Volume 5 Issue 3 Winter 2011

Ripple Effects

Eagle Creek Watershed: We're All In It Together

Mission Statement

To utilize a holistic approach to watershed management with the ultimate goals of improving water quality, increasing public awareness of watershed water quality, and encouraging stewardship of the watershed's resources.

ECWA Concerns

- Lawn chemicals, particularly nitrogen and phosphorus, and resultant algal blooms.
- Degradation of aquatic habitats as a result of increased sedimentation.
- Nutrient loading; harmful levels of herbicides and other chemicals.
- High levels of *E.coli* and other pathogens.
- The public's level of understanding of the watershed and its value as a natural resource.

JOIN US!

We welcome your participation. Should you have an interest in joining the ECWA, please contact John Ulmer at remlu@tds.net

This newsletter is funded in part by a 319 Grant from the U.S. EPA under an assistance agreement with the Indiana Department of Environmental Management.

Eagle Creek Watershed to Participate in Indiana On-Farm Network

The Eagle Creek Watershed Alliance is participating in the Indiana On-Farm Network in an effort to improve water quality by helping farmers optimize nutrient application. The Indiana On-Farm Network was started in August 2010 through a Conservation Innovation Grant awarded by the United States Department of Agriculture – Natural Resource Conservation Service (USDA/NRCS) to the Indiana State Department of Agriculture (ISDA). Crop producers concerned about economics, stewardship, and their environmental footprint comprise the Indiana On-Farm Network. The Indiana On-Farm Network is based on the original On-Farm Network program started by the Iowa Soybean Association in 2000.

The On-Farm Network Program in Iowa was developed to optimize nitrogen management in corn. The goal is to improve profitability and the environment as farmers use precision agriculture tools and technologies to conduct research on their own farms. Adaptive management has shown most farmers that they can reduce their nitrogen rates by one-third while still maintaining or increasing profitability. The adaptive management approach works to address challenges in the improvement of nutrient management – time of application, nitrogen sources, and methods of application. Because nitrogen fertilizer is a significant cost for farmers, the ability to identify and implement strategies which allow for more efficient application of nitrogen is a win-win situation. Farmers have increased profit and fewer nutrients are reaching our ground and surface waters.

Last year, the Jasper County Soil and Water Conservation District participated in the pilot project with ISDA and engaged a group of 17 producers. This year, ISDA is working with the Eagle Creek Watershed Alliance, Big Walnut Creek Watershed Alliance, and several other groups to gather participants. Participating farmers gain access to a number of different tools/tests in order to evaluate the status of nitrogen on their field. Tools include: Corn Stalk Nitrate Testing, Aerial Imagery, and Replicated Strip Trials.

Farmers participating in the On-Farm Network use the data collected from their own farms and share it with others in the area to evaluate the effectiveness and economic pros and cons of different management practices. Not only do farmers gain from the information about different practices on their own farm, but they also benefit from aggregate data across multiple farms and years. The end result of the program is farmer-driven adaptive management in real time – farmers gathering and making beneficial changes based on data from their own fields and those of others on neighboring farms.

ISDA is working in partnership with a number of other groups including the Indiana Soybean Alliance, Indiana Corn Marketing Council, The Indiana Association of Soil and Water Conservation Districts, Purdue Extension, and others. For more information about the program visit www.indianaonfarmnetwork.org.

Data, Data, Data...

In September of 2010 the Zionsville Town Council voted to enter a cost-share agreement with United States Geological Survey (USGS) to upgrade the stream gauging station in Zionsville on Eagle Creek. This station has reported water quantity parameters of discharge (flow in cubic feet per second) and stream depth for decades. The upgrade adds water quality monitoring parameters including temperature, dissolved oxygen, pH, specific conductance, turbidity and nitrate. Zionsville's fifty percent share of the cost is funded from the town's Storm Water budget.

Now, in addition to knowing how much water is in Eagle Creek, data is available on what's in the water in Eagle Creek. The gauge is located at the intersection of Eagle Creek and Zionsville Road. A large majority, 106 square miles, of the Eagle Creek watershed is upstream so the data will give a good picture of the health of the watershed and record impacts of pollution events, should they occur.

The Zionsville gauge is one of only two gauging stations in the state USGS system that monitor this many water quality parameters. The other is located in southwestern Indiana near Hazleton on the White River. Installation and maintenance of this sophisticated scientific equipment is an expensive proposition. Unfortunately federal budget pressures limit the amount of equipment that USGS can place in the field, and in fact some monitoring stations have had to be discontinued. It is commendable that Zionsville stepped up and provided funding so that water quality in the community can be better understood.

Data has been collected for about 3 months. The basic five parameters have been pretty solid, but there have been several problems with the nitrate monitor. This instrument is actually performing a "wet chemistry" lab analysis with lots of tiny pumps and moving parts all done automatically underwater. The amount of downtime has been frustrating to USGS and they are in the process of purchasing a Submersible Ultraviolet Nitrate Analyzer (SUNA) that measures the amount of nitrate using ultraviolet light. Hopefully a less mechanically complex instrument will increase reliability and reduce downtime.

USGS has been collecting manual samples for nitrate analysis during the past months, so we will have a baseline to compare spring fertilizer, residential and agricultural, application impacts. Everyone can view, on the Internet, the real-time data collected by the monitoring station, at http://waterdata.usgs.gov/nwis/uv?03353200.

Suffering Winter Blues? Find Ways to Enjoy Eagle Creek Watershed

Did you know our watershed provides opportunities for great wildlife viewing and other outdoor recreation? One such treat is bird watching! Winter time is a wonderful time to watch birds. Have you seen a cardinal banking gracefully to a feeder in the softly falling snow? How about a chickadee timidly waiting its turn to get a seed? Have you watched the nuthatch quickly grab a seed to "cache" it for later? While they are all working patiently together to feed, the aggressive blue jay bombs in scattering all of the birds, only for them to all resume once the blue jay leaves.

The Ornithology Center in the Earth Discovery Center at Eagle Creek Park hosts two rooms for your bird viewing pleasure! The "birdfeeder room" gives you an up close look at Cardinals, Nuthatches, Chickadees and Woodpeckers. The wonderful little Red-breasted Nuthatch, Fox Sparrow, and the occasional Pine Siskin are also visible here. This time of the year you can view up to sixteen species of birds at the feeders.

The back room offers panoramic views of the bird sanctuary. There is always an opportunity to see bald eagles flying around and the different ducks and geese on the open water. Lately, the Common Merganser, Red-breasted Merganser, American Black Duck, Mallard, and Common Goldeneye have all been seen, just to name a few. An uncommon raptor, the Merlin, made its presence last week and rewarded those who braved the cold. The last part of February and the first part of March, the ducks will return and you have the opportunity to see up to twenty-two species of North American ducks here at Eagle Creek Park.

For the more adventurous type, hiking around the coffer dam (Bird Sanctuary) will reward you with birds such as the American Tree Sparrow, Fox Sparrow, Northern Mockingbird, Brown Thrasher, and the ever popular LBB (little brown bird).

Whether you stay inside the Ornithology Center or hike around the coffer dam, the birds are here for your viewing pleasure! The Ornithology Center is located at 6515 Delong Rd, Indianapolis, IN 46278 inside Eagle Creek Park. Admission is free with park admission ($5/car, $15/bus).

For more information you can visit: http://www.eaglecreekdiscovery.org/home/ornithology-center.