October 5, 2012
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# Mitigation News

## Improved Sewer System Prevents Damages

Superior, WI - The City of Superior Public Works Department was accustomed to receiving reports of flooded basements from residents following major storms. In 1999, a 100-year storm event inundated the city with more than five inches of rain in two hours and caused around $574,000 in flood damage.

To help prevent future flooding, the City of Superior applied to Wisconsin Emergency Management (WEM) in 2000 for a grant through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP). The City's proposal consisted of two phases to help reduce the flooding problems.

The first phase involved the construction of a stormwater detention basin and a 7,000-foot storm water interceptor sewer to connect to the existing storm sewer system. Phase 1 was completed in 2004 at a cost of $1.9 million. The HMGP funded the interceptor sewer with FEMA providing $240,000, a Stormwater Grant provided $150,000, and both WEM and a Wisconsin Coastal Management Grant each provided $40,000. The City covered the remaining $1.4 million.

The project was deemed a success after significant flooding occurred in October 2005. There were no reports from property owners in the project area, even though other areas in Superior reported storm water flooding. Officials estimate that 284 structures, both residential and commercial benefitted from Phase 1 of the project, with an estimated $1.42 million in damages avoided from a single 100-year storm event. An estimated 664 structures would be protected from potential flooding in a 10-year storm event.

Phase 2 of the project was completed in 2009 and involved the construction of a 3,000-foot storm water interceptor sewer to connect to the project. Though Phase 2 did not use any FEMA

mitigation funding, the City of Superior matched funding provided by the American Recovery and Reinvestment Act of 2009 (ARRA) to further reduce the risk of flooding in the community.

The mitigation efforts were tested June 19-20, 2012 when a severe thunderstorm dropped eight to ten inches of rain over the Superior area resulting in flash flooding. Public works officials estimate that prior to the completion of the project, a storm of this magnitude would have yielded about 150 calls, but they only received 15 reports of flooded basements.

“Based on comparisons of flooding calls within the City after the June 2012 storm, the South Superior pond and interceptor sewers are protecting significantly more structures than initial estimates,” said Diane Nelson, Stormwater Coordinator for the Environmental Services Division of Public Works. “It’s great to see an area that used to have the most flooding problems become one of the most protected.”

By demonstrating long-lasting commitment to effectively mitigate risk, Superior has enhanced its ability to recover from a recent disaster, improving community resiliency for the future.

For more information on HMGP, visit [http://www.fema.gov/hazard-mitigation-grant-program-hmgp](http://www.fema.gov/hazard-mitigation-grant-program-hmgp).

Storm sewer Interceptor

Detention Basin

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