Field Notes of Sussex Conservation Observations – October 24, 2018

On Wednesday, October 24, 2018, at 9:00AM, members of the Reserve at Pilottown Homeowner's Association Board (DeFeo, Parker, Carroll) met with Ms. Jessica Watson of the Sussex Conservation District. Watson is the District's Sediment and Stormwater Program Manager and was asked to visit and inspect the Reserve's stormwater retention pond, the bio-swales and the New Road ditch.

The following inspections took place:

New Road Swale Ditch -

Watson inspected the area of the ditch from the fencing along New Road. She noted several indigenous plants in the ditch that were beneficial. She noted areas of phragmites that were growing in the ditch and she was informed the phragmites were also growing in other parts of the ditch north of Captains Circle. She reported the phragmites are an invasive aquatic plant species that when allowed to grow will take control of the entire ditch. Trimming them or cutting them down does little to stop their growth spread and can possibly encourage a faster spread of the plant. The phragmites need to be chemically treated and a systematic approach to keep new growth down should be put into place. She recommended that the HOA should plan for a spring time effort to spray the phragmites. Since the first frost is generally near the end of October and the area already had a light frost, the phragmites growth season ended with frost so it would not be beneficial to spray them until springtime.

As far as the rest of the ditch, Watson said it was important to conduct some periodic maintenance with it. She expressed little concern with water in the ditch as it was tidal to the Canary Creek. She recommended that trees that were observed should be removed from the ditch as they serve no benefit to the water management and would likely cause problems if allowed to grow. She suggested other indigenous plantings might be warranted in the ditch. She said the ditch is part of a wetland and although aesthetics can be important to the local landscape, it is important to encourage native plant growth and wildlife species to inhabit the ditch.

Asked about any responsibility from DelDOT to maintain the integrity of the ditch, Watson opined that DelDOT would probably not be concerned with growth of phragmites or invasive species in the ditch, but rather roadway flooding coming from it. She noted that if water from the ditch overflowed onto the roadway, DelDOT would attempt to correct the flooding issue. She suggested the HOA contact DelDOT as a request for cutting down the swale to a height that was more uniform and she promised to forward information for a DelDOT point of contact. She suggested the HOA could address some issues on their own, by possibly hiring a company that could assess and spray the phragmites or other invasive plants.

Upon inspection of the Forecastle Lane area of the New Rd. ditch, Watson cited that it was closer to the wetlands of Canary Creek and appeared to look as expected. She suggested that the areas of the pipes that flow under Forecastle Lane and from the bio-swales be kept clear of plant growth obstruction. Watson believed there might be drainage piping from Park Road under New Road into the ditch but none was evident during her visit. The concrete drainage pipe was located on 10.25.18. It extends from the south side of Park Rd., under New Rd. and ends in the New Rd. ditch behind lots 79 & 80.

Bio-Swales -

An inspection of bio-swale #1 took place, mainly along the Lightship Lane and Captains Circle side of the Reserve. Watson was aware the Reserve had two bio-swales, the second being behind homes along Marina Lane and University Lane.

Watson said it appeared the swale was functioning properly. She noted the observation ports (cleanouts) that are above ground to the buried piping under the swale. When asked to offer an opinion as to the life expectancy of a working bio-swale, Ms. Watson stated preventative maintenance of the swale would likely dictate its longevity. She reported that swales became a necessity during the 1990's, but at that time they were a relatively new concept to the area and it would have been impossible to predict how long one would last until it needed major repair or replacement. As far as the Reserve's bio-swales, Watson cited they were partly garden-like extensions of back yards and provided a water filtration system to help keep pollutants out of the Canary Creek and the Delaware Bay. She said it was important the swales drained after large amounts of rain and it was equally important to make sure large rooted trees or plantings did not clog the underground drainage pipe or fall into the swale, causing the pipe to break or fail. She did make note that some plantings, (probably original) were becoming large and should be watched. Ms. Watson also noted some private plantings appeared to be in the area of the swale where they could eventually damage it. A discussion took place regarding the policing of the bio-swale. She was informed that most property owners respect and obey the drainage easement that exists in their rear yards, but we could not attest that everyone did so.

Watson said the soil makeup of newer constructed bio-swales has changed over the years from what was installed in the Reserve, but she had little concern regarding the workability of ours. She believed periodic mulching was an important component to the bio-swale's longevity. Periodic inspection after large rainfalls was also very advisable. It was Watson's belief the Reserve bio-swale's were functioning as they should.

An inspection at the swale's end leading into a storm drain behind Lot #109 (Seagull Drive) revealed it to be dry and clear of any debris or concerns to Sussex Conservation.

Stormwater Retention Pond -

An inspection and walk around of the Reserve stormwater retention pond took place. Watson noted that the plant vegetation buffer area around the pond appeared to be in good shape. Walking around the rear of the forebay at the pond's west side, Watson noted a section where the earth banking had lost some sloping, appearing more vertical than desired. She said it was something to consider in our maintenance program. Watson said fill could be brought in and packed into the slope. A similar sloping condition was located in the south-east corner of the rear micropool. Watson took photos of both areas.

Watson noted that the Reserve's pond was somewhat unique to other local stormwater management ponds in that our pond was qualitative based and not quantitative. She said some local HOA ponds collect large amounts of rainwater runoff, where the Reserve pond does not. Water runoff from the Reserve pond flows directly to the wetlands and into Canary Creek and Ms. Watson seemed pleased with the clarity of the water. She said ponds have aesthetic values in many communities where they are very visible to the public. She opined that the Reserve pond and immediate surrounding area was well cared for and picturesque. She was informed the Reserve still contracted with Solitude Lake Management to inspect and treat the pond.

An inspection of the rear outflow took place. Ms. Watson looked for any evidence that the outlet structure was compromised. She said the pond outflow was similar to a small dam. The concrete outflow walls were anchored into the rear embankment of the pond and it would be important to visually inspect this area periodically while looking for any evidence that runoff had found its way around the concrete outflow into the embankment. No evidence of that was found during the inspection. Watson said it was important to keep the area in front of the outflow clear of aquatic vegetation. Grass from the outflow to the wetlands were fine as long as water runoff to the wetlands was not restricted. She was advised Solitude had treated phragmites at the rear of the pond during the year.

Both inflow pipes were located and observed. It was noted the pipes were below the water line. Ms. Watson was informed of concerns that the inflows contained sediment which could restrict water flow into the pond. She was advised the HOA was consulting with Solitude for possible action regarding closer inspection of the pipes. An observation of the stormwater catch basins on Seagull Drive also took place. The two basins observed both contained water. Watson said it was not uncommon for water to be located in the basins as they led directly to the below water level inflows. If the inflow pipes did not allow the flow of water into the pond, the catch basins would likely overflow onto the street during heavy rain.

Asked what the HOA could do in terms of looking for signs of a pond failure, Watson said that obvious signs of potential issues would be sink holes in the ground at areas above or near underground piping, overflowing street catch basins that directly feed the pond with water runoff, and a failure of the rear embankment and outflow of the pond. Watson stated that at this time the pond appeared to be functioning as it was supposed to do. She reiterated the importance to maintain it and to be prepared to invest in repairs when they are needed.

The meeting with Ms. Watson ended at about 10:20 AM. She would prepare a report on her observations and forward it to the HOA. She was thanked for her time and her assistance to the Reserve.

Prepared by
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