

## Investigation at Markham Illegal Dumping Site

### Fact Sheet #1 May 2010

Markham, Cook County, Illinois

#### Background

Illinois EPA was alerted by the City of Markham to a tire fire that began on April 1, 2010 at an illegal dump site in/near Markham in Cook County. The 12-acre-plus dumping areas within the site are bounded by 159th Street on the north, Dixie Highway on the east, the Calumet-Union Drainage Canal on the south, and Western Avenue on the west (see map). It appears that various dumping activities have been going on there for many years. Recent inspections by Illinois EPA revealed discarded mobile homes, automobile parts, boats, tires, drums and totes of unknown liquids and solids, other containers with residue of construction materials, unidentified gas cylinders, unknown liquid and solid spills on the ground, swimming pool chemicals and various construction and demolition debris.



The site is located in a mixed industrial, commercial and residential area located in what was previously an unincorporated area. It is not clear whether it is now part of Markham or Harvey. Illinois EPA is working with the Illinois Office of the Attorney General (IOAG) and local officials to determine ownership. Currently, public water supply mains are available to properties on the west side of the site in the Coral Gables subdivision. Some homes in the area immediately north of the site, however, continue to use private wells for their water source. Illinois EPA recently identified seven private wells in that area and obtained permission to test three of the wells. Based on information available to the Agency at this time, however, groundwater flow direction near the site appears to be toward the south, away from the wells.

In addition, evaluation of standing water in tires and other sources at the site revealed mosquito species capable of carrying a type of encephalitis, which primarily affects children, and the West Nile Virus, which primarily affects older citizens.

Contamination in standing pools of water or in surface soil at the site poses a threat to off-site surface waters via the drainage ditch to the Calumet-Union Drainage Canal. Initial soil evaluation by X-ray fluorescence (XRF) and through focused soil sample analysis shows some metals contamination and other chemicals.

**Message to parents of children** in the area of the dump site: please do not let children play at this site. While the chemical hazards have not been completely defined, there are many physical hazards as well as the potential for disease-carrying mosquitoes that present a danger to trespassers.

#### What chemical contaminants were found at the dump site?

Analytical results from limited surface sampling at the site reveal the presence of some heavy metals – such as lead and cobalt – at levels greater than background, which could potentially contaminate groundwater. Additionally, one of four samples revealed elevated levels of cancer-causing man-made chemicals from the family of polycyclic aromatic hydrocarbons (PAHs). PAHs are commonly found in products made from fossil fuels, such as coal-tar pitch and asphalt, and can be released into the air during incomplete burning of fossil fuels and garbage. Site trespassers may be exposed to these chemicals by inhaling airborne dusts or otherwise contacting contamination at the site.

U.S. EPA assisted in sampling for contaminants present at the site by collecting samples of unknown solids, liquids and soil on May 10th. Once analyses of those tests are available, in approximately three weeks, Illinois EPA and U.S. EPA will be in a better position to assess potential threats posed by the site. It is possible that further testing of site soils or waste materials will be necessary to characterize site hazards.

#### What was found in the recent groundwater samples from private wells?

Laboratory results from the private well tests revealed groundwater contamination from naturally-occurring metals and minerals, which do not appear to be site-related. The Illinois Department of Public Health (IDPH) reviewed the findings and issued letters to the three well owners. Only sodium levels were present at levels that would be considered a potential hazard to the health of persons with high blood pressure or on a sodium-restricted diet.

The wells tested are not in the direction of groundwater flow from the site, which is to the south. Mainly industrial businesses are located in this direction, and they are served by a community water supply.

Illinois EPA is interested in sampling a few more private wells close to the site. If you have a well within a few blocks of the site, please contact Charlene Thigpen at (847) 294-4122.

#### How will residents be informed about site activities and potential hazards at the site?

Illinois EPA has developed a mailing list of residents nearest the site, with the help of the Village of Markham, to whom we will send this fact sheet and other updates. Contact Carol Fuller (information below) if you or someone you know wants to be added to the mailing list for the site.

#### What are the next steps to make the site safer?

Illinois EPA requested assistance from the IOAG, who negotiated an agreement with the City of Markham to provide 24-hour police surveillance of the site so that no more waste will be deposited there. The City will maintain barriers to restrict access and has provided signs at locations around the perimeter of the site to deter individuals from entering the site and potentially being exposed to hazards.

Tests of mosquito larvae found in standing water at the site revealed the subspecies of mosquito that carries a type of encephalitis which affects mainly children. There were also mosquito species that carry the West Nile Virus. Illinois EPA purchased a mosquito treatment and arranged for the South Cook County Mosquito Abatement

District to apply it to reduce the number of mosquito larvae. The treatment, which was conducted on May 18, 2010, will be effective for three to four months. Illinois Department of Conservation police are attempting to find responsible parties for approximately 43 abandoned boat hulls that are also a source of stagnate water.

Additionally, Illinois EPA will conduct a removal of between 10,000 and 15,000 waste tires at the site and properly dispose of them. The work should be complete by the week of May 23, 2010.

**Who owns the site?**

It is reported that the City of Markham purchased liens against a number of parcels within the six-block "site" in a transaction related to unpaid real estate taxes. It is not clear, however, that any titles have been transferred. It is also reported that annexation of the properties may be a subject of dispute between the cities of Markham and Harvey.

**My family uses a private well, but we have never had it tested. Does Illinois EPA recommend testing it?**

Illinois EPA and IDPH recommend that anyone who lives in an area with current or former commercial or industrial facilities, and uses a well for their source of drinking water, have their well tested for possible chemical contamination.

When you receive the results of your water tests, you may ask a toxicologist with IDPH to review these results with you for possible health implications. You may also talk with them about the types of chemicals to test for. The phone number for the IDPH West Chicago Regional Office is 630/293-6800.

**Who do I talk to about testing my well?**

Commercial labs that are certified to analyze samples for organic chemicals and inorganic metals can be found on the List of Accredited Labs page. Discuss the cost of testing with the laboratory. Other information about private well safety is available in the Safe Water Well Initiative 2009 fact sheet.

**Will the contamination be cleaned up?**

Illinois EPA intends to pursue legal action through referral to the IOAG against any viable party involved in this matter. If any citizen has information about who is responsible for illegal dumping activities at this site, please contact Charlene Thigpen (see below).

Illinois EPA has discussed with U.S. EPA the possibility that they might conduct a removal of the most toxic substances at the surface (drums, totes, other containers of chemicals or wastes), depending on the outcome of sampling results.

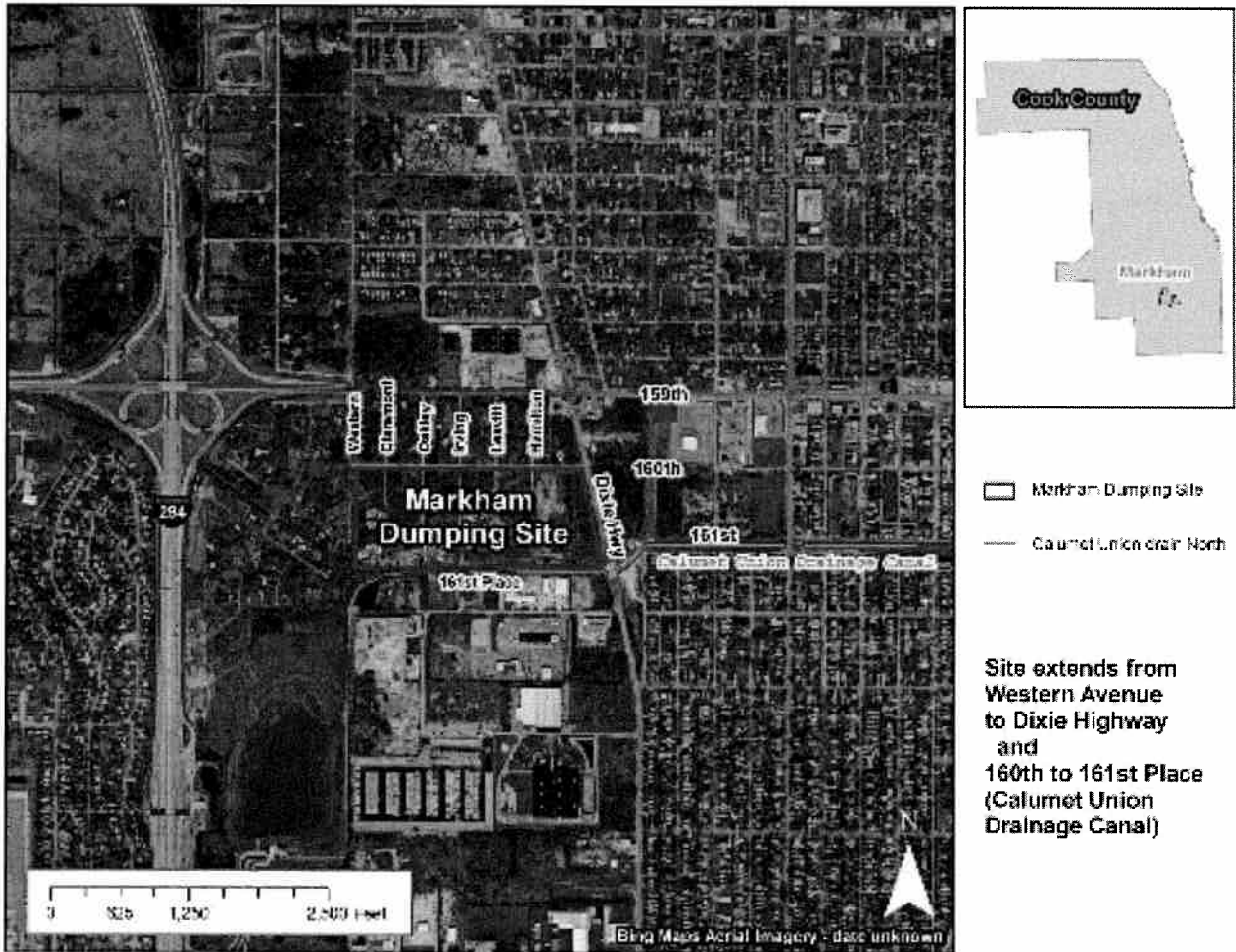
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**Map of the boundaries of the investigation “site.”  
Dumping has occurred at various places within the site.**



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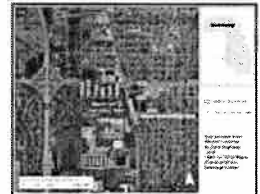
### Fact Sheet #2 July 2010

Markham, Cook County, Illinois

#### Background

The dump site in/near Markham in Cook County is a 12-acre-plus property bounded by 159th Street on the north, Dixie Highway on the east, the Calumet-Union Drainage Canal on the south, and Western Avenue on the west (see map). Dumping activities have apparently been going on at the site for many years. Illinois EPA found discarded mobile homes, automobile parts, boats, tires, drums and totes of unknown liquids and solids (and some spilled onto the ground), unidentified gas cylinders, swimming pool chemicals and various construction and demolition debris.

Mosquito species identified at the site are capable of carrying a type of encephalitis, which affects children as well as adults, and the West Nile Virus, which primarily affects older citizens.



- [View Larger Image](#)
- [View Printable Map](#)

**Message to area residents:** please do not let children play at this site. Physical hazards as well as the potential for disease-carrying mosquitoes present a danger to trespassers.

#### What cleanup actions have occurred at the site?

Illinois EPA is in the process of completing removal of tires and other debris at the site. 503 truckloads (9000 tons) of various solid waste materials dumped at the site were hauled away to be properly disposed at a landfill. In addition, 98 truckloads of tires (equivalent to 26,130 passenger tires) were removed from the site for beneficial reuse and recycling. To date, the total cost of the removal action by the state is more than \$600,000.

#### What chemical contaminants still exist at the dump site?

\*pH is a measure of the acidity or alkalinity of a solution, numerically equal to 7 for neutral solutions, increasing with increasing alkalinity and decreasing with increasing acidity.

Illinois EPA soil sampling results revealed some heavy metals at levels greater than background. Additionally, one of four samples revealed elevated levels of cancer-causing chemicals from the family of polycyclic aromatic hydrocarbons (PAHs). PAHs are commonly found in products made from fossil fuels, such as coal-tar pitch and asphalt, and can be released into the air during incomplete burning of fossil fuels and garbage. Site trespassers may be exposed to these chemicals by inhaling airborne dusts or otherwise contacting contamination at the site.

Laboratory analyses from samples collected by U.S. EPA in May reveal the presence of some metals, including lead. Totes of oil were tested, and the contents are not flammable. Samples of insulating material were tested for asbestos, and the results were negative. Several bags and drums of swimming pool chemicals revealed chlorine, ammonia and high pH levels\*, which can be corrosive. Standing water near the pool chemicals also contained ammonia and chlorine and higher-than-normal pH levels. It is expected that most of the surface contamination in the spilled chemicals area will be removed when U.S. EPA removes the chemical totes, other containers and visible residue in the fall of 2010.

#### Were any site-related contaminants found in groundwater samples from private wells?

No. Laboratory results from the private well tests in April revealed groundwater contamination from naturally-occurring metals and minerals only, which do not appear to be site-related.

The wells tested are not in the direction of groundwater flow from the site, which is to the south. Mainly industrial businesses are located in this direction, and they are served by a community water supply.

Illinois EPA is interested in locating the private wells closest to the site. If you have a well within a few blocks of the site and have not previously informed the Agency, please contact Charlene Thigpen at (847) 294-4122.

#### What are the next steps to make the site safer?

The Illinois Office of the Attorney General (IOAG) signed an Agreed Interim Order with the City of Markham on June 22, 2010. Pursuant to the order, the City is to provide 24-hour police surveillance of the site so that no more waste will be deposited there. The City will maintain barriers to restrict access and has provided signs at locations around the perimeter of the site to deter individuals from entering the site.

Illinois EPA purchased a mosquito treatment product and arranged for the South Cook County Mosquito Abatement District to apply it to reduce the number of mosquito larvae. The treatment, which was conducted on May 18, will be effective for three to four months.

#### Will the contamination be cleaned up?

Illinois EPA has removed most of the debris and tires at this point. U.S. EPA intends to conduct a removal of all suspect chemical containers and spilled chemicals at the site. That work is expected to begin in the fall of 2010.

Additionally, per the Agreed Interim Order, the City of Markham will discuss further clean-up activities for the dump site with the State.

#### What steps are being taken to make sure dumping does not resume at this location?

Vigilance by local government and private citizens is the best way to insure that more illegal dumping does not occur at this location. Citizens should report illegal dumping to local government and Illinois EPA Regional Office (see contact information below).

The Agreed Interim Order requires that Markham install and maintain video cameras at the site to catch fly dumpers in action. Live feed will be monitored by the police department 24 hours a day. The City is also required to continue to restrict access to the site to deter additional dumping and to maintain barriers and warning signs around the site.

Illinois EPA intends to pursue legal action against any viable party involved in this matter. If any citizen has information about who is responsible for illegal dumping activities at this site, please contact Charlene Thigpen.

#### For more information, please contact:

Photos of the site are available on the IEPA's Flickr photostream.

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