



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, March 3, 2026
3:30 PM**

1. MEETING CALLED TO ORDER

2. ATTENDANCE-ROLL CALL

3. APPROVAL OF AGENDA

4. APPROVAL OF MINUTES

❖ February 3, 2026

5. CITIZEN COMMENTS

6. ANNOUNCEMENTS BY COMMISSIONERS

7. SUBCOMMITTEE REPORTS

- ❖ Monitoring Subcommittee Report
- ❖ AdHoc Subcommittee Report

8. NEW BUSINESS

- ❖ Commission Review of Draft Proposal– iNeighborhood River Des Peres Monitoring System

9. OLD BUSINESS

- ❖ Draft Stormwater Master Plan-Continue discussions

10. COUNCIL LIAISON COMMENTS

11. ADJOURNMENT



Storm Water Task Force
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Draft MINUTES OF THE STORMWATER COMMISSION February 3, 2026

1. Call to Order. The sixtieth meeting of the Stormwater Commission (Commission) was called to order at 3:38 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, Mirela Celaj (Director of Public Works), and John Muligan (City Attorney). John Tieman (Councilperson).
3. Visitors. Tom Sullivan, Jerold Tiers, anonymous woman.
4. Agenda. The published agenda was accepted by voice vote (moved by Messrs. Aronberg and Holly): Roll Call; Approval of Agenda; Approval of Minutes; Citizen Participation; New Business; Old Business; Subcommittee Reports; Council Liaison Comments; Adjournment.
5. Minutes. Approval of the minutes of the January 13, 2026, meeting were moved and second by Commissioners Thompson, Holly. The motion passed by voice vote.
6. Announcements by Commissioners and Staff.
 - 6.1. Commissioner Holly: Interesting information: Kirkwood Performing Arts Center has University City Philharmonic Orchestra as a program.
 - 6.2. Commissioner Armstrong: University Heights Stormwater citizen group is sponsoring Educational program: Visions for Flood Mitigation for U City and Beyond on March 24.
7. Citizen Comments. None
8. Committee Reports
 - 8.1. Monitoring: Commissioner Eastin discussed equipment needs for the monitoring and early warning system (EWS). The Subcommittee's written report is attached:
 - 8.1.1. Monitoring and EWS has been in startup operation and data gathering mood for several years and equipment is reaching the end of its life. Hand-out, attached, details short-term and long-term equipment needs.
 - 8.1.2. Committee recommends that iNeighborhood be contracted as the maintenance contractor.
 - 8.1.2.1. Committee has been working with iNeighborhood for over a year. iNeighborhood has assisted the Committee with equipment replacement and maintenance.
 - 8.1.2.2. \$1200 for replacement of equipment: \$735 for sensors 3 rain gages and 2 level sensors; approximately \$465 for brackets and poles for new level sensors; \$0 for posts for new rain gages since they will be mounted on the existing poles. To be coordinated by iNeighborhoods.
 - 8.1.2.3. Replacement of an old solar panel is in process now.
 - 8.1.2.4. Discussion with iNeighborhood and Fondriest, our current equipment supplier, indicated that the cost for operation and maintenance but not



communication subscriptions over the next four years would be about \$17,000 including several items:

- 8.1.2.4.1. That \$17,000 would include software development to integrate the early warning system into the Fire Department's system rather than a separate system that makes coordination for flood emergencies difficult.
- 8.1.2.4.2. Periodic upgrades of equipment as latest technology becomes available.
- 8.1.2.4.3. iNeighborhood knows our system and the iNeighborhood system is running in parallel to our system. iNeighborhood system supplements our data. iNeighborhood equipment can replace our hardware and ease the difficulty of having two systems running. iNeighborhood would supply professional staff for the operation and maintenance rather than our current volunteer staff.
- 8.1.2.4.4. Current equipment replacement is necessary with Foundreist: two level sensors and three rain gages for a cost of \$1200.
- 8.1.2.4.5. Use of the City's bucket truck to get access to the mounted rain gages would reduce city costs greatly. The alternative is for periodic rental of a bucket truck.
- 8.1.2.4.6. The Subcommittee is exploring connection to power at University Park's maintenance shed near intersection of Pennsylvania and Dartmouth to reduce reliance on solar panel in that shaded area.
- 8.1.2.5. ***A motion was made (Armstrong, Holly) and passed by voice vote to authorize the Monitoring committee to obtain a formal proposal from iNeighborhood for O&M of monitoring and EWS: The Monitoring Subcommittee of the Stormwater Commission is authorized to discuss and obtain a proposal for providing and maintaining level sensors, rain gages, and ancillary equipment to support the River Des Peres flood early warning system (EWS). Further, the proposal should include software development to integrate the early warning system data with the City's emergency management system. The proposal should be sole source from iNeighborhoods because iNeighborhood already has closed circuit television and other equipment in place and using iNeighborhood as sole source is necessary to avoid mismatching equipment and creating compatibility problems. In addition, the Monitoring Subcommittee is authorized to get a proposal for iNeighborhood to obtain and install in the very new future broken EWS equipment: two level sensors and three rain gages.***

8.2. Imperviousness Bill Hoc Committee: no update: None

8.3. Old Business

8.3.1. Stormwater Mater Plan Projects

- 8.3.1.1. Consultant, HR Green, discussed 8 projects provided with benefits points and costs. In order of highest benefit to cost ration to the least.
- 8.3.1.2. Amherst to Blackberry – commissioner suggestion that the cost per house (approximately \$250k) is such that the more appropriate solution might be



- to buyout the houses.
 - 8.3.1.3. Mona Drive – discussed that the benefit cost is 0.5. Possibly could evaluate a buyout alternative since the homes are in a floodplain.
 - 8.3.1.4. Additional project
 - 8.3.1.5. Buyout and regrade property to create room for flooding
 - 8.3.1.5.1. Potential properties might include
 - 8.3.1.5.1.1. Seafood City property - buyout and add detention basin
 - 8.3.1.5.1.2. Mona Dr – buyout and add floodplain bench
 - 8.3.1.5.1.3. All along River Des Peres – buyout and add floodplain bench
 - 8.3.1.6. Buyouts remove tax-paying properties.
 - 8.3.1.7. Brentwood Bound is an example of flood mitigation stream by widening: \$90MM total with some of the following breakdown (\$35 million for flood mitigation, plus \$20 million for land acquisition, plus \$11 million for Manchester Road improvements, plus \$24 million for park improvements and railroad crossing improvement. for channel grading, \$11MM to Manchester Rd improvements, \$24MM on park/trail improvements)
 - 8.3.1.8. Stormwater Benefits scheme
 - 8.3.1.8.1. Current recommended scheme is same as MSD so City's plan can be meshed with MSD planning and MSD funding.
 - 8.3.1.8.2. Commissioner Cris identified that the prioritization scheme did not consider that some projects cost much more than the protected property.
9. New Business: None
10. Old Business
11. Council Liaison. Councilperson Tieman made the following comments:
- 11.1. Commented City crews for outstanding job of snow removal during the recent storm.
 - 11.2. Ms. Brook Sharp is now interim City Manager following the recent retirement of Gregory Rose.
 - 11.3. Mayoral election is only contested election on the April ballot: Bayne Smotherson and Terry Crow.
 - 11.4. City Council seats are uncontested: Lisa Brenner in First ward; Dennis Fuller in Second Ward; and Christina Dancy in Third Ward.
12. Adjournment: 6:00 PM (Armstrong, Aronberg) passed by voice vote.

Minutes Preparation. Minutes were prepared by Garry Aronberg and Eric Karch.



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Visitor Sign-in Log



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SIGN-IN SHEET
Stormwater Commission Meeting
 Date: Feb 3 - 3:30 pm

| NAME | ADDRESS | Telephone/E-mail |
|---------------|------------------|------------------------|
| Jerrold Tiers | 7345 Chamberlain | jtiers4ucity@gmail.com |
| Tom Sullivan | 7515 Spruce | _____ |
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Monitoring Committee Report University City, Missouri Stormwater Commission
12/2/2025

12/2/2025 Monitoring Committee Report

EXECUTIVE SUMMARY

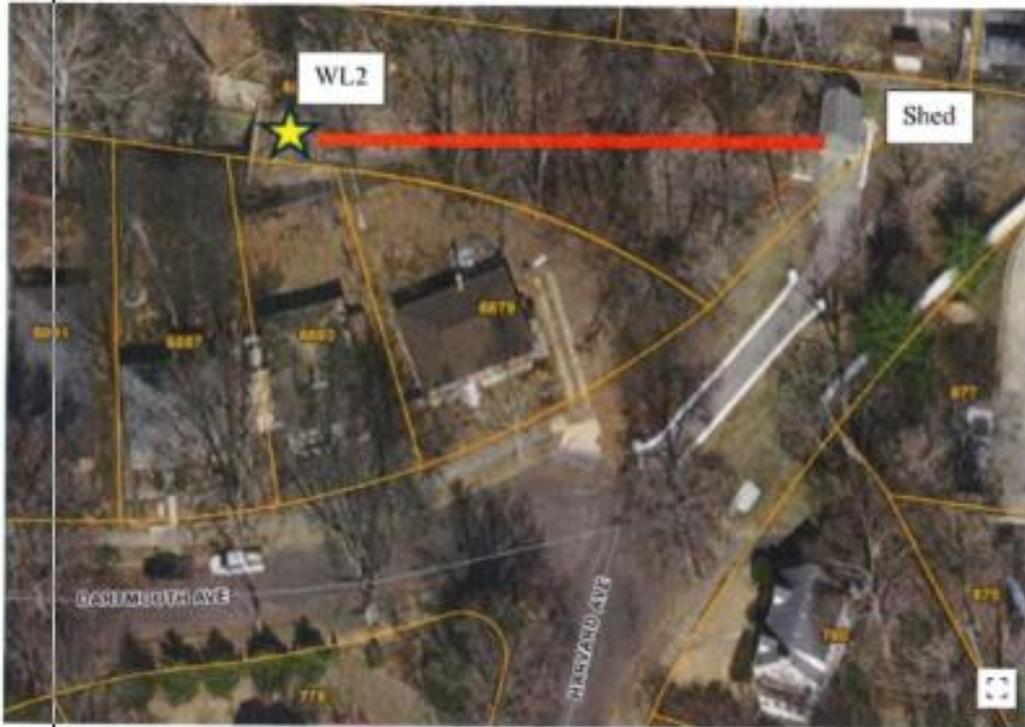
Rain Gage RG2 and Water Level Sensor WL2 are experiencing issues. A detailed description of the issues follows. An executive summary For the short run, here's my recommendation:

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





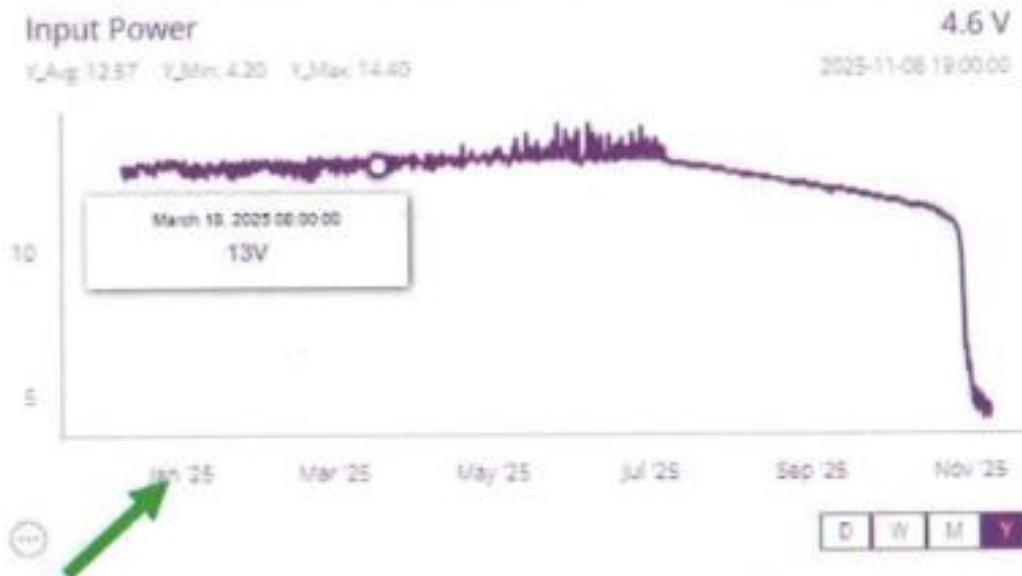
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Figure 1 – Water Level Sensor WL2 – Possible Hard-Wire Power Option to Explore

DETAILED DESCRIPTION OF LATEST SYSTEM ISSUES WITH RG2 AND WL2

~~Issue – Rain Gage 2 (RG2) stopped 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.



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- 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 to 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>



Figure 2 – Fondriest Solar Panel – New Model



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Figure 3 – Gage at beginning of site visit.



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Figure 4 – Gage at beginning of site visit.



Figure 5 – Gauge 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



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Figure 10 – Solar Panel – Silicone Detail