A question we get sometimes is "What's up with the black gunk on the water tower?" It is mildew. It grows on the underside of the tower where moisture from condensation or rainwater is shaded from the sun. It's ugly, but really it is just a cosmetic issue.

Last summer we had planned to have it cleaned off. But we delayed because we had a regular tank inspection scheduled for this year. We'd hoped the inspection itself might involve a light cleaning to remove the worst of the mildew.

And, more importantly, we wanted to know the results of the inspection. If the inspection said we could wait three to five years for repainting the tower, then a more thorough cleaning may make sense now. But if the report advised repainting the tower in the next year or two, then maybe the light cleaning would be enough.

Inspection

As it turned out, the inspection would not need to do even the light cleaning. So we took two sets of bids, one for the inspection and one for the cleaning.

The Water & Light Committee wanted to avoid potential bias or conflict of interest, so it hired an inspection firm separate from painting. Dixon Engineering out of Hales Corners performed the inspection in May. The inspection involved draining the water from the tower, removing sediment from inside the tank, and inspecting the condition of both the interior and exterior of the tower.

During the several days of the inspection, we used the pumps at our wells to maintain water pressure throughout the city. A couple of relief valves placed on fire hydrants prevented over pressure of the system. After the inspection, the interior of the tower was disinfected with chlorine and tested before going back into service.

Report

The comments during the inspection sounded like we may be able to wait a couple years before needing to repaint the tower. But when we recently received the written inspection report, repainting was recommended in a more immediate one-to-three year timeframe. At its July meeting, the Water & Light Committee decided to not spend money on cleaning the mildew from the exterior this summer. Instead, it decided to proceed with repainting the tower next year.

The report found the exterior paint to be in poor condition. It has faded extensively and had numerous areas of spot coating failures on the base cone and roof.

The report found the dry sections of the interior paint to be in fair to poor condition. The coating was ninety-nine percent intact, but there were areas of spot failure particularly on the tops of platforms.

The report found the wet interior paint to be in fair condition overall. Below the high water line, the coating has moderate blistering and spot failures on the floor and access tube. Above the high water line, the coating is in fair condition. The roof coating

is deteriorating at the open lap seams and the roof beam edges with minor corrosion.

Recommendations
The report recommended repainting the exterior and interior of the water tower in the next couple years. The estimated cost for cleaning and recoating the exterior is $70,000; the estimated cost for removing the existing paint and repainting the wet interior is $66,000. The estimated cost for spot overcoating in the dry interior is $12,000; this is not as critical as the other painting but a good idea if we have a painter on site.

The report also included a number of other recommendations. The roof seams would need to be recaulked after repainting the wet interior. A safety railing, painter's rigging railing, and safety grabs should be installed on the roof. The roof vent should be replaced with a new frost-free pressure vacuum vent. The expansion joint should be replaced.

All in all, the cost is estimated at around $218,000. Certainly more than the $160,000 we'd been using as a placeholder in our five-year capital budget. But the work is necessary, so the Water & Light Committee will include it in its budget request this fall with plans to proceed with the work next year.