



AGENDA
BIRMINGHAM ENVIRONMENTAL SUSTAINABILITY COMMITTEE
MONDAY, SEPTEMBER 15, 2025
BIRMINGHAM CITY HALL, 151 MARTIN ST, ROOM 202-203, BIRMINGHAM MI *
******* 5:30 PM*******

- 1) **Call to Order**
 - 2) **Roll Call**
 - 3) **Review the Minutes**
 - A. **Minutes**
 - 4) **Review of the Agenda**
 - 5) **New Business**
 - A. **Single-Family Stormwater Management – Study Session**
 - 6) **Miscellaneous Communications**
 - A. **Appointment to the SEMCOG Flooding Task Force**
 - 7) **Open to the Public for Items Not on the Agenda**
 - 8) **Adjournment**
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*Please note that board meetings will be conducted in person once again. Members of the public can attend in person at Birmingham City Hall, 151 Martin St., or may attend virtually at:

Link to Access Virtual Meeting: <https://bhamgov-org.zoom.us/j/84305107066>

Telephone Meeting Access: 833 928 4608 US Toll-free

Meeting ID Code: 843 0510 7066

Notice: Individuals requiring accommodations, such as interpreter services for effective participation in this meeting should contact the City Clerk's Office at [\(248\) 530-3405](tel:2485303405) at least on day in advance of the public meeting.

Las personas que requieren alojamiento, tales como servicios de interpretación, la participación efectiva en esta reunión deben ponerse en contacto con la Oficina del Secretario Municipal al [\(248\) 530-3405](tel:2485303405) por lo menos el día antes de la reunión pública. (Title VI of the Civil Rights Act of 1964).

A PERSON DESIGNATED WITH THE AUTHORITY TO MAKE DECISIONS MUST BE PRESENT AT THE MEETING.

City of Birmingham
Regular Meeting of the Environmental Sustainability Committee
August 25, 2025

Rooms 202-203
151 Martin Street, Birmingham, Michigan

Minutes of the regular meeting of the City of Birmingham Environmental Sustainability Committee held on August 25, 2025. The meeting convened at 5:30 p.m.

1) Roll Call

Present: Committee Members Lara Edwards, Debra Horner, Joe Mercurio, Jess Newman, Sara Rubino, Trenton Chapman

Absent: Committee Members Harvey Bell; Student Representatives Penelope Graves, Abhishek Thota

Staff: City Planner Aldred-Arens; Planning Director Dupuis, Assistant City Manager Fairbairn

2) Review of the Minutes – June 23, 2025

Motion by Bell

Seconded by Horner to approve.

Motion carried, 7-0

VOICE VOTE

Yeas: Edwards, Mercurio, Rubino, Chapman, Bell, Newman, Horner

Nays: None

3) Review of the Agenda

4) New Business

A. Community Engagement Plan – Final Review

CP Aldred-Arens and PD Dupuis presented the item and answered informational questions from the ESC.

ESC members raised the following points during discussion:

- The Plan looked great.
- For 'Sustained Engagement' under 'Metrics', staff should devise ways of tracking repeat engagement. The process of tracking repeat engagement should be streamlined as much as possible so as not to create too much work for staff.
- A couple of typographical errors were noted for correction.

Motion by Edwards

Seconded by Rubino to adopt the community engagement plan with the changes recommended today on 8/25, and to share the finalized version with the Commission.

Motion carried, 7-0

VOICE VOTE

Yeas: Edwards, Mercurio, Rubino, Chapman, Bell, Newman, Horner

Nays: None

B. GPLE & Leafblowers – Study Session

PD Dupuis presented the item and answered informational questions from the ESC.

ESC members raised the following points during discussion:

- References to lawn equipment could be changed to landscaping equipment.
- It was not clear that maintaining the City's golf courses aligns with the City's sustainability plan. It could make sense to have the users of the City's golf courses pay the cost of maintaining the golf courses via electric equipment.
- A longer phase-out for the City's golf courses could occur over time – maybe until 2035 – or the ESC could agree to reevaluate how the golf courses are maintained at a later date.
- Most residents are not likely enthusiastic about financially supporting the City's golf courses.
- Whether to exempt residential properties of a certain size should be considered. Open space or pervious/impervious could be two other factors considered.
- Working to ban gas-powered lawn equipment would be worthwhile, even if it ends up being postponed. It ties in well with the goal of increasing naturalization of lawns within the City.
- If the goal date of banning gas powered equipment is pushed out closer to 2035, there may be opportunities for municipal, county, or regional cooperation. This could increase the likelihood that landscaping companies find it more profitable to transition to electric instead of potentially ceasing services in Birmingham.
- Large, fallen trees may require the use of gas-powered equipment.
- A communication plan for letting landscaping companies know about any future changes would be necessary.
- The City could consider implementing a buyback of gas-powered equipment to encourage the transition. It is worth acknowledging that costs of transitioning from gas to electric equipment might be a challenge for some residents.
- The City could also consider implementing a fee to continue the use of gas-powered equipment.
- In some cases, preemptive exemptions could be appropriate. If an exemption process is implemented, there could be an associated filing fee. Then that filing fee could be put towards buybacks of gas-powered equipment, purchases of electrical equipment, carbon offsets, or other options.

- The prices of gas-powered equipment for a crew of five could be determined, in order to help inform a potentially appropriate fee for continuing to use gas-powered equipment.
- It would be necessary to determine whether some of these options would be realistic for the City.
- Staff should return with the beginnings of a package of proposed ordinance updates that align with this topic.
- Like a potential sustainability fee, other potential carbon-reduction fees could be discussed at future meetings.

C. Sustainability Fee – Study Session

PD Dupuis presented the item. Staff answered informational questions from the ESC.

ESC members raised the following points during discussion:

- A sustainability-related fee is a great idea, and is firmly within the wheelhouse of the City's sustainability goals.
- These funds would be spent in part on a stormwater analyst and a sustainability director, both of which are priorities for residents and are broader applications than just carbon reduction.
- 'Resiliency fee', 'Transportation fee', or 'Sustainability fee', or would be some potential options if the fee was titled.
- The fee would not necessarily be broken out on a bill. It may not be necessary to title the fee.
- Small businesses that validate parking would also be paying the 4% fee. That said, it is important to note that the first two hours in the structures are free.
- The impact of this fee would be borne more by shoppers and commuters, and less by residents. Many residents would be able to walk into the downtown.
- It would be interesting to hear examples of revenue-generating fees like this beyond New York City.

D. Single-Family Stormwater Management – Study Session

CP Aldred-Arens and PD Dupuis presented the item and answered informational questions from the ESC.

ESC members raised the following points during discussion:

- Aiming for homeowners to manage the first flush of runoff might be easier to understand.
- While there is some amount of pollutants in the first flush, each homeowner would only be managing the runoff from their property.
- It might be useful to determine whether the first flush or 90th percentile would come closer to meeting the City's stormwater retention and flooding reduction goals.
- There should be further consideration of whether stormwater management should become required when any change to a residential property is made, whether it should become required when any change over a certain threshold is made, or whether it should only apply to new builds.

- If the acreage of impervious surfaces created by new builds in the last few years could be compared to the acreage of impervious surfaces in the City created by other changes to a property in the last few years, it could help inform whether the policy should pertain to new builds only, changes over a threshold, or all changes.
- It might be appropriate to require stormwater retention once the impervious surface of a lot exceeds a certain percentage of the total lot.
- Reducing the amount of impervious surface allowed on lots would also be an efficient way of improving stormwater management in the City.
- Since it might not be efficient to require stormwater management after smaller changes to residential lots, those lots could be encouraged to participate in other stormwater management/sustainability efforts.
- All of the City of Ann Arbor is on a separated system. Grand Rapids offers a credit system. These could help inform how Birmingham writes its policy.

5) Miscellaneous Communications

6) Open to the Public for Items Not on the Agenda

7) Adjournment

No further business being evident, the meeting adjourned at 7:00 p.m.



Summer Aldred-Arens, City Planner



Laura Eichenhorn, City Transcriptionist



MEMORANDUM

Planning Department

DATE: September 15, 2025

TO: Environmental Sustainability Committee

FROM: Summer Aldred-Arens, City Planner

SUBJECT: Single-Family Stormwater Management

Background Summary

The City of Birmingham recently adopted the Oakland County Water Resources Commissioner's stormwater standards for commercial and multifamily development projects over 0.5 acres. These standards require on-site detention and treatment of stormwater to manage peak flows and reduce pollutant discharges into the municipal system. At present, there are no equivalent requirements for single-family residential construction.

On August 25, 2025 ([Agenda](#) – [Packet](#)), staff outlined the rationale for extending stormwater requirements to single-family residential projects, including redevelopment activity that increases impervious surface coverage and contributes to unmanaged runoff. The Committee was presented with Michigan examples such as Ann Arbor and Grand Rapids, discussed the "first flush" management approach, and reviewed best management practices appropriate for lot-level stormwater mitigation.

Engineering Discussing and Findings

Following consultation with the City Engineer, Melissa Coatta, and two Oakland County Water Resource Commission engineers, staff has refined the proposed approach to focus on engineering feasibility and practical homeowner compliance. The consensus was to recommend adopting the "first flush" one-inch rainfall standard, a method that effectively captures pollutant-laden runoff while remaining administratively manageable.

Two-Bucket Regulatory Framework

Engineering review supports dividing requirements for single-family stormwater management into two categories. For new builds and complete reconstructions, projects would be required to capture and manage the first inch of stormwater across the maximum lot coverage (30%) and minimum open space (40%). Compliance could require a blend of at least 40% natural measures - such as trees, rain gardens, or infiltration basins - and up to 60% built measures, including

storage systems, pipe expansion, or underground detention. This approach ensures that redevelopment projects contribute proportionally to system resilience.

For additions and incremental increases in impervious surfaces, requirements could scale with project size. Smaller projects under 500 square feet, such as patios or walkways, could be limited to natural measures like tree planting, rain gardens, or infiltration beds. Larger projects over 500 square feet could follow the same 40% natural and 60% built framework as new builds, scaled to the size of the impervious expansion. This two-tiered system attempts to balance ease of compliance with meaningful stormwater management.

Category	Applicability	Requirement	Type of Measures
New Builds & Complete Reconstructions	Full tear-down/rebuilds and new homes on undeveloped parcels	Capture & manage first 1 inch of stormwater across max lot coverage (30%) and min open space (40%)	At least 40% natural (trees, rain gardens, infiltration basins) and up to 60% built (storage systems, pipe expansion, underground detention)
Additions & Incremental Impervious Surfaces	Driveways, patios, additions, other impervious surface expansions	<ul style="list-style-type: none"> <500 sq. ft.: Natural measures only ≥500 sq. ft.: same 40% natural / 60% built split as new builds 	Natural = tree planting, rain gardens, permeable pavements; Built = subsurface storage, oversized laterals, engineered detention

Engineering Options Considered

The City Engineer demonstrated in an example a possible built measure that expanding lateral storm pipes from the conventional six-inch diameter to ten or twelve inches, paired with a flow restrictor at the municipal connection, could provide a cost-effective and technically feasible solution for many projects. Larger pipe diameters increase temporary storage capacity, while flow restrictors slow release, thereby reducing peak flow rates into the municipal system. This method builds on existing homeowner connections, and is supported by early modeling which indicates that expanded-diameter laterals can meaningfully retain first-flush volumes, particularly when paired with surface infiltration features.

For smaller-scale projects under 500 square feet, natural measures remain the preferred option. These include planting trees, installing rain gardens, or constructing shallow infiltration beds. Such measures promote infiltration at the runoff source, are relatively low-cost and manageable for homeowners, and provide co-benefits such as shading, biodiversity enhancement, and improved aesthetics.

For larger projects, staff recommends a hybrid approach combining natural and built measures. Forty percent (40%) of the required storage volume would be achieved through natural strategies such as rain gardens, permeable pavements, or tree plantings, while the remaining sixty percent (60%) would be provided by built measures including subsurface storage, oversized laterals, or

engineered detention systems. This hybrid framework balances environmental performance with engineering reliability, ensuring redundancy and adaptability across a variety of site conditions.

Basis of Calculation and Demonstrated Impact

The sizing methodology builds off of the mathematical considerations used by Ann Arbor, which establishes that required storage in cubic feet equals the new impervious area in square feet multiplied by 0.08. This formula translates the one-inch first flush into a parcel-scale calculation that can be applied consistently across Birmingham, providing a clear standard for both homeowners and staff.

Staff analyzed a representative single-family parcel to illustrate how the proposed framework functions in practice. The lot measures approximately 10,935 square feet. Under existing conditions, impervious surfaces covered 2,140 square feet; proposed redevelopment would expand this to 4,315 square feet, an increase of 2,174 square feet. Using the Ann Arbor standard of New Impervious Area \times 0.08, the required on-site storage volume is approximately 174 cubic feet.

Engineering solutions demonstrate that this storage requirement is achievable with standard measures:

- Pipe Expansion: A 191-foot lateral at 6 inches provides only \sim 38 cubic feet of storage. Expanding that same line to 12 inches increases storage to \sim 150 cubic feet, covering nearly the full requirement.
- Catch Basins: A standard 4-foot diameter \times 2-foot deep catch basin provides \sim 25 cubic feet of storage.
- Combination: A single upsized lateral paired with one catch basin achieves the required \sim 174 cubic feet, illustrating that common, low-impact modifications can fully meet the City's proposed standard.

Modest increases in pipe diameter or the inclusion of small-volume structures can accommodate stormwater requirements without excessive cost or design complexity. Moreover, integrating natural measures (such as rain gardens or tree plantings) further reduces reliance on engineered storage, providing both hydrologic and environmental co-benefits.

Next Steps

Staff recommends that the Committee provide feedback on four key issues:

- Consider directing staff to pursue the one-inch first flush standard as the basis for single-family stormwater requirements.
- Consider the two-bucket framework for new builds and incremental additions.
- Guidance on the appropriate balance between natural and built measures to ensure both environmental integrity and engineering feasibility.

Input from the Committee will guide the drafting of ordinance language and technical guidance for subsequent review by the Planning Board and the City Commission.

September 2, 2025

Mr. Nick Dupuis,

I am pleased to appoint you to SEMCOG's Flooding Task Force, which will guide the development of a regional Flooding and Resilience Plan. Your commitment to this important work is greatly appreciated by SEMCOG members and staff, and I extend my personal thanks for your willingness to serve.

The Task Force will provide expertise and feedback on nature-based solutions, conservation priorities, community flooding impacts and locations, infrastructure vulnerabilities, and tools to support informed local decision-making. Members will help establish a regional collaboration framework for flooding, including outreach and education messages, while supporting emergency management and response activities at state and local levels. The group will share perspectives from diverse sectors, compile and coordinate projects across transportation, environmental, water infrastructure, and private utilities, and identify funding opportunities to advance implementation. Additionally, the Task Force will identify and prioritize regional policies and actions to strengthen flooding and infrastructure resilience across the SEMCOG region.

The Task Force will be co-chaired by Macomb County Board of Commissioners Chairman, Don Brown and City of Taylor Mayor, Tim Woolley. Please see the attached one-pager for more information on the initiative. Please complete the [pre-meeting survey](#) by Friday, **September 12**, to share how flooding has affected your community and to identify your priorities for the Task Force.

Questions? Contact [Katie Grantham](#), Planner III, Environment and Infrastructure at (313) 296-9096 and [Beheshteh Makari](#), Planner III, Transportation Planning and Programming at (313) 300-4364.

Thank you again for your participation in this important regional collaboration.

Sincerely,



Gwen Markham
SEMCOG Chairperson
Oakland County Commissioner