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Galien River Watershed field trip stops at conservation easement, beach, rain garden

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Topics touched on during journey range from water testing to smart zoning

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NEW BUFFALO — A Sept. 21 “field trip” around the Galien River Watershed organized by The Conservation Fund included stops at the lakefront in New Buffalo to discuss water testing at area beaches and at a jumbo-sized rain garden being built to drain a nearby park.

Also visited was an ecologically significant conservation easement located in the heart of the watershed.

Addressing the tour’s 20-plus participants where the Galien River meets Lake Michigan in New Buffalo, Berrien County Health Department Supervising Sanitarian Ken Priest talked about the process of testing Lake Michigan waters for levels of E. coli bacteria at 14 public beaches from Michiana to Hagar Shores during the swimming season.

Beaches regularly tested during the summer include Grand Beach, New Buffalo, the beach at the end of Townline Road, Cherry Street Beach, Harbert Road, Warren Dunes State Park, Weko Beach and Lincoln Township Park and several beaches in the St. Joseph area.

“We are pretty blessed to be able to test these public beaches, three samples at each beach, from Memorial Day to Labor Day,” said Priest. “This year we’ve had five beach closings.”

He said those closings included Grand Beach, Silver Beach in St. Joseph, Weko Beach and Hagar Township.

“We actually had some problems early in the year, but we did not report them. That was before Memorial Day, and it was extremely cold weather,” he said.

Priest said the Health Department doesn’t do actual beach closures — that responsibility lies with the municipality or agency that oversees specific beaches.

He noted that people can check for beach closings on the Michigan Beach Guard website, www.deq.state.mi.us/beach/.



Steve Smith (Chikaming Open Lands Board president) and Ken Priest of the Berrien County Health Department hold a map showing the 14 Berrien County beaches routinely tested during the summer months during a Sept. 21 stop at the public beach in New Buffalo. - photo by David Johnson

Nick Margaritis, one of the Health Department's water testers, said samples are taken at three different spots, with the threshold for closing being 300 colonies or more of E. coli per 100 milliliters of water.

He said Berrien County's waters for the most part have been testing "very good" for many years now.

"Some results come back near drinking water quality," he said.

Priest said most samples are taken on Mondays, making follow-up tests possible before the weekend.

"We really hate to have the beaches closed because it has a huge economic impact," he said.

Priest also cautioned that test results are just a "snapshot" of that moment, and conditions in Lake Michigan are constantly changing,

"I think the water changes at each beach many, many times between when we sample, when we get the results, and then between when we resample and get our second results, and then the following weekend," said Priest. "You have to look at the whole thing across the spectrum, and not just one little snapshot."

Dr. Wayne Gleiber, owner of Great Lakes Scientific water-testing lab in Stevensville, talked about his experiences testing the big lake and some of the streams that feed into it for E. coli with area high school students from schools such as River Valley, Bridgman, Lakeshore and St. Joseph.

He said some of the small creeks that drain into Lake Michigan have indicated very high levels of E. coli bacteria.

"The kids go out and collect them at the points we have, they bring them back and then we teach them how to do the testing in the lab," he said.

Gleiber said creeks being sampled include Hickory Creek, the streams at Weko Beach and Warren Dunes State Park, Cherry Beach, Harbert, portions of the Galien, Sunset Beach and others.

"There are over 100 locations where we've been collecting for a little over a year now, and unfortunately with the high school students that's generally in the wintertime ... when the counts go down. From November to April we see a big decrease in the counts."

Thus he said testing was expanded this summer, with two St. Joseph High School students helping to collect samples mainly in the Warren Dunes and Weko Beach areas.

Gleiber said testing at Warren Dunes led them to a creek located about a half mile south at Shorewood Hills.

"We had very high counts there for a couple of years ... I'm talking about counts as high as 200,000 in that creek."

He said testing was expanded further and further upstream in that mile-plus long waterway, which starts near Interstate 94 in Sawyer near a retention pond that was originally suspected as the main source of the E. coli.

"Later we discovered there's a sewer that runs down Sawyer Road and actually flows into that creek," he said.

Gleiber said the apparent source was eventually isolated even further up the line near about five homes. He said a manhole cover access tested near that spot tested above 10 million colonies of E. coli per 100 milliliters (about three ounces) of water.

"We know exactly where it is, and now the Health Department need to look at that, because ... we don't have any jurisdiction," Gleiber said.

He added that the E. coli levels measured where the creek nears Lake Michigan came in "usually from about 2,000 to as high as 20,000."

He said other area streams also test in the 2,000 to 10,000 colonies per milliliter range.

"This means maybe a mile upstream there's some sort of point source of contamination that we should be looking for and cleaning up," he said.

Streams aren't necessarily the only factor, however.

"We had one study we did back in April. We looked at areas of Warren Dunes and Weko where there were gulls. And what we found was immediately offshore where the gulls were, we had some real high counts. The next day they were gone," Gleiber said.

Kris Martin of the the Southwest Michigan Planning Commission also discussed efforts to deal with septic system and groundwater issues in the watershed. He said free testing of people's well water was offered at a recent workshop held at the New Troy Community Center.

"Over 50 homeowners from the area came out and brought samples of their water," he said. "That's a way they can connect with this watershed — they're actually drinking this water."

Martin said several of the tests came back indicating levels of nitrates or nitrites exceeding EPA standards.

During the visit to New Buffalo's beach, it was noted that boats aren't allowed to dump the contents of their on-board septic tanks into the lake as was the common practice decades ago, although there was some suspicion that this still occurs, especially at the end of the boating season.

Gleiber said there were some "real high counts" in the lake several years ago about that time of the year.

The last stop on the tour was New Buffalo's Oselka Park where a massive, interconnected three-section rain garden is taking shape as an integral part of the "phase two" redevelopment project at the city's Oselka Park

New Buffalo City Council member Warren Peterson explained that phase one included a pavilion building, a new baseball field and improvements to a soccer field. He said phase two, which is slated to include a parking lot, a large berm already in place that will provide a winter sledding hill that may also provide seating for a proposed band shell and paved walkways.

Winding its way through all of this is the rain garden complex which Peterson said is designed to help with "the control and management of storm water" in an area that generates a considerable amount of runoff.

"So what we did in planning for the park was to set up areas for rain gardens," he said. "These are pretty significant rain gardens."

As heavy equipment rumbled through the southern portion of the rain garden, Assistant to the City Manager Ryan Fellows said the complex is set up to drain the property not with retention ponds that could breed mosquitoes and pose a safety threat due to deep water, but instead to have the water drain dry as the root systems of resident plants "be extra-deep straws to suck up that moisture."

"These are not meant to be a drainage ditch that is going to hold water," he said.

When there is standing water in the rain garden, Peterson said the lower portion includes what he called a safety ledge.

Fellows said the rain gardens, planted with 33 different species — everything from great blue lobelia and white turtlehead to queen of the prairie and Gray's sedge, also are intended to be an attractive feature of the park that will attract birds and butterflies.

"It's going to take some time for the seeds to grow, for everything to take root and develop and for

you to have lush, green vegetation here," said Fellows.

Peterson noted that much of the soil used for the sledding hill came from excavation of the nearby rain gardens.

The Galien River Watershed Field Trip journey began at the Chikaming Township Center in Harbert where Marcy Colclough, senior planner for the Southwest Michigan Planning Commission, talked about a build out analysis she completed for townships located within the watershed.

The analysis projects current development trends to see how future development might impact water quality and looks for methods that local governments can implement to prevent future impacts through planning and zoning plans.

Colclough praised Chikaming Township for its well-written zoning, in particular building setbacks from water bodies which help to protect those waters.

She noted that this is a good time for local governments to look at their land use maps and compare them to the wetland maps SWMPC can provide, adding that comparing land-use maps to maps showing existing and drained wetlands can assist planners in reducing potential problems such as flooding created by developing in these areas.

Next up was a stop at the Chikaming Open Lands (COL) Genetzke Conservation Easement along a branch of the Galien River near the intersection of Hanover and Minnich roads.

Bob Tatina, a member of the COL Stewardship Committee and professor emeritus of the Dakota Wesleyan University Biology Department, explained the Michigan Rapid Assessment Method (MiRAM) study conducted on the property in the spring of 2010 used to determine the ecological and societal significance of a wetland.

He said the Genetzke property received a score of 85 out of 100, making it a high-functioning, high-quality wetland.

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