



<http://www.epa.gov/osw/consERVE/materials/tires/>

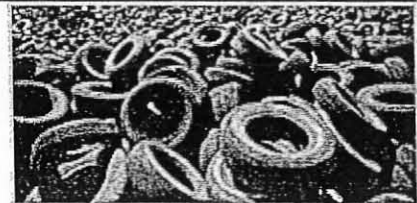
Last updated on Tuesday, October 04, 2011

Wastes - Resource Conservation - Common Wastes &

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Scrap Tires

There are at least 275 million scrap tires in stockpiles in the US. In addition, approximately 290 million scrap tires were generated in 2003.



Markets now exist for about 80 percent of scrap tires — up from 17 percent in 1990. The states have played a major role in tackling this problem by regulating the hauling, processing, and storage of scrap tires; and by working with industry to recycle and beneficially use scrap tires, through developing markets for the collected scrap tires.

This website provides general information on scrap tires, including:

[Where You Live](#) – links to state and EPA regional information

[Basic Information](#) – overview and statistics on scrap tire management, information about tire pile cleanup.

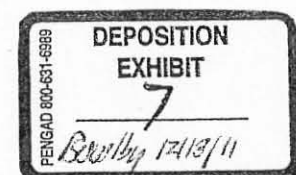
[Markets](#) – overview of scrap tire markets. Three large markets are described in additional detail: [tire-derived fuel](#), [civil engineering](#), and [ground rubber](#) used in highways and other applications.

[Laws/statutes](#) – particularly, state scrap tire legislation and programs

[Science/technology](#) – innovative uses of scrap tires

[Frequent Questions](#), [publications](#), and [related links](#)

[RCC Scrap Tire Workgroup](#) – overview, goals and action plans



DEQ Exhibit 51



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Basic Information

[Markets and Uses for Scrap Tires](#) | [Landfill Disposal](#) | [Stockpiles and Illegal Dumping](#) | [Scrap Tire Cleanup Guide](#) | [State and Local Governments](#) | [Health and Environmental Concerns](#)

At the end of 2003, the US generated approximately 290 million scrap tires. Historically, these scrap tires took up space in landfills or provided breeding grounds for mosquitoes and rodents when stockpiled or illegally dumped. Fortunately, markets now exist for 80.4% of these scrap tires—up from 17% in 1990. These markets—both recycling and beneficial use—continue to grow. The remaining scrap tires are still stockpiled or landfilled, however.

In 2003, markets for scrap tires were consuming 233 million, or 80.4%, of the 290 million annually generated scrap tires:

- 130 million (44.7%) are used as fuel
- 56 million (19.4%) are recycled or used in civil engineering projects
- 18 million (7.8%) are converted into ground rubber and recycled into products
- 12 million (4.3%) are converted into ground rubber and used in rubber-modified asphalt
- 9 million (3.1%) are exported*
- 6.5 million (2.0 %) are recycled into cut/stamped/punched products
- 3 million (1.7%) are used in agricultural and miscellaneous uses

Another 16.5 million scrap tires are retreaded. After any retreading has been performed, 290 million scrap tires are generated. About 27 million scrap tires (9.3%) are estimated to be disposed of in landfills or monofills. (*Source: Rubber Manufacturers Association, 2004.*)

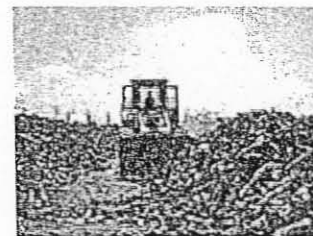
*Many scrap tires are exported to foreign countries to be reused as retreads, especially in countries with growing populations of automobile drivers such as Japan and Mexico. According to Mexico's National Association of Tire Distributors, as many as 20% of tires sold in Mexico are imported as used tires from the US and then retreaded for reuse. Some foreign countries also import tires to be shredded and used as crumb rubber, or to be used as fuel. Unfortunately, not all exported tires are reused or recycled. The downside of exporting scrap tires is that the receiving countries may end up with a disproportionate amount of tires, in addition to their own internally-generated scrap tires.

Markets and Uses for Scrap Tires

Scrap Tire Promotional Video

Tire-Derived Aggregate in Civil Engineering Applications (MP4) (5.45 min, 81MB) | en Español
Video plays on the QuickTime Player and requires you to have the QuickTime Player Plug-in
[EXIT Disclaimer](#)

NOTE: Download time for the video may vary depending on the speed of your web connection and other factors. To request a DVD of the full-length, 45-minute video, contact Mark Schuknecht, 703-308-7294



Scrap tires are used in a number of productive and environmentally safe applications. From 1990 through 2003, the total number of scrap tires going to market increased from 11 million (24.5%) of the 223 million generated to 233 million (80.4%) of the 290 million generated.

The three largest scrap tire markets are:

Tire-derived fuel
Civil engineering applications
Ground rubber applications/rubberized asphalt

Many uses have been found for recycled tires including whole tires, tires chips, shredded tires, and ground rubber. Retreading also saves millions of scrap tires from being disposed of as scrap each year.

[More information on scrap tire markets and uses.](#)

Landfill Disposal

Even with all of the reuse and recycling efforts, almost one quarter of scrap tires end up in landfills each year. Landfilling scrap tires can cause problems due to their uneven settlement and tendency to rise to the surface, which can harm landfill covers. To minimize these problems, many states require chipping or grinding of tires prior to disposal. Sometimes scrap tires are also incorporated into the landfill itself as part of daily cover, or in a landfill cap.

In recent years, the placement of shredded scrap tires in monofills—a landfill, or portion of a landfill, that is dedicated to one type of material—has become more common. Monofills may be used where no other markets are available and municipal solid waste landfills do not accept tires. Monofills are preferable to above ground storage of tires in piles, due to fire hazards and human health hazards.

State landfill regulations:

- 38 states ban whole tires from landfills.
- 35 states allow shredded tires to be placed in landfills.
- 11 states ban all tires from landfills.
- 17 states allow processed tires to be placed into monofills.
- 8 states have no restrictions on placing scrap tires in landfills.

Source: Rubber Manufacturers Association, 2003

Stockpiles and Illegal Dumping

In 1994, the estimated number of scrap tires in stockpiles in the US was 700 to 800 million. Since that time, millions of tires have been removed from stockpiles primarily due to aggressive cleanup through state scrap tire management programs. 275 million tires were estimated to be in stockpiles (*Source: Rubber Manufacturers Association, 2004.*)

"Over 75% of scrap tires are recycled or are beneficially used for fuel or other applications." - Rubber Manufacturers Association, 2003

Tire Stockpiles

A tire's physical structure, durability, and heat-retaining characteristics make these stockpiles a potential threat to human health and the environment. The curved shape of a tire allows rainwater to collect and creates an ideal habitat for rodents and mosquitoes.

Prone to heat retention, tires in stockpiles also can ignite, creating tire fires that are difficult to extinguish and can burn for months, generating unhealthy smoke and toxic oils. Illegal tire dumping pollutes ravines, woods, deserts, and empty lots. For these reasons, most states have passed scrap tire regulations requiring proper management.

Scrap Tire Cleanup Guidebook

To help state and local governments reduce the economic burdens and environmental risks associated with scrap tire piles on their landscapes, US EPA Region 5 and Illinois EPA, with input from members of the national Resource Conservation Challenge Scrap Tire Workgroup, have collaborated to create the Scrap Tire Cleanup Guidebook. The guidebook brings together the experience of dozens of professionals in one resource designed to provide state and local officials with the information needed to effectively clean up scrap tire piles. The guidebook discusses starting a cleanup program, working with contractors to clean up sites, and implementing prevention programs that will reduce scrap tire dumping.

To order, send an email to nscep@bps-lmit.com and ask for publication #530-R-06-001.

Scrap tire piles are not treated as hazardous waste. However, once a tire fire occurs, tires break down into hazardous compounds including gases, heavy metals, and oil which may then trigger Superfund cleanup status.

Tire piles/dumps can be found in big cities, small towns, and the countryside. Cleaning up these nuisance piles is time consuming and expensive. In an effort to limit dumping and stockpiling, most states have passed scrap tire regulations requiring proper management.

State Survey

Based on a survey of state agencies conducted by the Rubber Manufacturers Association in 2001, 91% of all scrap tires stockpiled in the US are concentrated in eleven states. For additional information, see the 2003 RMA study on scrap tire markets [EXIT Disclaimer](#).

Many states have cleaned up large numbers of tire stockpiles. Minnesota, Wisconsin, and Maryland are three states which report having cleaned up all scrap tire stockpiles.

For more information about illegal dumping, consult EPA's [Illegal Dumping Prevention Guidebook \(PDF\)](#) (33 pp, 1.1MB, [about PDF](#))

State and Local Governments

Scrap tires, as a solid waste, are regulated primarily by state governments. Currently, 48 states have laws or regulations specifically dealing with scrap tires. While each state has its own program, some common features include:

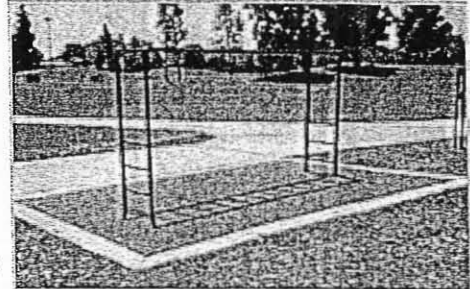
- Source of funding for the program;
- Licensing or registration requirements for scrap tire haulers, processors and some end users;
- Manifests for scrap tire shipments;

Limitations on who may handle scrap tires;
Financial assurance requirements for scrap tire handlers; and
Market development activities.

<http://www.epa.gov/osw/conserva/materials/tires/basic.htm>
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Local municipalities help educate the public about illegal dumping and enforce anti-tire dumping laws. Local agencies are also usually responsible for tire pile cleanup

Some local jurisdictions encourage proper disposal by allowing local citizens to drop off limited numbers of tires at recycling centers, or conduct tire amnesty days where any local citizen can bring a limited number of tires to a drop-off site free of charge. State scrap tire programs may provide financial help to fund such events.



Magic Johnson Park, Los Angeles, California. Poured in-place rubber made from recycled scrap tires.

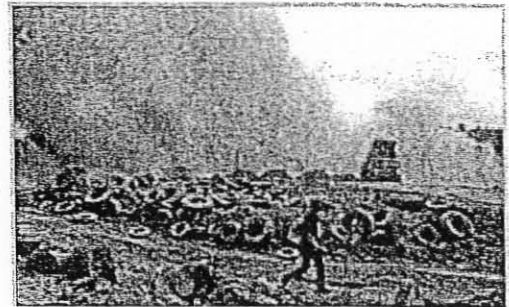
Local municipalities also play big role in procuring products made with scrap tires including playground/park applications. And in many states, local government agencies are also large users of rubberized asphalt in public paving projects. The Federal government is also a large purchaser of products made with recycled rubber, and has established [purchasing guidelines](#).

For more information about state scrap tire programs, consult EPA's [State Scrap Tire Reference Guide \(PDF\)](#) (53 pp, 262K, [about PDF](#)).

Health and Environmental Concerns

Tire piles—legal or illegal—pose two major health threats: pests and fire.

Disease carrying pests such as rodents may live in tire piles. Mosquitoes can also breed in the stagnant water that collects inside tires. Several varieties of mosquitoes can carry deadly diseases, including encephalitis and dengue fever. Mosquito control and eradication programs—short of removing tire piles—are difficult. For more information on mosquito-borne diseases, visit the [Centers for Disease Control and Prevention](#).



Burning Pile of Tires

Fire presents a second concern. Scrap tire fires are difficult to extinguish, and can burn for long periods. Tire fires release thick black smoke and can contaminate the soil with an oily residue. Tire fires generally start either as a result of arson or accident. [More information on tire fires](#).



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Tire Fires

Tire fires, although infrequent, are serious situations that are difficult to extinguish and expensive to clean-up.

Tire fires often become major hazardous incidents affecting entire communities—frequently requiring neighborhood evacuations and long, drawn-out fire extinguishing operations. These fires threaten pollution of the air, soil, and water. EPA, states, municipalities, and private companies have spent millions of dollars cleaning up tire fires across the country.



Photo of Burning Tires

EPA does not consider scrap tires a hazardous waste. However, if a tire fire occurs, tires break down into hazardous compounds including gases, heavy metals, and oil. The average passenger car tire is estimated to produce over two gallons of oil when burned. (Source: Rubber Manufacturers Association, April 2003)

Oil that exudes into ground and surface water as a result of tire fires is a significant environment pollutant. In some cases, this may trigger [Superfund](#) cleanup status. For every million tires consumed by fire, about 55,000 gallons of runoff oil can pollute the environment unless contained and collected. This oily material is also highly flammable.

Air pollution is also produced by tire fires. Air emissions may include polycyclic aromatic hydrocarbons (PAHs), benzene, styrene, phenols, and butadiene. For more information on toxic air pollutants generated by tire fires, go to EPA's [Toxics Air Pollution website](#).

Notable Tire Fires

In 1983, a 7-million tire fire in Rhinehart, Virginia issued a plume of smoke 3,000 feet high and nearly 50 miles long with air pollution emissions deposited in three states. The fire burned for nine months, polluting nearby water sources with lead and arsenic. The tire storage facility where the fire occurred is now being cleaned-up as a Superfund site.

In 1999, a lightning strike ignited a tire fire in Westley, California. The tire dump contained millions of scrap tires located in a canyon in a coastal mountain range. The large smoke plume from the fire impacted nearby farming communities and caused widespread concern of potential health affects from exposure to the smoke emissions. The tire fire also produced large volumes of pyrolytic oil that flowed off the slope and into the drainage of an intermittent stream. This oil was ignited too and the oil fire significantly increased the smoke emissions close to ground level. A response to the oil and tire fires was beyond the capabilities of local and state agencies. The EPA regional coordinator immediately responded using Oil Pollution Act of 1990 authority. It took 30 days to extinguish the fire. Total EPA response costs were \$3.5 million.

Extinguishing Tire Fires

<http://www.epa.gov/osw/conserves/materials/tires/fires.htm>

Last updated on Tuesday, October 04, 2011

Waste tires are difficult to ignite, but once a tire fire starts, it is generally very hard to control and extinguish. Using water and/or foam to extinguish a tire fire is often futile. Water is best used to keep adjacent, unburned tires from igniting.

Smothering a tire fire with dirt or sand is usually the best option for extinguishing fires. Typically, the sand or dirt is moved with heavy equipment to cover the burning tires.

Putting out a tire fire can also be facilitated by removing unburned tires from the pile to lessen the fuel load.

Additional Information

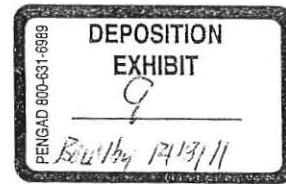
Through EPA's Superfund website, users can search for [National Priority List sites](#) throughout the US, including those that have resulted from tire fires—such as the [Rhinehart Tire Fire Dump Site in Virginia](#).

Other resources include:

[Rubber Manufacturers Association—The Prevention and Management of Scrap Tire Fires \(PDF\) \(37 pp, 90K, about PDF\) EXIT Disclaimer](#)
[Emissions from Open Tire Fires—report presented by the NC Department of Environment and Natural Resources, October 2000 EXIT Disclaimer](#)
[Superfund Emergency Response Program](#)



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West Nile Virus: What You Need To Know

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What Is West Nile Virus?

West Nile virus (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. This fact sheet contains important information that can help you recognize and prevent West Nile virus.

What Can I Do to Prevent WNV?

The easiest and best way to avoid WNV is to prevent mosquito bites.

- When you are outdoors, use insect repellent containing an [EPA-registered active ingredient](#). Follow the directions on the package.
- Many mosquitoes are most active at dusk and dawn. Be sure to use insect repellent and wear long sleeves and pants at these times or consider staying indoors during these hours.
- Make sure you have good screens on your windows and doors to keep mosquitoes out.
- Get rid of mosquito breeding sites by emptying standing water from flower pots, buckets and barrels. Change the water in pet dishes and replace the water in bird baths weekly. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.

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- 7 [Downloadable prevention brochure](#)
- 8 [Video: Public Service Announcement](#)

What Are the Symptoms of WNV?

- **Serious Symptoms in a Few People.** About one in 150 people infected with WNV will develop severe illness. 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.
- **Milder Symptoms in Some People.** Up to 20 percent of the people who become infected have 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.
- **No Symptoms in Most People.** Approximately 80 percent of people (about 4 out of 5) who are infected with WNV will not show any symptoms at all.

How Does West Nile Virus Spread?

- **Infected Mosquitoes.** 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.
- **Transfusions, Transplants, and Mother-to-Child.** In a very small number of cases, WNV also has been spread through blood transfusions, organ transplants, breastfeeding and even during pregnancy from mother to baby.
- **Not through touching.** WNV is not spread through casual contact such as touching or kissing a person with the virus.

How Soon Do Infected People Get Sick?

People typically develop symptoms between 3 and 14 days after they are bitten by the infected mosquito.

How Is WNV Infection Treated?

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

What Should I Do if I Think I Have WNV?

Milder WNV illness improves on its own, and people do not necessarily need to seek medical attention for this infection though they may choose to do so. If you develop symptoms of severe WNV illness, such as unusually severe headaches or confusion, seek medical attention immediately. Severe WNV illness usually requires hospitalization. Pregnant women and nursing mothers are encouraged to talk to their doctor if they develop symptoms that could be WNV.

What Is the Risk of Getting Sick from WNV?

People over 50 at higher risk to get severe illness. People over the age of 50 are more likely to develop serious symptoms of WNV if they do get sick and should take special care to avoid mosquito bites.

Being outside means you're at risk. The more time you're outdoors, the more time you could be bitten by an infected mosquito. Pay attention to avoiding mosquito bites if you spend a lot of time outside, either working or playing.

Risk through medical procedures is very low. All donated blood is checked for WNV before being used. The risk of getting WNV through blood transfusions and organ transplants is very small, and should not prevent people who need surgery from having it. If you have concerns, talk to your doctor.



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Pregnancy and nursing do not increase risk of becoming *infected with WNV*.

The risk that WNV may present to a fetus or an infant infected through breastmilk is still being evaluated. Talk with your care provider if you have concerns.

What Is the CDC Doing About WNV?

CDC is working with state and local health departments, the Food and Drug Administration and other government agencies, as well as private industry, to prepare for and prevent new cases of WNV.

Some things CDC is doing include:

- Coordinating a nation-wide electronic database where states share information about WNV
- Helping states develop and carry out improved mosquito prevention and control programs
- Developing better, faster tests to detect and diagnose WNV
- Creating new education tools and programs for the media, the public, and health professionals
- Opening new testing laboratories for WNV
- Working with partners on the development of vaccines

What Else Should I Know?

If you find a dead bird: Don't handle the body with your bare hands. Contact your local health department for instructions on reporting and disposing of the body. They may tell you to dispose of the bird after they log your report.

For more information call the CDC public response hotline
at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY)

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Fight the Bite!

If mosquitoes are still flying there is still a danger from West Nile virus. Infected mosquitoes spread West Nile virus that can cause serious, life-altering, and even fatal disease. Keep using insect repellent, wear long sleeves and long pants and dump out standing water in the yard where mosquitoes can lay their eggs.

- [Use Mosquito Repellent](#)
- [Eliminate standing water where mosquitoes can lay eggs](#)
- [Install or Repair Window and Door Screens](#)
- [Support Community-Based Mosquito Control Programs](#)

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West Nile virus Data and Maps 2011



[Table of WNV human infections](#)

[WNV neuroinvasive disease incidence reported to ArboNET, by state](#)

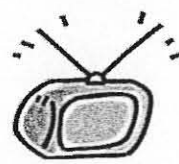
[WNV activity reported to ArboNET, by state](#)

[WNV neuroinvasive disease incidence reported to ArboNET, by county](#)

[WNV activity reported to ArboNET, by county](#)

[National & state maps provided by USGS \(including county-level data\)](#)

Helpful Tips



Avoiding mosquitoes doesn't mean that kids have to stay inside in front of the TV. Get them outside and playing, but remember - a couple of seconds applying an effective repellent to exposed skin and clothing will help everyone stay healthy.

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[ᄒᆞᆫ](#)

CDC Hotlines

Public:
 English/Español and Clinicians
 800-CDC-INFO (232-4636)

TTY—888-232-6348

NEWS & HIGHLIGHTS

- [Listings of EPA registered insect repellent products with protection times.](#)
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- [Information on insect repellents](#)
- [How do I choose an Insect Repellent?](#)
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PDF(2MB/1page)
- [For Transplant Patients](#)
PDF (2MB/2pages)
- [Community Education Tools](#)
- [Interim Guidance for States Conducting Avian Mortality Surveillance for West Nile Virus \(WNV\) and/or Highly Pathogenic H5N1 Avian Influenza Virus](#)
PDF(39 KB, 3 pages)

1999-2010 Archives

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Date last modified: November 15, 2011

Content source: Centers for Disease Control and Prevention
 National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)
 Division of Vector-Borne Diseases (DVBD)

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Division of Vector-Borne Diseases

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Statistics, Surveillance, and Control Archive

[Maps and Data](#) | [Surveillance Program](#) | [Guidelines](#) | [Case Definition](#) | [See Also](#)

Maps and Data

Human case and virus activity data and maps are available from several sources:

Archives

				
2010 Case Count	2010 State Maps 2010 County Maps	Click here to go to the U.S. Geological Survey to view weekly maps and tables of data collected.	Maps discontinued	2010 State Map 2010 County Map
2009 Case Count	2009 Maps		2009 Viremic Blood Donors	2009 Incidence Maps
2008 Case Count	2008 Maps		2008 Viremic Blood Donors	2008 Incidence Maps
2007 Case Count	2007 Maps		2007 Viremic Blood Donors	2007 Incidence Maps
2006 Case Count	2006 Maps		2006 Viremic Blood Donors	2006 Incidence Maps
2005 Case Count	2005 Maps		2005 Viremic Blood Donors	2005 Incidence Maps
2004 Case Count	2004 Maps		2004 Viremic Blood Donors	2004 Incidence Maps
2003 Case Count	2003 Maps		2003 Viremic Blood Donors	2003 Incidence Maps
2002 Case Count	2002 Maps			2002 Incidence Maps
2001 Case Count	2001 Maps			2001 Incidence Maps
2000 Case Count	2000 Maps			2000 Incidence Maps
1999 Case Count	1999 Maps			1999 Incidence Maps

*The data reported by USGS reflect surveillance information reported and verified to CDC through the ArboNET surveillance.

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West Nile Virus: Historical

2010 USGS West Nile Virus Maps

These maps reflect information for the 2010 West Nile Virus reporting season that has been submitted and verified to CDC through the week of May 9, 2011. These are considered the final USGS West Nile maps for the 2010 season.

2009 USGS West Nile Virus Maps

These maps reflect information for the 2009 West Nile Virus reporting season that has been submitted and verified to CDC through the week of May 4, 2010. These are considered the final USGS West Nile maps for the 2009 season.

2008 USGS West Nile Virus Maps

These maps reflect information for the 2008 West Nile Virus reporting season that has been submitted and verified to CDC through the week of April 9, 2009. These are considered the final USGS West Nile maps for the 2008 season.

2007 USGS West Nile Virus Maps

These maps reflect information for the 2007 West Nile Virus reporting season that has been submitted and verified to CDC through the week of May 20th, 2008. These are considered the final USGS West Nile maps for the 2007 season.

2006 USGS West Nile Virus Maps

These maps reflect information for the 2006 West Nile Virus reporting season that has been submitted and verified to CDC through the week of May 1, 2007. These are the final USGS West Nile maps for the 2006 season.

2005 USGS West Nile Virus Maps

These maps reflect information for the 2005 West Nile Virus reporting season that has been submitted and verified to CDC through the week of May 5, 2006. These are the final USGS West Nile maps for the 2005 season.

2004 USGS West Nile Virus Maps

These maps reflect information for the 2004 West Nile Virus reporting season that has been submitted and verified to CDC through the week of January 11, 2005. These are the final USGS West Nile maps for the 2004 season.

2003 USGS West Nile Virus Maps

These maps reflect information for the 2003 West Nile Virus reporting season that has been submitted and verified to CDC through the week of April 9, 2004. These are the final USGS West Nile maps for the 2003 season.

2002 CINDI West Nile Virus Maps

These maps reflect information for the 2002 West Nile Virus reporting season that has been submitted and verified to CDC through the week of April 22, 2003. These are the final USGS West Nile maps for the 2002 season.

2001 CINDI West Nile Virus Maps

These maps reflect the final reported and verified information from the 2001 West Nile Virus Surveillance Database. The database includes events through December 28, 2001.

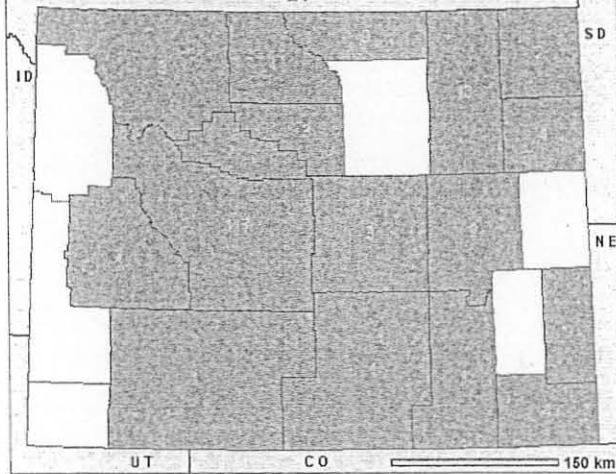
2000 West Nile Virus Dynamic Maps on The National Atlas

The National Atlas West Nile Virus maps illustrate confirmed and probable-positive WNV test results reported from January 1, 2000 through December 8, 2000.



West Nile Virus: Wyoming - Human

Cumulative 2007 Data as of 3 am, May 20, 2008

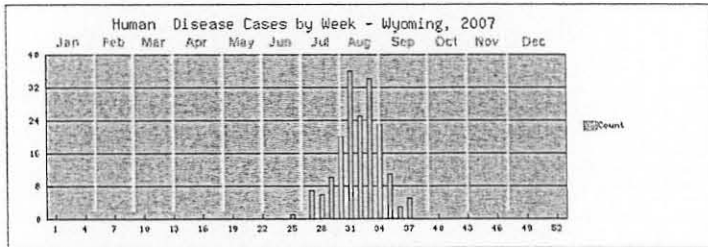


Legend

- Positive Test Results
- No Positive Test Results*

* States and counties in yellow either did not perform surveillance or did not report any positive test results from their surveillance.

These data are provisional and may be revised or adjusted in the future.



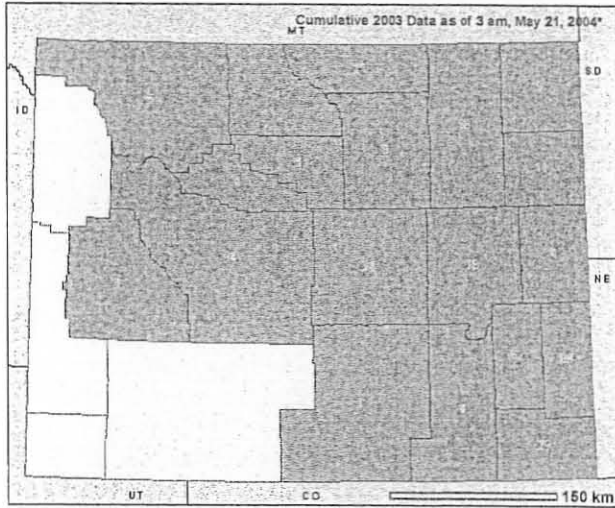
Cumulative Human Disease Cases by County - Wyoming, 2007

Albany County	1	Natrona County	3
Big Horn County	1	Park County	3
Campbell County	18	Sheridan County	9
Carbon County	1	Sublette County	1
Converse County	2	Sweetwater County	1
Crook County	2	Washakie County	3
Fremont County	117	Weston County	4
Goshen County	9		
Hot Springs County	2		
Laramie County	4		

Cumulative Total Entire State: 181
 U.S. Department of the Interior | U.S. Geological Survey
http://diseasemaps.usgs.gov/2007/wnv_wy_human.html
 This page last modified: Tuesday May 20, 2008 EST
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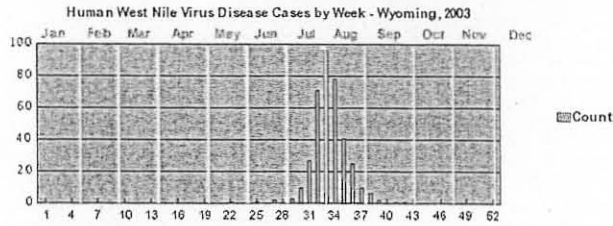


West Nile Virus Maps: Wyoming - Human



Legend
 Positive Test Results
 No Data

*These data are provisional and may be revised or adjusted in the future.



Cumulative Human Disease Cases by County - Wyoming, 2003

Albany County	4	Natrona County	24
Big Horn County	4	Niobrara County	4
Campbell County	66	Park County	5
Carbon County	1	Platte County	62
Converse County	19	Sheridan County	11
Crook County	9	Sublette County	1
Fremont County	24	Weston County	11
Goshen County	88	Washakie County	1
Hot Springs County	4		
Johnson County	8		
Laramie County	29		

URL: http://diseasemaps.usgs.gov/2003/wy_human.html
 Last modification: Thursday August 02, 2007 EST



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Division of Vector-Borne Diseases

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Resources

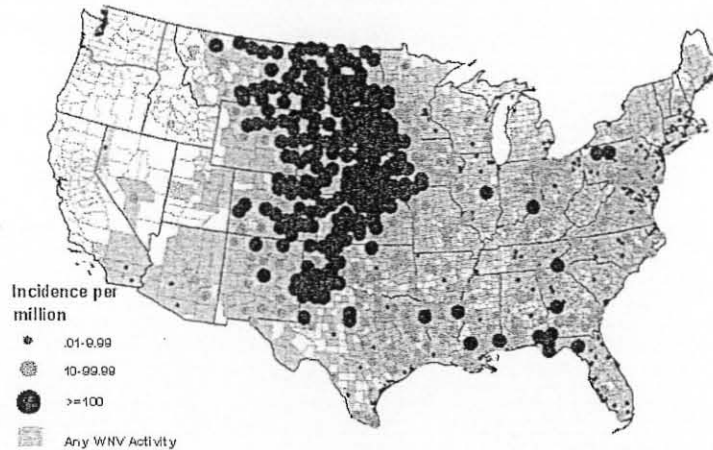
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Statistics, Surveillance, and Control

[Esta página en Español](#)

Final 2003 West Nile Virus Human Neuroinvasive Disease Incidence in the United States

This map reflects surveillance findings occurring January 1, 2003 through December 31, 2003 as reported to CDC's ArboNET system for public distribution by state and local health departments.
[Click here for a printer friendly version.](#)



West Nile virus maps reflect surveillance reports released by state and local health departments to CDC's ArboNET system for public distribution. Map shows the distribution of human neuroinvasive disease (encephalitis and/or meningitis) incidence occurring during 2003 with number of human cases shaded according to incidences ranging from .01 to 9.99, 10 to 99.99, greater than 100, and WNV activity (human, mosquito, veterinary, avian and sentinel data).

Maps detailing county-level human, mosquito, veterinary, avian and sentinel data are published each week on the collaborative USGS/CDC West Nile virus web site: <http://diseasemaps.usgs.gov/>

WNV Surveillance Maps detailing Neuroinvasive Disease Incidence additional years:

[2010 by State](#) | [2010 by County](#)
 For these and other posted surveillance pages please visit the [West Nile virus surveillance archives](#)

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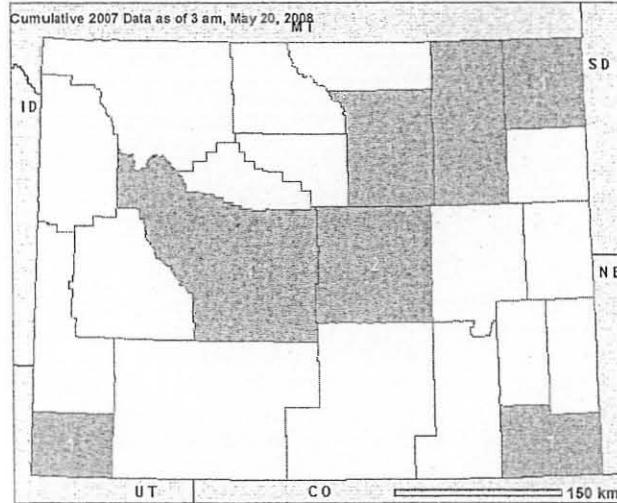
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Page last modified May 29, 2007

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West Nile Virus: Wyoming - Veterinary

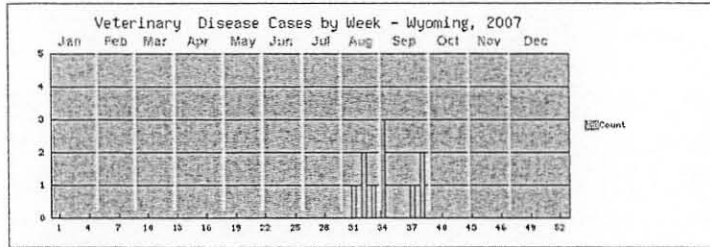


Legend

- Positive Test Results
- No Positive Test Results*

* States and counties in yellow either did not perform surveillance or did not report any positive test results from their surveillance.

These data are provisional and may be revised or adjusted in the future.



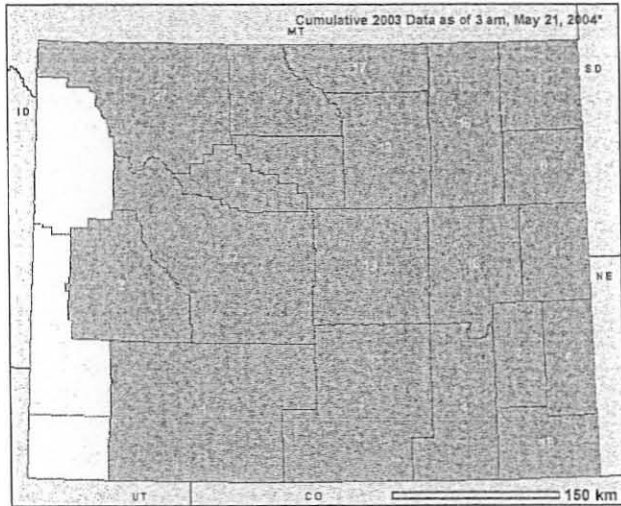
Cumulative Veterinary Disease Cases by County - Wyoming, 2007

Campbell County	3
Crook County	1
Fremont County	1
Johnson County	1
Laramie County	1
Natrona County	2
Uinta County	1

Cumulative Total Entire State: 10
 U.S. Department of the Interior | U.S. Geological Survey
http://diseasemaps.usgs.gov/2007/wnv_wy_veterinary.html
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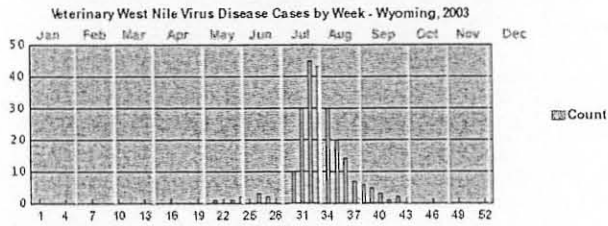


West Nile Virus Maps: Wyoming - Veterinary



Legend
 Positive Test Results
 No Data

*These data are provisional and may be revised or adjusted in the future.



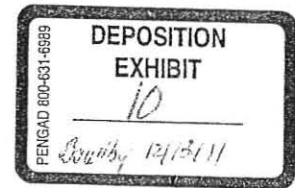
Cumulative Veterinary Disease Cases by County - Wyoming, 2003

Albany County	4	Natrona County	13
Big Horn County	17	Niobrara County	1
Campbell County	16	Park County	27
Carbon County	1	Platte County	7
Converse County	18	Sheridan County	17
Crook County	2	Sublette County	2
Fremont County	52	Sweetwater County	1
Goshen County	4	Washakie County	4
Hot Springs County	4		
Johnson County	13		
Laramie County	16		

URL: http://diseasemaps.usgs.gov/2003/wy_veterinary.html
 Last modification: Tuesday May 01, 2007 EST



Care and to your health.



What is West Nile Virus?

West Nile virus (WNV) is a mosquito-borne disease that can cause a potentially serious illness in humans. It is the leading cause of arboviral (arthropod; or carried by insects) disease in the United States. Mosquitoes spread this virus after they feed on infected birds and then bite people, other birds, and animals.

WNV is not spread by routine person-to-person contact, and there is no evidence that people can get the virus by handling infected animals. There have been reports of WNV transmission through blood transfusions, transplanted organs, breastfeeding, through the placenta from mother to fetus, and laboratory work.

Suspected human cases are tested in the Wyoming Department of Health's Public Health Laboratory. People with a mild infection (West Nile fever) may experience a wide range of symptoms including fever, headache, skin rash, body aches, fatigue, and swollen lymph glands. Some people with West Nile fever may also have nausea and vomiting. People with more severe infections (West Nile neuroinvasive disease, meningitis, encephalitis, or poliomyelitis) may experience high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, paralysis, and respiratory paralysis. If you have any of these symptoms, contact your health-care provider.

West Nile virus infection in humans occur primarily in the late summer or early fall, although the mosquito season is April through October. The majority of people who get infected with the virus have no illness, or at most, have an infection similar to a mild flu with fever, headache, and fatigue. The virus rarely affects the central nervous system and causes West Nile neuroinvasive disease (encephalitis, meningitis, or poliomyelitis).

However, West Nile neuroinvasive disease can occur. In fact, it is possible that people who develop encephalitis, meningitis, or poliomyelitis may have serious long-term health problems and some people never fully recover. One study reported only 37% of patients who had West Nile encephalitis made a full recovery. The full recovery referred to physical, functional, and cognitive areas. The article can be accessed by clicking [HERE](#).

What is West Nile encephalitis?

West Nile encephalitis is a brain infection caused by West Nile virus, a flavivirus previously only found in Africa, Eastern Europe, and West Asia. West Nile virus is closely related to St. Louis encephalitis virus, which is found in the United States, the Japanese Encephalitis virus from Asia, and Murray Valley encephalitis virus from Australia and New Guinea.

How can I get it?

The principal route of human WNV infection is through the bite of an infected mosquito. In 2002, additional WNV routes became apparent; however, this represented a very small proportion of cases. These routes include receiving transplanted organs and blood transfusions, trans-placental (mother to unborn child) and possibly breastfeeding transmission, and laboratory workers working with West Nile infected products.



Commit to your health.

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Who is most at risk?

Anyone can get WNV. People who spend a great deal of time outside are at risk for developing WNV infection. People over 50 years of age have the highest risk of developing a severe illness because our bodies have a harder time fighting off disease as we age. People with compromised immune systems (for example, organ transplant recipients, cancer patients, individuals with HIV/AIDS or other illnesses) are also at increased risk.

What are the symptoms?

People with mild infections, West Nile fever, may experience fever, headache, body aches, skin rash, and swollen lymph glands. People with more severe infections, West Nile neuroinvasive disease, may experience high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, and convulsions. If you have any of these symptoms, contact your healthcare provider.

Are there long-term consequences?

While most infections are usually mild, symptoms of West Nile fever can last for up to 30 days. West Nile neuroinvasive disease is more serious and can result in significant long term illness, death, or serious brain damage. Symptoms of West Nile neuroinvasive disease usually last for several weeks to months. The Centers for Disease Control and Prevention (CDC) notes that neurological effects may be permanent. Some improvements may be seen over time.

Is there treatment or a vaccine?

There is no specific treatment or vaccine for West Nile virus infection. While most people fully recover from the viral infection, hospitalization may be needed in some cases.

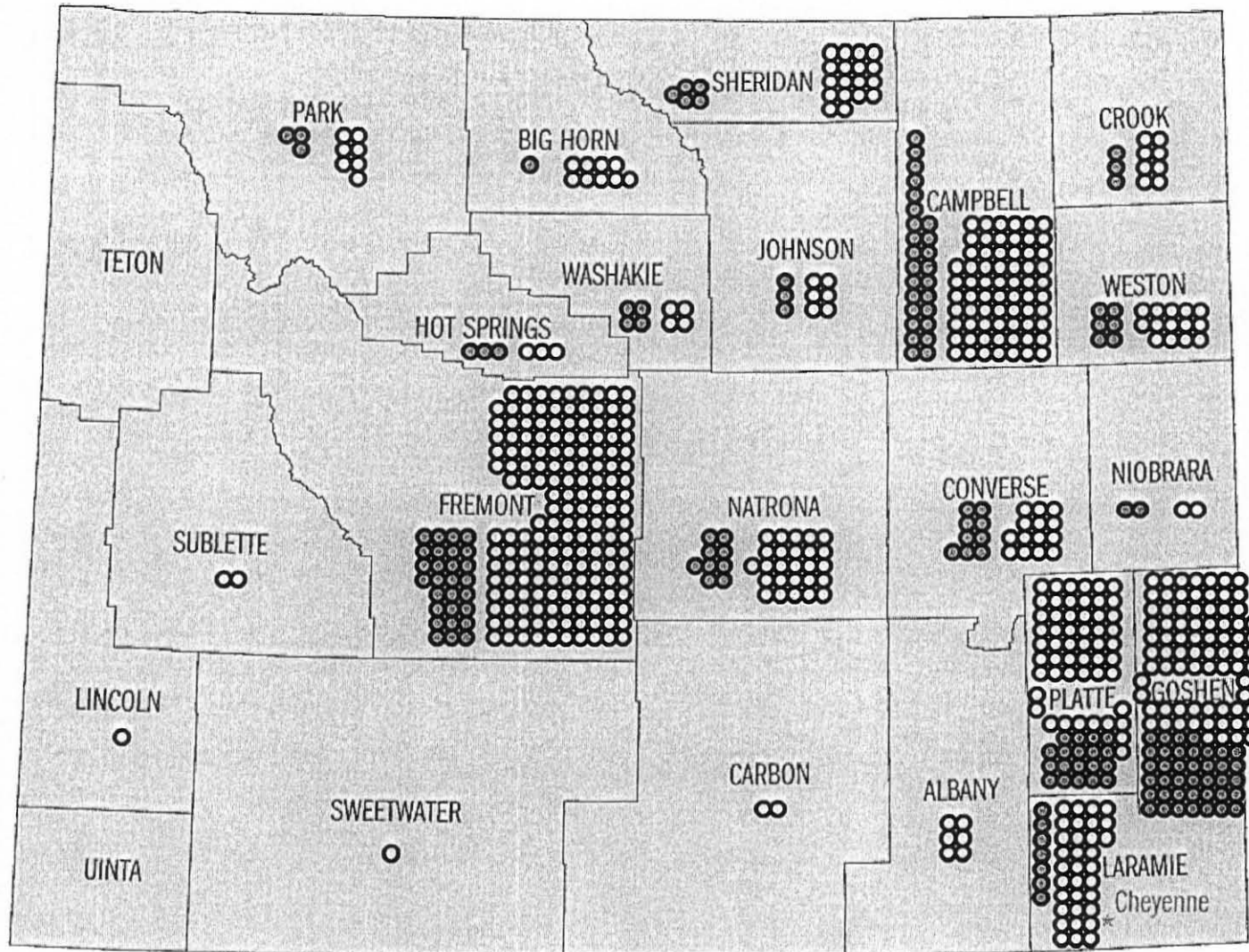


Wyoming
Department
of Health

Commit to your health.

Relative Geographic Distribution of Human WNV cases in Wyoming, 2002-2009

○ A human WNV fever case ● A human WNV Neuroinvasive Disease case



*Placement of each dot within a county is not representative of the exact location of WNV case residence



Commit to your health.

West Nile Virus and Horses

Horses are affected by West Nile virus (WNV) much more often than any other domestic animals. Many horses infected with WNV do not develop any illness, but of horses that become ill, about 30 percent die or need to be euthanized. Other livestock and poultry do not commonly show any illness if infected with WNV.

A WNV vaccine is available for horses. Please contact your veterinarian for more information. Additionally, because mosquitoes are linked with WNV transmission, you can prevent or control future WNV outbreaks among horses by controlling mosquito populations and preventing horses from being exposed to mosquitoes.

For more information on WNV prevention and control in equine and other livestock, visit the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) West Nile Virus website at <http://www.aphis.usda.gov/vs/nahss/equine/wnv/>.

For information on submitting horse samples for testing in Wyoming, visit the Wyoming State Veterinary Laboratory website at <http://wyovet.uwyo.edu/>.

Agriculture and Livestock

Cattle, sheep, and pigs rarely develop serious illnesses from West Nile virus (WNV) infection, and mortality in chickens has not been documented. Additional information is available at United States Department of Agriculture's (USDA) West Nile Virus in farm animals.

Other Resources

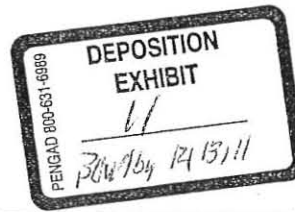
For information on West Nile virus and agricultural issues, visit the United States Department of Agriculture's (USDA) Equine West Nile Virus website at <http://www.aphis.usda.gov/vs/nahss/equine/wnv/>

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Wyoming
Department
of Health

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Brent D. Sherard, M.D., M.P.H., Director and State Health Officer

Governor Dave Freudenthal

December 10, 2008

Ref: TR-2008-101

To whom it may concern:

The Wyoming Department of Health discourages the accumulation of tires for the purpose of wind blocks, fences, etc., because they pose a potential threat to human health. Tires provide a significant nesting place for mice, which are responsible for Hantavirus Pulmonary Syndrome in humans. Removal of tires will have a direct impact on the rodent population.

It is also well known among mosquito entomologists and mosquito abatement personnel that automobile and truck tires often support large populations of mosquitoes, which are responsible for West Nile Virus. Eliminating scrap tires will eliminate a prolific mosquito habitat and the associated disease risks. In addition, the spread of the Asian Tiger Mosquito has been hastened by interstate shipments of scrap tires. Many states have banned importation of scrap tires for this reason. Where elimination is not feasible, mosquito abatement programs may be compelled to suppress mosquito populations at tire piles. However, this task is problematic and costly, particularly at large piles.

To suppress adult mosquitoes at a tire pile requires the frequent use of adulticides, none of which are environmentally benign. Delivering adulticides effectively is problematic at large piles because it is very difficult to penetrate the pile to the depths where the mosquitoes are resting. Larval mosquitoes are likewise a difficult target to reach, as they most frequently inhabit tires beneath the surface of the pile. It has been estimated to cost approximately \$2.43 per tire per treatment for the cost of material only. However, treatment is only effective for seven to ten days, requiring numerous treatments during a season.

Tire fires, although infrequent, are serious situations that are difficult to extinguish and expensive to clean-up. Tire fires often become major hazardous incidents affecting entire communities—frequently requiring neighborhood evacuations and long, drawn-out fire

Preventive Health and Safety Division
6101 Yellowstone Road, Suite 510 • Cheyenne WY 82002
WEB Page: www.health.wyo.gov
(307) 777-7172 • (307) 777-5402 FAX
Toll Free 1-866-571-0944

DEQ Exhibit 54



Brent D. Sherard, M.D., M.P.H., Director and State Health Officer

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Tire fires, although infrequent, are serious situations that are difficult to extinguish and expensive to clean-up. Tire fires often become major hazardous incidents affecting entire communities—frequently requiring neighborhood evacuations and long, drawn-out fire

extinguishing operations. These fires threaten pollution of the air, soil, and water. Environmental Protection Agency does not consider scrap tires a hazardous waste. However, if a tire fire occurs, tires break down into hazardous compounds including gases, heavy metals, and oil. The average passenger car tire is estimated to produce over 2 gallons of oil when burned (Source: Rubber Manufacturers Association, April 2003). Oil that exudes into ground and surface water as a result of tire fires is a significant environment pollutant. Air pollution is also produced by tire fires. Air emissions may include polycyclic aromatic hydrocarbons (PAHs), benzene, styrene, phenols, and butadiene.

If you need further assistance please contact me via email at timothy.ryan@health.wyo.gov or by telephone at (307) 777-2931.

Sincerely,



Timothy Ryan M.S., Ph.D.,
Environmental Public Health Officer
Wyoming Department of Health

TM/djd

c: Linda Chasson, M.S., Administrator, Preventive Health and Safety Division
Ginny Mahoney, M.A., Chief of Staff

BEFORE THE
ENVIRONMENTAL QUALITY COUNCIL
STATE OF WYOMING

FILED

OCT 09 1987

Terri A. Lorenza, Adm. Aide
Environmental Quality Council

EXHIBIT A

IN THE MATTER OF A NOTICE OF)
VIOLATION AND ORDER ISSUED TO)
ALLEN RICHARDS, UNLIMITED TIRE)
DISPOSAL OF WYOMING, INC.)

DOCKET NO. 1837-87

STATE OF WYOMING
DEPARTMENT OF ENVIRONMENTAL QUALITY

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

The above-entitled matter came before the Environmental Quality Council for hearing on August 26, 1987 in Cheyenne, Wyoming. Unlimited Tire Disposal of Wyoming, Inc. was represented by Michael R. O'Donnell of Cheyenne, Wyoming. The State of Wyoming, Department of Environmental Quality was represented by Mike Barrash, Assistant Attorney General, Cheyenne, Wyoming. Having considered the evidence before it and the arguments of counsel, the Environmental Quality Council hereby finds and concludes as follows:

FINDINGS OF FACT

1. Unlimited Tire Disposal of Wyoming, Inc., the Protestant, has accumulated 65,000 to 100,000 tires at a site located in the SE $\frac{1}{4}$, Section 14, T13N, R64W, of Laramie County, Wyoming, hereinafter referred to as "the site".
2. The only activities at the site have consisted of receiving, sorting, and storing tires; with some tires being removed to be taken elsewhere for recapping.
3. On June 10, 1987, the Department of Environmental Quality issued a Notice of Violation and Order, Docket No. 1837-87 to the Protestant, which was addressed to Mr. Allen Richards.
4. On June 19, 1987, the Protestant filed a timely appeal of the Notice of Violation and Order, No. 1837-87.

DEQ Exhibit 55

5. At the time of the hearing, the Protestant limited the portions of the Order to which it objected to paragraph 1 of the Order, which states "effective immediately, no more tires shall be allowed into the site;" and paragraph 4 which states "by September 1, 1987, all unshredded tires remaining on the facility property shall be either removed to a permitted solid waste disposal facility or shall be stored indoors."
6. The Protestant has planned to build a tire processing facility at the site which will include a shredding, chipping, or pyrolysis plant.
7. The Protestant has alleged that the current activity, that is, receiving, storing, sorting and removal of tires, constitutes a processing plant under Section 12. of the Solid Waste Management Rules and Regulations, 1975.
8. Section 2.x. of the Solid Waste Management Rules and Regulations defines a processing plant as a "facility used or designed to transfer, shred, grind, bale, compost, salvage, separate, reclaim, or provide other treatment of solid wastes."
9. Section 2.af. of the same regulations defines Solid Waste as "garbage, and other discarded solid materials resulting from industrial, commercial and agricultural operations, and from community activities, but does not include solids or dissolved material in domestic sewage or other significant pollutants in water resources such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants."
10. It was undisputed that the used tires at the site in Laramie County constitute solid waste.
11. The activities in which the Protestant is engaged, to wit receiving, sorting, storing and removing tires, do not constitute

the processing of tires according to the definitions set forth above.

12. A facility capable of processing tires does not exist at the site.

13. Although the Protestant has stated there is an opportunity to finance a processing facility at the site, as of the date of the hearing there were no written or firm commitments for financing.

14. An outdoor accumulation of tires creates a fire hazard because:

a. Tires are combustible and may be ignited by lightning or other means;

b. Once on fire, tires generate high temperatures resulting in a fire which is difficult to extinguish;

c. Burning tires produce smoke which contains high levels of particulates and which may be toxic;

d. Burning tires produce oils which may contaminate the soil and surface and groundwater; and

e. Burning tires produce ash with a high content of metals.

15. Fire control measures available and implemented do not completely mitigate the fire hazard posed by the outdoor accumulation of tires.

16. The accumulation of tires outdoors poses additional public health hazards because such tire accumulations create habitat for disease carrying vectors such as skunks, rats, and mosquitoes.

17. Vector control measures available and implemented do not completely eliminate the vector habitat created by the outdoor accumulation of tires.

CONCLUSIONS OF LAW

1. The Environmental Quality Council has jurisdiction over the parties and subject matter of this hearing.

2. An appeal of the Notice of Violation and Order, Docket No. 1837-87 was filed in a timely manner pursuant to Section 35-11-701(c)(ii).

3. The Protestant has accumulated solid waste in the form of used tires in quantities that have created a public nuisance, a health hazard, a fire hazard, and a vector habitat in violation of Section 12.a.(11), the Solid Waste Management Rules and Regulations, 1975.

4. Because the Protestant has created a public nuisance, health hazard, fire hazard, and vector habitat, the Protestant should be prohibited from receiving any additional tires at its site in Laramie County.

5. Given the extensive conference and conciliation measures that have taken place, a reasonable date for complete removal of all tires at the site is January 1, 1988 unless a shredding facility or chipping facility, is operational by that date. This facility must be a permanent plant capable of shredding or chipping at least 5,000 tires per week, or be a facility that the Director of the Department of Environmental Quality determines meets the requirements of Section 12. of the Solid Waste Management Rules and Regulations, 1975.

ORDER

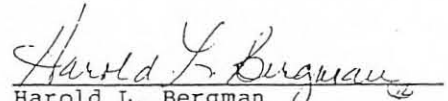
Based upon the above Findings of Fact and Conclusions of Law, the Environmental Quality Council hereby orders that the Notice of Violation and Order, No. 1837-87 specifically paragraphs 1 and 4 of that Order, be modified as follows:

1. The Protestant, Unlimited Tire Disposal of Wyoming, Inc., is prohibited from receiving any tires at its site, described as being in the SE1, Section 14, T13N, R64W, of Laramie County, Wyoming;

2. All tires presently ~~on the site~~ are to be removed from the site by January 1, 1988, unless a shredding facility or chipping facility, is operational by that date. This facility must be a permanent plant capable of shredding or chipping at least 5,000 tires per week, or be a facility that the Director of the Department of Environmental Quality determines meets the requirements of Section 12. of the Solid Waste Management Rules and Regulations, 1975; and

3. In all other respects the Notice of Violation and Order, No. 1837-87 is affirmed.

DATED this 9th day of October, 1987.


Harold L. Bergman
Hearing Examiner

CERTIFICATE OF SERVICE

I, Terri A. Lorenzon, certify that at Cheyenne, Wyoming, on the 9th day of October 1987, I served a copy of the foregoing Findings of Fact, Conclusions of Law and Order, by depositing copies of the same in the United States mail, postage prepaid, duly enveloped and addressed to:

Mr. Michael R. O'Donnell
104 East 30th Street
P.O. Box 1025
Cheyenne, WY 82003-1025

and by interoffice mail of the same date to:

Randolph Wood, Director
Department of Environmental Quality
122 West 25th Street, Herschler Building
Cheyenne, WY 82002

David A. Finley
Program Manager
Solid Waste Management Program
Department of Environmental Quality
122 W 25th Street, Herschler Building
Cheyenne, WY 82002

Mike Barrash
Assistant Attorney General
Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002

Terri A. Lorenzon
Terri A. Lorenzon
Administrative Aide
Environmental Quality Council
Barrett Building, Room 308
2301 Central Avenue
Cheyenne, WY 82002
Tel: (307) 777-7170