



# THE SSE ELUCIDATOR

*“Elucidate: to give clarity through explanation and analysis.”*

## WEST NILE VIRUS PROTECTION

While no longer front page news, West Nile virus (WNV) remains a serious threat. WNV is a potentially serious illness. Experts believe WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall. Unfortunately, the threat has increased over the last couple of years. WNV is now in most of the U.S. More Americans were diagnosed with WNV in 2006 than in 2005; the number of fatalities increased as well. In 2006, 4,269 cases of WNV were reported in the U.S., with 177 reported fatalities. Maryland also experienced an increase in WNV cases from five cases and zero fatalities in 2005 to eleven cases and one fatality in 2006. Your state’s statistics can be found at <http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm>. The Centers for Disease Control (CDC) states that the increase “...suggests that endemic transmission of WNV will continue for the foreseeable future.”



**Adults are at highest risk** – People over age 50 and people who have ever received a solid organ transplant are more likely to develop serious symptoms of WNV if they do get

sick and should take special care to avoid mosquito bites.

People typically develop symptoms between 3 and 14 days after they are bitten by the infected mosquito. Most often, WNV is spread by the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread WNV to humans and other animals when they bite. In a very small number of

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cases, WNV also has been spread through blood transfusions, organ transplants, breastfeeding, and even during pregnancy from mother to baby. However, WNV is not spread through casual contact such as touching or kissing a person with the virus.

Approximately 80 percent of people (about four out of five) who are infected with WNV will not show any symptoms at all. However, about one in 150 people infected with WNV will develop severe illness, called West Nile encephalitis or West Nile meningitis (inflammation of the brain or the area around the brain). The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness, and paralysis. These symptoms may last several weeks and neurological effects may be permanent. Up to 20 percent of the people who become infected experience milder symptoms such as fever, headache, and body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach, and back. Symptoms can last for as short as a few days, though even healthy people have become sick for several weeks.

There is no specific treatment for WNV infection. In cases with milder symptoms, symptoms such as fever and aches pass on their own, although even healthy people have become sick for several weeks.

## WEST NILE VIRUS PROTECTION

(continued)

In more severe cases, people usually need to go to the hospital where they can receive supportive treatment including intravenous fluids, help with breathing, and nursing care.



**Fight the Bite!** WNV is a risk you can do something about! When dealing with West Nile virus, prevention is your best bet. Fighting mosquito bites reduces your risk of getting this disease, along with others that mosquitoes can carry. Take the commonsense steps below to reduce your risk.

**Avoid Mosquito Bites** – Apply insect repellent on exposed skin and clothing when you go outdoors. Use an EPA-registered insect repellent such as those containing DEET, picaridin or oil of lemon eucalyptus. Permethrin sprayed on clothing provides protection through several washes. Products with a higher percentage of DEET as active ingredient generally give longer protection. Don't spray repellent on skin under clothing. Don't apply repellents containing permethrin directly to skin. For details on when and how to apply repellent, see [www.cdc.gov/westnile](http://www.cdc.gov/westnile), and look for Insect Repellent use and Safety in the Questions and Answers pages.



Clothing can also help reduce mosquito bites. When weather permits, wear long-sleeves, long pants and socks when outdoors. Mosquitoes may bite through thin clothing, so for extra protection spray clothes with repellent containing permethrin or another EPA-registered repellent. Do not spray repellent on the skin under your clothing.

Be aware of peak mosquito hours. The hours from dusk to dawn are peak biting times for many species of mosquitoes. Take extra care to use repellent and protective clothing during evening and early morning, or consider avoiding outdoor activities during these times.

Note: Vitamin B and "ultrasonic" devices are NOT

effective in preventing mosquito bites.

**Mosquito-Proof Your Home** – Drain Standing Water. Mosquitoes lay their eggs in standing water. Limit the number of places around your home for mosquitoes to breed by getting rid of items that hold water. Even a small amount of standing water can be enough for a mosquito to lay her eggs. At least once or twice a week, empty water from flower pots, pet food and water dishes, birdbaths, swimming pool covers, buckets, barrels, and cans. Check for clogged rain gutters and clean them out. Remove discarded tires, and other items that could collect water. Be sure to check for containers or trash in places that may be hard to see, such as under bushes or under your home. Encourage your neighbors to do the same. Additional precautions include fixing or installing window and door screens to keep mosquitoes outside and placing mosquito netting over infant carriers.

**Help our Community** – Report dead birds to local authorities. Dead birds help health departments track WNV. Dead birds may be a sign that WNV is circulating between birds and the mosquitoes in an area. WNV has been identified in more than 200 species of birds found dead in the U.S. However, it's important to remember that birds die from many other causes besides WNV. By reporting dead birds to state and local health departments, you can play an important role in monitoring WNV. State and local agencies have different policies for collecting and testing birds. State and local health departments start collecting reports of dead birds at different times in the year. Some wait until the weather becomes warm before initiating their surveillance (disease monitoring) program. Visit [http://www.cdc.gov/ncidod/dvbid/westnile/city\\_states.htm](http://www.cdc.gov/ncidod/dvbid/westnile/city_states.htm) to find information about reporting dead birds in your area.

If you need to pick up a dead bird, or local authorities tell you to simply dispose of it, avoid bare-handed contact with any dead animals, and use gloves or an inverted plastic bag to place the bird carcass in a garbage bag and dispose of it with your routine trash.

## DHS NATIONAL PREPAREDNESS MONTH

The U.S. Department of Homeland Security has designated September as National Preparedness Month. Throughout September, Homeland Security will work with a wide variety of organizations, including local, state, and federal government agencies and the private sector, to highlight the importance of emergency preparedness and promote individual involvement through events and activities across the nation. This nationwide effort is designed to encourage Americans to prepare for emergencies in their homes, businesses, schools, and communities. This year's effort has a growing coalition of more than 625 national, regional, state, and local organizations pledging support. By preparing yourself, your family, and your businesses, you allow first responders to prioritize efforts and aid.



Emergency preparedness is no longer the sole concern of earthquake prone Californians and those who live in the part of the country known as "Tornado Alley." For Americans, preparedness must now account for man-made disasters as well as natural ones. Your family may not be together when disaster strikes, so it is important to plan in advance: how you will contact one another; how you will get back together; and what you will do in different situations. The goal of National Preparedness Month is to encourage individuals and families to take a few simple steps to make themselves and their families better prepared for emergencies including:

**Get a Kit** – Get a kit of emergency supplies that will allow you and your family to survive for at least three days in the event an emergency happens. The kit should include basic items like water, food, battery-powered radio, flashlight, and a first aid kit. Go

to <http://www.ready.gov/america/getakit/index.html> for a complete list of recommended supplies.

**Make a Plan** – One of the simplest things you can do to be better prepared is to have a family emergency plan. To develop one, ask yourself some important questions. "In the event of an emergency, do we have everyone's contact numbers and an out of town contact?" "Is there a designated place for everyone to meet outside of the home and neighborhood?" "What is the emergency plan including the evacuation location of my child's school?" Only you can answer these questions and develop an emergency plan that will suit your family's unique needs.

Plan in advance what you and your family will do in an emergency. Your plan should include a communications plan and address sheltering-in-place and evacuation. Go to [http://www.ready.gov/america/make\\_a\\_plan.html](http://www.ready.gov/america/make_a_plan.html) for more information and templates to help get you started.

**Be Informed** – There are important differences among potential emergencies that will impact the decisions you make and the actions you take. Learn more about different threats that could affect your community and appropriate responses to them. Methods of getting your attention vary from community to community. One common method is to broadcast via emergency radio and TV broadcasts. You might hear a special siren, or get a telephone call, or emergency workers may go door-to-door. Go to [www.ready.gov](http://www.ready.gov) for more information about natural disasters and potential terrorist threats and for more information about the emergency plans that have been established in your area.

**Get Involved** – After preparing yourself and your family for possible emergencies, take the next step: get training in first aid and emergency response and get involved in preparing your community. Citizen Corps provides residents with opportunities to prepare, train, and support local emergency responders. For more information or to get involved visit [www.citizencorps.gov](http://www.citizencorps.gov) to find your local Citizen Corps council.

## EMERGENCY SHOWERS AND EYEWASHES

Accidental chemical exposures can still occur even with good engineering controls and safety precautions. The first 10 to 15 seconds after exposure to a hazardous substance, especially a corrosive substance, are critical. Delaying treatment, even for a few seconds, may cause serious injury. It is essential to look beyond the use of goggles, face shields, and the procedures for using personal protective equipment. Eyewash, eye/face wash, and emergency shower stations are a necessary backup to minimize the effects of accidental exposure to chemicals.

The Occupational Safety and Health Administration, OSHA, 29 CFR 1910.151 states, “where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.” This regulation is enforced by OSHA, who defers to the American National Standards Institute (ANSI) Z358.1–2004 standard as a recognized source of guidance for the requirements that all portable and plumbed emergency eye, eye/face wash, and emergency shower equipment must meet. ANSI Z358.1–2004 establishes uniform minimum performance and use requirements for Emergency Eyewash and Shower Equipment and supplemental products. This includes construction, testing, water pressure, flow requirements, location, operation, and maintenance, among others.

For emergency showers and eyewash stations to be effective the stations should be located so that the affected body part can be flushed immediately and thoroughly for at least 15 minutes using a large supply of clean fluid under low pressure. Water does not neutralize contaminants, it only dilutes and washes them away, and therefore large amounts of water are needed.

Eyewash, eye/face wash, and emergency shower stations should comply with the following specifications:

- ◆ Located within 10 seconds from a hazard exposure area (approximately 55 ft)
- ◆ Placed at the same level as the hazard with a

clear unobstructed pathway to the equipment

- ◆ A highly visible sign on or near the equipment to designate location, with adequate lighting in the area so equipment is easy to find
- ◆ Eyewashes designed specifically for flushing the eyes only must be capable of delivering 0.4 gallons per minute for at least 15 minutes.
- ◆ Eye/face washes designed for flushing both the eyes and face must be capable of delivering at least 3 gallons per minute
- ◆ Plumbed water supply should be tested weekly to ensure proper operation and to clear the supply line of sediment build-up and minimize microbial contamination
- ◆ Plumbed shower units must be capable of delivering 20 gallons/minute for at least 15 minutes
- ◆ Test equipment annually to ensure that it meets the flow requirements
- ◆ The water supply should be “tepid” or lukewarm to avoid risk of scalding or hypothermic shock

The need for emergency showers or eyewash stations is based on the properties of the chemicals that workers use and the tasks that they do in the workplace. A job hazard analysis can provide an evaluation of the potential hazards of the job. The selection of protection, emergency shower, eyewash or both, should match the hazard.

Emergency showers are designed to flush the user’s head and body. Eyewash stations are designed to flush the eye and face area only. However, there are combination units available that contain both features. A combined unit should be provided to all work areas with highly caustic chemicals that could severely irritate the eyes, face, and body or which is toxic when absorbed through the skin. Such areas include battery charging stations, chemical processing storage areas, and transportation areas that involve hazardous materials or waste.

Areas with high levels of airborne particulates



## EMERGENCY SHOWERS AND EYEWASHES (continued)

and/or chemicals present that could affect the eyes only need to install an eyewash station. If minimal exposure to chemicals that could affect other body parts is present, a supplemental drench hose can be added to the eyewash station. Such areas include:

- ◆ Machine shops (welding /grinding applications)
- ◆ Janitors closet used to store cleaning chemicals
- ◆ Parts washer locations and dipping operations
- ◆ Small spaces with limited drainage capabilities

In locations where freezing conditions exist, freeze protected or frost proof emergency eyewash and shower equipment must be installed. This will eliminate the risk of pipes freezing and equipment malfunctioning. These areas include:

- ◆ Chemical tank farms (located outdoors)
- ◆ Waste treatment ponds
- ◆ Chemical processing/storage (located outdoors)
- ◆ Transportation of hazardous materials (railroads, trucks, aviation)

Areas that are remote and do not have a plumbed water supply available should install portable self-contained eyewashes to include gravity fed or pressurized units. Such areas include construction sites, agriculture operations using pesticide spraying, law enforcement, and jet fueling applications.

Areas that have limited space available, space that is not conducive to installation of emergency shower or eyewash equipment, or require minimal removal of hazardous materials, can use supplemental eyewash products such as drench hoses, personal bottle eyewashes or sprays, prior to reaching equipment that drenches for 15 minutes.

The ANSI Z358.1-2004 recommends tepid water and defines it as “moderately warm; lukewarm.” Although a specific temperature is not given, the guideline range should be between 60 – 95 degrees F. To assure tepid water, the equipment generally needs both hot and cold water, with a blending valve to mix the water. Consult the material safety data sheet (MSDS) to determine if the flushing fluid

temperature would accelerate a chemical reaction. If this is the case consult with a medical professional.

Each work area should have a designated person responsible for inspecting and operating (activating) the emergency shower, eyewash station, combination units, and drench hoses weekly. A weekly check will ensure that there is flushing fluid available as well as clear the supply line of sediments and minimize microbial contamination caused by ‘still’ or sitting water. Weekly testing/inspection should be documented on an inspection tag that is affixed to the equipment.

Changing the fluid in self-contained systems frequently and cleaning the units regularly can prevent inadvertent use of contaminated fluid. Refer to the manufacturer’s instructions for further details. Even in plumbed eyewash stations, the water may contain contaminants such as rust, scale, and chemicals. This is one of the reasons for a good maintenance and testing program.

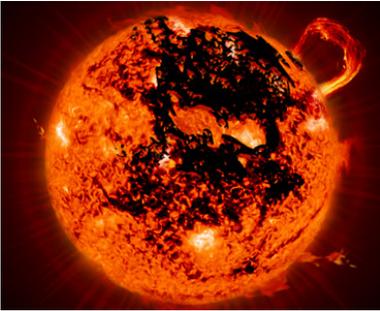
The ANSI standard also recommends a complete inspection on an annual basis. Personal eyewash equipment should be inspected and maintained according to the manufacturer’s instructions and at least annually for overall operation.

All employees must be trained in the proper use, operation, and location of emergency showers or eyewash stations before any emergencies occur. Periodically practice mock scenarios/drills, blindfolding the exposed employee(s) and have them try to get to the emergency equipment. Training should also include instruction in contact lens removal. Wearing of contact lenses can be dangerous because chemicals can become trapped under a contact lens. Any delays caused by removing contact lenses in order to rinse eyes could result in injury.

Finally, installing an alarm system that alerts others if the emergency equipment is activated should also be considered. The alarm may be audible or blinking lights, and may be connected to a remote monitored location.



## SUNGLASSES – MORE THAN JUST A FASHION STATEMENT



Sunglasses aren't just fashion accessories anymore, they provide necessary protection for your eyes. Most consumers are aware of sun exposure's danger to the skin, but don't know the

sun's rays can also damage the eyes. To correctly shield the eyes consumers must know how to select appropriate sunglasses since wearing the wrong type can do more harm than good.

**UV Protection** – Ultraviolet (UV) light is made up of invisible rays emitted by the sun. Ultraviolet A (UVA) and Ultraviolet B (UVB) are the two UV rays of concern. UVB rays burn the skin and can easily damage the eyes. Continuous exposure to UVB rays in combination with bright sunlight can cause cataracts, a gradual clouding of the eye's lens, eventually causing blindness if left untreated. UVB rays can also create a cancer zone by penetrating the eyelids, raise the chances of developing a melanoma on the delicate skin around the eyes, and cause wrinkles. Furthermore, studies show UV exposure can contribute to a number of additional ocular complications, including pterygium (an abnormal growth on the eye's surface), macular degeneration and cancer.

Using proper eye protection can help prevent vision disorders such as cataract and macular degeneration. For example, a 1988 study found that fishermen who did not wear sunglasses or a brimmed hat experienced three times as many cataracts as fishermen who did. Sunglasses protect you in different ways but primarily by reducing the amount of harmful UV radiation that reaches the eye.

When purchasing sunglasses, it is important to look for a label specifying UV protection. Choose sunglasses that block 99 to 100 percent of UV rays because they protect eyes from both UVA and more harmful UVB rays. This is particularly important because wearing tinted glasses without UV protection

causes more harm than not wearing sunglasses. When light is cut out, your pupil dilates in order to let more light into the visual system. Tinted glasses without UV protection spell trouble because they let more harmful UV rays into the dilated pupil.

### *Tips for purchasing sunglasses –*

- ◆ Check for the OSHA label indicating 99 or 100 percent UV protection.
- ◆ Look for close-fitting, larger-lensed or wrap-around sunglasses. These will prevent UV rays from filtering in from around the edges.
- ◆ Don't be misguided by price--higher-priced sunglasses usually reflect fashion or durability, not UV protection--look for the label.
- ◆ Dark-colored sunglasses don't necessarily provide better protection. A clear chemical coating applied to the lens is responsible for UV protection, not the lens color.

Although they help filter out harmful rays, UV-absorbing contact lenses should not be used as substitutes for sunglasses. Sunglasses provide one of the best sources of UV protection. While some UV-absorbing contact lenses are now available, they do not provide adequate protection and should not replace sunglasses. Sunglasses are still needed to cover the entire eye area, including eyelids.

It is important to wear sunglasses on cloudy as well as sunny days and throughout all four seasons. As long as it is light outside, UV rays can reach your eyes and skin. In fact, your eyes can receive harmful UV rays even when not affected by direct sunlight. Sand, snow, water, and certain types of pavement can reflect UVA/UVB; so many outdoor activities can increase the risk.

Remember, your sunglasses will not make you look better, see more comfortably, or protect your eyes when they are in your purse, pocket, or on the dashboard of your car. Get in the habit of putting them on.



## ARMY PRESENTS ENERGY AND WATER MANAGEMENT AWARDS



U.S. ARMY NEWS RELEASE

The Secretary of the Army, the Hon. Pete Geren, recognized the Army's top achievers in energy and water conservation August 8 for saving a combined total of more than 737,132 million British thermal units of energy, 214 million gallons of water and \$9.2 million during Fiscal Year 2006. The Secretary of the Army Energy and Water Management Award winners improved efficiency, instituted renewable technologies, and promoted energy awareness at installations worldwide.

The awards program, established in 1979, recognizes installation small groups and individuals from the Army, Army Reserve, and Army National Guard who make significant achievements in energy conservation and water management.

"Reducing energy and water use is an important Army goal," said Mr. Geoffrey Prosch, Principal Deputy to the Assistant Secretary of the Army (Installations & Environment). "These individuals and installations exemplify our dedication to preserving the environment and protecting our natural resources."

These awards recognize how the U.S. Army is working aggressively to ensure that Soldiers have the resources they need to accomplish their mission: the land, water, air, and energy resources needed to train, test, and field systems; and, a healthy environment in which to live. This "Sustainability" effort is a national security imperative; through improving effectiveness of our force and preserving resources, the U.S. Army is setting the example for the rest of the nation.

Award categories include Energy Efficiency/Energy Management, Innovation and New Technology, Renewable Energy, Alternative Financing, Water Conservation, Program Effectiveness, and Individual Achievement.

29th Annual Secretary of the Army Energy and Water Management Award Winners Include:

### *Installation Award*

U.S. Army Garrison Benelux, Belgium–Energy Efficiency/Energy Management– (Mr. Steve Dunham, Mr. Jeffrey Romero, Ms. Linda Moens and Mr. Patrick Retour)

### *Small Group Awards*

Fort Knox, Ky. – Renewable Energy/Alternative Energy – (Mr. Gary Meredith, Mr. David Blandford, Mr. Patrick Walsh, Mr. Pat Appelman and Mr. Matt Bowman)

Fort Detrick, Md. – Water Conservation – (Mr. Jeff Beck and Mr. Charles Sisk)

Rock Island Arsenal, Ill. – Energy Efficiency/Energy Management – (Mr. David Osborn, Mr. Gary Cook, Mr. Carlo Facciolla, Mr. Heath Helstrom, Mr. Jay Richter, Mr. Charles Swynenberg and Mr. James Thompson)

Camp Shelby, Miss. (MSARNG) – Energy Efficiency/Energy Management – (Mr. Larry Daughtry, Mr. Chuck Evans, Mr. John Harnish and Mr. Kato Escaner)

Fort Stewart, Ga. – Energy Efficiency/Energy Management – (Mr. Fred Pierre-Louis, Ms. Willie Barnett and Ms. Denise Kelley)

U.S. Army Garrison Ansbach, Germany – Energy Efficiency/Energy Management – (Ms. Regina Kranz, Ms. Gabriele Berner and Mr. Rudolf Gmelch)

U.S. Army Garrison Hessen (Hanau), Germany – Energy Efficiency/Energy Management – (Mr. Karl-Heinz Schneider, Mr. Walter Rausch and Mr. Peter Adrian)

### *Individual Awards*

Mr. Ernst Kusiak – U.S. Army Garrison Wiesbaden, Germany – "Life Time Impact Award" for Energy Efficiency/Energy Management

Mr. Scott Naeseth – Fort McCoy, Wis. (USAR) – Individual Leadership Contribution Award" for Energy Efficiency/Energy Management

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**THE ELUCIDATOR**

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<http://mrmc-www.army.mil>

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***Reminder***

*For all accidents, no matter how minor,  
specific forms documenting the incident must be submitted to your Safety Office.*

*Military: DA Form 285-AB-4*

*Civilian: DOL Claims Forms CA-1 or CA-2*

*All employees requiring medical attention must visit your local Occupation Health Clinic as soon as possible post mishap.*