

November 2007



Upcoming Events:

EHSO Meeting

December 13, 2007 @
Central Office 57th Street
12:00 pm to 2:00 pm
Seminar Room
555 West 57th Street, 16th Fl.
New York, NY 10019

NYCER Meeting

November 27, 2007 @
The New School
12:00 pm to 2:00 pm
66 West 12th Street, New York,
New York 10011 (between 5th
and 6th Avenues) in Manhattan

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CUNY EHS News

CUNY School of Professional Studies Prepares City for Coastal Storm

This article provides some detailed follow-up to several informative presentations on the status of the Coastal Storm Preparation.

By Andrew Boyarsky

NYC's Office of Emergency Management had a major training project for those who would staff the City's emergency sheltering system in the event of a major coastal storm. The great challenge presented was to develop an effective training curriculum in just three months and to start delivering training over six months to tens of thousands of NYC

employees. The CUNY School of Professional Studies (SPS) had the unique challenge of rapidly developing and delivering an effective training program.

The Coastal Storm Emergency Sheltering Program calls for the deployment of up to 68,000 volunteers in 65 evacuation centers, and more than 500 hurricane shelters to house 600,000 potential evacuees. This would be the equivalent of sheltering the entire population of a medium-sized city.

While the system is capable of a large response, the sheltering

system is scalable to respond to different storm levels and would activate the appropriate level of staff and facilities depending on the need. NYC schools and CUNY buildings would comprise a large portion of the emergency sheltering system facilities. The staff, who would fill a management role will receive additional training in the key functions and roles in the sheltering system. The Coastal Storm Plan Training Project will continue for the next four years, with annual training for

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Green Chemistry

This article addresses an emerging trend in chemistry teaching and practice. It features material published by the U.S. Environmental Protection Agency.

By Mel Rodriguez

As the cost of environmental and hazardous waste disposal services continue to rise, more and more companies are looking to reduce the amount of waste that is generated from chemical processes and research. With the passage of the Pollution Prevention Act of 1990, which mandated that companies reduce the amount

of pollution generated at the source whenever feasible, companies were forced to develop newer and more innovative techniques in research that took into consideration human health and the environment. With this, a new concept emerged called Green Chemistry. Green Chemistry is a philosophy that encourages the design of products and processes that reduce the generation of hazardous wastes. Green Chemistry derives its principles from the various disciplines in chemistry, including organic, inorganic, biochemistry, and physical chemistry. Its

main goal is to minimize hazards while at the same time maximizing the efficiency of chemical choice.

The Twelve Principles of Green Chemistry

Paul Anastas, formerly of the Environmental Protection Agency, and John C. Warner, Director of the Center for Green Chemistry, developed the Twelve Principles of Green Chemistry.

- Prevent waste: design chemical synthesis to prevent waste, leaving no waste to

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Coastal Storm

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all managerial and supervisory level staff.

The training consists of both on-line and classroom based courses. Some will be done pre-season, before a hurricane event and others will be done "Just-In-Time" for all staff at the time of an actual coastal storm event. SPS has trained almost 14,000 people — more than 10,000 on-line and close to 4,000 in the classroom. For more information on the coastal storm plan, please visit http://www.sps.cuny.edu/programs/stormplan_program.html

What about face-masks, respirators and the flu?

By Dr. Janice Turner

There are general guidelines on the use of facemasks and respirators in non-occupational settings issued by the federal government. According to the U.S. Department of Health and Human Services (<http://www.pandemicflu.gov/vaccine/maskguidance.html>), face-masks may be considered for those who enter crowded settings and do not want to cough on others or who wish to protect their nose and mouth from other people's coughs. Respirators should be considered by those individuals that are in unavoidable close contact with an infectious person (e.g., hospital patients or sick family members at home). To ensure that any mask or respirator usage is proper and consistent with regulatory requirements, please consult with your campus EH&S Officers.



H5N1 Avian Influenza: Understanding Concerns for College Campuses

A previous article published in the newsletter featuring Avian Influenza focused on the status of the disease. This article provides information on the recently released North American Plan that addresses a potential Avian Influenza Pandemic.

By Dr. Janice Turner

The North American Plan for Avian and Pandemic Influenza was announced by the leaders of Canada, Mexico and the United States on Aug. 21, 2007 to reduce the spread of disease in case of a pandemic influenza event. Preparations for handling an emergency of this nature, in the United States, are being created by local, state and federal agencies and private institutions to prevent disruption of vital services and economic losses. Federal authorities suggest that colleges and universities plan campus protocols for responding to a pandemic influenza outbreak.

The North American Plan is designed to provide a framework that nations can use to detect, monitor, contain, control, and minimize deaths and illnesses from an influenza (flu) pandemic. The U.S. Environmental Protection Agency outlined procedures that colleges and universities may consider for responding to a severe outbreak. Planning responses to a future emergency influenza outbreak on college campuses is especially important because diseases spread more easily in places where people congregate. Colleges must protect the health of students, employees and their families.

According to the Centers for Disease Control and Preven-

tion, the H5N1 strain of avian flu is a highly contagious virus with the most potential to cause widespread death and illness because it contains a chemical surface protein that is not found in other human influenzas. Therefore, humans have little or no immunity, and the possibility of sustained human-to-human transmission and fast pandemic spread is great. An outbreak could result in high death rates, millions of hospitalizations and hundreds of billions of dollars from direct effects (such as medical costs) and indirect effects (such as disruption of the transportation service infrastructure).

H5N1 is a zoonotic virus. Zoonotic viruses are transmissible from vertebrate animals and arthropods (e.g., mosquitoes) to humans. H5N1 is spread by wild migratory birds that carry it, but do not usually get sick. Domestic birds (e.g., chickens), on the other hand, can get very sick and die from H5N1. New strains of this virus are evolving constantly as it spreads from birds to humans. Currently, human to human spread is limited, but a new strain of H5N1 may evolve at any time and become highly contagious between people. Most cases of H5N1 in humans have resulted from direct contact with live infected bird secretions and excretions, and from contaminated surfaces.

Avian influenza is easily spread between humans by coughing and sneezing. Since 2003, more than half of the people infected with H5N1 in Asia, Europe and Africa have died, a sobering

statistic considering that during typical flu seasons, usually less than 10% of those infected die. A severe pandemic could result in the closing of schools and day-care centers, banning of public gatherings and disruption of basic services and supplies.

Because of the potential for significant disruption to the U.S. economy it has been suggested that plans for responding to an avian flu pandemic occur at many levels within our society: federal, state and local, individual (family planning), workplace, schools, health care facilities, and communities.

The Centers of Disease Control and Prevention suggests the following guidelines for schools that are developing responses to an influenza pandemic:

- Design an Emergency Management Pandemic Plan addressing mitigation and prevention, preparedness, response, and recovery
- Design a Communication Plan
- Plan strategies for continuity of learning or instruction
- Design a Continuity of Operations Plan (for goods and services)
- Outline procedures for continued operation during an extended emergency
- Create an influenza surveillance system with local health agencies
- Develop an Incident Command Center
- Identify roles and responsibilities

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EHS Meeting Updates

By Sheryce Woolery

SEPTEMBER EHSO MTG.

The September meeting was held at The Graduate Center on September 20, 2007. John Flaherty, Director of Public Safety at The Graduate Center provided greetings.

EPA audit disclosure reports for the Bronx Community College and the Borough of Manhattan Community College were completed and submitted to the EPA. Upcoming audits will be conducted at the New York City College of Technology and the Graduate School of Journalism by October's end. Bill Knoop, Project Manager, CUNY EH&S, reported that ChemTracker has

been implemented at five campuses and reminded EHS Officers that the deadline for Executive Order 142 is approaching.

The Environmental Compliance subcommittee plans to develop a number of SOPs including inventory procurement and university wide contracts for waste disposal (universal, electronics and regulated medical wastes). The committee will make available a checklist developed by Parmanand Panday, currently in use at Queens College, to monitor compliance with hazardous waste regulations in teaching laboratories.

The EPA will begin an un-

derground storage tank initiative. Each college is encouraged to ensure that USTs and related monitoring equipment are functioning properly and integrity testing is conducted, as needed. Kurt Klein, Health and Safety Manager, CUNY EH&S, discussed the Health and Safety Subcommittee's plans to administer training for drivers of powered industrial trucks.

The training portion of the September Council meeting consisted of a presentation by **David Wilson, of O'Brien & Gere**, on The Department of Homeland

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Green Chemistry (cont.1)

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treat or clean up.

- Design safer chemicals and products: design chemical products to be fully effective yet have little or no toxicity.
- Design less hazardous chemical syntheses: design syntheses to use and generate substances with little or no toxicity to humans or the environment.
- Use renewable feedstock: use raw material and feedstock that are renewable, such as those from agricultural products or are the waste of other processes, rather than depleting feedstock, such as those made from fossil fuels (e.g., petroleum, natural gas or coal).
- Use catalysts, not stoichiometric reagents: catalysts are used in small amounts and can carry out a single reaction multiple times. They are preferable to

stoichiometric reactions which are used in excess and work only once.

- Avoid using chemical derivatives: avoid using blocking or protecting chemical groups or any temporary modifications if possible. Derivatives use additional reagents and generate more waste.
- Maximize atom economy: design syntheses so that the final product contains the maximum proportion of the starting materials. There should be few, if any, wasted atoms.
- Use safer solvents and reaction conditions: avoid using solvents, separation agents, or other auxiliary chemicals. If these chemicals are necessary, use innocuous chemicals. If a solvent is needed, water is a good medium as well as certain eco-friendly solvents that do not contribute to smog formation

or destroy the ozone.

- Increase energy efficiency: run chemical reactions at ambient temperature and pressure whenever possible.
- Design chemicals and products to degrade after use: design chemical products to break down to harmless substances after use.
- Analyze in real time to prevent pollution: include real time monitoring and control in process to minimize or eliminate the formation of byproducts.
- Minimize the potential for accidents: design chemicals and their forms (liquid, solid or gas) to minimize the potential for chemical accidents including explosions, fires and releases to the environment.

Environmental Protection Agency, "Twelve Principles (continued in right inset)

Green Chem (cont.2)

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of Green Chemistry." <http://www.epa.gov/greenchemistry/pubs/principles.html>

Presidential Green Chemistry Challenge

In 1995 the Environmental Protection Agency began the Presidential Green Chemistry Challenge which recognizes industry innovations and uses of Green Chemistry for pollution prevention. The Presidential Green Chemistry Challenge awards companies and other institutions in one of five categories: Academic, Small Business, Greener Synthetic Pathways, Greener Reaction Conditions and Designing Greener Chemicals. The technological ideas and innovations awarded by this Challenge must be scientifically sound, economically viable, and directly reduce risks to the human health and environment by reducing the hazards associated with the design, manufacture and use of chemicals. For more information on Green Chemistry go to the EPA's information page at: <http://www.epa.gov/greenchemistry/>

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(in order of appearance)

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Hand Washing - 101

By Dr. Janice Turner

In light of heightened concern over MRSA (Methicillin-resistant *Staphylococcus aureus*), the Centers for Disease Control and Prevention reiterates that **hand washing is still the single most effective method for preventing the transmission of disease!** That is why even EH&S professionals can use an occasional reminder.

Correct hand washing involves the following steps:

- place hands under clean warm running water and lather hands and fingers with soap
- rub hands and fingers together vigorously for 20 seconds (sing "Happy Birthday" twice in its entirety)
- rinse hands well under running water and dry hands with a paper towel or air dry
- turn faucet off with a clean hand towel

Alcohol based sanitizers are an alternative, but, washing with soap and water is the better choice.

When using an alcohol-based sanitizer:

- place a drop of the sanitizer in the palm of one hand
- rub hands and fingers with the product until both hands are dry

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Avian Influenza (cont.)

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- Coordinate plans with partners and stakeholders in the community

The best methods for preventing the spread of avian influenza rely on following simple public health principles of hand hygiene and social distancing. The effectiveness of facemasks and respirators for controlling the spread of influenza is unclear scientifically. Therefore, the use of these devices should be based on sound public health judgment

and historical precedent.

Health professionals are confident that there will be an H5N1 avian flu pandemic in the United States this century, but are unable to predict the year or the severity of the disease. Their best estimates are that the outbreak has a very high potential for causing massive disruptions in all sectors of our country. For this reason, it is important for colleges and universities to plan ahead.

For more information about

the avian flu, please refer to the Centers for Disease Control and Prevention, <http://www.cdc.gov/flu/avian/>, and to the New York City Department of Health and Mental Hygiene, <http://www.nyc.gov/html/doh/html/cd/cd-avianflu.shtml>. Information about flu pandemic and how to prepare can be found at the New York Department of Health website, <http://www.nyhealth.gov/diseases/communicable/influenza/pandemic/index.htm>

EHS Meeting Updates (cont.)

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Security's "**Chemical Facility Anti-Terrorism Standards.**"

Mr. Wilson discussed performance standards developed by the DHS, designed to deter an attack on a chemical facility and offered a status update on Appendix A. Pilot projects on sustainability assessment are in the review stage for Kingsborough Community College and Bronx Community College.

Gordon Taylor, Director of Internal Control and Audit, will be requesting information from schools to assist with the development of the CUNY Risk Assessment System. Schools are encouraged to assist.

OCTOBER EHSO MTG.

The October meeting was held at The CUNY School of Law on October 11, 2007. Steve Katz, Director of Public Health and Safety, offered greetings followed by a welcome from Gregory Koster, Vice President of Administration and Finance at the Law School.

Internal audits have been conducted at City College, Hunter College and Kingsborough

Community College, and the reports are being reviewed and finalized. Upcoming internal audits are scheduled for Lehman College and Brooklyn College. EH&S Officers from other campuses are encouraged to volunteer to serve on these audits. Peter Jayasekara, EH&S Officer, Laguardia Community College, and new chair of the subcommittee, discussed the use of the SH 900 and SH 900.1 forms for the Injury Illness Reports, and requests that everyone forward completed forms to Janice Turner at

janice.turner@mail.cuny.edu.

Jill Hyland, Director of Project Development of the CUNY School of Professional Studies, gave a presentation on **Hurricane Preparedness Training** (see article by Andrew Boyarsky). Ms. Hyland discussed operational strategies, including notification, evacuation, and logistics.

The NYSDEC is providing RCRA reporting training, including the 2007 annual reporting and hazardous waste manifest reporting. To

register, call 1-800-452-1925.

NYCER SEPTEMBER MTG

The September NYCER meeting was held at Barnard College on September 25, 2007 and began with a welcome by Dan Davis, Associate Director of Facilities at Barnard College, followed by a welcome from Julio Vazquez, Director of Facilities. EPA region II has suggested that it plans to conduct follow up audits as part of the College and University initiative, and has begun inquiries at SUNY, which recently completed its audit program.

The meeting continued with a presentation by **Laurie Kerr, Senior Policy Advisor, the Mayor's Office of Long Term Planning and Sustainability**, on "**The Mayor's 30 in 10 Sustainability Challenge for Colleges and Universities.**" Ms. Kerr discussed NYC's greenhouse gas emissions and the 30 in 10 Sustainability Challenge to reduce greenhouse gas emissions by thirty percent in ten years.