



TOWNSHIP OF FERGUSON

The following are specific questions that arose during the SAC #2 meeting. A subsequent meeting was held with Township staff to review the questions and the following is being provided to assist the SAC in the continuing discussions regarding Level and Extent of Services.

1. What is the consequence of stormwater infrastructure failure?

The consequence for failure, a reactive approach, is more expensive to the Township. Emergency repairs impact on-going work schedules diverting staff from a current assignment, as well as potentially higher material costs than if it was a planned or preventative repair. In this region, sinkholes are likely with failure of drainage system (inlets or pipes).

2. What is the risk of reactive maintenance?

Risk of reactive maintenance is that it precludes efficient staff management. It is hard to schedule crews for work when they are tasked with tending to emergency events when due to lack of maintenance.

3. How are repairs prompted?

Repairs are often prompted by public complaints, typically after large rain events. Complaints are almost always based on visible failure (sunken pavement, ponded water, etc.) and not as a result of an in-depth review (cracked inlet walls, etc.).

4. How often are complaints received?

Complaints are received daily, with a large increase in the spring season (with snow melt). The frequency of complaints is high enough that the front desk staff (receptionist) has asked for an FAQ that she can use as a guide to respond to complaints. Telephone calls received are typically logged, but complaints are not separately documented. A complaint comes in, and is assigned to first available staff. It was noted that sinkholes and basins typically go to Ron or Kevin, road issues go to Dave or Steve M. and park issues go to Centre County Parks and Recreation. While the Work Order process is utilized by some key staff, the Township acknowledged that it needs to improve on acceptance and use of this process by all staff.

5. How often are repairs made?

Repairs are made almost on a weekly basis (related to pipes, inlets and “basins”). There were approximately 50 repairs for stormwater related matters conducted in a one year period (based on a cursory review of Township records and logs). Repairs that results from complaints are not always tracked in the work order system.

6. Does the Township have the capacity to respond as infrastructure fails; how big of a problem is it to repair/replace infrastructure as problems arise?

The most significant impact is related to the Township’s capacity to respond. A reactive approach is a disruption to the scheduled work flow (delays in other functions of the Township work force). There are two work flow paths for stormwater repairs. One is by Work Order, where a complaint or staff observation has resulted in a work order being generated to remedy an issue. Effort is made by Supervisors to account for emergency work orders in their work assignments. The second path is an Emergency Repair, which is addressed immediately, but places demands on staff to support the effort, taking them from other activities as may have been scheduled.

7. What is the risk management strategy for impacts of failure?

There is not currently a risk management strategy in place to address the impacts of failure (such a resource allocation) or pre-defined procedure for staff to follow in event of failed stormwater infrastructure. There is a continuity of operations plan in place for staff and Township services, but not related to failure or stormwater. The Township relies in part on its MS4 permit (for inspections, PCSM plans, outfalls, etc.) as a means to define their risk (related to Water Quality).

8. What type of evaluation is required for the different stormwater system components?

The types of evaluations are related to the various elements. For example, inlets require a visual inspection. Traffic control is set up, the grate is pulled, debris is removed and Township crew will enter the inlet to inspect walls, floor, pipe connections and grate top. Drive by inspections are not effective beyond identifying a ponded condition or a failed top / grate. Pipes can only be inspected (without CCTV) at the terminal ends (unless very large diameter). Otherwise, CCTV must be used to capture video along the length of the pipe. Basins (and related BMP's) can be typically be inspected by walking the site, to look for erosion or low spots (which may indicate a sink hole is forming) with some additional effort at the outlet structure and outfall.

9. Is it a viable option to “share” equipment with adjacent municipalities?

Having a dedicated piece of equipment has advantages for scheduling. For example, for CCTV in pipe inspection, a crew must mobilize, clean line, place camera in the line, address roots and debris as encountered and then refine data (for viewing). Weather, traffic control and equipment failure must be taken into consideration when scheduling work. Shared resource carries complications that may outweigh the cost savings:

- a. Scheduling issues (having equipment for set period and on demand when needed) may not meet the needs for both jurisdictions.
- b. Efficiency is affected when conditions may not always facilitate CCTV work coordinating with another jurisdiction (e.g., inability to use equipment during rain event)
- c. Equipment depreciation and repairs can slow work effort further and clear responsibility for maintenance of equipment must be worked out in advance.

As a first start, a shared program with dedicated staff and equipment, supplemented with contracted staff and equipment may help to build more capability. However, the challenges of coordination may make it difficult to plan and be efficient. For example, a good analogy would be sharing the cost of a lawn mower with your neighbor. You could share a lawn mower with neighbors, but when you need it, it may not be available; it may rain on days you would have had the mower, etc. It becomes an issue of effectiveness and efficiency as a tradeoff for flexibility to schedule based on conditions beyond the Township's control.

10. Are there future system concerns that should be discussed?

Future concerns include (1) a drainage system that is known to have been in the ground for a period of time (for example, corrugated metal pipe) that is approaching end of design life and is beginning to exhibit signs of failure with (2) the lack of a program to inspect and maintain the asset(s).

11. What is an appropriate role for the Township with regard to private basin maintenance? When does the Township get involved?

The Township prefers to be involved when an owner(s) identify or are aware there is a something going on within the basin. Providing technical advice or inspection can prevent more significant issues. Better planning and cost control can occur if the owner does not have to deal with a catastrophic failure.