MINUTES
UPPER ALLEN TOWNSHIP STORMWATER AUTHORITY
AUGUST 21, 2024, - 6:00 P.M.

STORMWATER AUTHORITY BOARD
James G. Cochran, Chairman
Richard A. Castranio, Jr., Vice Chairman
Kenneth M. Martin, Secretary
Eric Y. Fairchild
Phil J. Walsh

TOWNSHIP OFFICIALS
Scott W. Fraser, Township Manager
Timothy Wendling, Asst. Twp. Mgr
Stephen Feinour, Solicitor
Jason Reichard, P.E., Twp Engineer
Jennifer Boyer, Comm. Dev. Dir.

CALL TO ORDER

Chairman Cochran called the meeting to order at 6:00 p.m. Mr. Fraser performed roll call. All members of the authority were present.

CHAIRMAN'S ANNOUNCEMENTS

Chairman Cochran announced that there would be a presentation this evening by the Township Engineer, Jason Reichard. Mr. Reichard will address the heavy rain event that occurred a couple of weeks ago and demonstrate areas where stormwater systems proved their utility.

PUBLIC COMMENT

Ms. Joan Mitroba, of 2408 Bumblebee Hollow Road, Mechanicsburg came to speak. She praised the Township: "we love the quality of the services, the recreational opportunities, the school systems, the parks, the community events, the facilities, and the natural areas are second to none." She continued, "however, it seems that recently there has been a lot of residential and commercial development, and it seems to be putting a great strain on our infrastructure. Basically, stormwater problems are getting worse. During recent Hurricane Debby, Bumblebee Hollow was greatly impacted. The end of Bumblebee Hollow Road was actually washed out." Ms. Mitroba lives along the stream and observed, along with her neighbors, pipes being clogged, which led to the stream overflowing its banks. "The result is that a lot of debris and sediment is going through the stream and it ends up at the Yellow Breeches Creek." Ms. Mitroba is part of the Yellow Breeches Cleanup Crew; at this time of year, after storms, they find a great deal of debris and litter. "I'm not seeing a lot of retention basins in these new developments. So, I'm wondering where all this water is coming from. This is not a new situation, but the volume of water has been increasing – it's a lot more than before. We're trying to be patient and do what we can to keep the pipes empty, but still when stuff comes down, it crams the pipes and then everything goes over."

Ms. Mitroba suggested a section in the Township newsletter be dedicated to stormwater system maintenance—this is to be featured in the Fall newsletter. She expressed the hope that the Township would commit time and attention to the situation in the Hollow, which is resulting in a

loss of stream banks and a lot of debris going into the Yellow Breeches. “I’m hoping that funding from stormwater fees can be used to investigate where the water is coming in and how to possibly remedy the situation. Chairman Cochran thanked Ms. Mitroba for her input.

Joe Smock, of 31 Hellam Drive, Mechanicsburg: “We had a lot of issues. Spring Run really came up—there’s a ton of debris and it’s still there.” He expressed the hope that the Township engineer’s presentation would address some of his concerns.

CONSENT AGENDA

a. Approval of Minutes of July 17th, 2024.

b. Consideration/Approval of April 2024 Bills in the Amount of $26,736.49

c. Consideration/Approval of Staff Reports

(1) Township Manager’s Report
(2) Solicitor’s Report
(3) Engineer’s Report

Mr. Castranio made a **MOTION** to approve the consent agenda, **SECONDED** by Mr. Martin. There were no objections. The motion carried unanimously.

NEW BUSINESS

There was nothing for discussion.

OLD BUSINESS

Chairman Cochran prefaced Mr. Reichard’s presentation by noting that the storm event we experienced during Hurricane Debby put down at least 7 inches of rain within a 24-hour period, which is believed to be a record. He characterized the storm as a large microburst; something which you don’t engineer for. “If you wanted to engineer everything to prevent flooding at 7 inches in 24 hours, the costs would be tremendous and you wouldn’t use it but maybe once a decade.”

Mr. Reichard presented a slide deck, which represented an information-gathering effort by C.S. Davidson. The Township was required to do a pollution reduction plan by the Department of Environmental Protection (DEP). The Township invested significant funds in various basin retrofits, stream restoration projects, and stormwater enhancements throughout the Township. With this rain event, it provided a great opportunity to see how these systems are working.

He discussed Winding Hill Park North, an early project. “We constructed a new stormwater facility located to the rear of the park and recreation building. There used to be a small basin that was right beside a concession stand. It was largely non-functional and didn’t serve a purpose

aside from slight pre-development or post-development stormwater control. The Township had interest in developing the property further with additional parking lots, fields, trail systems, etc.—so we relocated the basin at the lowest point of the property and it's really a combination of systems with underground storage, above ground storage, piping system, etc." He referenced a photo of a pipe, noting that it was at one point flowing nearly half-full; the pipe runs the length of the park and feeds a stormwater basin that's located at the rear of the park and recreation building. This was a basin that had rain gardens, areas for infiltration, landscaping, and tree plantings. The tree plantings, once mature, will help cool stormwater as it moves downstream. This facility reached close to ultimate capacity; one of the first times since that pipe was installed that the water level was observed so high.

He moved on to discuss work at Mt. Allen Park, where a bioswale was constructed. All the pipe network had dumped into a channel that was severely eroded; the Township saw this as a good opportunity to install a bioswale, which calls for the flattening of the stream embankment with rock armoring on the initial outlet to reduce water flow velocity. Amended soils and native plantings along the channel, along with constructed rock vein structures help to lower the water step by step where there's significant elevation changes. The little pools created thus help collect sediment, which earns the Township nutrient reduction credits with the DEP. Mr. Reichard showed a series of photos of the vegetated channel in action.

Mr. Reichard then described stormwater improvements in the Aspen Park rain garden. Per Mr. Reichard, "we tried to take advantage of all the properties that the Township owned in terms of trying to reduce stormwater rates and pollution." He demonstrated how the rain garden, with its amended soils and underdrain system, held up well during the most recent extreme rain event. Mr. Reichard explained that this upstream system is helping the Spring Run Drainage Corridor.

Another Township project took place at Spring Run Park, where a stream bank restoration was performed. There had been an existing channel that extended through the park, about 18 inches wide and deep, with severely eroded vertical banks. A significant amount of water was being directed down Spring Run Drive and would outlet there and cause erosion. The project called for laying back the embankments to reestablish a natural floodplain along the stream corridor. This has been improved slightly, but it was a very narrow channel and really doesn't have the capacity for the amount of water that was coming to this point. Mr. Reichard demonstrated where the channel was expanded to between 25-30 feet. Excess sediment has been removed. Mr. Reichard observed that there was significant improvement in the collection of sediment and nutrients.

Mr. Reichard then discussed one of the largest projects the Township has undertaken: the Meadowview stormwater basin. "The Meadowview stormwater basin has a fairly significant drainage area largely developed and there's significant amount of water tributary to here with three very large culvert pipes. We started evaluating this site because it had a great opportunity for pollution reduction and as we did our work, we found that the facility was rather undersized. Part of our scope called for excavation to try to maximize the capacity of this basin and improve the flood control that that system offers. We also incorporated rain gardens and natural landscaping once again for sediment removal. And this is pretty much close to maximum capacity for this facility, but it's holding an extensive amount of water and releasing it at a controlled rate going downstream." He showed a photo of Fisher Park: "So top of bank, if you

will. To put that in perspective, this is a shot directly downstream through Fisher Park. And that gives you an idea how much water is being cycled through that facility. Fortunately, had that facility not been there, this would have been a much more significant condition. This water is all tributary to systems that we improved in the Canterbury development area where we came in and there was an existing stormwater basin located here to the rear of these properties, we found that basin was underperforming. It was built or designed under old standards and there was an opportunity to further restrict the amount of water that was leaving that facility. Looking up ahead here, here's Fisher Park. All of the stormwater bypasses that facility and what historically does flow down through to Lancelot Avenue and Hawthorn Avenue. I believe there were conditions of road over topping, and we had some residents there that had reports of flooding in the past because of the surge of water that did come through that area. This is the existing basin after we completed our modifications. We put a structure here to force this facility to hold water. I think in the past it may have been probably half of that, even if that amount, most of the water was a direct pass through with the basin at its peak you can see there's probably another two foot of water in here during this event, so it definitely maximizes the functionality of this particular system. Then, looking down slope, this is the newest ~~new~~ basin that we built. The one I just showed you a picture of directly feeds this facility. It's a secondary containment system for that existing basin. However, the flow that you saw coming from Meadowview and through Fisher Park, as I mentioned, is a bypass, and it's a significant stream of stormwater that's flowing into there as well. The house here on the left side was in a similar condition. The system up slope of those three facilities made a significant improvement and the control of stormwater ~~off~~ coming from the site. You can see a debris line here. Historically, I would have said this road would have been overtopped in that condition but was well maintained within the stream banks.

And lastly, Creekstone Manor was another BMP improvement where we constructed another rain garden. This is full of amended soils with an underdrain system designed to filter out sediment and pollutants. The system's working great. Normally you would see a pool of water here. That's all being infiltrated through that media and being collected by that underground system, and ultimately tributaries to the basin. The basin previously had never held water. We made modifications to that facility, and it is now holding a significant amount of water."

Chairman Cochran posed a question about stormwater planning for new developments. When new developments are being constructed, they must engineer and present a stormwater management plan to the Township. The Township requires this plan to be such that the stormwater runoff will be no greater than it was before development. Mr. Reichard confirmed that the Township observes pre- and post-development conditions. The developer will hire an engineer to "perform hydraulic calculations to model the water flow conditions once all the houses are built, the roads are built, all the impervious coverage is in place and our ordinances do require for that post-development to be less than the original conditions then we also have provisions for volume retention to reduce a certain amount of volume from that flow as well as part of that overall stormwater system."

Chairman Cochran again opened the floor for public comment, reiterating the unique nature of the recent storm event, calling it a "100-year event;" all across the West Shore, people experienced flooding. He observed that the Township is facing obstacles in stormwater management due to the age of many developments (from the 70s, 80s, and 90s). Stormwater

program requirements were not always as rigorous as they are today, and the Township is dealing with the fallout. Mr. Cochran briefly discussed the Webercroft development, which he noted probably couldn't have been built today as it sits so low. He explained that the Stormwater Authority was working to address issues that would get credit with the state and also be reasonable for the taxpayer. The current emphasis is on the Cedar Run Basin. That project was on hold until Legacy Park work was completed. Legacy Park's water drains back into the Township, but it is in Mechanicsburg Borough. Once Legacy Park made their stream bed through there, they created bigger channels to get water underneath Market Street. Now, Cedar Run may be addressed, along with Broad Street, Deihl Road, and Webercroft. These areas should see their stormwater projects completed over the next two years.

Chairman Cochran discussed the flooding that occurred on Route 15. "When you get that much rain at one time, you get a lot of debris that gets moved - because the rain is so heavy that even sheet flow is pushing things down. Well, there's one drain at the top of Old Hollow Road on that side of Route 15 that the PennDOT put in to get water underneath and over to the east side. The debris clogged that drain. It came down and closed off the drain, and when the basin got full, it overtopped and came rolling down the hill and went down on Route 15, only to find that the drains on Route 15 clog too. Once it got there, it had nowhere to go. PennDOT came in and cleaned those drains and when they did the water dissipated pretty quickly. But that's what happened there."

The Chairman once again opened the floor. Ms. Mitroba spoke: "As I said in my comments, this is not a new problem, and I realize—we've been very patient—we know that seven inches of rain is not something we're going to see, hopefully. But climate change is here. I don't think we can deny it anymore. There are more storms and hurricanes. The hurricanes usually go out to sea; well, they came right through central Pennsylvania and they just stalled. To make a long story short, I appreciate all you're doing for remedying the situation in large developments, but my feeling is what are we doing for the individual homeowner who pays taxes and stormwater fees and we have to take the brunt of all this water and this is not that's not a new thing the fact that was seven inches was just worse. I mean, we've cleaned out our pipes like five times this season because if they get clogged, it gets even worse. But even if they're not clogged, the volume of water that goes through there is ridiculous. So, I don't know. The church on the hill, and now we have Chick-fil-A and whatever."

Ms. Mitroba observed that she had not seen any retention basins in the area of Chik-fil-A. Chairman Cochran pointed out that there are retention basins up on top and that water actually drains in the opposite direction—about half of the water from the Mills at Shepherdstown drains toward Market Street. The other portion comes over and there are basins in the road that are not top-coated yet, which were not yet working. Mr. Reichard pointed out that in that development, almost all of the stormwater basins are actually underground.

Chairman Cochran addressed Ms. Mitroba: "One of the issues on Bumblebee, and I used to live very close to Bumblebee, I believe, and maybe Jason can correct me, is that when your homes were built, you put in a certain size pipe, and that wouldn't meet today's requirements that your pipes are so small that water does build up and then they're easily clogged and I don't think there's anything we can do to prevent some debris from falling into the little stream bed that goes

down there. People throw garbage out…and it's a shame but we can't stop it, there's just no way to physically stop that…The problem might come down to the size of the pipes." The only remedy would be to replace the pipes. Chairman Cochran encouraged Ms. Mitroba's neighbors to come to present testimony to the Board as well.

Mr. Smock returned to the podium. He has owned the home at 31 Hellam Drive for over 35 years. Prior to Fairmont Circle being built, there was a small 18-inch corrugated metal pipe; there is now a huge pipe and the entire stream has dropped down three to four feet from erosion. It's down to bedrock. He observed conditions there: a very large tree came down across the stream. It was established that the Township would not interfere with the tree as it was on private property. Per Ms. Boyer, the development plan for the area mandates that the HOA is responsible for this type of work. Mr. Smock reported that Kimberly Meadows does not have an HOA, just a civic association. According to Ms. Boyer, it was set up to have an HOA. Had the HOA been established, it would have been taking care of the tree. The tree in the creek impacts multiple private property owners; Mr. Smock estimated there were ten properties involved. They have done some work on their own to try to prevent further erosion.

Mr. Fairchild commented: "I see one of the jobs of the stormwater authority to identify and then prioritize the stormwater issues in the township. And the new issue that emerged from this storm, I thought to be most surprising was the flooding on US 15. And I'm wondering if that isn't what ended up in Bumblebee Hollow. And I'd appreciate if we'd take a closer look at that." He encouraged residents to attend the Stormwater Improvement Committee meetings, which take place at 8am at the Township building on the third Tuesday of each month. Mr. Reichard assured Ms. Mitroba that Bumblebee Hollow would be investigated.

Mr. Martin made a **MOTION** to adjourn the meeting at 6:41p.m., **SECONDED** by Mr. Castranio. The meeting was adjourned at 6:41p.m.