## **Detailed Narrative of the 2016 Emergency Drainage Project**

On February 19, 2016, Joe Murray and Francis Piraino from Parish Property Management (PPM has been managing the property since late 2015) discovered a heavy flow of water pouring into the church basement/crypt. This basement is directly under the church altar and choir area and includes the organ mechanics and blower, as well as the main electrical, gas, and water lines that enter the church complex. When the flow was discovered there was already about a half foot of water in the basement, and the two sump pumps were doing their best to evacuate the flood water. Francis and Joe immediately contacted me, our two wardens, as well as our plumber and the water company because the water flow was heavy enough that the initial diagnosis was a water main break pouring into the church basement. The flow did not stop when the water was turned off. Several hours later, it was determined by the town manager, the water company, our plumber, and an excavator that the likely problem was that the sewage line was backed up and the sump pumps, which apparently were tied into that sewage line, were endlessly circulating flood water from a recent snow melt and large rain storm (flooding, though not heavy flooding, in the basement had been regular in large melts or big storms). When the sump pumps were turned off the water flow stopped. The basement remained flooded with 6 inches of water. The town cleaned their sewage lines. We scheduled ours to be cleaned the next day. The town manager (and everyone else) assumed the problem was that our line was backed up.

The next day, February 20, professional drain cleaners sent a camera through the sewage pipe from the church toward the road. The camera discovered that the pipe was partially collapsed and also that the pipe ended into an unknown cistern, located approximately 25 feet from church exterior, under our paved circular driveway. Excavation of the pipe and cistern was scheduled for the next dry day. Inconveniently we had a major rain storm for the next five days. On February 26, the driveway was excavated to explore the pipe and determine what the cistern was. Excavation revealed a 6 foot deep, 6 foot diameter man-made, rock cistern that the pipe poured into. The design and material used for the cistern looked to be very old. There were no visible pipes going from the cistern to the street. On February 27 the cistern was professionally cleaned out, and it was confirmed that there were no pipes exiting to the street.

Essentially, we had discovered an old seep tank into which the church sacristy wash sink drained – additionally there may have been a bathroom where the current sacristy is. Presumably, because the pipe exiting the church basement towards the street appeared to be a standard sewer pipe, the rectory sewage line was grafted into that line in the early 1940s when the rectory was built. At some point in the unknown past, two sump pumps were added to the same plumbing system to address regular flooding in the basement. At the end of the day, all of it was draining into a large cistern 25 feet off the property. How this system managed to function for so many decades is unclear – it functioned well enough not to be noticed, yet poorly enough to exacerbate any flooding in the basement.

By law, the sewer lines must connect to the town sewer system, and the sump pumps must drain on to the property or connect into the town storm drain system. We had several options and all of them were very expensive. The most obvious options of extending the sewer pipe to the street and

building a large storm water drywell in front were unfortunately among the most expensive due to the amount of ledge rock on our property, which would have required extensive excavation and even possible blasting. The least expensive and least explosive options meant digging up the entire front yard and much of the driveway of the church in the hopes that we would be able to run two new lines. The excavators hit substantial amounts of ledge rock three times, but in the end they were able to run both lines.

The first line is a new sewer line which is connected into the Undercroft of the Parish Hall where a bathroom had once existed. The old bathroom had been dismantled decades ago, but the sewage line was intact but clogged. Making the line usable again required extensive cleaning by a professional drain cleaning company – it took them two full days to open up the line. Some good news in that part of the story is that we have the future option of installing a handicapped bathroom in the Undercroft. The second line connects the sump pumps in the basement to the main storm drain line under the driveway between the Parish Hall/Ranck Building and the Old Parish House. That line runs around the Parish Hall, and several necessary storm drain grates and access points were installed. Work on that part of the property concluded with backfilling and landscaping of the lawn, filling in of the cistern with rock, the installation of an access point to the sewer line in the driveway, and repaving.

In some way, shape, or form nearly all of the sump pumps and gutter downspouts on our parish grounds drain into that main driveway storm drain line. That line runs into the south western corner of the property by the playground. Because that corner area was full of large broken pieces of concrete, rocks, a dying tree, wood chips, dirt, and standing water, we needed to excavate the area to determine whether it connected to the town or simply ended in some sort of nonfunctioning drywell. The tree was removed, a large pit was excavated, and thankfully we discovered a very large pipe connecting into the town storm drain system. This was very good news. Our excavators then lined the excavated area with large rocks and created an appropriate and functioning drainage area which will allow all storm water from our property to exit into the town storm drain system. As of this letter that corner area is fenced off with caution tape, but it will soon be accessible only through a proper fence and lined with shrubs.

The final portion of the drainage project was ensuring that all other sump pumps and storm drain pipes on our property are working and draining properly. We have replaced and rerouted several sump pumps in the Old Parish House, we have one more sump pump that needs to be rerouted, and that work is planned for shortly. Likewise, we have determined that all but one of the other storm drain pipes are intact and functioning. There is an area between the church and rectory, just off of the Garden of Resurrection, that was excavated last summer to replace a gas line to the rectory. That area had not yet been re-landscaped because of worries there might be drainage issues there. We had the pipes in that area scoped, and thankfully there are no underground breaks or clogs. The area will be re-landscaped in the next few weeks. The main drainage pipe from that area to the driveway is broken in two places. The broken pipe is above ground, quite dangerous for anyone walking through the area, and has caused significant erosion of the hill next to the Garden of Resurrection. That pipe is scheduled to be repaired in the next few weeks.