



Department of Public Works and Parks

6801 Delmar Boulevard, University City, Missouri 63130, Phone: (314) 505-8560, Fax: (314) 862-0694

**AGENDA
COMMISSION ON STORM WATER ISSUES
HEMAN PARK COMMUNITY CENTER
975 PENNSYLVANIA
Tuesday, December 2, 2025
3:30 PM**

1. MEETING CALLED TO ORDER

2. ATTENDANCE-ROLL CALL

3. APPROVAL OF AGENDA

4. APPROVAL OF MINUTES

❖ November 4, 2025

5. CITIZEN COMMENTS

6. ANNOUNCEMENTS BY COMMISSIONERS

7. SUBCOMMITTEE REPORTS

- ❖ Monitoring Subcommittee Report
- ❖ AdHoc Subcommittee Report

8. NEW BUSINESS

9. OLD BUSINESS

- ❖ Draft Stormwater Master Plan-Continue discussions

10. COUNCIL LIAISON COMMENTS

11. ADJOURNMENT



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Draft MINUTES OF THE STORMWATER COMMISSION November 4, 2025

1. **Call to Order.** The fifty-seventh meeting of the Stormwater Commission (Commission) was called to order at 3:35 PM by Chair Todd Thompson.
2. **Attendance-Roll Call.** The following Commission members were present at the Community Center: Susan Armstrong, Garry Aronberg, Bob Criss, Phil Eastin, Mark Holly, Eric Karch, Todd Thompson. Also in attendance were John Tieman (Councilperson), Mirela Celaj (Director of Public Works), and John Muligan (City Attorney)..
3. **Visitors:** Jerald Tiers
4. **Agenda.**
 - 4.1. Commissioner Criss **moved** and second by Commissioner Eastin (Criss, Eastin) that public comment be limited to 15 minutes and individual comments to three minutes so that the commission would have time to consider efficiently the commission's published agenda items. Discussion identified many repetitious public comments about the Enclave at lengthy public comment periods at our recent meetings. But the comments gave resents a chance to voice opinoions. **Motioned passed** by voice vote with one nye.
 - 4.2. Commissioner Karch volunteered and was appointed by Chair Thompson to draft bylaws changes to reflect the motion on public comment. The bylaws change will be consider at a future meeting.
 - 4.3. The published agenda was accepted by voice vote: *Roll Call; Approval of Agenda; Approval of Minutes; Citizen Participation; New Business; Old Business; Subcommittee Reports; Council Liaison Comments; Adjournment.*
5. **Minutes.**
 - 5.1. Minutes of the October meeting were approved with the following change the title of public speaker Don Fitz should be changed to instructor environment psychology.
 - 5.2. The minutes were approved as changed by voice vote (Karch, Holly)
6. **Citizen Comments.**

Gerald Tiers, resident and former Traffic commissioner, commented that the Traffic Commission also tried to establish public comment time limit during meetings and implemented a no-response to public comment practice.
7. **Announcements by Commissioners and Staff.**

None
8. **Committee Reports**
 - 8.1. Monitoring:
 - 8.1.1. Commissioner Eastin submitted a written report that was included in the agenda. That report is attached to these minutes.
 - 8.1.2. Commissioner Eastin summarized the written report:



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- 8.1.2.1. Presented to the Council for funding is our goal is to streamline for the fire chief two components of the current early warning system.

- 8.1.2.1.1. WQ Data Live

- 8.1.2.1.1.1. At 1.5 inches of rain per hour, WQ Data Live issues an alert via Code Red to the Fire Chief.

- 8.1.2.1.1.2. WQ Data Live will not accommodate the following, therefore the fire chief does not have access to:

- 8.1.2.1.1.2.1. algorithms to report predicted water levels

- 8.1.2.1.1.2.2. cameras

- 8.1.2.1.1.2.3. iNeighborhoods water level sensors

- 8.1.2.1.2. iNeighborhoods

- 8.1.2.1.2.1.1. Cameras

- 8.1.2.1.2.1.2. Water level sensors

- 8.1.2.2. **Monitoring Subcommittee wishes to meet with the Fire Chief to get his input and needs. PW director Celaj will arrange a meeting.**

8.2. Imperviousness Bill Hoc Committee: no update.

9. New Business

None

10. Old Business.

- 10.1. The MSD Tunnel Project planned by MSD to control combined sewer overflow into River des Peres is early in the design phase.

- 10.1.1. Councilman Tieman expressed concern that residents have been contacted about easements that confused residents. He is concerned that he had not been informed of those easements requests and could not help residents.

- 10.1.2. MSD plans to have a public meeting with impacted property owners is planned in early 2026.

- 10.2. Draft Stormwater Management Plan.

- 10.2.1. Commissioners wish to see a list of MSD projects now planned for University City. **Garry Aronberg will get that list.**

- 10.2.2. Public Works Commissioner Celaj wants to bring Storm Water Management Plan to Council in near future and encouraged Commission to finalize Commissions review and recommendations.

- 10.2.3. Consultants Garry Aronberg and Eric Karch of HR Green and Reitz and Jens discussed mitigation ordinances, public-private project definitions, project prioritization, mitigation funding.

- 10.2.3.1. Discussion was extensive about public-private definitions. Commissioners agreed to consider public-private definition and discuss further at the next meeting.

- 10.2.3.2. **Garry will send benefit point work sheet to commissioners.**

- 10.2.3.3. Discussion: benefit points are not a cost to avoid skewing benefits to expensive properties.

- 10.2.3.4. Dollars are present worth of capital investment and operating but not lost time or



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loss of private property. Benefits points are intended to reflect loss of private property.

- 10.2.3.5. Cost for buyouts seems high to commissioners. Also suggested frequently flooded houses should be prioritized for buyouts. Costs presented in the draft report for buyouts includes 2.5 multiplier of appraised costs plus hazardous material disposal (eg asbestos and lead paint), closing and legal costs, staff admin time.
- 10.2.3.6. Additional project suggested for examination:
 - 10.2.3.6.1. In-line and off-line storage in River des Peres and widening the channel – using increased green space as park-like amenity. In-line storage would be floodplain benches.
 - 10.2.3.6.2. Adding wetlands to mitigate CSO.
- 10.2.3.7. Suggestions for inclusion in recommendations: public education campaign to inform residents of flood prone properties, library reference shelf, flood history disclosure to prospective buyers, collection of low floors in flood plain, collect systematically high water data, update standard flood response procedures
- 10.2.3.8. Consider using U City share of MSD stormwater funding for bonds.

11. **Council Liaison.**

Councilperson Tieman, suggested that we watch data center siting rules pending among cities and counties. Current rules for data centers seem centered on warehouses. Current rules seem to be inadequate to protect neighbors.

12. **Adjournment:** 5:50 PM (Armstrong, Aronberg).

13. **Minutes Preparation.** Minutes were prepared by Garry Aronberg.

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12/2/2025 Monitoring Committee Report

EXECUTIVE SUMMARY

Rain Gage RG2 and Water Level Sensor WL2 are experiencing issues. A detailed description of the issues follows. An executive summary For the short run, here's my recommendation:

1) Rain gage RG2

- a. RG2 has not reported data to our online system since November 8.
- b. Fieldwork and follow-up conversations with Fondriest indicates that the solar panel appears to be malfunctioning. We observed degradation of the silicone seal at the power cable junction on the face of the solar panel.
- c. Fondriest changed their solar panel design to move the junction to the bottom of the panel so it is protected from solar UV.
- d. We recommend ordering a new solar panel and battery for RG2. We requested a quote, and asked that they discount it because this seems to be a systematic issue.
- e. We request that the City use their bucket truck to remove the unit (rain gage and solar panel / battery) to temporarily move the unit to an indoor City room. The City should take special care not to damage the antenna, and we recommend first unscrewing the antenna before disconnecting the rest of the unit. We then need to mail the solar panel to Fondriest so that they can inspect it to learn why it is malfunctioning and to repair it, if feasible.

2) WL2

- a. The unit is reporting intermittently. After discussion with Fondriest, it seems the unit may not be getting enough sunlight to charge the solar panel. The battery has degraded to the point that it will no longer hold a sufficient charge. We changed settings on the unit that should significantly conserve power, however, the degraded battery is preventing us from confirming this.
- b. We ask that the City investigate the feasibility to hard-wire power to WL2, which might include requesting permission from the subdivision. Note that the subdivision's shed appears to be located on City property, which may help with negotiation. See Figure 1.
- c. In the meantime, we recommend ordering a new solar panel and battery. We requested a quote, and asked that they discount it because this seems to be a systematic issue. We expect that a fresh battery and new solar panel will allow us to test the unit's ability to perform under the revised settings. If we ultimately decide to hard-wire power to WL2, we will re-purpose the new solar panel and battery for one of the other units. Given the status of RG2, we expect we will need to replace the solar panels of RG1, RG3, and WL1



Storm Water Commission, Monitoring Subcommittee Update

11/4/2025

- The i-Neighborhood IoT platform installed at UCHS needs to have the gateway radio replaced for general update and to handle the UCity stormwater instrument data. i-Neighbors has not been successful working with school facilities personnel on replacement. Council member Lisa Brenner (with contacts at Board of Edu.) was aware of issue but thought resolved. She agreed to assist resolve of replacement.
- The tunnel water level sensor is experiencing erratic readings. Eric has been working with Joe Davidson, Fondriest to trouble shoot issues. Possible problems include:
 - o Poor solar power due to location (shade, low seasonal solar angle). An option is to add additional solar panel. (\$1,800) + 2way power splitter \$445). Option B would be run direct power line to sensor pole.
- The height of the tunnel wall and close proximity of sensor to wall may potentially be causing "peripheral interference" with radar signal. i.e. the vertical distance to normal (low) river level (~6-7m) allows radar signal circumference to expand and bounce off tunnel wall.
- Bob Criss has communicated with Joe Davidson about using the WQ DataLIVE network for directly programming flood predictive algorithm for UCity stormwater network. Davidson replied that while the WQDataLIVE could not integrate the flood predictive equations, the data could be accessed and coded with Python software. This is the same solution as proposed by Dave Sandel (i-Neighborhood) in their lot proposal for UCity. Because we are a subscriber of WQDataLive, UCity will not be charged the \$950 access fee.
- RdP monitoring upgrades funding? Dave Sandel (i-Neighborhood) has communicated he will be back in StL ~ Nov. 10th and is prepared to begin the Phase 1 & 2 programming upgrades. The two projects can be completed by 12/31/2025.
- Safety Minute. The RdP tunnel facewall "washout" (back of wall) has been backfilled with gravel. Thank you Public Works Dept.

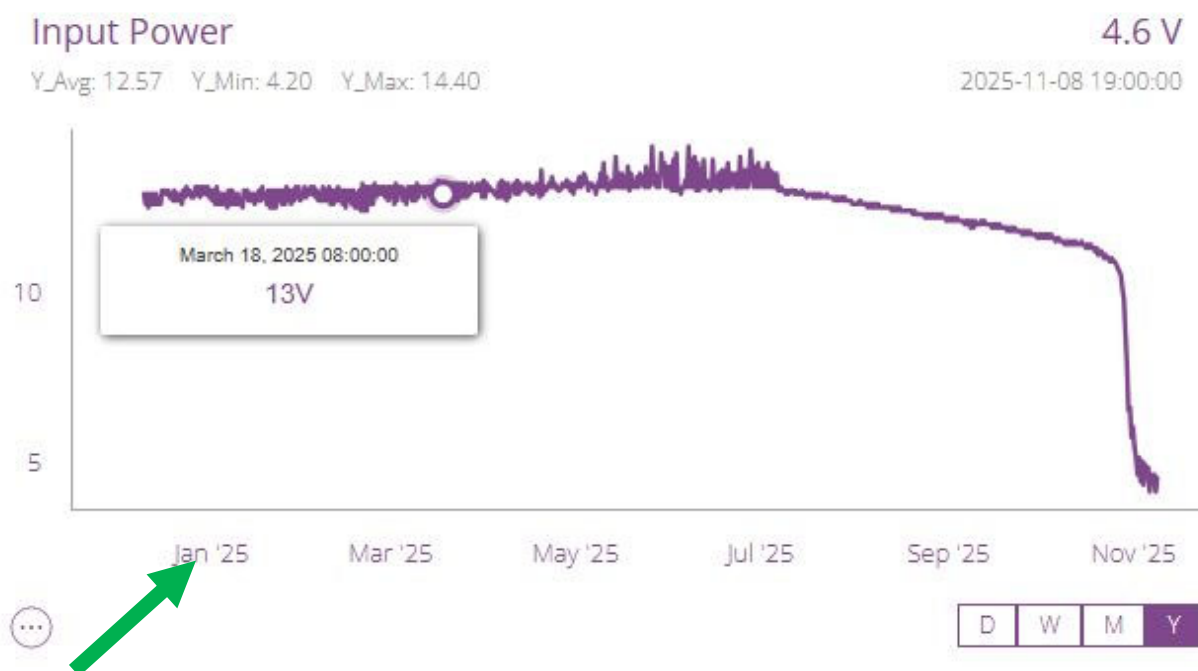


Figure 1 – Water Level Sensor WL2 – Possible Hard-Wire Power Option to Explore

DETAILED DESCRIPTION OF LATEST SYSTEM ISSUES WITH RG2 AND WL2

Issue – Rain Gage 2 (RG2) stopper reporting on November 8. We replaced the batteries in rain gages RG1 and RG2 on December 18, 2024. And we replaced the battery in RG3 on 1/28/2025.

Fondriest provided this plot showing no consistent recharge pattern after early July. The battery has gradually drained over the past few months until it reached a critical point and declined rapidly in November. At this stage, a battery replacement is necessary. A visual inspection of the solar power pack may also help determine why the system was not recharging properly.



Commissioners Criss and Karch inspected RG2 on 11/23/2025 (9:30am to 10:30am).

- RG2 sits atop a pole that is approximately 14-feet high and is 80-feet away from the nearest tree.
- System remains in place as it was installed.
- All brackets and screws were tight.
- All electric cords were attached and screwed tight.
- Antenna was slightly loose and was re-tightened with one full turn.
- No obvious signs of storm damage or vandalism.
- No leaves or debris obscuring the solar panel OR the top of the rain gage's tipping bucket catchment.
- Solar panel face has an electric connection at the top-center. The silicone around that connection appears to be degrading and has separated from the panel face in a couple of locations.

- The electric cord between the panel/battery and RG2 was unplugged, then replugged to power-cycle the unit. We heard one beep to confirm power-up. After about 60 seconds we heard three beeps. I'm not sure what that means, since I was expecting to hear 2 beeps to confirm good cell connection. I checked WQ Data Live 11/24/2025 @ 9am and RG2 continues to fail to report.

We asked Fondriest for advise on next steps?

1. Our understanding of the input power plot is that the noise ceases in July which seems to indicate that the solar panel is not charging the battery. Does that appear to be the case? Is it possible that the solar panel has become damaged by the degraded silicone?
2. Does the beep sequence (1 beep followed about 60 seconds later by 3 beeps) indicate a problem connecting to the cell signal?
3. We are prepared to buy a new battery if needed, but we thought we should try to address our first two questions as well.

Fondriest responded:


1. I would recommend sending in the solar power pack for evaluation due to the degraded silicone. We recently switched to a new solar panel design where the junction is on the bottom of the panel, so it is protected from solar UV.
2. 3 beeps means either the cell modem did not turn on (likely due to the low battery) or the cell signal strength was too weak.
3. I would recommend sending in the solar power pack for repair or purchasing a new solar power pack with the new design and better charging. Link for new solar panel.
<https://www.fondriest.com/nexsens-sp-series-solar-power-packs.htm>

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Figure 2 – Fondriest Solar Panel – New Model



Figure 3 – Gage at beginning of site visit.



Figure 4 – Gage at beginning of site visit.



Figure 5 – Gage at beginning of site visit.



Figure 6 – Gage tipping bucket catchment. No obstructions.



Figure 7 – Solar Panel.



Figure 8 – Solar Panel – Silicone Detail



Figure 9 – Solar Panel – Silicone Detail



Figure 10 – Solar Panel – Silicone Detail