CHAPTER 10

ALL HAZARDS INCLUDING TERRORISM, HAZARDOUS MATERIAL AND HAZARDOUS WASTE

Terrorism is a hazard with which Wyoming has had intimate experience in recent history. Wyoming has identified more than 250 critical infrastructure targets. WOHS is a member of the Wyoming FBI Joint Terrorism Task Force. The task force has reviewed and prioritized 12 of these targets as being most favorable targets for a terrorist attack resulting in a loss of this critical infrastructure. The importance of these targets by the FBI has resulted in these targets as being classified at the "SECRET LEVEL."

Wyoming is one of a few states who have had their infrastructure targeted in a conspiracy to sabotage through utilization of explosives against the oil pipelines and refineries, including a natural gas plant. One individual was convicted in federal court on two counts of Title 18, Section 2339(a) USC (providing material support to terrorists), Title 18, Section 373 USC (soliciting a crime of violence); Title 18, Section 842 USC (unlawful distribution of explosives); and Title 26, Section 5861(d) USC (possession of an unregistered destructive device {hand grenade}). In November 2007 he was sentenced to 30 years in federal prison.

Two other individuals were investigated for terrorism activity by FBI and local authorities, and pled guilty in U.S. District Court for the destruction of interstate power lines. During 2003 two subjects were convicted in the U.S. District Court, District of Wyoming, for violation of Title 18, Section 1366(a) USC (destruction of an energy facility). On October 30, 2003, both subjects were sentenced to 2 years, six months in federal prison, 3 years probation and restitution in the amount of $1,035,431. This act of terrorism involved the destruction of a critical interstate power line by removing bolts to the power line tower. The original tower cascaded to other towers causing failure. The towers were located in Sweetwater County. Power failures occurred in several western states including the city of Los Angeles, California.

Terrorism risk assessments and response actions relative to terrorist threats to Wyoming's infrastructure is addressed in Wyoming's Response Plan, is in compliance with the National Response Framework, and applicable portions of the Wyoming Response Plan are incorporated into this plan by reference.

A general definition of *hazardous material* is a substance or combination of substances which because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious, irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed.

The U.S. Department of Transportation (DOT), U.S. Environmental Protection Agency (EPA), and the Occupational Safety and Health Administration (OSHA) all have responsibilities in regards to hazardous materials and waste. Presented below are the various definitions and general responsibilities of each of the agencies.

The U.S. DOT, which has control over transported hazardous materials, uses the following definition: hazardous material means a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under Section 5103 of Federal Hazardous Materials Transportation Law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in part 173 of sub-chapter C of this chapter. The U.S. DOT has nine classes of hazardous material:

- Explosives;
- Compressed gasses: flammable gasses, non-flammable compressed gasses, poisonous gasses;
- Flammable liquids: flammable (flash point below 141 degrees), combustible (flash point 141 degrees – 200 degrees);
- Flammable solids: flammable solids, spontaneously combustible, dangerous when wet;
- Oxidizers and organic peroxides: oxidizer, organic peroxide;
- Toxic materials: material that is poisonous, infectious agents;
- Radioactive material;
- Corrosive material: destruction of human skin, corrode steel at a rate of 0.25 inch per year; and
- Miscellaneous.

The EPA also has responsibility for hazardous materials, chemicals, and wastes that have the potential to be released into the environment through stationary facilities. The EPA addresses the need for facilities with hazardous waste substances to store containers in some kind of containment system through the Resource Conservation and Recovery Act. Stationary containers such as tanks, as well as portable storage containers such as 55-gallon drums, are required to have a system that will protect the environment from this waste if a leak were to occur. Hazardous waste regulations appear in Title 40 of the Code of Federal Regulations (CFR). Portable container containment is addressed under Subpart I, Use and Management of Containers (EPA 40 CFR 264.175). Facilities dealing with the storage of hazardous materials may also be required to have containment if they are to meet the Uniform Fire Code (UFC) standards. Within the UFC standards, Section 80, Division III refers to “Hazardous Materials Storage Requirements” pertaining to containers and tanks and Division IV refers to “Spill Containment” with regard to hazardous materials.

The Emergency Planning and Community Right-to-Know Act (EPCRA) requires certain regulated entities to report information about hazardous chemicals and substances at their facilities to federal, state, and local authorities. The objective is to improve the facilities, or government agency's ability to plan for and respond to chemical emergencies, and to give citizens information about chemicals present in their communities. The President has issued Executive Orders to federal agencies that mandate their compliance with certain EPCRA requirements. Part of EPA's mission is to ensure that federal facilities comply

with these requirements. Sections 301 and 303 of EPCRA mandate the creation of two organizations; The State Emergency Response Commission (SERC) and the Local Emergency Planning Committee (LEPC). Sections 311-312 of EPCRA require facilities to submit material safety data sheets or Tier II forms (lists of hazardous chemicals on-site above threshold quantities) to SERC's, LEPC's, and local fire departments.

In addition to EPCRA, there is a Risk Management Program (RMP). When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a RMP, which includes a(n):

- Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases;
- Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and
- Emergency response program that spells out emergency health care, employee training measures, and procedures for informing the public and response agencies (e.g. the fire department) should an accident occur.

By June 21, 1999, a summary of the facility's risk management program (known as a RMP) was to be submitted to EPA, which will make the information publicly available. The plans must be revised and resubmitted every five years. A summary of the RMP facilities by county can be reviewed at **Figure 10.1**. A listing of the facilities present in each county is presented in **Table 10.1**.

The RMP is about reducing chemical risk at the local level. This information helps local fire, police, and emergency response personnel (who must prepare for and respond to chemical accidents), and is useful to citizens in understanding the chemical hazards in communities. EPA anticipates that making the RMPs available to the public stimulates communication between industry and the public to improve accident prevention and emergency response practices at the local level.

OSHA, established under the U.S. Department of Labor by the OSHA Act of 1970, regulates the storage and use of toxic and hazardous substances as they relate to worker health and safety. OSHA regulations are found in Title 29 of the CFR, Part 1910, Subpart H.

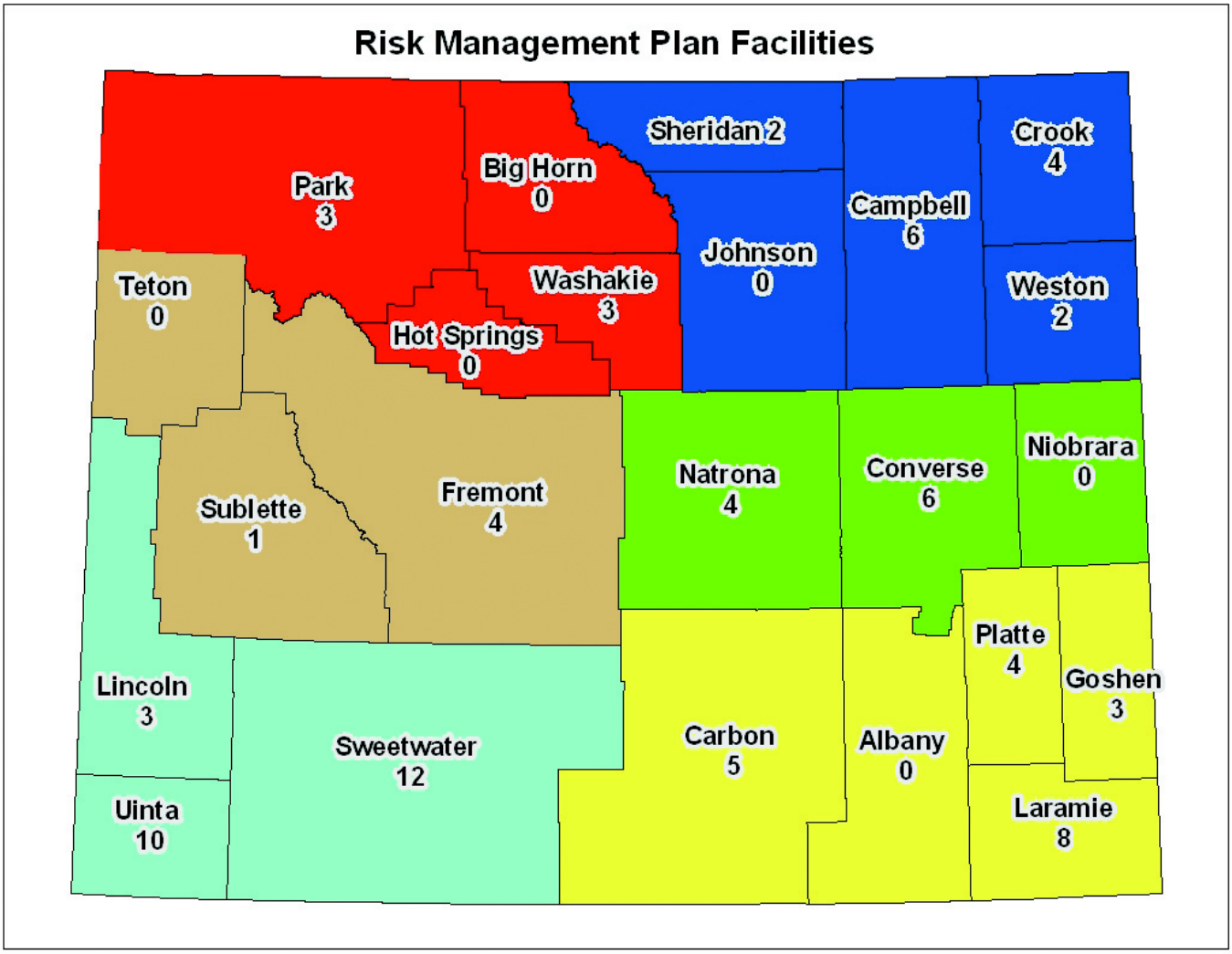

Figure 10.1—Risk Management Plan Facilities in Wyoming.

Table 10.1—Risk Management Plan Facilities in Wyoming.		
County	**Site**	**Chemical**
Campbell	Bitter Creek BG Mix Tank	Flammable
Campbell	Gillette Wastewater Treatment Facility	Chlorine
Campbell	Hilight Gas Plant/Reno Jct. Isomerization Plant	Flammable
Campbell	Kitty Gas Plant	Flammable
Campbell	Pump Station 1	Chlorine
Campbell	Wygen 1	Ammonia
Carbon	Bairoil OC CO_2 Plant	Ammonia; Flammable
Carbon	Colorado Interstate Gas Co. - Rawlins Station	Flammable
Carbon	Echo Springs Plant	Flammable
Carbon	Sinclair Wyoming Refinery	Flammable; Chlorine
Carbon	Wamsutter Stabilization Facility (Carbon County)	Flammable
Table 10.1—Risk Management Plan Facilities in Wyoming.		
County	**Site**	**Chemical**
Converse	Douglas Gas Plant	Flammable
Converse	Power Resources Inc. – Smith Ranch Project	Ammonia

Converse	Sage Creek Gas Processing	Flammable
Converse	Sand Dunes Plant	Flammable
Crook	Donkey Creek BG Mix Tanks	Flammable
Crook	Madison Pump Station	Chlorine
Crook	Raudsep BG Mix Tank	Flammable
Crook	Reynolds BF Mix Tank	Flammable
Fremont	Beaver Creek Gas Plant	Flammable
Fremont	Lost Cabin Gas Plant	Flammable
Fremont	Pavillion Gas Plant	Flammable
Fremont	Peak Sulfur, Inc.	Others
Goshen	Jirdon Agri Chemicals, Inc.	Ammonia; Flammable
Goshen	Wyoming Ethanol	Ammonia; Flammable
Goshen	Torrington Simplot Soilbuilders	Ammonia; Flammable
Laramie	Dyno Nobel, Inc.	Ammonia; Chlorine
Laramie	Farmers Elevator Company	Ammonia
Laramie	Frontier Refining Inc. Cheyenne Refinery	Chlorine; Flammable
Laramie	Ray L. Sherard Water Treatment Plant	Chlorine
Laramie	Roundtop Water Treatment Plant	Chlorine
Laramie	Silo Plant	Flammable
Lincoln	Exxon Company, USA Shute Creek Facility	Flammable
Lincoln	Pioneer Cryogenic Plant	Flammable
Lincoln	Williams Field Service	Flammable
Natrona	Casper Gas Plant (gas plant & production facility)	Flammable
Natrona	Salt Creek Gas Plant	Flammable
Natrona	Sam Hobbs Regional Wastewater Facility	Chlorine
Natrona	Sinclair Casper Refinery	Flammable
Park	Elk Basin Gas Plant	Flammable
Park	Little Buffalo Basin Gas Plant	Flammable
Park	Powell Simplot Soilbuilders	Ammonia
Sheridan	Big Goose Water Treatment Plant	Chlorine
Sheridan	Sheridan Water Treatment Plant	Chlorine
Sublette	Exxon Company, USA, Black Canyon Dehy. Facility	Flammable
Sweetwater	Blacks Fork Gas Plant	Flammable
Sweetwater	Colorado Interstate Gas Co. – Table Rock	Ammonia; Flammable
Sweetwater	GR/RS/SW Co. J.P.W.B. Water Treatment Facility	Chlorine
Sweetwater	Granger Gas Plant	Flammable
Sweetwater	Lincoln Road Gas Plant	Flammable
Sweetwater	Lost Creek Compressor Station	Flammable
Sweetwater	Red Desert	Flammable
Sweetwater	Simplot Phosphates Company	Ammonia; Chlorine
Sweetwater	Vermillion Gas Plant	Flammable
Uinta	Anschutz Ranch East Gas Plant	Flammable
Uinta	Chevron USA Production - Carter Creek Gas Plant	Flammable
Uinta	Clear Creek Gas Storage Central Facility	Flammable

Table 10.1—Risk Management Plan Facilities in Wyoming.

County	Site	Chemical
Uinta	Glasscock Hollow Field Production Facility	Flammable
Uinta	Millis Terminal	Flammable
Uinta	Painter NGL/NRU Gas Plant	Flammable
Uinta	Silver Eagle Refining, Inc.	Flammable
Uinta	Whitney Canyon Gas Plant	Flammable

Washakie	Hiland Gas Plant	Flammable
Washakie	Worland Gas Plant	Flammable
Weston	Newcastle Gas Plant	Flammable
Weston	Wyoming Refining Company	Flammable

History

According to the *Wyoming State Emergency Response Commission 2004 Annual Report*, There were a total of 247 reported hazardous materials spills in 2004 throughout Wyoming. 41 percent of all spills were related to petroleum production, 19 percent related to other refined petroleum products, 16 percent specific to diesel spills, 10 percent related to in-situ mining, and 14 percent reported as miscellaneous in nature. There were a total of 427 hazardous material spills reported in 2003, 377 spills in 2002, 360 spills in 2000, and 389 spills in 1999. The majority of the spills, statewide, are related to petroleum production and products.

In the years since 2003 seven (7) regional response teams have been created and trained in hazardous material response. An additional regional team is in the process of being added to the resources available throughout the state. Since their inception late in 2004, the regional response team concept has been very successful, as they have responded to a total of 226 incidents, 3 incidents in 2004, 4 incidents in 2005, 15 in 2006, 45 in 2007, 34 in 2008, 44 in 2009, 75 in 2010 and as of May 23, there have been 21 responses by the Regional Response Teams in 2011.

Impacts

As mentioned above, one hazardous material spill occurs about every 24 hours. Data on response and cleanup costs are not readily available. It is estimated that the costs are many tens of thousands of dollars per year.

Future Potential Impacts

The probability of hazardous material spills is certain to continue in Wyoming. There are some facilities, however, that contain extremely hazardous substances. Those are the facilities that are required to generate RMPs. An accident resulting in the release of chemicals from those facilities could pose a significant problem to local jurisdictions and the state of Wyoming.

The chemicals that are extremely hazardous in each county as a result of the RMP facilities are presented in **Table 10.2**. There are some potentially significant problems that could develop in Wyoming if select chemicals in **Table 10.2** are released. No additional information will be included in this report due to homeland security concerns.

Table 10.2—Hazardous Chemicals by County.

County	Chemical
Campbell	Butane
Campbell	Carbon tetrachloride
Campbell	Chlorine
Campbell	Condensate

Table 10.2—Hazardous Chemicals by County.	
County	**Chemical**
Campbell	Diesel
Campbell	Digester gas (CH_4 70%) (CO_2 30%)
Campbell	Ethylene glycol
Campbell	Isobutane
Campbell	Lube oil
Campbell	Methanol
Campbell	Natural gas condensate
Campbell	Natural gasoline
Campbell	Pentane
Campbell	Propane
Campbell	Sodium hydroxide
Campbell	Y-grade (ethane-propane/de-ethanized mix)
Carbon	70U00 dimetallic GE betz
Carbon	Absorbent (activated carbon & aluminosilcate)
Carbon	Alcoa F-200
Carbon	Alkylate (gasoline component)
Carbon	Aluminum sulfate
Carbon	Asphalt
Carbon	Bauxite (SRU catalyst)
Carbon	Benzene
Carbon	Betz 20K & 26K (corrosion inhibitor)
Carbon	Betz 8Q106 (rust/corrosion inhibitor)
Carbon	Betz 8Q202 (antioxidant)
Carbon	Carbon dioxide
Carbon	Catalyst, platforming
Carbon	Cement and associated additives
Carbon	Chevron OGA 476 DS (gasoline additive)
Carbon	Citgo PM 840 oil
Carbon	Condensate (hydrocarbon liquid)
Carbon	Control IS3000
Carbon	Control OS 7785
Carbon	Diesel fuel
Carbon	Diesel fuel (in two tanks)
Carbon	Diesel fuel(s)
Carbon	Diethanolamine
Carbon	DN-190 Grace Hydrocracker catalyst
Carbon	DN-3120 Grace Hydrocracker catalyst
Carbon	Drilling mud and associated additives
Carbon	EC1010A Filmer Nalco
Carbon	EC1014A Filmer Nalco
Carbon	EC3044A
Carbon	EC3051A
Carbon	E-Cat (Grace & AKZO)
Carbon	Emulsion breaker (Nalco/Exxon EC2425A & EC2059A)
Carbon	Expedite
Carbon	FCC/poly gasoline
Carbon	Ferric sulfate
Carbon	Flour protien concentrate (foam) AFFF & XL3
Carbon	Fresh FCC catalyst (Grace & AKZO)
Carbon	Gasolines
Carbon	GE betz 8Q31
Carbon	Gilsonite 350
Carbon	Glycol ether DM (jet fuel additive)
Carbon	Heavy oils (FCC bottoms, vacuum tower bottoms, resid)
Carbon	Hexane M,O,P
Carbon	Hydrate lime
Carbon	Hydrogen sulfide
Carbon	Hydrogen sulfide/amonia
Carbon	Hydrotreating catalyst
Carbon	Iron/chronium catalyst (high temp. catalyst on hydrogen plant)
Carbon	Jet fuel /JP-8
Carbon	Light cycle oil
Carbon	Light straight run gasoline
Carbon	Lube oils
Carbon	Methanol 50/50
Carbon	Methyldiethanolamine
Carbon	Nalco EC1005A (neutralizer)

Table 10.2—Hazardous Chemicals by County.	
County	**Chemical**
Carbon	Nalco EC100A & EC1030A (corrosion inhibitor)
Carbon	Naphtha
Carbon	Natural gas
Carbon	Nickel catalyst (hydrogen plant)
Carbon	Nitrogen
Carbon	Phosphoric acid
Carbon	Polymerization SPA-2 (cat poly catalyst)
Carbon	Produced hydrocarbons
Carbon	Red dye b midcontinental chemical
Carbon	Refinery fuel gas
Carbon	Reformate
Carbon	Slop r (water-amine-condensate)
Carbon	Soda ash dense (sodium carbonate, anhydrous)
Carbon	Sodium aluminate 45%
Carbon	Sodium hydroxide (caustic soda)
Carbon	Sodium hypochlorite
Carbon	Steam condensate
Carbon	Steam return - line treatment
Carbon	Steamate NA2440 GE betz
Carbon	Sulfur
Carbon	Sulfuric acid
Carbon	Sunoco hydroline H225T
Carbon	Sunoco hydroline H90T
Carbon	Texaco system 3 TFA-4908 (gasoline additive)
Carbon	Toluene
Carbon	Triethylene glycol
Carbon	Unichem 8162 (asphalt additive)
Carbon	Unleaded gasoline
Carbon	Uop platnium catalyst (reformer)
Carbon	Used oil
Carbon	Wastewater and oil
Carbon	Xylene
Carbon	Y-grade product
Carbon	Zinc oxide catalyst (hydrogen plant)
Converse	Ambitrol FL 50
Converse	Corrosion inhibitors
Converse	Ethane/propane
Converse	Fuels
Converse	Gasoline
Converse	Heat transfer fluids
Converse	Heat transfer fluids - metanol/antifreeze
Converse	Lubricants, engine
Converse	Methldiethamine
Converse	Natural gas liquids
Converse	Solvents
Converse	Treatolite corrosion inhibitor
Converse	Waste/slop oil
Crook	Crude oil
Fremont	Acids, inorganic
Fremont	Alkalinity and pH control material
Fremont	Antifreeze
Fremont	Inert gases
Fremont	Scale inhibitors
Goshen	Ammonium sulfate (12-0-0-26-s)
Goshen	Anhydrous ammonia
Goshen	Lorsban 4E
Goshen	Nortron SC
Goshen	N-serve
Goshen	Pramitol 25E
Goshen	Sonalan HFP
Goshen	Strychnine
Goshen	Telone II
Goshen	Temik 15G
Goshen	Thimet 206
Goshen	XX-7 spreader
Goshen	Zinc phosphide oat bait
Goshen	Zinc sulfate

Table 10.2—Hazardous Chemicals by County.	
County	**Chemical**
Laramie	Alumina
Laramie	Ammonia
Laramie	Ammonium nitrate
Laramie	Ammonium nitrate solution
Laramie	Asphalt
Laramie	Butane
Laramie	Calcium chloride
Laramie	Chlorine
Laramie	Cracked heavy oil Unichem 8162W
Laramie	Crude oil
Laramie	Cyclohexylamine (Nalco 1800)
Laramie	Diesel fuel
Laramie	Diethanolamine
Laramie	Ethyl alcohol
Laramie	Ethylene glycol, 55%
Laramie	Formaldehyde
Laramie	Gas oil
Laramie	Gasoline
Laramie	Heavy aromatic naphtha (Tolad T-3012)
Laramie	Hydrochloric acid
Laramie	Hydrogen fluoride
Laramie	Hydrogen sulfide
Laramie	Iso-butane
Laramie	Methanol
Laramie	Methy ter-butyl ether
Laramie	Monoethanolamine (Nalco EC1005A)
Laramie	Nitric acid
Laramie	Nitrogen
Laramie	Nitrogen, liquefied
Laramie	Normal butane
Laramie	Petroleum coke-uncalcined
Laramie	Petroleum hydrocarbons slurry
Laramie	Potassium hydroxide
Laramie	Propane
Laramie	Sodium carbonate (soda ash)
Laramie	Sodium chloride
Laramie	Sodium chlorite
Laramie	Sulfur
Lincoln	Amines, Flammable, Corrosive, N.O.S.
Lincoln	Alkalinity and ph control material
Lincoln	Condensate PL
Lincoln	Deflocculants
Lincoln	Defoaming agents
Lincoln	Ethyl Mercaptan
Lincoln	Ethylene Glycol
Lincoln	Filtration control agents/flocculants
Lincoln	Gelling agents
Lincoln	Liquefied Gas [Flammable]
Lincoln	Methanol
Lincoln	Therminol-55 (C-14-30 Alkylaromatic Derivatives)
Lincoln	Natural Gas, Methane
Lincoln	Oil
Lincoln	Oil based mud additives
Lincoln	Produced hydrocarbons
Lincoln	Shale control additives
Lincoln	Spotting fluids
Lincoln	Viscosifiers
Lincoln	Weight materials
Natrona	Betz 2W157
Natrona	Betz 5K1621
Natrona	Betz 8Q106
Natrona	Betz 8Q12
Natrona	Betz 8Q202
Natrona	Betz 8Q305
Natrona	Betz 8Q32
Natrona	Betz 8Q403
Natrona	Betz 8Q70

Table 10.2—Hazardous Chemicals by County.	
County	**Chemical**
Natrona	Boiler feed water/steam/condensate
Natrona	Butane - iso butane
Natrona	Caustic soda 50% (or less)
Natrona	Chlorine gas
Natrona	Criterion 448 TL (cobalt moly catalyst)
Natrona	Criterion C424
Natrona	Cyclohexane
Natrona	Ethyl hitech 6423 (xylene)
Natrona	Ethylbenzene
Natrona	FCC catalyst
Natrona	Fuel oil light, (hydrocarbon mixture light)
Natrona	GC3 PA-122 (xylene)
Natrona	Hexane
Natrona	Hf-c catalyst
Natrona	Lime
Natrona	Lubrizol R 8251 (xylene, benzene, ethylbenzene)
Natrona	Mdea
Natrona	National aero-foam
Natrona	Paint and paint thinner
Natrona	Red dye (xylene, ethylbenzene)
Natrona	Surfactant, miscellaneous
Natrona	Texaco 17101 TTFA-4908R (xylene, ethylbenzene)
Natrona	Unichem 7560 (xylene)
Natrona	Unichem 8072 (ethylbenzene, xylene)
Natrona	UOP catalyst SPA2
Natrona	UOP R-50 catalyst
Natrona	UOP R-56 catalyst
Park	Amogas engine oil
Park	Amonium hydroxide 26-BE
Park	Criterion catalyst 234
Park	Diethandamine
Park	Hydroquinone
Park	Molten sulfur
Park	Stoddard solvent
Sublette	Miscellaneous drilling additives
Sweetwater	Acids, organic
Sweetwater	Acrylmide
Sweetwater	Ammonium thiosulfate
Sweetwater	Biocides
Sweetwater	Breakers, emulsion/gel
Sweetwater	Buffers, pH
Sweetwater	Butane-gasoline mix
Sweetwater	Calcium compounds
Sweetwater	Caustic soda solution - sodium hydroxide
Sweetwater	Chlorine (Cl_2)
Sweetwater	Crosslinkers
Sweetwater	Cyclohexylamine
Sweetwater	Detergents/foamers
Sweetwater	Ethanethiol (ethylmercaptan)
Sweetwater	Ethyl mercaptan
Sweetwater	Ethylenediamine
Sweetwater	Explosives
Sweetwater	Fricton reducers
Sweetwater	Gel stabilizers
Sweetwater	Herbicides
Sweetwater	Hydraulic fluids
Sweetwater	Hydrocarbon coating oil
Sweetwater	Hydrogen fluoride
Sweetwater	Liquid oxygen
Sweetwater	Methane
Sweetwater	Methyl diethanolamine
Sweetwater	Molecular sieve type 4ADG
Sweetwater	Molten sulfur (s)
Sweetwater	Monoammonium phosphate
Sweetwater	Natural gas (methane)
Sweetwater	Natural gasoline: hexane +
Sweetwater	NGL (Y grade liquids)

Table 10.2—Hazardous Chemicals by County.	
County	**Chemical**
Sweetwater	Off road diesel fuel #2
Sweetwater	Phosphoric acid (H_3PO_4)
Sweetwater	Pipe joint compound
Sweetwater	Polymer-acrylamide
Sweetwater	Proppants
Sweetwater	Resin and resin solutions
Sweetwater	Salt solutions
Sweetwater	Silica
Sweetwater	Slaked lime- $Ca(OH)_2$
Sweetwater	Sodium chlorate solution ($NaClO_3$)
Sweetwater	Sodium hydroxide solution (NaOH)
Sweetwater	Solvent
Sweetwater	Sulfur dioxide
Sweetwater	Sulfur trioxide
Sweetwater	Surfactants, corrosive
Sweetwater	Surfactants, flammable
Sweetwater	Surfactants, miscellaneous
Sweetwater	Temporary blocking agents
Sweetwater	Tracers
Sweetwater	Welding materials
Sweetwater	Y grade product
Uinta	Acrylamide
Uinta	Compressed gas
Uinta	Crw 9059
Uinta	Flammable liquid (methanol)
Uinta	Friction reducers
Uinta	Gel stabilizers
Uinta	Heat medium oil
Uinta	Hydrogen sulfide (pipeline gas)
Uinta	Lost circulation material
Uinta	Lubricants, drilling mud additives
Uinta	Nalco 1720
Uinta	Nalco 7204
Uinta	Nalco 7290
Uinta	Nalco 8735
Uinta	Scale inhibitors
Uinta	Therminol 55
Uinta	X-cide 105
Washakie	Butane mix
Washakie	Fuels (butane)
Washakie	Fuels (gasoline)
Washakie	Fuels (propane)
Washakie	Lubricant oil
Washakie	Solvents (methanol)
Weston	Ambitrol (ethylene glycol)

In the event of the release of a hazardous substance in one of Wyoming's counties, the impact to citizens will vary, based on development, density of population, the substance released and the substance's method of release and chemical properties. A table and map (below) portray the overall risk to the population based on the density of the population and its composition within the county.

Proposed State Mitigation Projects

The following mitigation projects have been proposed by state, federal, and local entities in the process of generating the Wyoming Multi-Hazard Mitigation Plan. Chapter 22 has all proposed mitigation projects.

- State or regional-sponsored hazardous material collection days, with improved

education on disposal of household items.

- Increased education and public outreach regarding the risks associated with hazardous materials and appropriate disposal methodology.
- Commodity Flow Study.
- Chemical Safety Audits of fixed facilities.
- Safe Haven Study to establish buffer zones around towns.
- Increase capability for waste management regulatory inspectors , and civil servants regularly, or with a high potential of exposure to hazmat.
- Identify areas most susceptible to release of toxic gas (H2S, CO2) and review mitigation plans in place.
- CBRNE Protection and monitoring upgrades at points of entry.
- Education on Shelter-In-Place.
- Provide all-hazards weather radios to all residences in Wyoming.
- Identify and inspect shelters in hazard prone areas.
- Research feasibility and costs of adding new frontage roads /detour routes to I-80, I-90, and I-25 to prevent significant delay in traffic flow and resultant economic loss and possible loss of life.
- Provide hazards information to shelters, emergency facilities in public buildings, campgrounds, and phone books.
- Provide emergency phones at strategic locations with direct lines to emergency dispatch services.
- Develop reseeding plans for losses due to all hazard events.
- GIS training for local jurisdictions with emphasis on hazards recognition and analysis for application to mitigation planning.
- Investigate opportunities for developing or improving warning systems as a means to reduce loss of life, damage to property, and economic losses.
- Education programs encompassing multi-hazard insurance for business, resident and government application.
- Education programs encompassing multi-hazard mitigation for business, resident and government application.
- Planning studies regarding transportation of essential and/or key personnel during all hazard events.
- Continue outreach to counties on identifying cost effective and feasible mitigation projects.
- Promote Continuity of Operations and Continuity of Government, statewide.
- Maintain and continue to expand hazards databases that were generated for the State Hazard Mitigation Plan. Seek new sources of information.
- Identify, document, and advertise all volunteer agency’s locations and contact information.