Sand Creek, Ottawa County

Watershed Summary, 2002

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Lower Sub-Watershed

Summary

The majority of this section of Sand Creek flows through Aman Park, which allows the area to remain relatively natural. The main contributor to degradation along this stretch would be the MDOT project occurring on M45. Although it is evident that Best Management Practices were incorporated into the project, erosion pathways were still evident and large areas of disturbed land were left un-vegetated. Other potential problems that exist, which could also exist throughout the entire watershed are failing residential septic tanks.

General Comments Indicated on Field Sheets

- **LSC-1**, MDOT barrels in the water downstream. Landowner's road being installed on right upstream side with high degree of potential for runoff.
- **LSC-3**, Downstream the old oil lines crossing the stream should be removed.
- **LSC-5**, Ongoing construction and loose soil on upstream side.
- **LSC-6**, Downstream flow is using west road ditch.

Mid-Lower Sub-Watershed

Summary

This portion of Sand Creek flows through a rural, wooded, residential area south of Marne. Problems noted in this section included a large gully formed by road runoff located on the main branch at the Leonard crossing. Other problems include resident waterfront owners not buffering the stream from their maintained lawns. At MLSC-4, a potential contamination problem exists due to containment tanks located adjacent to the stream.

General Comments Indicated on Field Sheets

- **MLSC-1**, Upstream water flowing in on right hand side is fast moving and green.

- **MLSC-4**, Upstream to right, containment tanks with dirt containment barrier. Has pipe that dips into cut 55-gallon barrel in ditch / looks oily.
- The rest of the comments indicated that the sites looked relatively good.

Mid-Upper Sub-Watershed

Summary

The land-use in the northern half of this sub-watershed is primarily agricultural and the southern half is residential to urban. Tributaries in this sub-watershed had very little water in them or were dry, but there was evidence of high channel forming flows. An unknown tile discharging nutrient rich water was observed at site MUSC-7. Bank erosion due to animal access was observed at two sites MUSC-8 and MUSC-13. Runoff from the roads, in downtown Marne, drain directly to Sand Creek. Drainage pipes were observed at MUSC-4 along with a substantial gully, which was formed due to road runoff. Runoff from dirt / gravel parking lots adjacent to the stream at MUSC-1 looked to have an impact on the creek.

General Comments Indicated on Field Sheets

- **MUSC-1**, Boat storage both sides with runoff from parking lots.
- **MUSC-2**, Maintained lawns both sides, water low and stagnant.
- **MUSC-6**, Hard to find, gravel pit on upstream side.
- **MUSC-8**, The culvert to the north contains stagnant water. Downstream, there is an unknown water pipe source.
- **MUSC-14**, Culvert to upstream side eroded on both sides of culvert.
- The rest of the comments stated that the sites were relatively good.

Upper Sub-Watershed

Summary

The land use within the upper sub-watershed of Sand Creek consists of mainly agricultural fields (corn and soybean) and orchards. Much of the channels are delegated as county drains and are maintained. Although the surveys were conducted during base flow, it was evident that high flow levels are common during rain events. The culverts are set up for extreme volumes of water in that, some sites had three large diameter culverts at the crossing. Much

of the roads in the sub-watershed were gravel and there was evidence that sediment from the roads were entering the stream at the crossings. One particular site USC-7, there is no preventative measures taken to prohibit road runoff above the new box culvert. Stream bank erosion due to animal access was noticed at USC-8 (Janice Tompkins talked with property owner). Nutrient input from surrounding agricultural fields were impacting USC-13. Excessive amounts of algae were observed along the edges, on the substrate, and throughout the water column of the stream. Sites USC-17 and 18 were heavily impacted by road runoff and orchard access areas.

General Comments Indicated on Field Sheets

- **USC-1**, An intensive horse operation is located on the south side of Cleveland, east side of the creek. Manure was notice near the creek. The road ditch is very deep allowing extensive erosion on southwest side.
- **USC-3**, Garbage observed downstream, on the left side. Cropland needs horizontal tilling. The culvert is undercut.
- **USC-4**, Tiles from surrounding fields drain directly into he stream on both sides.
- **USC-11**, The Culvert is over 1/3 filled with sediment. Considerable erosion on hillside coming down the road to stream (Upstream, left side). Sediment from the road enters the stream.
- **USC-12**, Downstream crop fields need larger buffer zones. One of two culverts dry and ½ full of sand.
- **USC-13**, Upstream crop fields need larger buffer zones. Two of three culverts filled in with sediment, on both sides.
- **USC-14**, Downstream crop fields, on the left side need larger buffer zones.
- **USC-15**, Sheep pasture adjacent to upstream side. The sheep are allowed to drink from the creek at a 5 ft wide spot.
- **USC-16**, Road runoff directly into stream.
- **USC-18**, Upstream, pipe from adjacent field drains directly into stream (foamy water). Film on water but did not look like oil or bacteria.

- **USC-19**, White 8” pipe draining directly into the upstream side of the stream.

East Fork Sub-Watershed

Summary

The landuse characteristics in this sub-watershed range from agricultural / orchard in the northern reaches, rural residential to slightly urban in the mid-section and rural residential to mostly forested in the lower reaches. Observed problems affecting the watershed include hydrology issues, agricultural runoff, and possible septic system contamination. Extensive channel erosion caused by high volumes of runoff were noticed at EFSC-5, 6, 10, and 19. Agricultural runoff was greater in the Lau Bach Inter-County Drain region of the sub-watershed, evidence being the high amount of vegetative matter at EFSC-15. A possible septic contamination was noticed by Janice Tompkins at EFSC-14 on 10/16/2002 while conducting surveys with Howard Miller Volunteers. Along with the channel erosion at site EFSC-10, deep gullies from road runoff and residential runoff indicate degrading sources.

General Comments Indicated on Field Sheets

- **EFSC-1**, Installation of sewer main line at crossing causing potential source issues.
- **EFSC-2**, Residential maintained lawn on left upstream side. Potential highway (I96) runoff on left downstream side.
- **EFSC-3**, No geo-textile material placed to hold roadside vegetation after restoration following pipeline (gas) construction.
- **EFSC-6**, Upstream side culvert is deteriorated (rusted out) at the bottom.
- **EFSC-12**, Septic system (raised) next to dry streambed.
- **EFSC-13**, Significant aquatic plant growth, upstream.
- **EFSC-14**, Grey water noticed, possible septic system failure.
- **EFSC-15**, Good riparian buffers downstream, but high nutrient loading.
- **EFSC-19**, Holes at the top of the culvert.
- **EFSC-20**, Loose soil around both culverts.