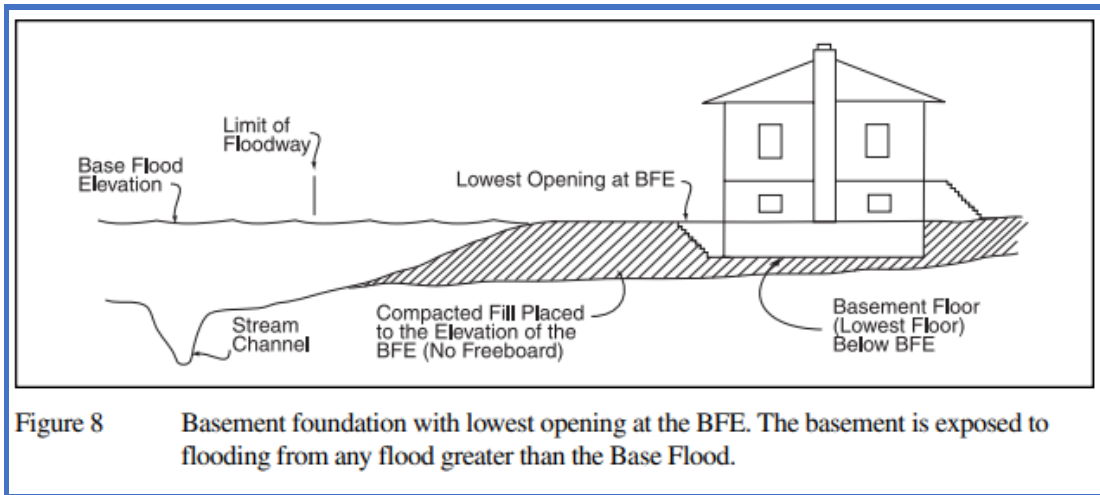


Figure 6 Basement foundation in fill placed above the BFE. The depth of the basement floor below the BFE is less than when no fill is placed.



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Based on Figure 6 & 8 above the configuration detailed out at the February 16, 2023 TAC meeting appears to be a hybrid of these development layouts, below is a visual rendering. Note that Figure 8 appears to have stairs leading to a basement access/door.

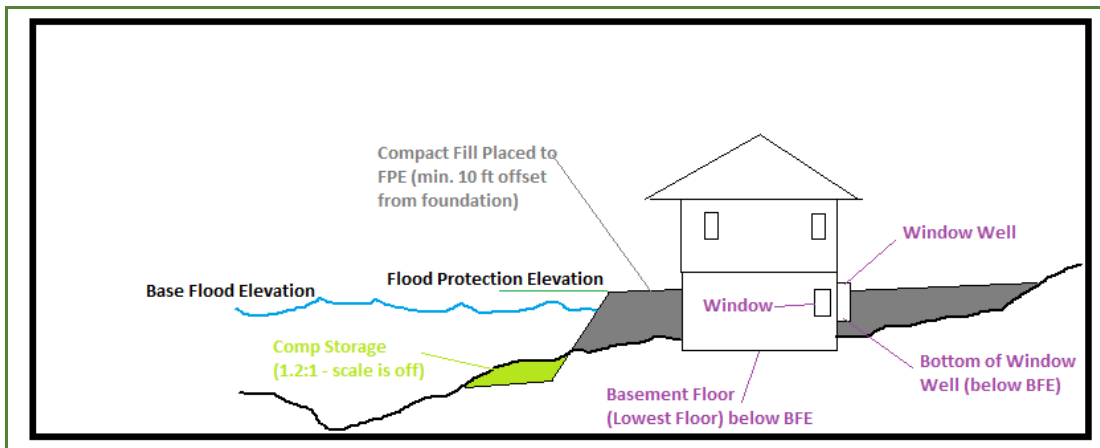


Figure described at 2/16/23 TAC meeting (Brian Frank's interpretation – riverine example)

SMC's recommendation is to continue to retain existing permit paperwork to properly document previous development in the Special Flood Hazard Areas (SFHA) that was permitted under the WDO as amended on October 13, 2020 (or prior) [Refer to 44 CFR Section 65.6(a)(14)(ii)]. The current WDO definition of LAG matches the August 10, 1999 version of the WDO.

Moving forward from the date of this Regulatory Guidance Memo (#2023-01) the FEMA LAG definition and technical guidance provide in the current MT-1 Guidance document (along with other FEMA Technical Bulletins/Documents) should be used as appropriate based on the details of the proposed development throughout the permit process. Please contact SMC with any related questions or for needed clarifications on this subject matter.

References

1. Lake County Stormwater Management Commission (October 13, 2020). [Lake County Watershed Development Ordinance](#). Lake County, IL (145 pages).
2. FEMA (November 2019). [Guidance for Flood Risk Analysis and Mapping. MT-1 Technical Guidance. Guidance Document 65](#) (55 pages).
3. FEMA (May 2001). [Technical Bulletin 10-01. Ensuring That Structures Built on Fill In or Near Special Flood Hazard Areas Are Reasonably Safe From Flooding in accordance with the National Flood Insurance Program](#). (26 pages).

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

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