New Research on Mosquitoes and Stormwater Structures

By Justin Harbison, Ph.D.

For over a century, we’ve known stormwater structures like catch basins and rain barrels can be significant sources of mosquitoes due to their propensity to hold standing water. In fact, several agencies charged with mosquito control around the Chicago area focus the bulk of their efforts on treating the region’s hundreds of thousands of catch basins. As stormwater regulations have become more stringent, new technologies and structures have been developed to not only manage stormwater but decrease the pollutant load carried with it. Structures, such as detention and retention basins, rain gardens, and proprietary belowground devices, play an important role in protecting water quality but, like their predecessors, can hold standing water favorable for mosquitoes. From 1999 to 2010, the State of California’s Vector-borne Disease Section performed numerous studies examining the association these technologies (also known as “Best Management Practices”) play in protecting mosquito breeding sites.

Attorney General Sues In Train Derailment Ethanol Fire

IEPA Sought Close Oversight of Environmental Sampling

Following a request by the Illinois EPA, the Illinois Attorney General and Bureau County State’s Attorney have sued for court imposition of environmental sampling and groundwater monitoring mandates on the Iowa Interstate Railroad, whose October 7 train derailment west of Peru, Illinois resulted in the rupture of ethanol tank cars.

A total of 26 freight cars were derailed, about nine carrying ethanol, a flammable substance. 52 fire departments responded when the ethanol cars ignited, and most residents of nearby Tiskilwa left when a precautionary evacuation was recommended. Despite a spectacular blaze, no one was injured by the derailment or fire, and no damage to surroundings occurred.

Ethanol, the alcohol in alcoholic beverages, is produced from corn in large quantities by an industry that sprung from federal and state laws requiring the addition of renewable fuels, or ethanol specifically, to gasoline. By another federal requirement, the ethanol in the rail cars, and in most industrial applications, was denatured, meaning that small amounts of a substance, often gasoline, were added that render it unpleasant to the taste or even have with mosquitoes able to carry diseases. The most recent publication from this work, “Discovery of Vector Mosquitoes (Diptera: Culicidae) in Newly-Installed Above- and Belowground Stormwater Treatment Systems in San Diego County, California”, was written by Dr. Marco Metzger and colleagues. For a year, this group monitored fifteen ex...
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National Association of Environmental Professionals Update

By Ron Deverman, NAEP Immediate Past President

NAEP continues to create additional benefits for NAEP members and affiliated NAEP Chapters like IAEP. The newest benefit is the NAEP National Desk environmental newsletter which our IAEP newsletter editor, Eric Sikora, has been forwarding to you. The NAEP National Desk is a biweekly publication of current national issues affecting the environmental professional. Topics range from key policy decisions and legislation related to energy, transportation, natural resources, land management, and air quality to major changes in federal agency guidance or procedures. The NAEP National Desk is provided through a licensing agreement between NAEP and Environment and Energy (E&E) Publishing, LLC (www.eenews.net). E&E’s four daily online publications are ClimateWire, Environment and Energy Daily, Greenwire and E&E News PM. The National Desk consolidates the top stories from these publications.

The NAEP 2011 Annual Conference will be held in Portland, OR, May 20-24, 2012. This conference’s theme is “Science, Politics, and Policy: Environmental Nexus.” A NEPA Symposium and a Visual Resources Symposium will be held the first day of the conference. Check out the exciting details of the conference sessions and events on the NAEP website, www.naep.org. The 2012 annual conference Schedule-At-A-Glance is now posted and we will have more information in future issues of IAEP Network. In 2010, NAEP began an excellent webinar series and that series continues in January 2012 with a session on recent developments in Native American tribal coordination. NAEP plans at least 8 webinars for 2012 and an additional 4 (quarterly) webinars with American Public University on job search and career development successes. We will have more information about these webinar opportunities soon.

We recommend that IAEP members consider joining the NAEP; membership information is on-line at www.naep.org. If you have questions about NAEP or IAEP’s affiliation with the national association, contact Ron Deverman at rdeverman@hntb.com.

Household Electronic Recycling Mandate Takes Effect January 1

Use of Manufacturer Recycling Programs to Become Mandatory

Illinois residents will no longer be able to throw their old electronics in the trash after a recycling mandate takes effect on January 1. Beginning in 2008, the Illinois legislation required manufacturers to accept and recycle or refurbish discarded electronics they sold in Illinois, and the IEPA can impose a civil penalty of $10,000 for each day of violation. Consumers and landfills will now be bound by law to participate, following several years allowed for manufacturers to establish recycling programs. Registered recyclers and refurbishers will serve as intermediaries, receiving the discarded items from households on behalf of the manufacturers.

The law applies to 17 common products, chiefly computer-related and home entertainment items. The recycling rate for all electronics in 2007 was 14%, according to IEPA. The legislation appears to aim at both a reduction in landfill disposal and increased recovery of metals used in the electronics. The latter are increasingly valuable commodities, and also potential groundwater contaminants should they escape landfills.

Accompanying the mandates is an IEPA-administered annual cycle of reporting, registration, and fee payment for manufacturers, recyclers and refurbishers. Logistical options available to households for getting rid of their electronic refuse will depend on local recycler and governmental initiatives, but appear to tend in urban areas toward centralized drop-offs akin to those used for batteries and household chemicals. In 2011, the City of Chicago accepted electronic waste two to three days per week year round at a Household Chemical and Computer Recycling Facility, and also held single-day drop-off events in various areas of the city one to two times in the year.
A Year in Review

2011 has been a busy year for IAEP. In order to provide more for your IAEP membership we scheduled seven seminars, one webinar and many networking opportunities to provide educational as well as social connections to you, your colleagues and potential clients. In March we honored Mr. Jared Pilbeam with a $1,500 student scholarship. We also hosted a fantastic golf outing in September that raised $3,000 for our IAEP scholarship fund.

To recap, IAEP offered the following informational seminars in 2012:

- **February** – Emergency Spill Response to Bio-fuels by USEPA
- **April** – Student Career Seminar by IAEP and BDE Manual Update by IDOT
- **May** – Total Maximum Daily Loads and Load Reduction Strategies by Illinois EPA
- **June** – Clean Water Act Guidance by US Army Corps of Engineers – Chicago District
- **September** – An Endangered Species Update by USFWS, Chicago Field Office
- **October** – Illinois Stream Mitigation Guidance by the US. Army Corps – St. Louis District

Recap of the October Seminar

On October 12 at Café Zalute in Rosemont, Illinois, Mr. Keith McMullen from the St. Louis District of the Army Corps of Engineers presented the Illinois Stream Mitigation Guidance that was released in 2010. He provided a synopsis of the agency’s point of view on its interpretation and went over the forms that are required for permit applications for stream projects.

Attorney General Sues In Train Derailment Ethanol Fire

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100% ethanol (equivalent to 200 proof) is two to 2.5 times more concentrated than whiskey or vodka, and 2.8 times as concentrated as the rum added to your holiday egg nog (or 1.3 times Bacardi 151 rum). Most of the ethanol released from the tank cars would have been destroyed in the resulting fire. But the state and county attorneys alleged that some may have been absorbed into the ground and put water supplies and local surface water bodies at risk.

Illinois’ “Narrative Standards” offer...
New Research on Mosquitoes and Stormwater Structures
By Justin Harbison, Ph.D.

(Continued from page 1)

tended detention basins (EDBs) and sixteen belowground systems (or small-footprint devices, “SFDs”) for mosquitoes. Not surprisingly, they found both EDBs and SFDs consistently held standing water and harbored disease-transmitting mosquito species throughout much of the year. What was a bit unexpected was that the standing water found in many of these structures was not stormwater; it was more directly anthropogenic: the water resulted from over-irrigation of nearby landscaping. Findings such as these not only highlight the need for well-informed stormwater planning, design, and maintenance, but proper water management in general.


Monitoring a belowground small-footprint device (SFD) for mosquitoes.

Justin Harbison is an instructor of Biology at Loyola University Chicago and serves as a consultant for the North Shore Mosquito Abatement District. He previously worked as a Public Health Biologist for the State of California’s Vector-borne Disease Section where he worked in stormwater management and the prevention of mosquito-borne diseases. He earned a Ph.D. in the field of Public Health from the University of California Los Angeles. Justin has been a member of IAEP since 2010.

Attorney General Sues In Train Derailment Ethanol Fire

(Continued from page 4)
estimated concentrations that contaminants in surface water bodies must be below to avoid impacting fish and other aquatic life. For comparison, the standards list ethanol limits that are about 1,000 times higher than benzene, the common groundwater contaminant at gasoline spill sites, and tetrachloroethene, a well-known dry cleaning and industrial solvent. These differences hold both for long-term low-level, or “chronic”, and one-time large dose (“acute”), contamination.

Under existing regulations, responsible parties already routinely commission the investigation of environmental risks posed by such accidents and remediate as needed, with IEPA review. Essentially, the court orders sought by the Attorney General would require the railroad to provide IEPA frequent updates rather than more normal periodic summaries, reiterate the railroad’s sampling obligations for household and utility water wells and specify a one mile radius for this sampling, and require it to provide bottled water to households whose water supplies might be found contaminated.

According to the Iowa Interstate Railroad’s web site, it is one of the top ethanol and feed market carriers. In addition to agricultural products, the regional railroad transports commodities such as plastics, paper, steel, and coal on trackage between Chicago and Council Bluffs, Iowa, with a branch line to Peoria and interchanges with national railroads. The derailment site, not far from Starved Rock State Park, where this former Rock Island Railroad line makes a broad curve following the winding valley of an Illinois River tributary, has allegedly been the site of other train wrecks over the years. Track work had reportedly been conducted at the location on the previous day.
President’s Pen
By Robert Sliwinski

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that require mitigation. This was an excellent opportunity to learn about the guidance and the perspective of the USACE.

We hope you took advantage of as many seminars as possible to expand your abilities to assist your clients and to get to know the State and Federal regulators and staff. May of our events have been at Café Zalute in Rosemont and we thank them for their good food and service. I noticed that the networking prior to the speakers presentation has been a big hit and encourage you to attend these fun pre-event socials. If you have any suggestions for a future seminar please contact us.

Keep an eye out for another IAEP scholarship in 2012!

We end the year with a holiday greeting to all IAEP members and their families. It’s this time of year that we think of others less fortunate than ourselves. Consider donating to your local charities and food banks. Every little bit counts and no one should go hungry this holiday season.

New IAEP Board Member Vacancy Applications Received
Two IAEP members have applied for the remaining board vacancy. We appreciate the enthusiasm for this organization and we have a number of talented people within our board. Thanks for your contributions to a great year!

I look forward to seeing you at our upcoming events in 2012 and value any comments, questions or suggestions you might have.

Please email me at rsliwinski@cbbel.com.

Robert Sliwinski is a Senior Wildlife Biologist at Christopher B. Burke Engineering, Ltd.
Illinois Association of Environmental Professionals

All Members Receive:

- **The Network** – a regular e-newsletter which provides timely informative articles on environmental issues, a job mart; notice of upcoming seminars and special events; information on student scholarship awards, golf outings and more!
- Free or discounted admission to all IAEP seminars, environmental events, and other networking/career advancement programs
- An IAEP Membership Certificate suitable for framing and IAEP monogrammed pen.

Corporate/Institutional Members Receive:

- Same benefits as Professional Membership, along with profile, logo and link placed on the IAEP website.

The Illinois Association of Environmental Professionals is a 501(c)(3) non-profit and non-lobbying organization and Affiliate of the National Association of Environmental Professionals.

Contributions are deductible according to law.

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IAEP is a Multi-Disciplinary Society of Professionals that:

- Network in business, government, and education;
- Promote awareness of environmental issues impacting the private and public sectors;
- Advocate that environmental concerns be incorporated in planning and decision-making activities;
- Support professional development for members and provide career guidance to students;
- Support and promote IAEP Code of Ethics and Standards of Practice for environmental management issues.

IAEP MEMBERSHIP APPLICATION FORM

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Position/Title ____________________
Company __________________________
Address __________________________
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