



City of Cambridge Department of Public Works

John F. Nardone, Commissioner

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Response to Public Comment on Draft Amendments to Land Use Regulations September 23, 2026

On August 12, 2026, the City of Cambridge posted proposed amendments to the Land Use Regulations under Cambridge Municipal Code Chapter 13.16 to clarify project thresholds that trigger a Department of Public Works (DPW) Stormwater Control Permit and/or Stormwater Site Plan Review by DPW as part of a Building Permit. Updates and clarifications to the review thresholds were warranted to bring the existing Regulations in line with the changes to local Zoning and also to provide clarification to those seeking permits in the City.

During the 30-day public comment period, the City received four comment letters. Additional information and clarification in response to the comments received is included below.

Projects on Parcels Less than 5,000 Square Feet

The City appreciates the public support to lower thresholds for projects requiring Stormwater Control Permits. As pointed out by several of the letters, these redevelopment projects are important to capture to make meaningful stormwater improvements across the City.

Several letters expressed concern that projects on parcels less than 5,000 square feet would be exempt from stormwater requirements. To clarify, the proposed Land Use Regulations require that any project proposing to increase impervious cover by more than 1,000 square feet be required to complete Stormwater Site Plan Review and must meet the Cambridge Stormwater Standards to the Maximum Extent Practicable. This requirement applies to projects on parcels of less than 5,000 square feet. The intent of the updated Regulations is to capture mid-size redevelopment projects on parcels large enough to make meaningful stormwater improvements (i.e., parcels greater than 5,000 square feet) as well as to capture projects completing major renovations or site work (i.e., projects increasing impervious cover by 1,000 square feet or more) on smaller lots.

For small disturbance projects on parcels less than 5,000 square feet that are also not increasing impervious cover by more than 1,000 square feet, the City encourages stormwater improvements to be considered as part of the project scope. For these projects, while a full Stormwater Site Plan Review is not required, DPW will provide resources and guidance to inform applicants about potential stormwater site improvements appropriate to projects of this scale during Building Permit review.

Tiered Permitting Structure

Several letters proposed that Cambridge implement a tiered permitting structure. The City agrees that classifying projects into multiple categories (i.e., tiers) based on scope and size is the best approach to effectively regulate and implement stormwater improvements and feels that the updated Regulations and clarifications are consistent with this structure.

Under the proposed Regulations, projects in Cambridge will fall into one of three categories (i.e., tiers) with different stormwater requirements for each category. The three categories are:

1. Projects requiring Stormwater Control Permits (which must fully meet all Cambridge Stormwater Standards),
2. Projects requiring DPW Stormwater Site Plan Review as part of Building Permits (which must strive to meet all Cambridge Stormwater Standards and, at minimum, meet the Standards to the Maximum Extent Practicable), and
3. Small Disturbance Projects (which do not have stormwater requirements, but DPW will provide resources on stormwater improvements during Building Permit review).

The intent of the proposed Regulations is to provide clear thresholds for what projects fall into all categories. Under the current Land Use Regulations, projects either require a Stormwater Control Permit or are evaluated by DPW for whether stormwater improvements are required as part of a Building Permit. The proposed amendments to the Regulations clearly place all projects into one of the three categories listed above. The City plans to issue a September 2026 Supplemental Directive to the Wastewater and Stormwater Guidance Document that outlines what projects fall within each of the three categories and their corresponding stormwater requirements.

Design and Technical Guidance

Several comments received were related to stormwater system and site design, which are not explicitly included in Regulations. The City agrees that clear guidance to project proponents is critical to successful implementation of the Regulations and regularly refers project applicants to the City's Wastewater and Stormwater Guidance Document where this information is located. The City is preparing to update the full Wastewater and Stormwater Guidance Document and plans to issue this document when MassDEP finalizes the revised Massachusetts Stormwater Handbook for consistency. In the interim, a September 2026 Supplemental Directive and a revised Site Plan Review Requirements document will be issued online concurrently with the final Regulations. These documents will direct project applicants to the appropriate resources for stormwater system and site design requirements.





September 10, 2026

Via Email

John Nardone, Commissioner
Cambridge Department of Public Works
147 Hampshire St.
Cambridge, MA 02139

RE: Charles River Watershed Association's comments regarding the proposed updates to the City of Cambridge's Land Use Regulations

Dear Commissioner Nardone,

The Charles River Watershed Association (CRWA) strongly supports the proposed updates to the City of Cambridge's Land Use Regulations that lower the threshold for development and disturbance activities requiring a Stormwater Control Permit. In our heavily urbanized environment, effective stormwater control is critical to protecting communities including healthy rivers and streams. Increasing rainfall intensity driven by climate change and the growing likelihood of localized flooding require that we carefully consider every opportunity to implement robust stormwater controls.

We commend the City of Cambridge for expanding the triggers for a Stormwater Control Permit. Capturing projects based on the proposed criteria are excellent foundational steps toward better municipal water management. However, these changes must be considered holistically within the broader context of the City's other policies with regard to development.

The Context of Reduced Setbacks and Small Lot Sizes

Improvements to the City's regulations must be viewed in the context of recent zoning changes that set side- and rear-lot setbacks for multi-family housing to a mere 5 feet. This zoning shift will inevitably lead to developments with significantly larger impervious footprints and the widespread removal of mature tree canopies. Crucially, 5-foot setbacks create a "zero-margin" environment for runoff. With severely limited space for Best Management Practices (BMPs), unmanaged runoff and undersized stormwater management systems will immediately discharge onto neighboring properties (bad) or into the municipal system (worse), risking localized flooding and property damage.

Furthermore, we urge the City to address a critical blind spot in the current and proposed regulatory framework: the significant number of parcels in the City that are under 5,000 square feet. Historically, these small lots have been broadly exempt from stormwater thresholds because the potential for development on these lots was constrained by zoning restrictions. With the new setback allowances, those restraints no longer exist, therefore, developers are now highly incentivized to maximize the buildable footprint on these micro-lots, often resulting in near-total impervious lot coverage.

While a single sub-5,000-square-foot lot may seem insignificant in isolation, the cumulative impact of aggressive infill across hundreds of these lots will overwhelm existing drainage infrastructure and exacerbate neighborhood flooding. To prevent this "death by a thousand cuts," it is imperative that lots under 5,000 square feet are no longer granted blanket exemptions, and that any substantial infill on these parcels triggers, at minimum, a minor

stormwater review.

Because the reduced setbacks will allow for substantial, dense infill on smaller lots, the currently proposed thresholds still leave a dangerous gap in runoff management. To truly protect our infrastructure and neighborhoods, we strongly urge the City to implement [Climate Adaptation Stormwater Standards](#) (CASS) to capture smaller, yet highly impactful, lot disturbances. We propose the following tiered permit structure that treats redevelopment and new development as equal and should be added to the regulations:

- **Minor Permit:** Required for smaller projects, such as small additions or driveways, creating between 400 and 1,000 square feet of new impervious area, or projects disturbing greater than 5,000 square feet of land.
- **Extensive Retrofit Permit:** Required for major renovations or redevelopments that cost more than 30% of the property's assessed value. These projects should be required to either reduce the existing impervious area by 20% or install stormwater controls that manage runoff from the equivalent of 20% of that existing area.
- **Major Permit:** Required for developments adding more than 1,000 square feet of new impervious surface, or projects with high pollution potential. These projects must be required to capture and retain stormwater from up to a 100-year storm event.

Concurrent Updates to Technical Guidance and BMP Solutions

Finally, while updating the Land Use Regulations is a vital structural change, these thresholds will only be effective if the underlying technical guidance dictates resilient design. We urge the City to concurrently update the *June 2021 Supplemental Directive: Wastewater and Stormwater Management Guidance for residential projects*. In its current form, the Directive lacks the detail necessary to protect our waterways and adjacent properties in a densely built environment.

Specifically, the Directive must be updated to require mandatory soil and groundwater testing for infiltration systems on small lots. Furthermore, it must account for system capacity reductions due to known failure modes - such as plugged permeable pavers, frozen green roofs, and debris fouling in drywell systems - by applying realistic permeability factor reductions based on material types. To ensure these systems function long-term without placing an undue enforcement burden on DPW engineers, we suggest the City develop "pre-approved," standardized BMP solutions for smaller lots that include mandatory, recorded maintenance checklists for property owners.

CRWA appreciates the City's proactive approach to stormwater management and urges the adoption of these stronger standards to ensure our community remains resilient in the face of ongoing development and a changing climate.

Sincerely,

Michael DiDomizio,
Senior Stormwater Program Manager
Charles River Watershed Association

Jon Flynn,
Legal Director
Charles River Watershed Association



September 12, 2026

Via Email

TO: John F. Nardone, Commissioner
City of Cambridge Department of Public Works
147 Hampshire St.
Cambridge, MA 02139
CC: City Clerk
FROM: Karen Brushett, BSME, PMP
51 Cushing St.
Cambridge, MA 02138
RE: Public Comment on Proposed 2026 Land Disturbance / Stormwater Regulation Updates

Dear Commissioner Nardone and DPW Staff,

My background is in mechanical engineering, primarily chemical processing and utility system design and operation. I have managed a municipal wastewater treatment facility subject to MassDEP and NPDES permit requirements, managed engineering teams, and managed a project portfolio exceeding \$100 million.

I appreciate DPW's work to update the Land Disturbance Regulations and I support the City's effort to capture more redevelopment projects and make stormwater expectations clearer. I am also supportive of the September 10 comments submitted by the Charles River Watershed Association (CRWA). My comments below are intended to build on that work and focus on implementation: making the rules clear enough that applicants, designers, reviewers, property owners, and abutters understand what is required and can rely on consistent engineering standards.

I recognize that the City's public-comment memo describes this amendment primarily as a change to project thresholds, rather than a full update of the City's stormwater storage and water-quality standards. However, the effectiveness of the new thresholds depends on the technical guidance underneath them. I therefore recommend that a technical-guidance update be coordinated so that the new project categories have clear, enforceable design standards when they take effect.

Summary of Recommendations

- Use a tiered stormwater review structure informed by CRWA's Climate Adaptation Stormwater Standards (CASS), including meaningful review of smaller projects and a stronger retention standard for larger projects.
- Clarify exactly which Articles of the Land Disturbance Regulations apply to each project category. An applicability matrix would be the simplest approach.
- For the mid-tier Stormwater Site Plan Review category, replace or tightly define the phrase 'to the maximum extent practicable' with an objective standard and a documented infeasibility process.
- Clarify how gravel, permeable pavement, green roofs, overhangs and other covered surfaces are treated for impervious-area thresholds versus stormwater-management credit.
- Clarify professional qualifications so that hydrologic/hydraulic design and infiltration-system calculations are sealed by a professional whose license and demonstrated competency cover that work, while surveyors may continue to certify survey and as-built information as appropriate.
- Update the technical guidance to require site-specific soil and groundwater data for infiltration systems, provide clearer design protections for abutting properties, and account for long-term performance and maintenance of Best Management Practices (BMPs) such as permeable pavement and green roofs.

1. Adopt a Tiered Stormwater Review Structure Informed by CRWA CASS

CRWA's September 10 letter recommends a tiered system that reaches smaller projects, including a Minor Permit for 400 to 1,000 square feet of new impervious area (or more than 5,000 square feet of land disturbance); an Extensive Retrofit Permit for major redevelopment costing more than 30% of the property's assessed value, with either a 20% reduction in existing impervious area or controls for the

equivalent area; and a Major Permit for projects adding more than 1,000 square feet of impervious area or presenting high pollution potential. CRWA also recommends a 100-year retention standard for the Major tier.

I support the tiered concept, but I think it can be adapted to fit Cambridge's existing review structure rather than copied verbatim. One possible Cambridge framework would be:

No permit / best practices: Less than 400 square feet of new impervious area, where no other City stormwater trigger applies. No mandatory stormwater system, but clear best practices should be provided.

Minor review: Approximately 400 to 1,000 square feet of new impervious area, or projects disturbing more than 5,000 square feet of land. The requirement should be simple and scaled to the project. For example, the City could require management of a defined design volume on the newly created impervious area.

Extensive retrofit / mid-tier review: Projects that meet the City's proposed Stormwater Site Plan Review criteria, or the substantial redevelopment criteria (such as a renovation cost threshold as proposed by CRWA). These projects should meet the City's stormwater standards fully unless a specific requirement is *demonstrated* to be infeasible. Projects adding more than 1,000 square feet of new impervious area or presenting high pollution potential should also be subject to the CASS 100-year retention standard.

Major Stormwater Control Permit: Projects meeting the City's proposed Stormwater Control Permit triggers should meet all applicable Land Disturbance Regulation requirements, including enforceable O&M, inspection, as-built and performance-guarantee requirements, and should be subject to the CASS 100-year retention standard.

100-year retention: clarify the comparison to Cambridge's current standard

Cambridge's June 2021 Supplemental Directive already uses climate-adjusted 2070 rainfall values. For quantity control, it requires storage of the runoff volume between the pre-construction 2-year, 24-hour hydrograph and the post-construction 25-year, 24-hour hydrograph. The 2070 25-year rainfall depth in the City's table is 8.22 inches.

CRWA currently describes the CASS 100-year standard differently: it identifies the 2025 Charles River watershed 100-year, 24-hour storm as approximately 8.78 inches and calls for elimination of runoff from that 100-year event. Therefore, the difference is not simply 8.22 inches versus 8.78 inches. The proposed CASS approach also changes the performance requirement from retaining the volume between two hydrographs to retaining the 100-year event itself.

I recommend that DPW evaluate CRWA's CASS 100-year retention standard for projects meeting the CASS Major Permit criteria.

2. Clarify Which Regulatory Articles Apply to Each Project Category

The draft applicability language now brings two types of projects into the regulation: projects requiring a Stormwater Control Permit and projects requiring Stormwater Site Plan Review through a Building Permit. This is a good change, but the later Articles are not consistently written for both categories.

For example, Article II's permit-application requirements are written around the Stormwater Control Permit. Article VI states that the owner must submit an O&M Plan for stormwater measures incorporated in the Stormwater Control Permit. Other provisions governing inspections, bonds, completion documents and enforcement also refer specifically to the permit. It is therefore not clear which of those requirements apply to the new mid-tier projects that are subject to this Regulation but do not receive a Stormwater Control Permit.

I recommend adding a simple applicability table or appendix that lists Articles I through X and identifies, for each project category, whether the Article is: (1) fully applicable, (2) applicable with modified requirements, or (3) not applicable. This would improve consistency for DPW staff and applicants and should reduce permitting questions and rework.

3. Make the Mid-Tier Compliance Standard Objective & Clarify Definition of Infeasible

The City's summary memo states that projects in the Stormwater Site Plan Review category must meet Cambridge standards for water quality and peak rate 'to the maximum extent practicable.' The phrase is important because it determines how much stormwater control will actually be required on a large number of mid-sized projects. However, the proposed regulation does not clearly establish how "maximum extent practicable" will be applied to this category.

I recommend a more objective structure: require full compliance with the applicable stormwater standards unless a specific requirement is demonstrated to be infeasible and require the applicant to document the basis for that conclusion. The draft regulation already defines 'Infeasible', but this definition must be updated. A project should not be allowed to create its own infeasibility by first maximizing the building envelope and then treating the remaining lack of space for stormwater management as an unavoidable site constraint. The fact that zoning permits a particular building envelope should not, by itself, establish that stormwater requirements are technologically or economically infeasible.

If DPW prefers to retain 'maximum extent practicable,' the City should at least define the documentation required, the factors DPW will consider, and the minimum level of performance that cannot be waived. That gives designers a predictable target and gives DPW staff a consistent basis for review without eliminating reasonable flexibility on genuinely constrained sites.

4. Clarify the Impervious Surface / Area Definition and Treatment of BMPs

The draft improves the definition of Impervious Surface or Area and specifically identifies paved surfaces, rooftops, swimming pools, patios, and paved, gravel and compacted-dirt surfaced roads. I recommend a little more clarification because these classifications now directly affect whether a project crosses a regulatory threshold.

- Clarify whether gravel driveways, parking areas and other compacted gravel surfaces are treated the same way as gravel roads and establish an objective standard for what types of gravel are considered pervious versus impervious.
- Permeable pavement & pavers may be an effective BMP when properly designed and maintained, but maintenance on private properties is not guaranteed and therefore should be discounted appropriately.
- Treat roofs consistently for applicability calculations, including green roofs, classifying these as impervious.
- Many exceptions exist in the Zoning Ordinance within the setbacks, like decks, stairs, window wells, awnings, bay windows, canopies, bike racks and fire escapes. The regulation should clarify how these features are treated when calculating impervious area.

The objective should be one clear DPW definition that is consistent enough with zoning terminology to avoid conflicting classifications.

5. Clarify Professional Qualifications for Stormwater Design

Article IV currently allows a Stormwater Management Plan to be signed by a Massachusetts Registered Professional Civil Engineer, Professional Land Surveyor, or Registered Landscape Architect. I recommend separating the certification of survey/as-built information from responsibility for hydrologic and hydraulic design.

A land surveyor has an important role in documenting property boundaries, elevations, existing conditions and as-built locations. However, calculations involving runoff, storage, infiltration capacity, groundwater mounding and system hydraulics should be prepared and sealed by a licensed professional whose scope of practice and demonstrated competency include that work.

6. Update the Technical Guidance Concurrently

I strongly recommend updating the 2021 Supplemental Directive to Stormwater Management to address the following items, which are difficult to resolve through project-by-project judgment.

Site-specific soil and groundwater testing

Infiltration-system design should be based on site-specific field information at the location and elevation of the proposed infiltrating surface. MassDEP's draft updated Stormwater Handbook states that a Title 5 percolation test is not an acceptable substitute for saturated hydraulic conductivity because it can overestimate Ksat. The draft Handbook also emphasizes identifying seasonal high groundwater and generally maintaining at least two feet of separation below infiltration stormwater control systems.

I recommend that Cambridge require appropriate field determination of infiltration capacity/Ksat, seasonal high groundwater, soil profile and other limiting layers when infiltration is relied on for compliance, using methods accepted by MassDEP's then-current Handbook/guidance or other recognized methods approved by DPW. The City should also specify when groundwater-mounding analysis is required.

Protection of abutting properties

Article IV already states that stormwater discharge must not have a negative impact on adjacent or abutting properties. The technical guidance should make that requirement more usable by providing design criteria or examples for dense urban lots. At a minimum, the guidance should address separation from foundations and property lines for underground infiltration systems, when groundwater-mounding analysis is needed, acceptable design approaches where standard separation cannot be achieved, and where emergency overflow may be directed when a system exceeds its design capacity.

MassDEP's guidance can provide one useful reference point for some subsurface infiltration systems; for example, it generally uses a 10-foot minimum setback from building foundations for certain subsurface infiltration systems and recognizes that greater separation may be necessary depending on foundation conditions and anticipated groundwater mounding. Cambridge can determine whether different or more conservative criteria are appropriate for its dense urban conditions.

Long-term performance and maintenance of BMPs

I support the use of infrastructure such as permeable paver systems, green roofs, drywells, and other infiltration-based BMPs; however, the regulations should distinguish between theoretical design performance when a system is new and the level of performance reasonably to be expected over decades of private ownership where consistent long-term maintenance cannot reasonably be assumed.

CRWA's comment letter appropriately identifies well-known failure mechanisms, including clogging of permeable pavers, debris and fouling of drywell systems and reduced performance of green roofs under adverse weather conditions. These concerns are especially important for smaller residential projects where the required maintenance is unlikely to occur. The City should therefore not assume full design capacity indefinitely but rather require a conservative long-term performance assumption for capacity reduction based on expected degradation.

For smaller residential projects, the stormwater system should be designed so that failure or substantial performance degradation of a maintenance-dependent system does not result in uncontrolled runoff or impacts to adjacent properties.

At a minimum, designs should include accessible inspection and clean out ports, clearly assigned maintenance responsibilities, a safe overflow or secondary drainage path and documentation of the system's expected performance under reasonably foreseeable degraded conditions.

Conclusion

I support the City's effort to lower stormwater thresholds and capture more redevelopment. My main concern is that the new categories need equally clear technical and administrative requirements. A regulation that is specific about applicability, design criteria, documentation and maintenance will be easier for DPW to administer, easier for applicants to design to, and more protective of the City's infrastructure, waterways and neighboring properties.

Thank you for the opportunity to comment and for the work DPW staff is doing on these updates.

Sincerely,



Karen Brushett

Mechanical Engineer (BSME)

Project Management Professional (PMP)

Key Sources Referenced

- [City of Cambridge, Proposed Land Disturbance Regulations \(2026 redline\)](#)
- [City of Cambridge, June 2021 Supplemental Directive to Wastewater and Stormwater Management Guidance](#)
- [Charles River Watershed Association, Climate Adaptation Stormwater Standards \(CASS\)](#)
- CRWA, September 10, 2026 Cambridge Land Use Regulation comment letter (provided with these comments)
- [MassDEP, Draft Massachusetts Stormwater Management Handbook](#)
- [MassDEP, Standard Design Guidelines for Shallow UIC Class V Injection Wells](#)

City of Cambridge
Dept of Public Works

Shannon Finley
10 Perry St.
Cambridge, MA 02139

Re: Proposed Land Disturbance Amendments 2026

11 Sept 2026

I would like to thank you for addressing the new pressures put on our stormwater drainage system now that residential lots can be developed to an extent resulting in less naturally permeable space.

After reading through the document many times, it isn't clear what is required for smaller projects that are on lots 5,000sf or larger, triggering a Stormwater Site Plan Review. Is it the same requirements as for large projects?

Are these projects, if required to have storage tanks for stormwater collection, required to to meet all requirement stipulated in Article IV Stormwater Management Standards?

Are these projects, if required to have storage tanks for stormwater collection, required to to meet all requirement stipulated Article VI Operation And Maintenance Standards?

Are soil and perch test required or is that under the scope of the Licensed Civil Engineer or Landscaper?

Does the City distinguish as to what type of gravel is considered pervious or impervious?

Permeable pavers do not retain their permeability unless maintained. They should not ever count towards permeable area calcs.

It isn't clear how emergency discharge from underground storage tanks is factored in. Is this allowed with an above-ground pop-up emitter? If so, is there a requirement on location as to not drain across abutters property? No outlet should drain directly to sewer as that avoids proper design and failure of system is undetectable. If a failed tank pumps discharge into sewer it defeats the purpose and will put pressure on sewer and CSOs.

Thank you for considering my comments and questions.
Sincerely, Shannon

617-233-3245
Shannonfm@hotmail.com

To: Service Requests <theworks@Cambridgema.gov>

Subject: Comments regarding the proposed updates to the City of Cambridge's Land Use Regulations

Dear Commissioner Nardone,

I'm writing to add my support to the attached CRWA comments on the update to Cambridge Land Use Regulations, attached here.

As a Cambridge resident keeping a close eye on permitting under the Multi-family Housing Ordinance, I am concerned about the city's current practices in permitting new buildings with allowances to direct significant stormwater overflows into the municipal water system. I am familiar with the relief that the city provided the project at 90 Lexington Ave. and am disappointed that the city chose to direct a solution that will produce decades of overflows into our rivers instead of requiring the developer to design a compliant system (if that's even possible on that site). If that is representative of what's happening across the city to meet demands for new housing, DPW should at least make that known, so voters can react accordingly. I hope your proposed updates will help clarify city requirements going forward, so that practice stops.

As an active rower and recent former President of Cambridge Boat Club, I am extra-sensitive to the increasing frequency and intensity of CSOs into the Charles. It's no fun (and not so safe) to be on the river under those circumstances, and if a major CSO happened around Head of the Charles weekend, that would be a serious black eye for the city's reputation and economy. I'm with CRWA in believing we should target zero CSOs by 2050 and hope your updates will support that goal.

I appreciate the City's proactive approach to stormwater management and urge the adoption of the stronger standards suggested by CRWA.

Sincerely,

Thomas M. Pounds

102 Lexington Ave., Cambridge