

# Shiawassee Capital Improvement Plan Project Examples

## Perched Culvert



The picture depicts a perched culvert. Perched culverts carve out, or scour, a basin below the impact point of the falling water. This has numerous detriments to the drainage system such as hindering wildlife travel upstream, increased erosion, and possible eventual collapse of the dirt supporting the culvert.

## Bank Erosion



These are pictures of drains with considerable streambank erosion along the watercourse. This disrupts water quality and sends sediment downstream where it can contribute to blockages, as shown by the sediment bar in the bottom photo. This can be rectified by stabilizing the bank such as shown in the top left photo. Remediation projects on eroded drains can have many benefits such as improving water quality and creating habitat for native wildlife.

## Compromised Infrastructure



These are photos of typical drains running through urban and suburban areas. All of these photos show evidence of bank erosion that is threatening the integrity of established infrastructure. The erosion in the top right photo indicates the integrity of the bridge may become compromised if left unchecked. The top left shows a culvert whose dirt and wood supports could collapse if they are not fortified. The bottom photo shows an eroded bank closing in on a fence.

## Surface Pollution



This is a surface outlet pipe discharging into a drain. Notice the pollution on the surface of the water creating an oil-like sheen. This degrades water quality and is detrimental to organisms that depend on this water body. It would be beneficial to determine if the source of this pollution was a one-time event or if it is a constant problem at this location.

## Flooded Drain



These are examples of flooded drains in a rural areas. The center left and top two are a tile drain system that is flooding, with the water completely bypassing the intended storm system and entering the drain through culvert road crossings. The main branch supporting the tile drain likely needs to be widened to improve capacity or checked for blockages downstream. The center right shows a culvert crossing where the flow is very low, likely due to a change in grade or blockage downstream. The bottom two photos show a flooded drain overflowing onto a road.

Have an idea for a project? Scan this QR code with your phone's camera to fill out a questionnaire where your ideas can be heard! A link to the questionnaire is also below the code.



<https://forms.gle/PVrC7pTve221J8eG6>