

# Environmental Response Highway Incidents

Department for  
Environmental Protection

Environmental Response  
Branch



**Kentucky**  
UNBRIDLED SPIRIT™

# ERT - Highway Incidents



# ERT Who? ERT Why?

ERT was created by the cabinet after KRS 224.01-400 was passed on July 15, 1980 by the KY State Legislature.



# ERT Who? ERT Why?

- **Coordinate the Department's response to an environmental emergency**
- **ERT is the Department's lead for Natural & man made disasters.**  
**Coordinate with federal and state agencies- EPA, USCG, US F&W, ORSANCO, KY EM, KY Fire Marshall, KY Mines & Minerals, KY Oil & Gas**
- **ERT has a permanent work station located in the State's Emergency Operation Center (EOC)**
- **ERT is a member of Region 4, Regional Response Team- EPA, USCG, FEMA, NOAA, US DOD, US DOE, US DOI, US DOJ, US DOL, US DOT, Region 4 states.**



# What ERT Does:

- Represents the Department for Environmental Protection and coordinates their response during environmental emergencies
- Oversees the emergency phase of the incident
- Provides technical assistance to:
  - The responsible party;
  - Federal, state and local agencies;
  - The public
- Provide resources that local responders may not have available
- Works within the Incident Command Structure



# ERT Response Volume

- 550 – 600 per year average
- 50 – 60% are truck related
- 25% are UST related



# ERT Response Authority

## KRS 224 1-400 (14)

- The cabinet shall be the lead agency for hazardous substance, pollutant, or contaminant emergency spill response and, after consultation with other affected federal, state, and local agencies and private organizations, shall establish a contingency plan for undertaking emergency actions in response to the release of a hazardous substance, pollutant, or contaminant. The contingency plan shall:
  - (a) Provide for efficient, coordinated, and effective action to minimize damage to the air, land, and waters of the Commonwealth caused by the release or threatened release of hazardous substances, pollutants, or contaminants;

## State Emergency Operations Plan/ Emergency Support Function 10 (ESF 10)

### ESF 10 OIL AND HAZARDOUS MATERIALS ANNEX

#### Coordinating Agencies

- The Department for Environmental Protection Environmental Response Team (DEP-ERT) for reporting purposes shall serve as the coordinating agency for state response to oil and hazardous materials incidents.

#### Support Agencies and Organizations

- Office of the State Fire Marshal
- Kentucky Department of Military Affairs, Division of Emergency Management
- Kentucky Army and Air National Guard
- Kentucky Community Crisis Response Board
- Kentucky Transportation Cabinet, Department of Highways
- Justice and Public Safety Cabinet, Kentucky State Police
- Cabinet for Health and Family Services, Department for Public Health
- Kentucky Department of Agriculture
- Kentucky Office of Homeland Security
- United States Environmental Protection Agency
- United States Department of Homeland Security
- United States Coast Guard
- American Red Cross



# ERT Response Authority

- KRS 224.1-400 (effective July 15, 1980)
  - Establishes spill reporting requirements
  - Designates the Energy and Environment Cabinet as the “lead agency” for hazardous substance, pollutant, or contaminant emergency spill response
  - Requires the responsible party to report, characterize and remediate spills
  - Allows the Department for Environmental Protection to recover costs incurred in responding to environmental emergencies
- KRS 224.10-100
  - Gives inspectors the right to enter and inspect any property or premises to investigate actual or suspected sources of pollution or contamination, or for determining compliance with KRS 224
- KRS 224.10-410
  - Gives the Secretary of the Energy and Environment Cabinet the right to issue an Order for Discontinuance, Abatement, or Alleviation of Condition or Activity



# ERT Response Authority

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  - Provide for efficient, coordinated, and effective action to minimize damage to the air, land, and waters of the Commonwealth caused by the release or threatened release of hazardous substances, pollutants, or contaminants;
  - Include containment, cleanup, and disposal procedures;
  - Provide for remediation or restoration of the lands or waters affected consistent with this section;
  - Assign duties and responsibilities among state cabinets and agencies in coordination with federal and local agencies;
  - Provide for the identification, procurement, maintenance, and storage of necessary equipment and supplies;
  - Provide for designation of persons trained, prepared, and available to provide the necessary services to carry out the plan; and
  - Establish procedures and techniques for identifying, containing, removing, and disposing of hazardous substances released or being released.



# ERT Reporting Requirements

- **KRS 224.1-400 (5) (Hazardous Substance)**

Whenever notification of a release or threatened release of a **hazardous substance** is required pursuant to this section, any person possessing or controlling the hazardous substance shall immediately notify the cabinet's twenty-four (24) hour environmental response line.

- **KRS 224.1-400 (6) (Pollutant or Contaminant)**

Any person possessing or controlling a **pollutant or contaminant** for which a reportable quantity has been established by administrative regulation promulgated pursuant to subsection (2) of this section shall immediately notify the cabinet's twenty-four (24) hour environmental response line, as soon as that person has knowledge of any release or threatened release, other than a permitted release or application of a pesticide in accordance with the manufacturer's instructions, of a pollutant or contaminant to the environment in a quantity equal to or exceeding the reportable quantity.

- **KRS 224.1-400 (10) (Oil)**

Any person in charge of a **vessel** or site from which oil is discharged in a harmful quantity as defined by 40 C.F.R. Part 110 in contravention of Section 311 of the Federal Clean Water Act shall immediately notify the cabinet's twenty-four (24) hour environmental response line.



# ERT Reporting Requirements

- **KRS 224.1-400 (11) (Petroleum Products)**

Any person possessing or controlling **petroleum or a petroleum product** as defined by KRS 224.60-115(15) shall, as soon as that person has knowledge of any release or threatened release, other than a permitted release or application of a pesticide in accordance with the manufacturer's instructions, in an amount of **twenty-five (25) gallons** or more in a twenty-four (24) hour period, except for diesel fuel for which the reportable quantity is **seventy-five (75) gallons** or more in a twenty-four (24) hour period, or in contravention of Section 311 of the Federal Clean Water Act, immediately notify the cabinet's twenty-four (24) hour environmental response line.

- **224.70-110 General prohibition against water pollution.**

No person shall, directly or indirectly, throw, drain, run or otherwise discharge into any of the waters of the Commonwealth, or cause, permit or suffer to be thrown, drained, run or otherwise discharged into such waters any pollutant, or any substance that shall cause or contribute to the pollution of the waters of the Commonwealth in contravention of the standards adopted by the cabinet or in contravention of any of the rules, regulations, permits, or orders of the cabinet or in contravention of any of the provisions of this chapter.



# Notification Requirements Revisited

- The responsible party shall immediately notify the Cabinet's Spill Reporting Hotline upon knowledge of a **release or threatened release** in excess of the reportable quantity
- Highway Incidents are most often reported by:
  - Local Emergency Management Director/personnel
  - Fire Department / Fire Chief
- Highway Incidents are sometimes reported by:
  - KDOT Regional IM Coordinator
  - Responsible Party
- Highway Incidents are sometimes NOT reported.



# Reportable Quantities Summarized

- **Petroleum**
  - Any petroleum except diesel: 25 gallons or more
  - Diesel fuel: 75 gallons or more
  - Any amount that creates a sheen on a waterway
- **Hazardous Materials**
  - For Hazardous Substances: See 40 CFR Part 302
  - For Extremely Hazardous Substances: See 40 CFR Part 355
- **Pollutants** - Any quantity that poses an imminent threat to human health and/or the environment



# Statutory Definitions:

- **Environment** - The waters of the Commonwealth; land surface; surface and subsurface soils and strata; or ambient air within the Commonwealth or under the jurisdiction of the Commonwealth.
- **Environmental Emergency** - Any release or threatened release of materials into the environment in such quantities or concentrations as cause or threaten to cause an imminent and substantial danger to human health or the environment; the term includes, but is not limited to, discharges of oil and hazardous substances prohibited by Section 311(b)(3) of the Federal Clean Water Act - (Public Law 92-500), as amended.



# Statutory Definitions (continued):

- **Release** - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing hazardous substances, pollutants, or contaminants into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance, pollutant, or contaminant.
- **Threatened Release** - A circumstance which presents a substantial threat of a release.



# Statutory Definitions (continued):

- **Petroleum and Petroleum Products** - Crude oil, or any fraction thereof, which is liquid at standard conditions of temperature and pressure, which means at sixty (60) degrees Fahrenheit and 14.7 pounds per square inch absolute. The term includes motor gasoline, gasohol, other alcohol-blended fuels, diesel fuel, heating oil, special fuels, lubricants, and used oil.



# Statutory Definitions (continued):

- **Hazardous substance** - Any substance or combination of substances including wastes of a solid, liquid, gaseous, or semi-solid form which, because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, or pose a substantial present or potential hazard to human health or the environment. The substances may include but are not limited to those which are, according to criteria established by the cabinet, toxic, corrosive, ignitable, irritants, strong sensitizers, or explosive.
  - Hazardous Materials - see 40 CFR Part 302
  - Extremely Hazardous Substances - see 40 CFR Part 355
  - Does **not** include petroleum or natural gas.
  - Does **not** include radiation



# Statutory Definitions (continued):

- **Pollutant or contaminant** (KRS 224.1-400) - Shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.
- **Pollutant** (KRS 224.1-010) - means and includes dredged spoil, solid waste, incinerator residue, sewage, sewage sludge, garbage, chemical, biological or radioactive materials, heat, wrecked or discarded equipment, rock, sand, soil, industrial, municipal or agricultural waste, and any substance resulting from the development, processing, or recovery of any natural resource which may be discharged into water;
- Does **not** include petroleum or natural gas.



# Statutory Definitions (continued):

- **Responsible Party**
  - Not defined by statute
  - Referenced as the “person” that controls or possesses the material





# ERT Organization

- Management (Full Time)
  - Branch Manager
  - 2 Response Coordinators
  - Preparedness Coordinator (Part Time)
- 30 Responders
  - 3 Responders in each of 10 regions
  - Responders are full time employees of Department for Environmental Protection, most as inspectors
  - Response work is done in addition to regular job duties
- 1 Management Staff and 1 Responder in each region is on-call at all times

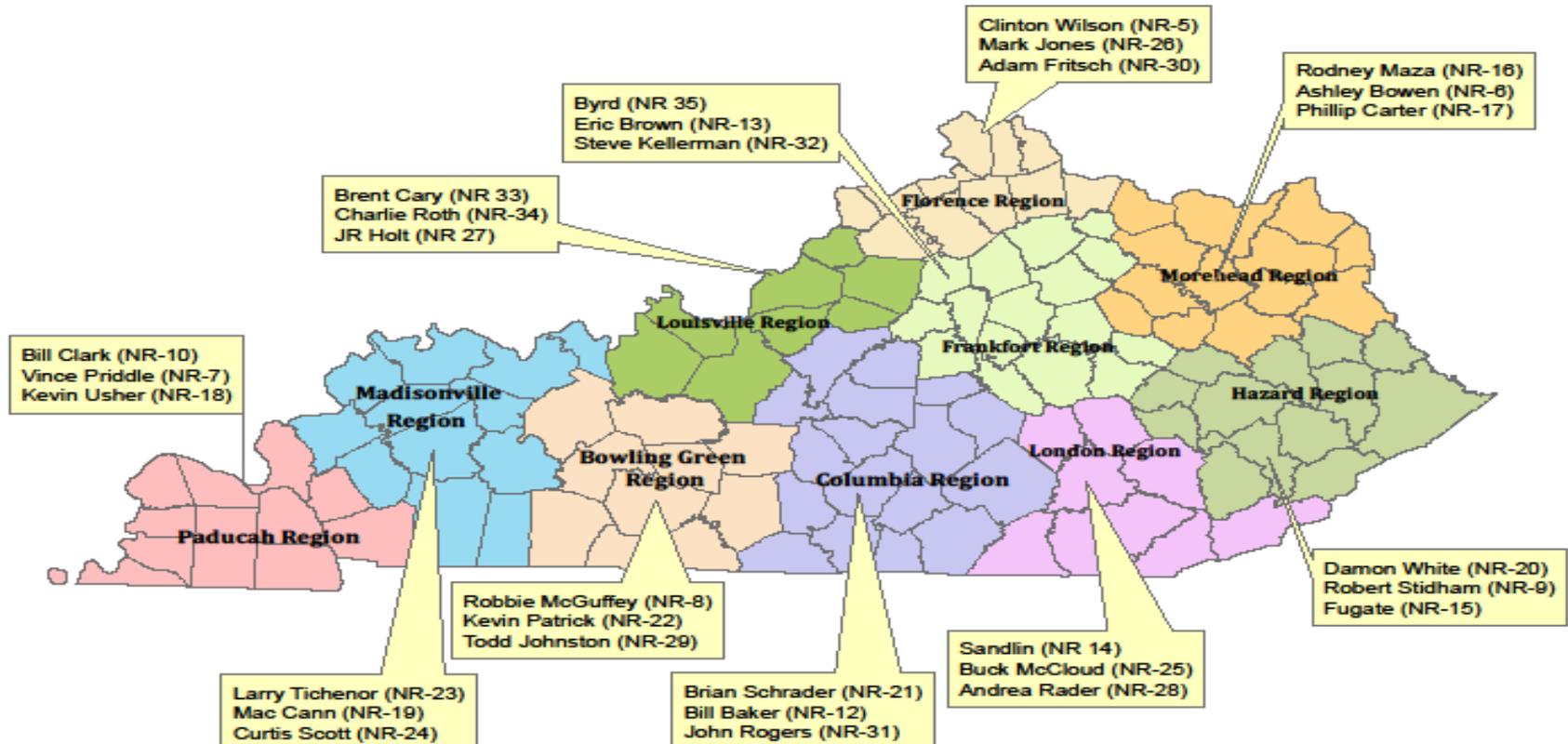


# ERT Regions



**Kentucky Department for Environmental Protection  
Environmental Response Team  
200 Fair Oaks Lane  
Frankfort, KY 40601  
24 hr Spill Reporting Hotline 1-800-928-2380**

**Robert Francis, Manager (NR-1)  
David Leo, Response Coordinator (NR-2)  
Kevin Strohmeier, Response Coordinator (NR-3)**



# ERT Response

- Small Incidents
  - Handled by 1 On-Scene Coordinator
- Larger Incidents
  - Handled by multiple staff
    - Could require community air monitoring, mobile command post



# Emergency Phase

- Begin Emergency Phase
  - Release or threatened release
- End of Emergency Phase
  - Release has stopped
  - Material is contained
  - No free product
  - No impact to waterways



# Transfer to DEP Programs

- Most Commonly Referred to Programs:
  - Field Operations
    - Division of Waste Management
    - Division of Water
  - Superfund



# Numbers to Remember

- **Environmental Response Team** (800) 928-2380  
(502) 564-2380
- **National Response Center** (800) 424-8802
- **State EOC** (800) 255-2587
- **US EPA Region IV** (404) 562-8700



# Highway Spill Cleanup



# Highway Spill Cleanup

I. Safety

II. Incident Command

III. Spill Cleanup



# Highway Spill Cleanup

## I. Safety

- A. Visibility
- B. Incident Evaluation
- C. Traffic Control
- D. Essential Training



# Highway Spill Cleanup

## Visibility



# Highway Spill Cleanup

## Visibility



# Highway Spill Cleanup

## Incident Evaluation

- first responder on scene check for safety to proceed
- watch for issues with the cargo
- keep an eye on traffic
- be alert! Conditions can change rapidly



# Highway Spill Cleanup

## Traffic Control

- maintain/restore traffic flow as quickly as possible
- provide safe working conditions
- MUTCD guidelines
- traffic control duties may shift as incident progresses



# Highway Spill Cleanup

## Essential Training

- highway safety
- awareness level for hazardous materials
- Incident Command System



# Highway Spill Cleanup

## Incident Command System (ICS)

- standard yet flexible incident response
- Incident Commander is in charge
- responders take direction from or through IC
- IC may change as incident progresses



# Highway Spill Cleanup

## Incident Priorities

1. Life safety
2. Incident stabilization
3. Protection of property and the environment



# Highway Spill Cleanup

## Spill Response

1. Spill reporting requirements
2. Identify the responsible party
3. Contain and clean up



# Highway Spill Cleanup

## Spill Reporting

- 25 gallons for petroleum product is reportable quantity (RQ)
- except diesel which is 75 gallons
- petroleum that produces sheen or threatens surface water or drinking water supply
- hazardous materials in cargo have complex RQs
- unusual or potential pollutant



# Highway Spill Cleanup



# Highway Spill Cleanup



# Highway Spill Cleanup

## Identify the Responsible Party

- responsible party (RP) = spiller
- RP is responsible for cleanup whoever is at fault
- Saferweb has contact information for commercial carriers:

<http://safer.fmcsa.dot.gov/CompanySnapshot.aspx>



# Highway Spill Cleanup

Adobe Reader window showing a PDF document titled "Saferweb Knight Transportation.pdf". The document content is a table with the following data:

<b>Entity Type:</b>	Carrier		
<b>Operating Status:</b>	REGISTERED	<b>Out of Service Date:</b>	None
<b>Legal Name:</b>	KNIGHT TRANSPORTATION INC		
<b>DBA Name:</b>			
<b>Physical Address:</b>	5601 W BUCKEYE ROAD PHOENIX, AZ 85043-4603		
<b>Phone:</b>	(800) 489-2000		
<b>Mailing Address:</b>	5601 W BUCKEYE ROAD PHOENIX, AZ 85043-4603		
<b>USDOT Number:</b>	428823	<b>State Carrier ID Number:</b>	
<b>MC or MX Number:</b>	MC-227271	<b>DUNS Number:</b>	--
<b>Power Units:</b>	3,644	<b>Drivers:</b>	3,704
<b>MCS-150 Form Date:</b>	07/22/2011	<b>MCS-150 Mileage (Year):</b>	380,000,000 (2010)
<b>Operation Classification:</b>			
<input checked="" type="checkbox"/> Auth. For Hire      Priv. Pass. (Non-business)      State Gov't <input type="checkbox"/> Exempt For Hire      Migrant      Local Gov't <input type="checkbox"/> Private(Property)      U.S. Mail      Indian Nation <input type="checkbox"/> Priv. Pass. (Business)      Fed. Gov't			
<b>Carrier Operation:</b>			
<input checked="" type="checkbox"/> Interstate      Intrastate Only (HM)      Intrastate Only (Non-HM)			
<b>Cargo Carried:</b>			
<input checked="" type="checkbox"/> General Freight      Liquids/Gases      Chemicals			



# Highway Spill Cleanup

## Contain and Clean Up

- minimize
- absorb
- disposal



# Highway Spill Cleanup

## Minimize

- stop the leak
- empty the fuel tanks
- slow or stop the spread with absorbents, barriers, and dams
- do not use chemicals or flush with water unless it is all recovered and disposed of



# Highway Spill Cleanup



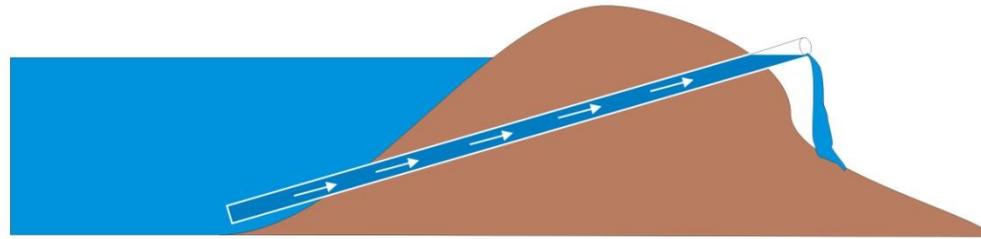
# Highway Spill Cleanup



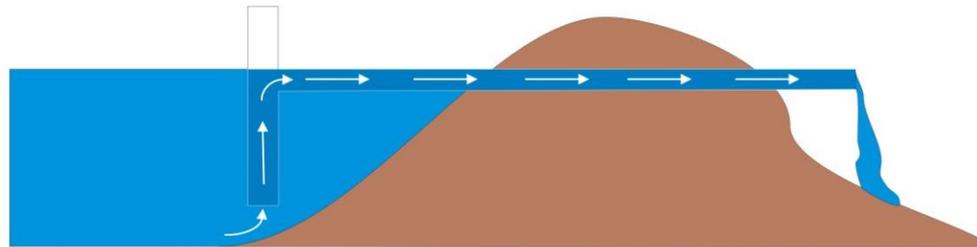
# Highway Spill Cleanup



# Highway Spill Cleanup



Underflow Dam



T-Siphon Dam



# Highway Spill Cleanup



# Highway Spill Cleanup



Division of Waste Management

50



# Highway Spill Cleanup



# Highway Spill Cleanup



Division of Waste Management

52



# Highway Spill Cleanup

## Absorb

- commercial products: booms, pads, granular absorbents
- soil, mulch, wood chips – be creative
- avoid sand since it doesn't absorb much and it can reduce traction



# Highway Spill Cleanup

- **Absorbents**
  - Booms, pads, pom-poms
  - Oil dry / kitty litter / pulverized clay / sawdust / mulch
  - Soil, other materials – be creative if necessary
  - The materials must be recovered
- **Mechanical means**
  - Vac Trucks
  - Power Brooms
  - Power washing with or without surfactants – products must be recovered
  - Excavation / Interceptor Trenches
- **Bioremediation Agents** - BioSolv, Micro-Blaze, Spill Mate, etc
- **Petroleum Solidifiers**



# Highway Spill Cleanup

## Disposal

- dig up contaminated soil to visual on ROW
- solidify all liquids
- dispose of contaminated materials at an approved landfill



# Highway Spill Cleanup

Gasoline is considered a hazardous material because it is ignitable and because it contains dangerous levels of benzene, a known carcinogen. Large quantities of spilled gasoline and the residues from its cleanup might be considered as hazardous. That means the waste materials, such as recovered fuel and absorbent material, should be handled only by a qualified cleanup contractor.

