

# MEMO

**To: Sean Dorsey PE, Village of Mount Prospect**  
**From: Marcy Knysz, AICP, LEED AP, CPESC**  
**Date: October 2, 2018**  
**Re: Additional Water Quality Testing on Weller Creek**

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Water quality testing was conducted throughout the Village on June 21, 2018 per the requirements of the Illinois Environmental Protection Agency (IEPA) Municipal Separate Storm Sewer System (MS4) Permit Program. On June 21, 2018 Aquatic Ecosystems Management collected water samples at eight (8) designated locations. The sampling was conducted within twenty-four hours of a 1.17" rain event. Results of the testing have been summarized in the Village's Year 16 Water Quality Monitoring & Assessment Program Report. Results of the testing indicated elevated levels of fecal coliform at both test sites (see attached map) located in Weller Creek. The downstream test location was almost 2.5 times the level of fecal coliform than the upstream testing location. Additional testing was recommended to determine the source of the fecal coliform.

## ADDITIONAL TESTING

For the additional testing, one (1) site was added to Weller Creek, for a total of three (3) sampling sites (see attached map). The samples were taken on September 12, 2018 during dry weather conditions. Samples were taken during dry weather conditions to narrow down the source of the fecal coliform. The following is a description of the sampling sites:

- Site 5:** The test site is Weller Creek located just west of the intersection of West Clevon Avenue and Weller Lane. This site is considered the upstream location for Weller Creek.
- Site 9:** Additional testing location added between Site 5 and Site 6, immediately downstream of the Mount Prospect Golf Club.
- Site 6:** The test site is Weller Creek located on the west side of Mount Prospect Road, north of South Josephine Court and south of Fletcher Drive on the boundary between the Village of Mount Prospect and the City of Des Plaines. This site is considered the downstream location for Weller Creek.

## RESULTS

Results of the September 12, 2018 testing showed significantly lower levels from the June testing of fecal coliform at the two original sites (Site 5 and Site 6) and an elevated level at the additional test site (Site 9). The following is a summary of both sampling events.

**Summary of Sampling Events on 6/21/18 and 9/12/18 (Reported in Colonies/100 ml)**

	<b>Site 5 (Upstream)</b>	<b>Site 9</b>	<b>Site 6 (Downstream)</b>
<b>6/21/18</b>	2,000	NA	10,000
<b>9/12/18</b>	60	730	390

**CONCLUSION**

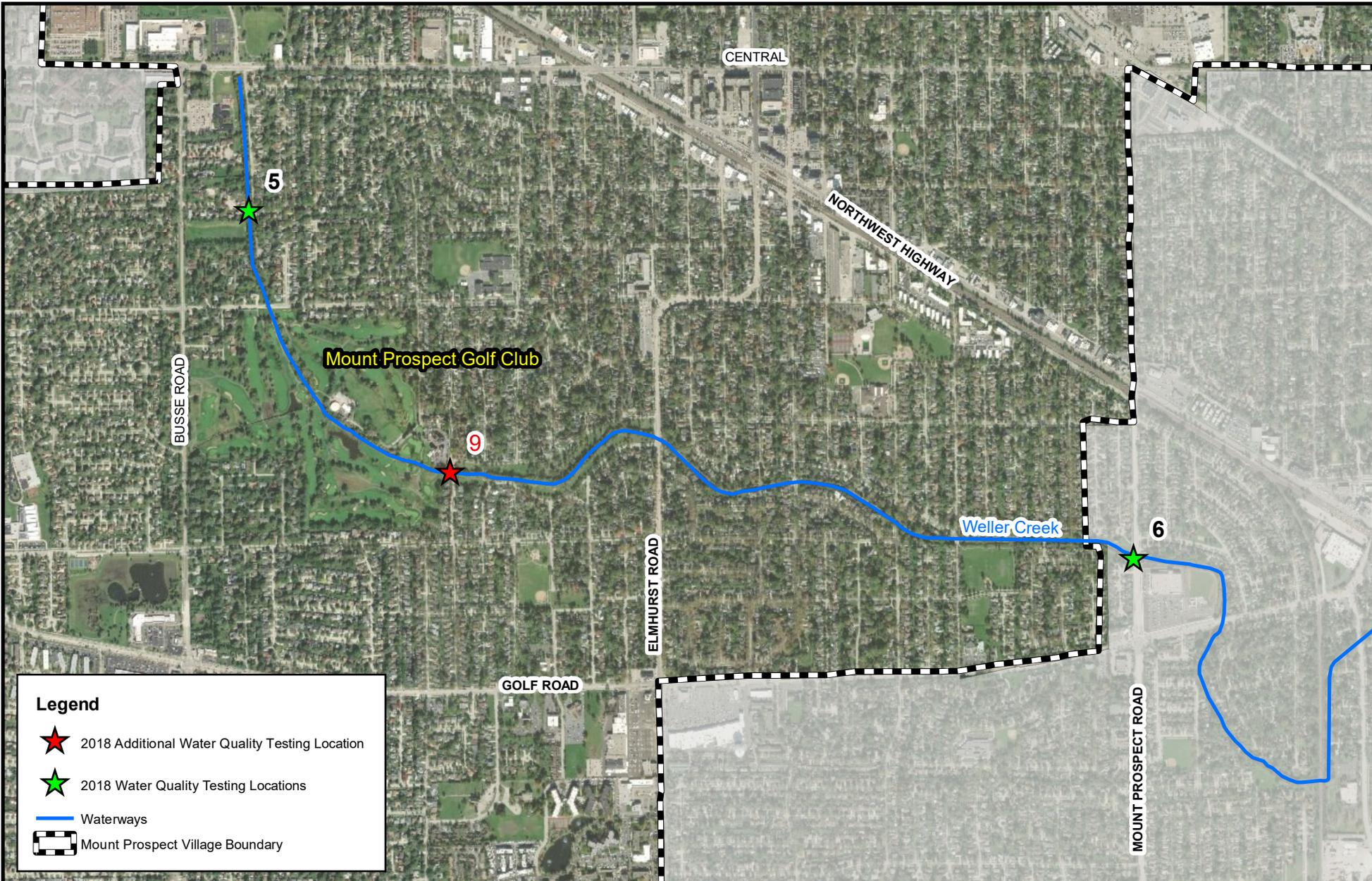
To put the results in relation to general activities, the current USEPA recommendations for body-contact recreation is fewer than 200 colonies/100 ml; for fishing and boating, fewer than 1000 colonies/100 ml; and for domestic water supply, for treatment, fewer than 2,000 colonies/100 ml. The drinking water standard is less than 1 colony total coliform bacteria/100 ml with E. coli absent.

In general, a significant amount of fecal coliform is released in the wastes produced by animals. Heavy geese populations on golf courses are common sources of elevated levels of fecal coliform in local waterways. High levels of nutrients from turf maintenance can also increase the growth rate of bacteria. Coordination with the Mount Prospect Golf Course is recommended to reduce the amount of fecal coliform in stormwater runoff coming from the golf course. The owners of the Golf Course should be educated on the beneficial effects of establishing native vegetation around waterbodies to discourage geese from accumulating on the golf course. Nutrients should also be reduced in regular maintenance of the turf.

The following are specific applications that can deter geese from the golf course:

1. **Vegetative Barriers:** Geese prefer to walk from land into water. Establishing any type of a barrier that prevents geese from doing so will make the area less attractive to geese. Geese have more difficulty locating new shoots in taller grass (more than 6 inches). Allowing the grass or other vegetation to grow tall around water bodies may also act as a vegetative barrier to geese or block their line of sight, which is their primary protection against predators. New plantings will likely require protection from geese during establishment. Fencing or an overhead grid wire system (6-ft. spacing) can achieve this.
2. **Reduce Fertilizer Use:** Geese prefer fertilized grass to unfertilized grass.
3. **Rock Barriers:** Large boulders (more than 2 feet in diameter) placed along the shoreline may discourage goose use and access to grazing sites by making it difficult for geese to walk in and out of the water. Their effectiveness is improved when used in conjunction with vegetative barriers.
4. **Visual Deterrent:** A visual deterrent such as a coyote decoy is another goose control method to use on the golf course. The coyote decoy is a free-standing life size deterrent that will scare the geese away
5. **Lights:** Floating water units that contain a flashing light which is scarcely noticeable to humans but is very disruptive to the sleep of the geese: it is directly at their eye level and is annoying to their incredibly sensitive eyesight. Geese choose to sleep in locations that feel safe to them, in which they are free of threats from predators while they rest. The safety in the water is why they choose lakes, ponds and other waterways for sleep and/or rest at night. The light causes them to no longer feel secure at night in the water. Because geese prefer to sleep and eat in the same area, they will no longer find the adjacent grassy area attractive during the day either, and will leave to find another habitat, usually after just a few restless nights.

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**Legend**

-  2018 Additional Water Quality Testing Location
-  2018 Water Quality Testing Locations
-  Waterways
-  Mount Prospect Village Boundary



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**NORTH**

1 in = 1,500 ft  
 Date: 10/02/18

**WELLER CREEK  
 2018 ADDITIONAL WATER QUALITY  
 TESTING LOCATION  
 VILLAGE OF MOUNT PROSPECT**

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