

Every time we have to close 303 West because Tinkers Creek overflows its banks it generates an outcry as to why? Over the next few paragraphs, I will attempt to put together an explanation, not an excuse, as to why we do have to close it.

## **History**

I do not know when 303 was originally conceived since it pre-dates everyone living now. But considering it is virtually a straight arrow, one could imagine it was the main “path” from Streetsboro to Hudson. This probably occurred sometime in the 1800’s. We all know that the shortest distance between 2 points is a straight line. Back in the day flooding didn’t have an effect on travel. There were no cars, so people just trudged right through. In anyone’s memory that area has flooded since the road went through there. And, considering that most of the city was just farmland and the ground was able to absorb the rainwater and such, I seriously doubt that flooding in that area was an issue.

We all know that this area has become a significant issue for us. To try and find a viable, workable solution, we commissioned a feasibility study in 2013 and to determine what projects could be done to resolve this situation. ODOT then set out to work on a design that was sent to AMATS. We applied for grant funding and were subsequently allocated funding. The project commenced on March 29, 2018, and was brought to a dead stop on May 14, 2019.

## **Tinkers Creek Watershed**

Most of the city, as well as 13 Cuyahoga County, 8 Summit County, 4 Portage County and 1 Geauga County Communities make up the Tinkers Creek Watershed (see map below). This watershed is the largest tributary to the Cuyahoga River, with a drainage area of an astonishing 96.4 square miles. Tinkers Creek head waters begin just south of the city in Franklin Township, which is the narrowest portion of the creek. A watershed gathers all the stormwater and runoff from the surrounding areas and funnels it to a common way, Tinkers Creek. Tinkers Creek eventually winds its way north towards Lake Erie. Its terminus is in Valley View where it empties into the Cuyahoga River which then empties into Lake Erie. Along its way, all 24 communities along its course gather all of the runoff from those communities and are dumped into it. As it winds north it becomes wider but, here in Streetsboro, it is still very narrow. You have to look at Tinkers Creek here in the city as a funnel. You can put all the water you want in the top of the funnel, but the outlet is what restricts the flow out the bottom. And, if there is more water going in then going through, it overflows its banks causing the flooding in that area. It is a normal and natural process for streams and waterways to overflow when rain events occur.

## **Why does it flood?**

Back when Streetsboro had its enormous growth in the late 50’s and early 60’s, there was not much thought put into planning where to send the runoff. Most cities did not consider stormwater management a priority back then. All the housing developments were put on much higher ground. The runoff would filter down to Tinkers Creek. There was no development and just a smattering of homes out there, so it didn’t bother anyone if it flooded. When the developments were put in, they just put ditches in to carry the water away. There was no storm water management practices, like detention or retention ponds to stem the flow. It just got carried down to Tinkers Creek. This was fine as there was no one to affect where the water ended up. So, no thought was given, they just let the water run unabated down to Tinkers Creek.

The Environmental Protection Agency was created in 1970, after the Cuyahoga River caught fire in Cleveland and other water catastrophes nationwide. That began a period where environmentalists began taking a serious look at how we managed our natural resources. Up to that time, developers pretty much did what they wanted with no regard for the environment. As you well know, since the 70's the EPA has become a giant and began to seriously regulate how things were done to the environment. They began to look at how to regulate flooding and how to protect sensitive areas and wetlands. They started to put in place stormwater management practices. Up until the late-80's the city really did not practice a lot of stormwater management, neither did many cities. All the new developments have detention and retention ponds to manage and slow the discharges downstream. This has helped but has not solved the rush of water to the SR303 area. Also, any manufacturer or business is required to have a retention/detention pond on their property to hold and slowly release any stormwater from their site.

There is still an enormous amount of water that runs unabated to that area. We cannot go back in to the "older" developments and add stormwater management to them. The cost would be exorbitantly prohibitive, and it is a cost that would have to be completely absorbed by the city. It would entail adding storm drains, retention/detention ponds and a litany of other things, adding up to millions of dollars that we would be on the hook for.

When we have long term rain events, or the ground is saturated (like it is now) or when we have a "gulley washer" event that dumps significant rain on the city, it all makes it way down to Tinkers Creek very quickly. The funnel effect comes into play. Not enough water can get through the funnel, so it spills over resulting in closing that area. If it can't move out fast enough, then we have the resulting flooding in that area.

## **The Plan**

The City, our Engineers and ODOT got together to discuss what could be done, since this is a huge inconvenience when it does occur. The Civil Engineers came up with a plan and it was presented to AMATS to try and secure 80% funding for the project. The plan was approved. We were slated to receive 80% funding from the Feds, 10% funding from the state and 10% funding from the city. There were essentially 2 areas that were subject to frequent flooding. The "bowl" area that was not much of an inconvenience because we had a "bypass" road that could be utilized to get around it. The second area was the section that floods between Jefferson and the tracks. This is by far the most troublesome area since there is no easy way to get around it.

Everything in the plan was approved and we moved forward.

The first phase of the project was to do the bowl area, this would kind of be the trial area for what the Engineers felt was the solution. They removed the roadway and began bringing in fill to build the road up. Once they got the fill in, they then inserted "wicks" into the fill to remove the water under the overburden. They wicked the water out from underneath the roadway then resurfaced the road. This was very successful and completely solved the problem in this area. This proved that the plan they had come up with would work and work well for the third phase of the project.

The second phase of the project was to replace the culverts underneath the road with bigger culverts to allow more water to flow through. This portion went off without a hitch and flow had improved dramatically.

Then we got to the third phase. This was going to follow the same plan as the bowl phase. Remove as much of the muck down to about 50 feet and replace it with over burden, wick it, build it up higher to get above the floods, resurface it and we would be done.

I need to add here, this section of the road is the most environmentally sensitive. First off, this is not a normal wetland. It is in fact what is called a “fen”. In the environmentalist’s world, a fen is much more sensitive than a normal wetland. It has greater protections and there are much more restrictive parameters to adhere to because of their rarity and benefit. Secondly, in that area are “high bush cranberries”, a highly sensitive plant found only in a Fen and here is where they are found to their western extent. There were other environmentally sensitive flora and fauna but none to the level of the high bush cranberries.

It is here that the project came to a complete stop. Here in the 11<sup>th</sup> hour, the EPA and the Army Corps of Engineers informed ODOT that they would not be allowed to continue with the project and it was stopped dead in its tracks. The explanation received was that there was a significant concern that by placing the extra weight (the overburden) on the road would cause the water level in the adjacent area to rise upsetting the eco-balance in the area around it and possibly causing the destruction of the fen. They would not even allow extra height to be added to the roadway to get us above the normal flood levels, fearing that that extra weight would cause the water level to rise. They would not allow the project to move forward. Since this time, we have continued to seek additional solutions, but none of them are currently viable.

The phases of the project that were completed have resulted in the frequency and duration of the flooding to be reduced, although it has not completely fixed the problem. The road has not been closed near as much as it used to be, and when it needs to be closed, it has been closed for less time. We had one closure in early 2019 before the project had been completed that the road was closed for almost 54 hours. None of our recent closures have approached that amount of time. Generally, the closures have been for less than 12 hours.

## **Other Possible Solutions**

The only other solution available to us is to bridge the entire area. It would have to span over 2,000 feet from Jefferson Street to the other side of the RR Tracks. It could not be a normal bridge. It would have to be a suspension bridge (for those that don’t know, a suspension bridge is one in which the road bed is suspended from cables attached to towers) since there is not suitable bedrock in which to sink the supports and anchor the bridge within the area. Four years ago, It was estimated this bridge would cost in excess of \$25,000,000, (one could only imagine what it would cost now) that is well beyond what ODOT and AMATS are willing to pony up and it is definitely well beyond what we could afford. So this is not a feasible option.

## **Summary**

We are as much concerned about this as anyone. This has been a thorn in our side for as long as anyone can remember. We started to look for a solution in 2013. We thought we had one, we had a design, we had funding and then we got knocked down by circumstances well beyond our control. We were left with no viable solutions. Unfortunately, I don’t see any new solutions coming in the foreseeable future. This is what happens when our long-ago forefathers decided to build a road over a wetland, at the time no big deal. But now, it is an issue and will continue to be an issue.

# Tinker's Creek Watershed Map

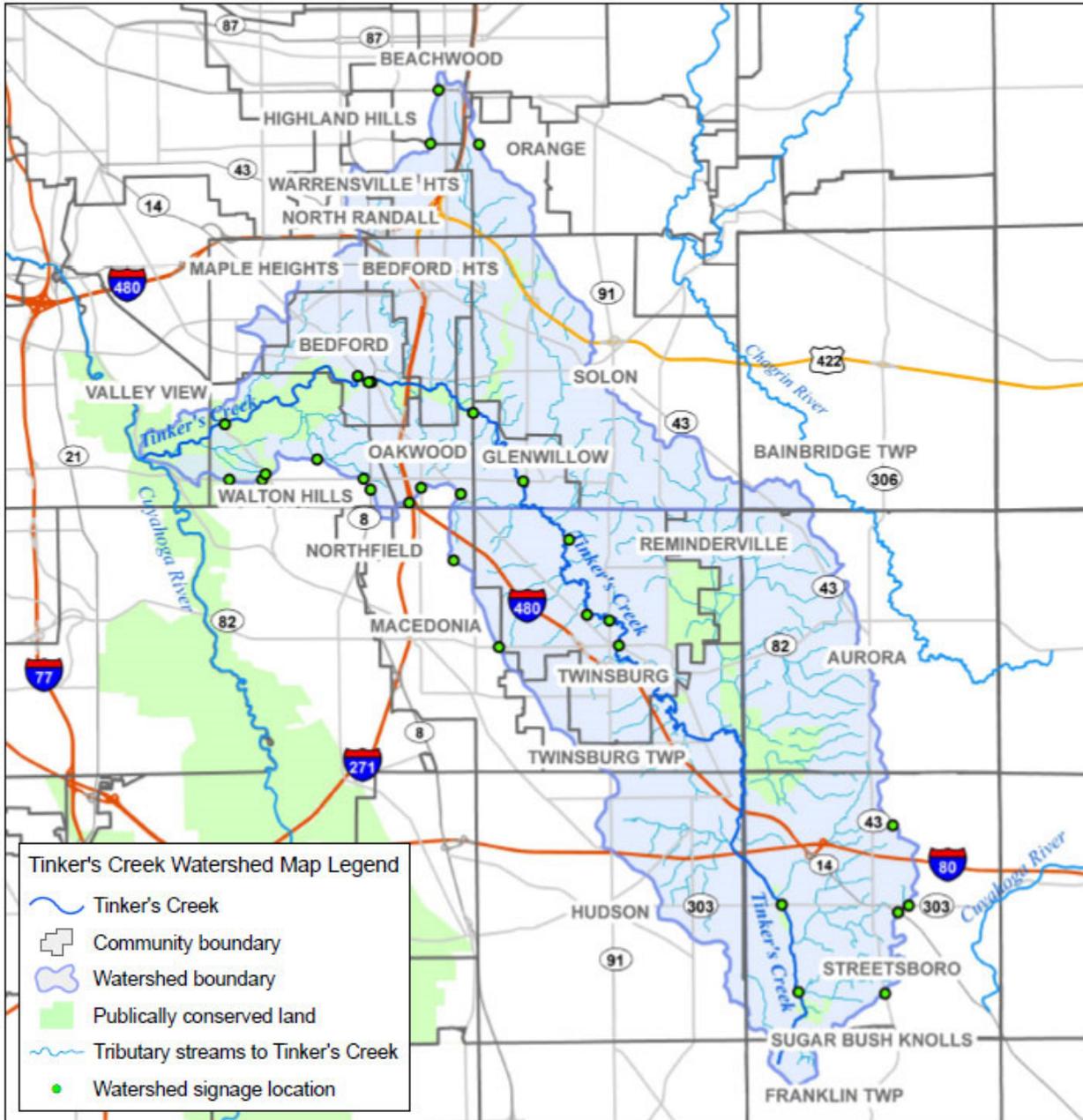
**Tinker's Creek Watershed (TCW) Spans 4 Counties and 24 Communities!**

13 Cuyahoga County communities = 41.7% of TCW is in this county

6 Summit County communities = 30.6% of TCW is in this county

4 Portage County communities = 27.2% of TCW is in this county

1 Geauga County community = 0.6% of TCW is in this county



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