

What is an Illicit Discharge?

Stormwater runoff from urbanized areas can transfer pollutants from the storm sewer system to lakes and streams. In order to protect water quality Federal, State, and Local governments regulate what can go down the storm drain. In most cases, only rain is allowed down the drain.

Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater is considered an illicit discharge. These discharges can often be detected when a storm drain has flow during dry weather.

The University of Kentucky is required to prohibit discharges of non-stormwater as well as detect and eliminate any discharges that may occur.

Activities that can produce a discharge include:

- Outdoor Washing Activities: Vehicles, Surfaces, Equipment, Buildings
- Parking Lot Maintenance
- Vehicle/Equipment Fueling
- Vehicle Maintenance/Repair
- Landscaping/Grounds Care
- Sewer Blockage/Maintenance
- Construction
- Erosion



MS4 Requirements

MS4 stands for Municipal Separate Storm Sewer System, which requires a permit from the Kentucky Division of Water. The primary goal of the University of Kentucky's MS4 program is to reduce the discharge of pollutants to the storm system and protect water quality to the maximum extent practicable. The permit authorizes the University of Kentucky to discharge stormwater runoff into receiving streams while implementing six minimum control measures described by the permit. One of these control measures includes an Illicit Discharge Detection and Elimination Program.

The University has a system in place for the campus community to report suspected illicit discharges or illegal dumping into the storm drains. Any substance entering a storm drain has the potential to harm water quality and needs to be stopped, so it is critical that discharges are reported immediately. Because of this, the Environmental Quality Management (EQM) Department and ITS Information Services Geospatial Team worked together to develop a reporting tool that is easy for the public to access and use, no matter what level of technical expertise a user may have.



Resources

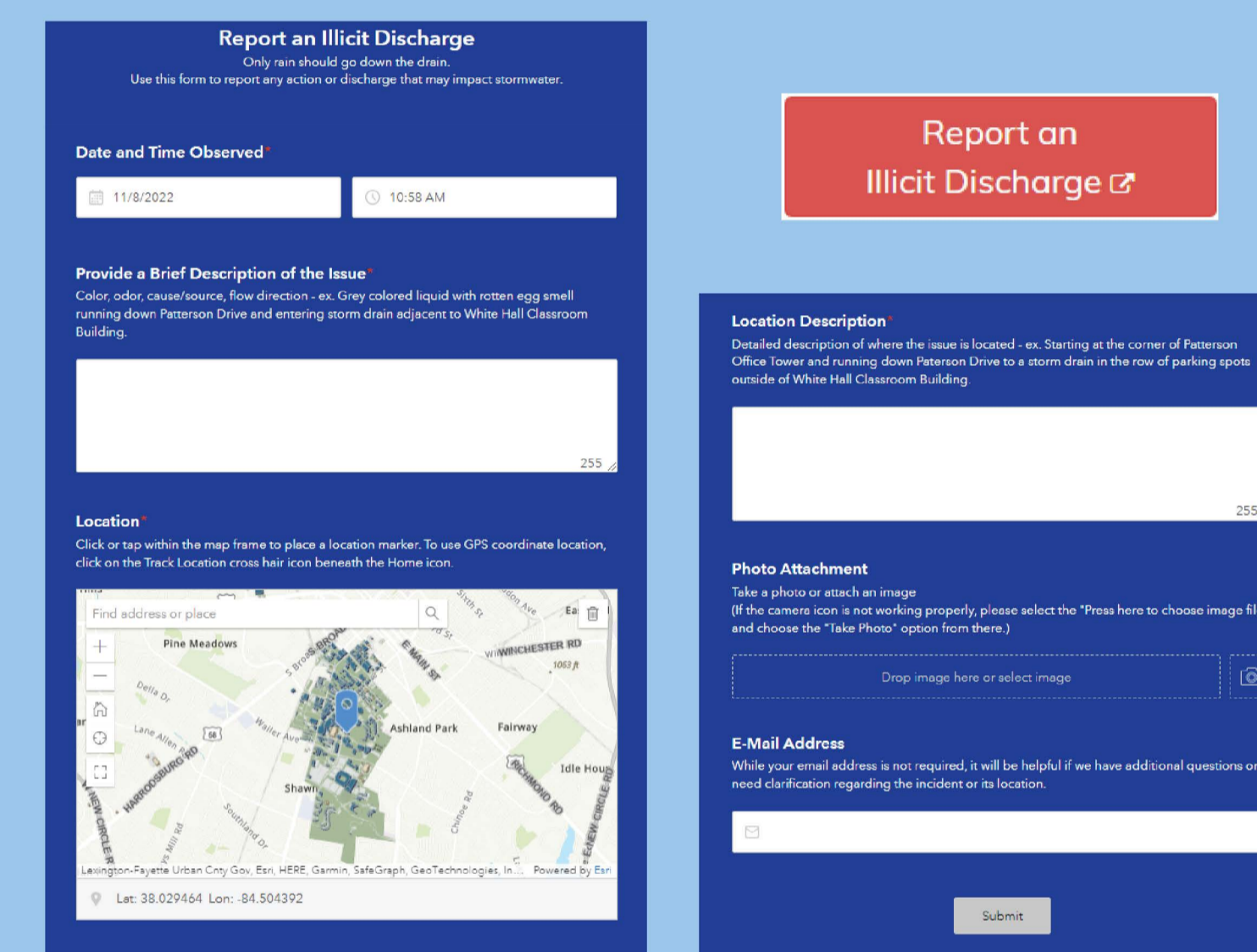
- UK Stormwater Program Information:**
<https://www.uky.edu/env/stormwater/program-information>
- Illicit Discharge Information:**
<https://www.uky.edu/env/stormwater/illicit-discharges>
- UK GIS Hub:**
<https://gishub.uky.edu/>
- ArcGIS Survey123 Overview:**
<https://www.esri.com/en-us/arcgis/products/arcgis-survey123/overview?source=%2Fen-us%2Farcgis%2Fproducts%2Fsurvey123%2Foverview>
- ArcGIS Web AppBuilder:**
<https://www.esri.com/en-us/arcgis/products/arcgis-web-appbuilder/overview>

Reporting Tool Process

The illicit discharge reporting tool was made using Survey123. Survey123 is an ArcGIS solution that allows for simple and intuitive form-centric data collection and global positioning of features. For viewing and tracking data ArcGIS Web AppBuilder was used, this solution helps to develop interactive mapping apps, even without any coding knowledge.

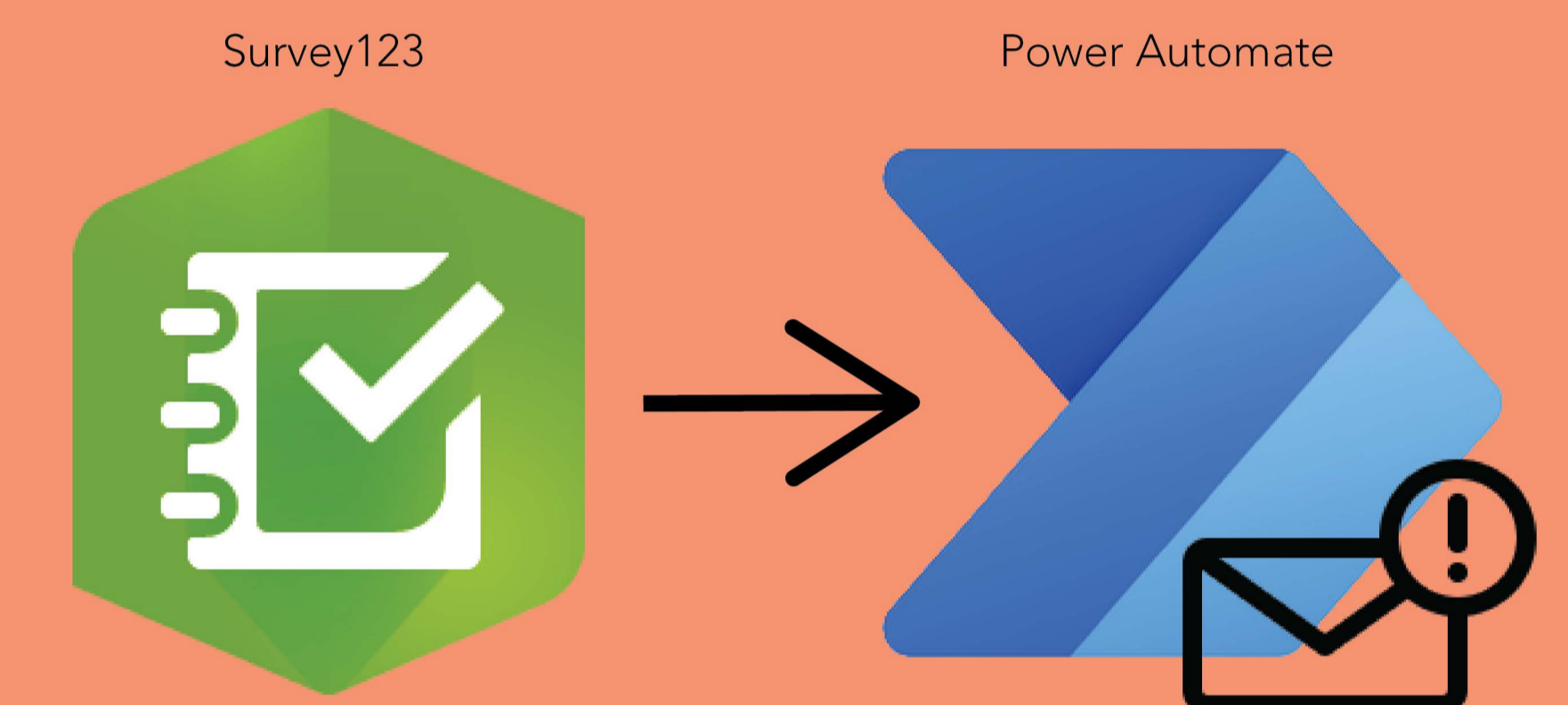
1. Report

EQM asks that if anyone in the campus community sees something other than clean water entering a drain that they report it. The Survey123 form for reporting an illicit discharge is publicly available and prominently displayed on the EQM Stormwater website for easy access. The form guides the user through reporting key information about the illicit discharge.



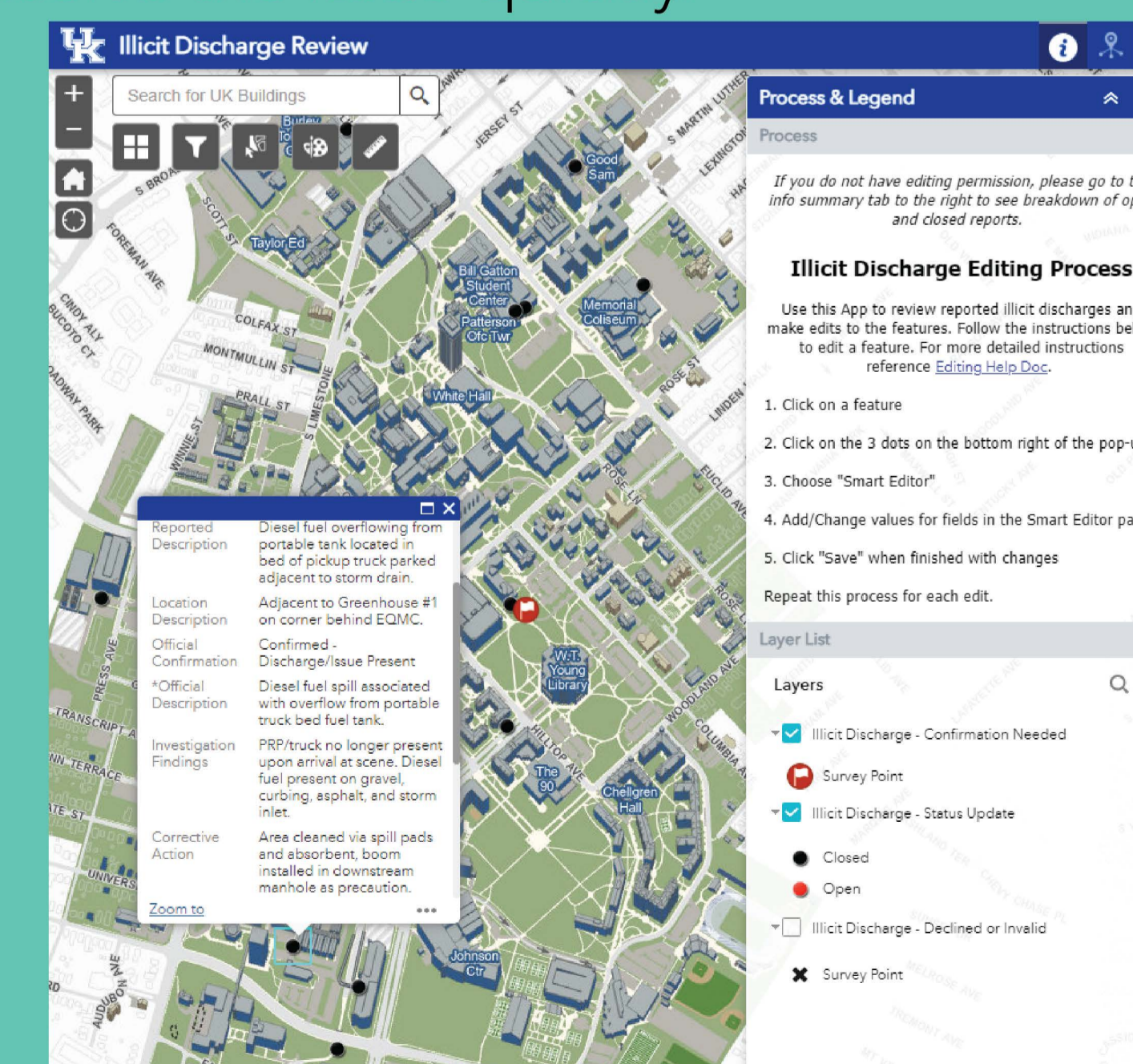
2. Notify

EQM responds to all illicit discharges and spills on campus. After an Illicit Discharge Form is submitted an automated email is sent immediately to EQM for review. The ITS Geospatial Team used Microsoft Power Automate to set up a webhook with Survey123 to automate the email process.



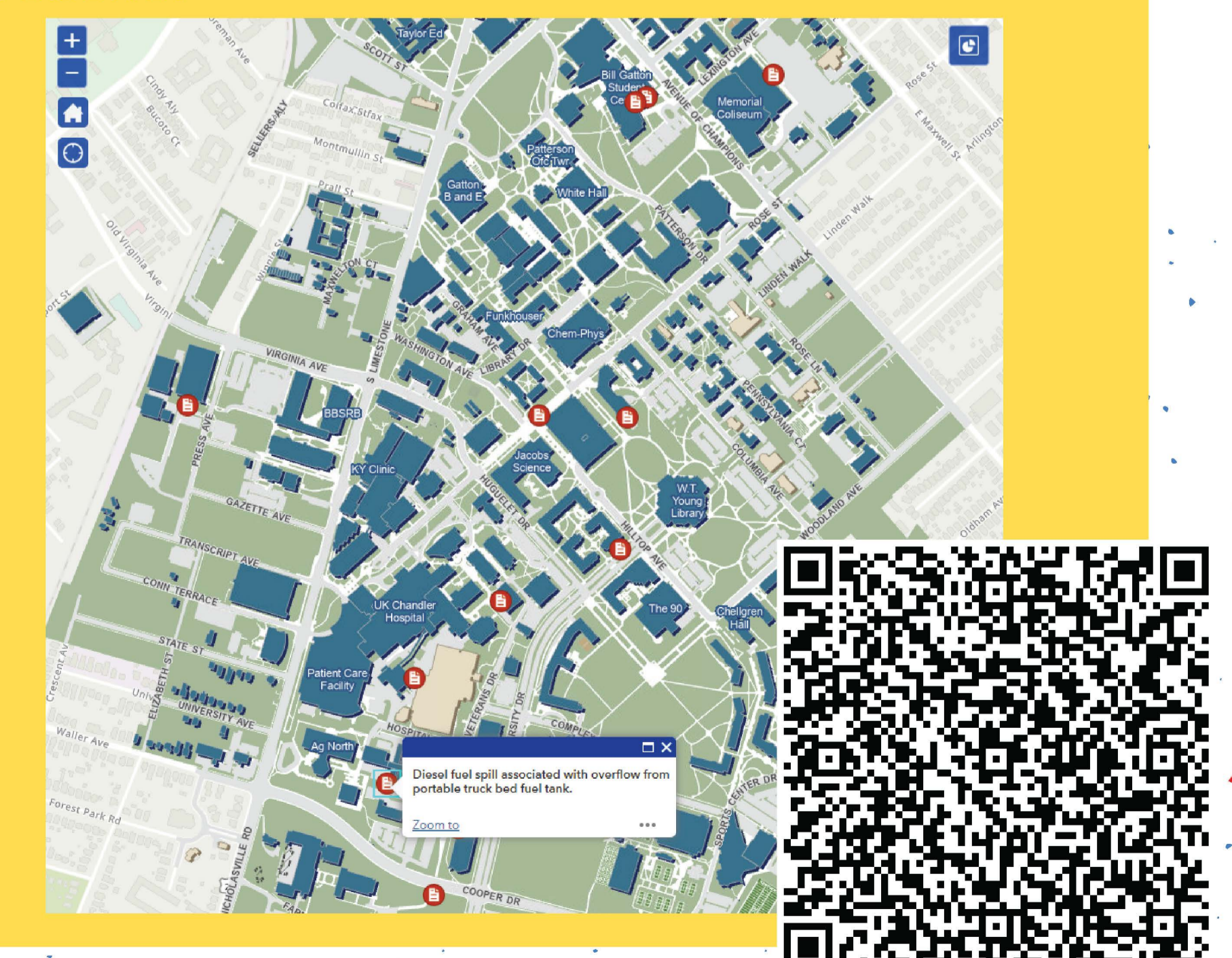
3. Review

Once notified, EQM will use an internal (non-public) ArcGIS Web App to review and confirm details of the submission. The details will help EQM to decide if any corrective action is needed. If needed, EQM will work with the appropriate personnel to resolve the issue quickly.



4. Close

After the issue is resolved the feature in the internal review Web App is marked as "Closed". Then the reported illicit discharge will be viewable with limited content to the public on the Interactive Stormwater Quality Map and Stormwater Website.



Scan the QR code to view reported illicit discharge locations on the Interactive Stormwater Quality Map