

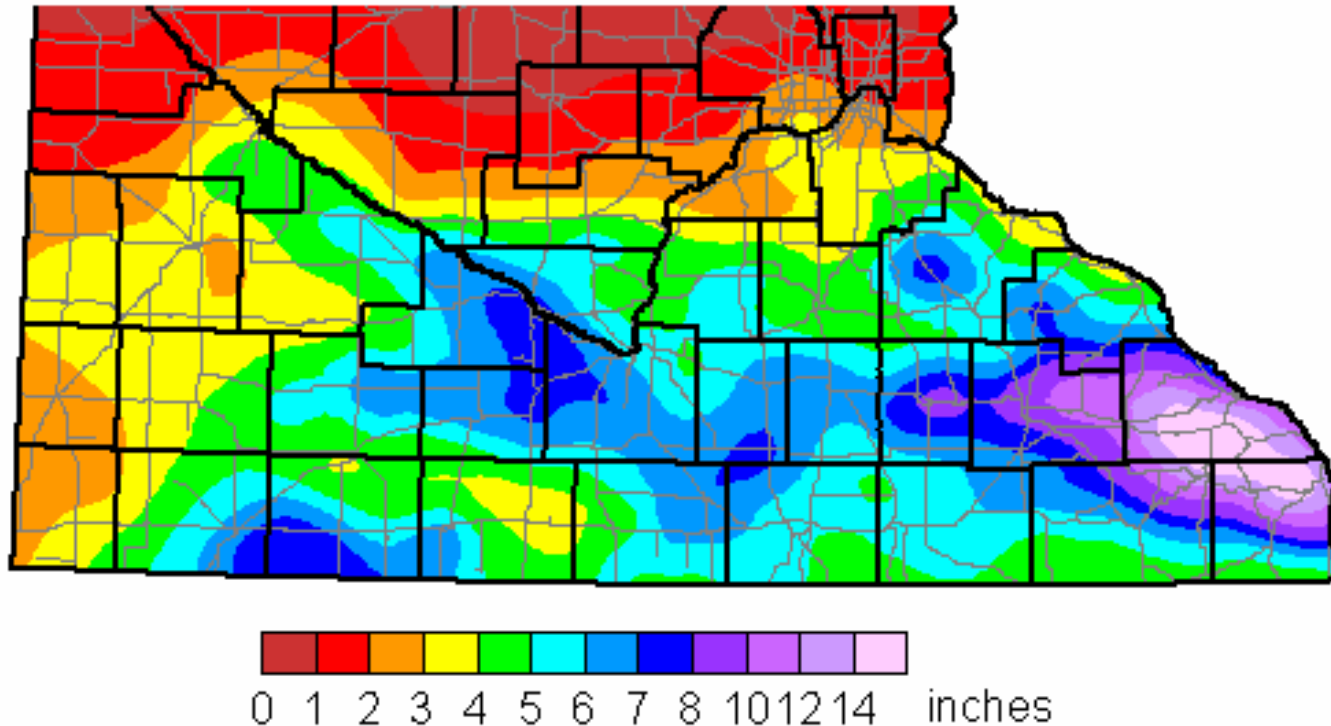
# MPCA

## Emergency Response

Southeast Minnesota Flash Floods  
August 18/19, 2007

Counties: Fillmore, Winona, Houston,  
Olmsted, Wabasha, Steele, Dodge.

# Rainfall Totals for Southern Minnesota August 18 through August 20 (8:00 AM CDT), 2007



State Climatology Office - DNR Waters

- Highest NWS climate observer reading: 15.27 inches in 24 hrs.
- Largest Multi-day rainfall total was 20.85 inches.

# 11 to 15 inches of rain fell in about a day in a seven county area.

- Flash Flooding, 7 Lives lost,
- About 55 Communities affected,
- Three Counties with extensive damage, (Winona, Houston, Fillmore),
- Initial Red Cross Estimate: 6,375 Families Affected, (over 4,800 FEMA registrations for individual assistance),
- Large Community Evacuations (Red Cross and Salvation Army activations); Search and Rescue; Road Closures; National Guard Activation: State, County & City Emergency Operations Centers opened, Agency EOCs activated (MPCA, MDH, MDA, ACOE), State and Federal disaster declarations.

- 16 Communities with Major WWTF upsets, bypasses, and sewage backups.
- 2 WWTFs under water: Hokah and Rushford,
  - Goodview & Rushford Village collection systems under water or inoperable.
- Homes, debris, propane tanks, fuel oil tanks, and vehicles washed away, silty mud everywhere.
- Many Businesses flooded and damaged,
- Two Mobil Home Communities flooded (Rushford, 33 homes destroyed and St, Charles),
- Several campgrounds and parks destroyed, (RVs washed into the woods)
- Landslides in Houston County destroyed rural homes, Farms and roads,
- Rail and Communications disrupted/damaged.
- Stunned and Tired Local Officials.



Garvin Brook,  
Photo: Winona Daily News



Photo: Mark Henderson, Rochester



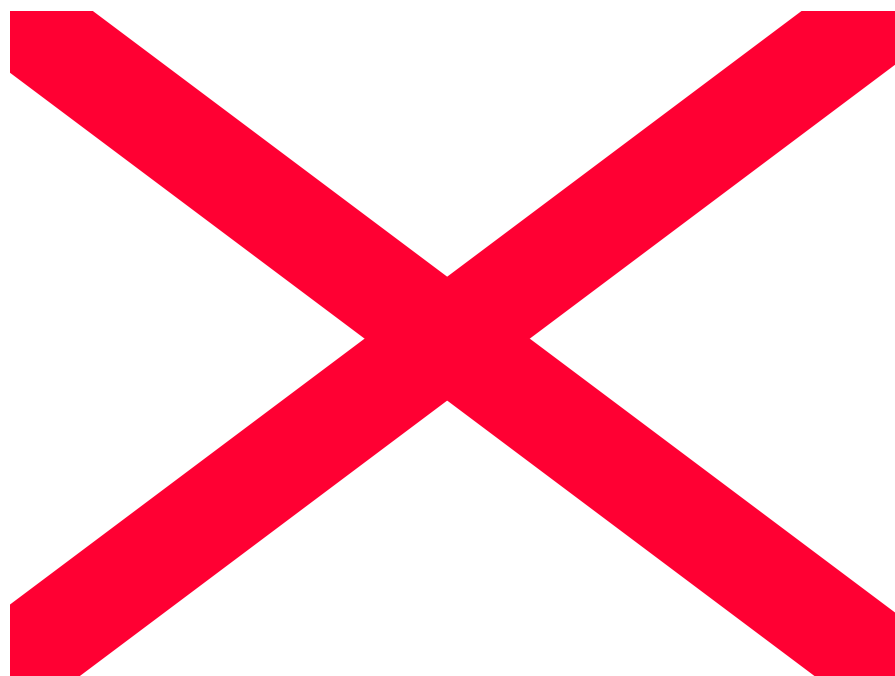
Photo: Phil Haney, Minnesota City

Photos: Chris Parker, Stockton

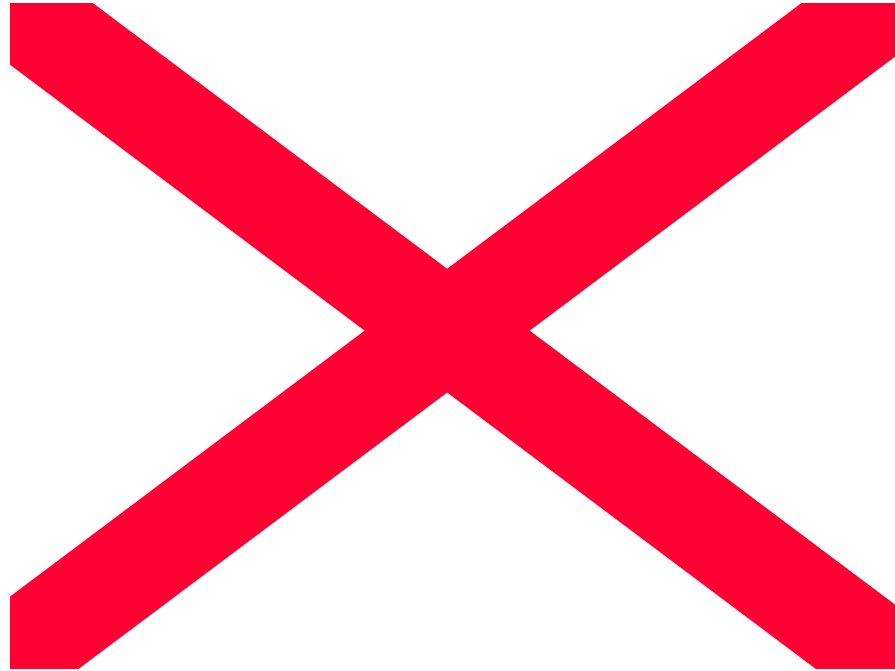


Rushford

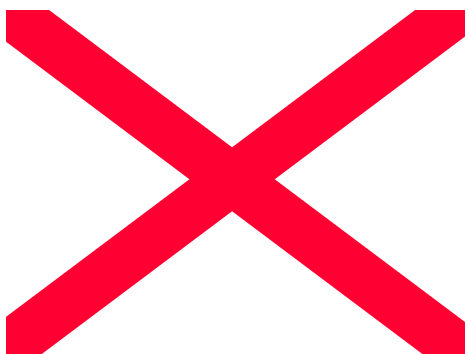
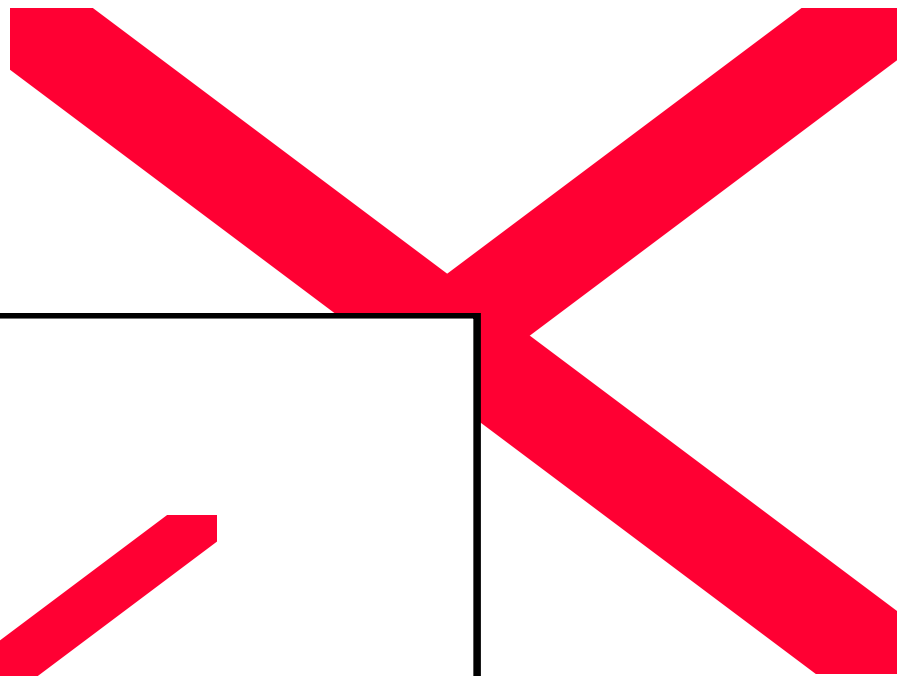


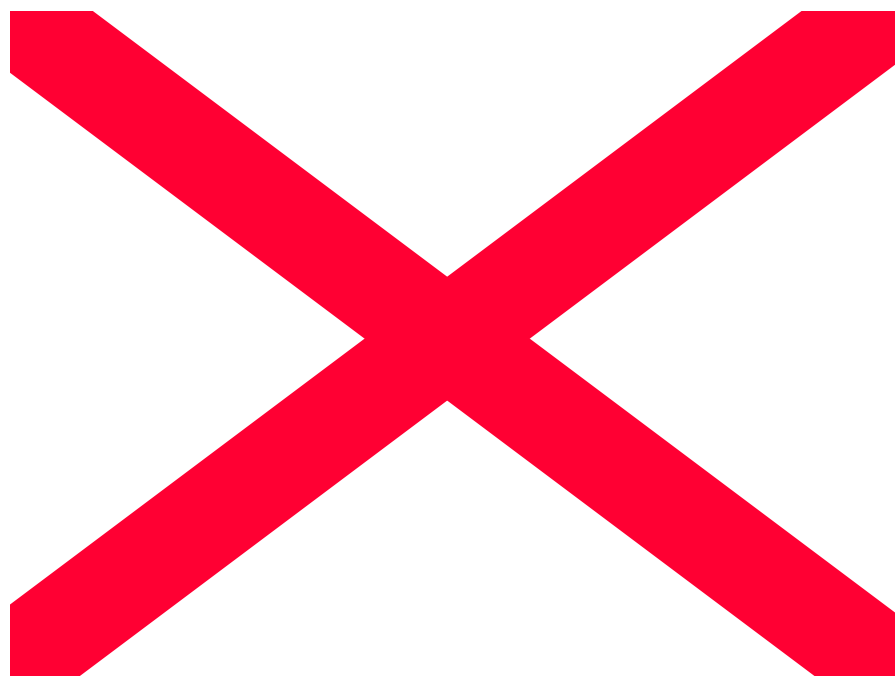


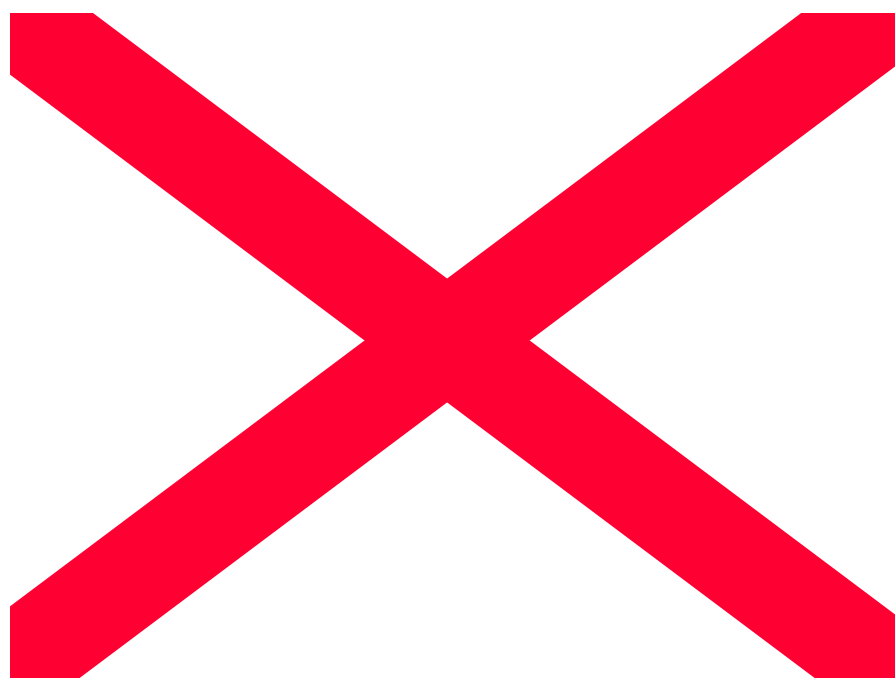
Rushford WWTF

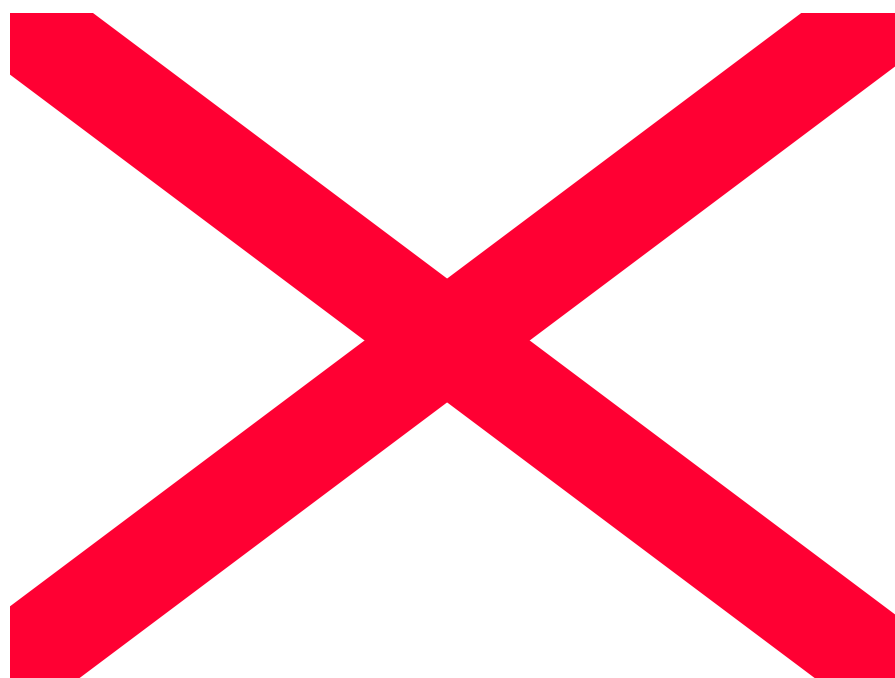


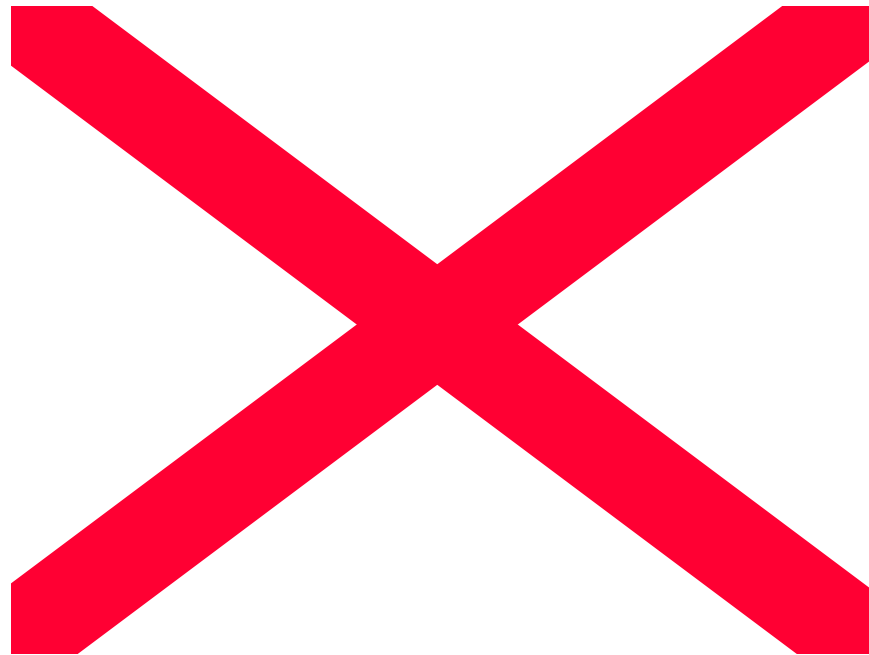
Rushford Kwik Trip



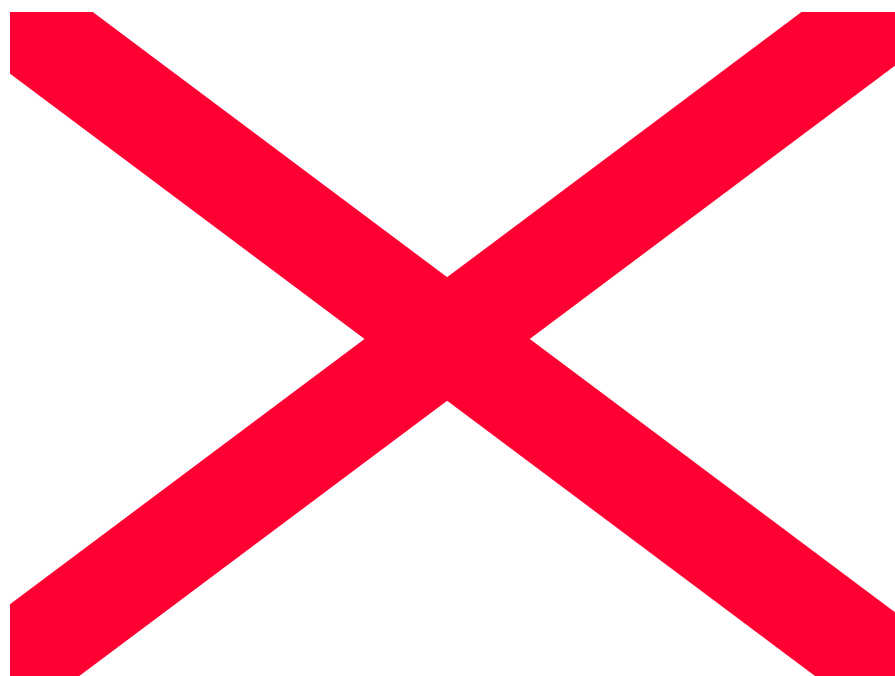








Winona, Gunderson Addition





Goodview Apartments

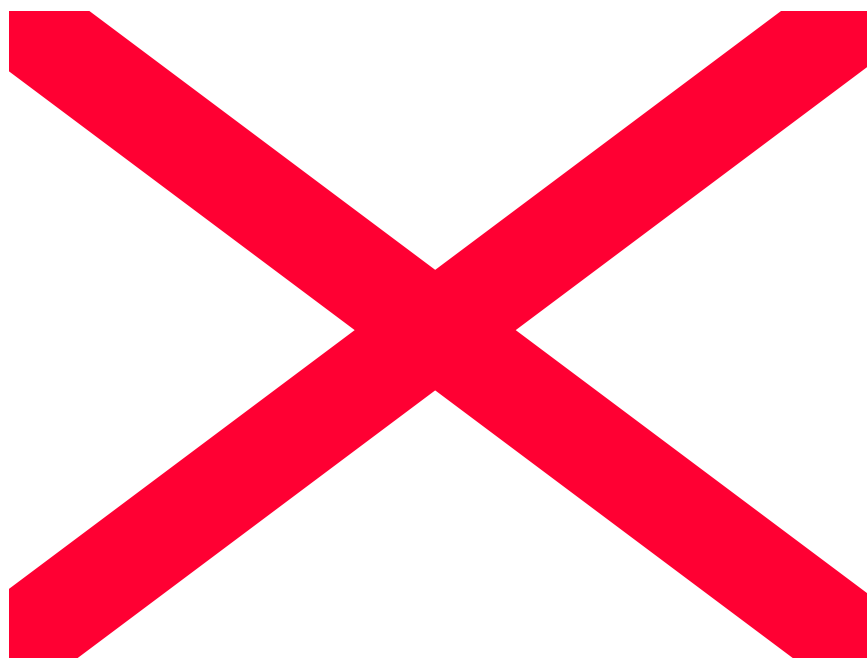
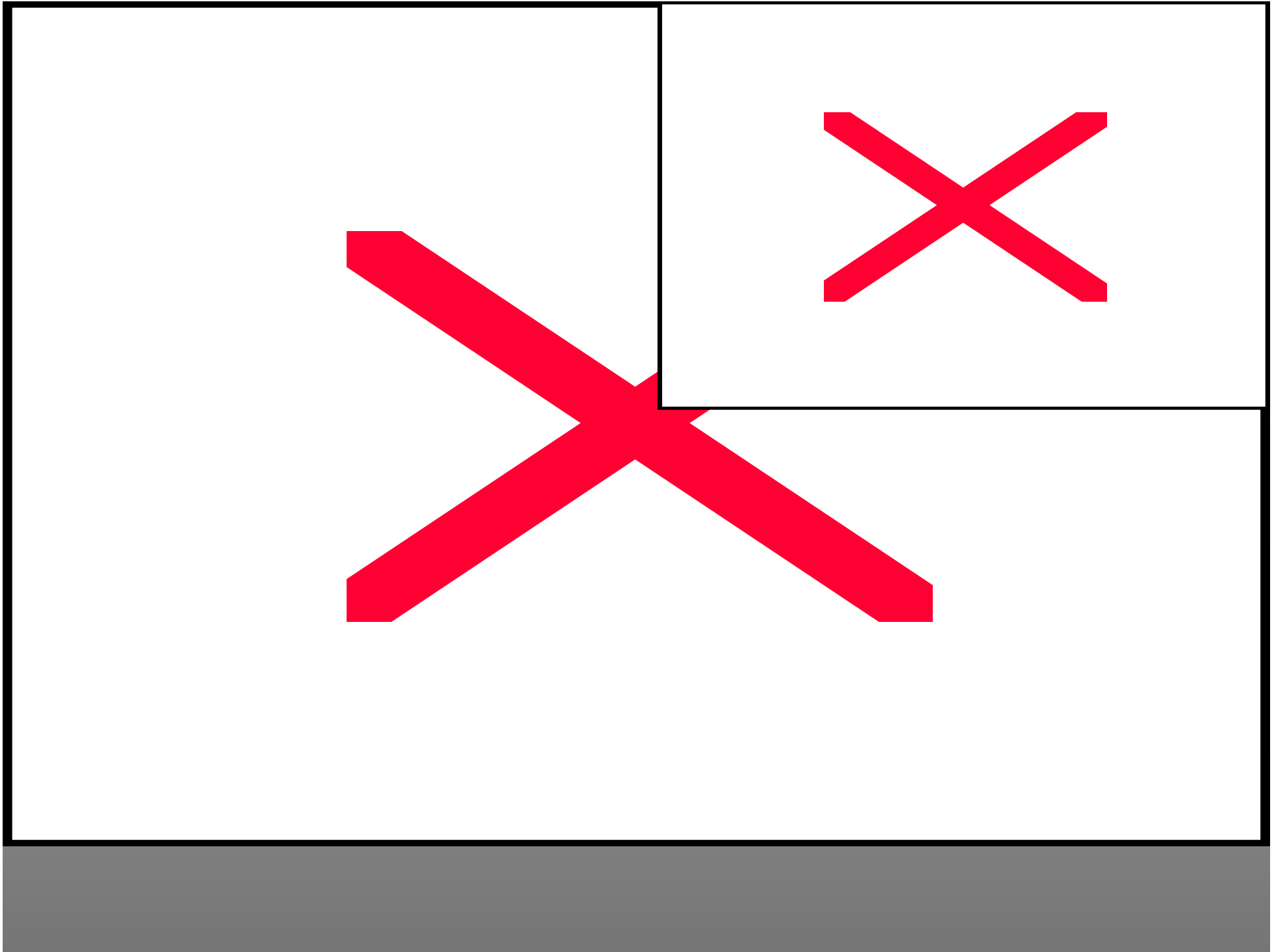




Photo: Sarah Sullivan, Brownsville



Photo: Sarah Sullivan, Brownsville



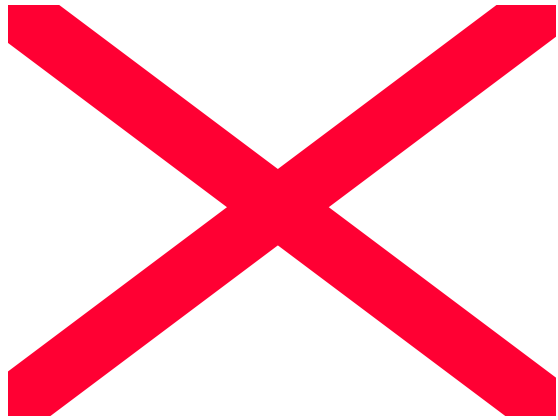
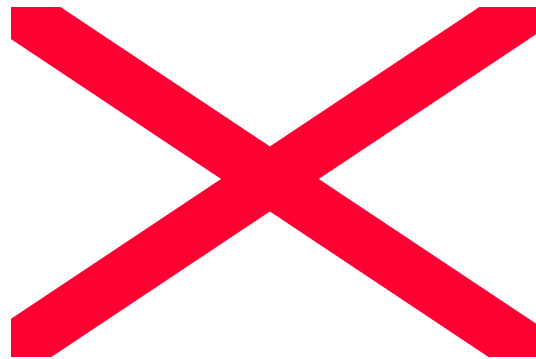
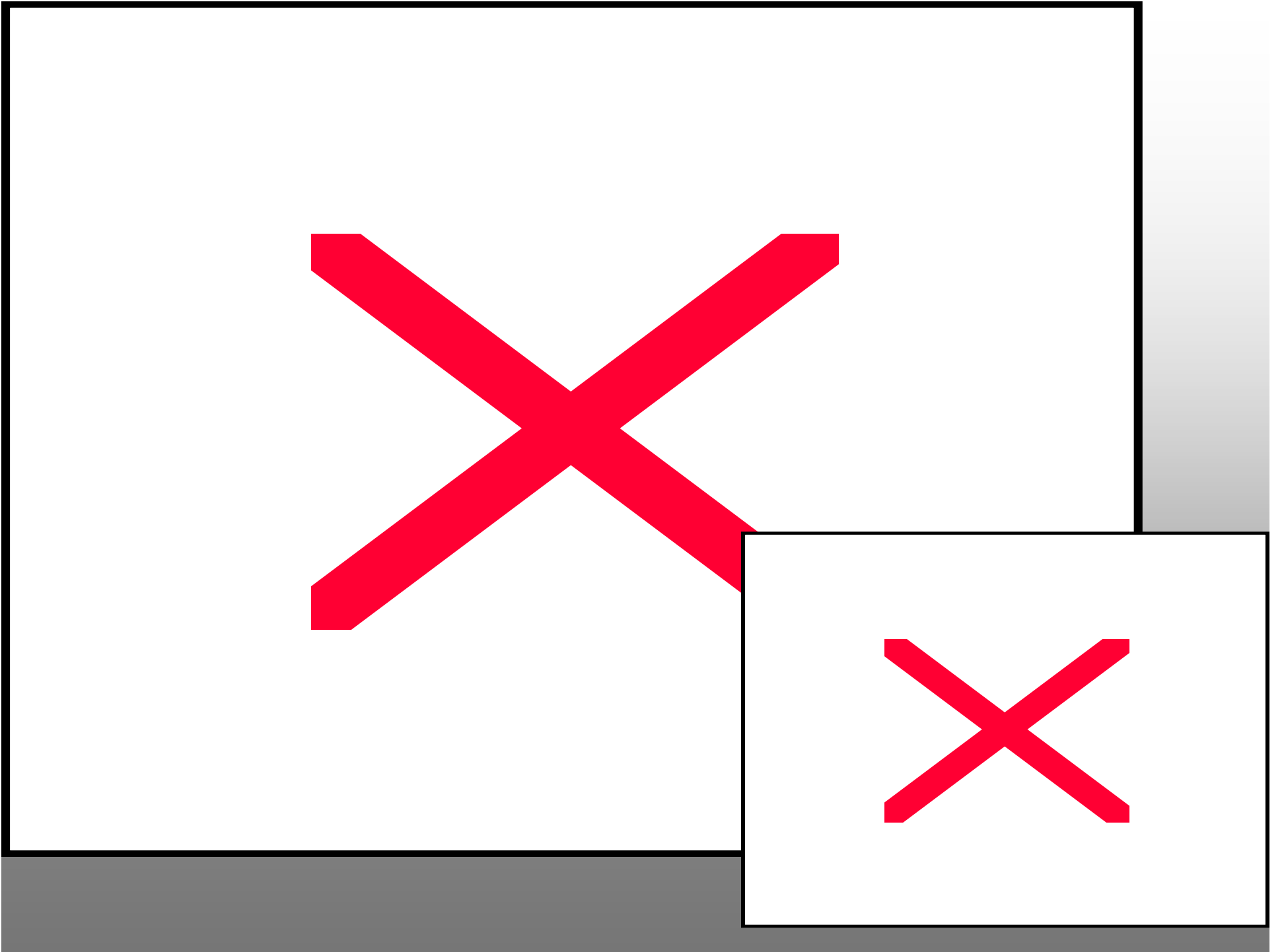
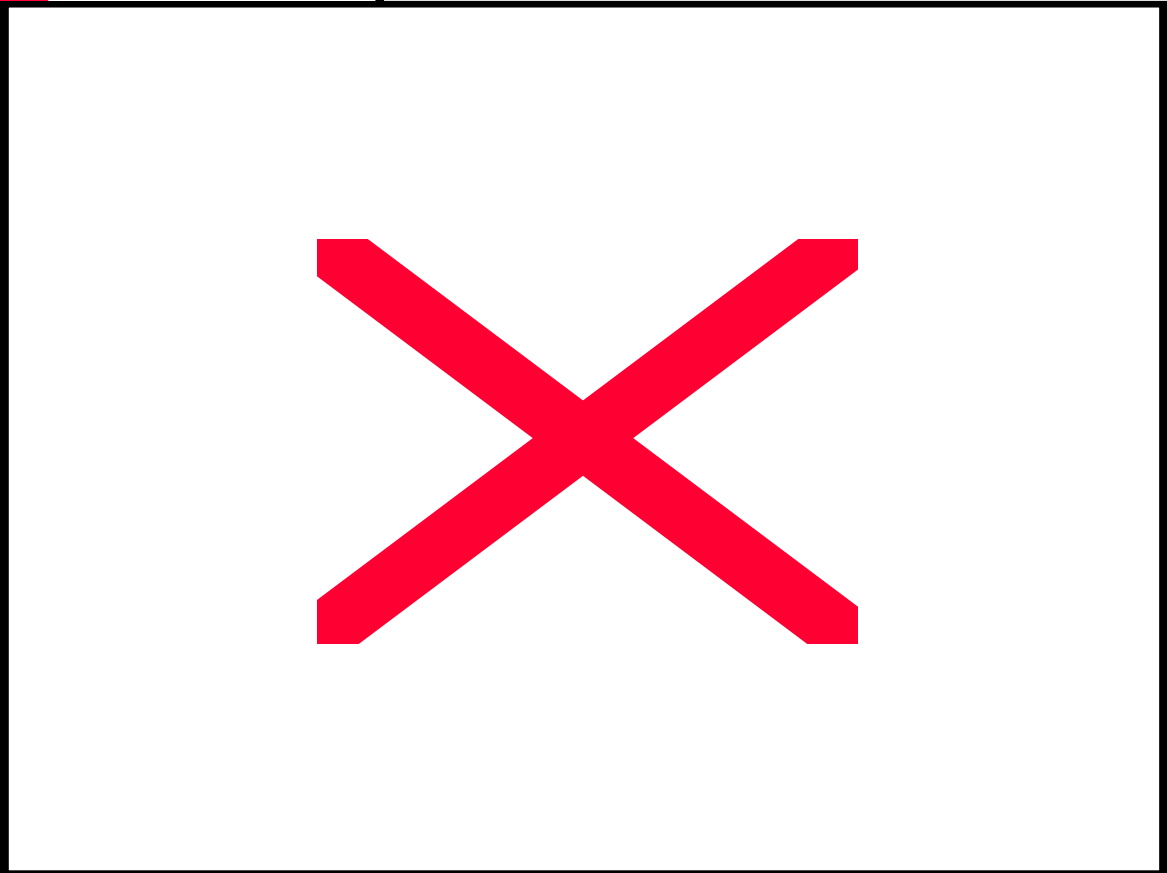
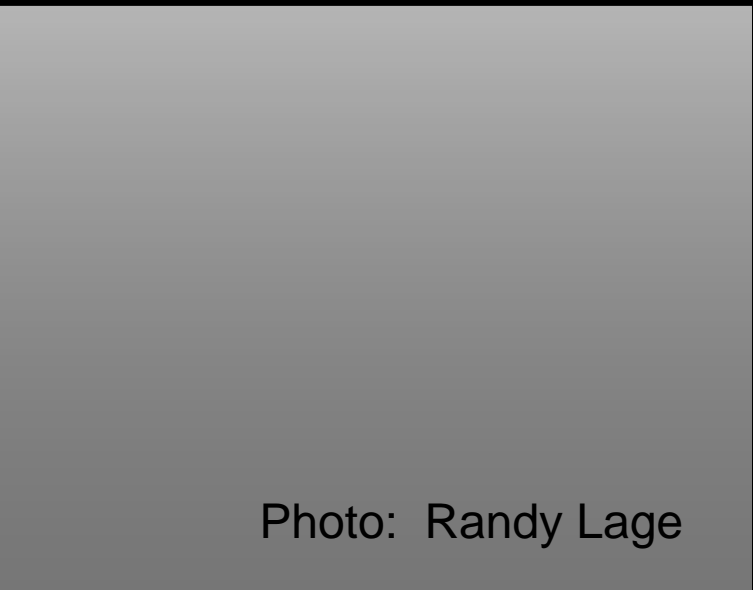
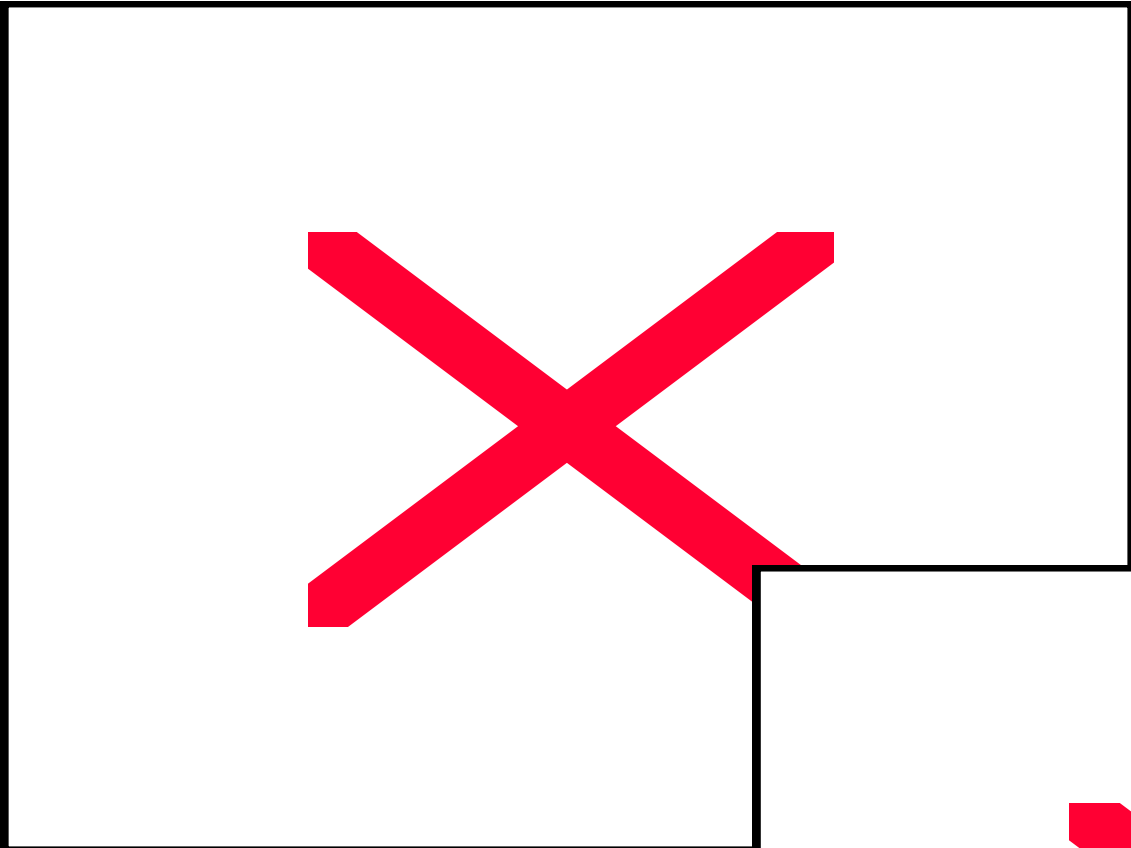


Photo: Vaughn Snook,  
Brownsville

Photo: Sarah Sullivan, Brownsville









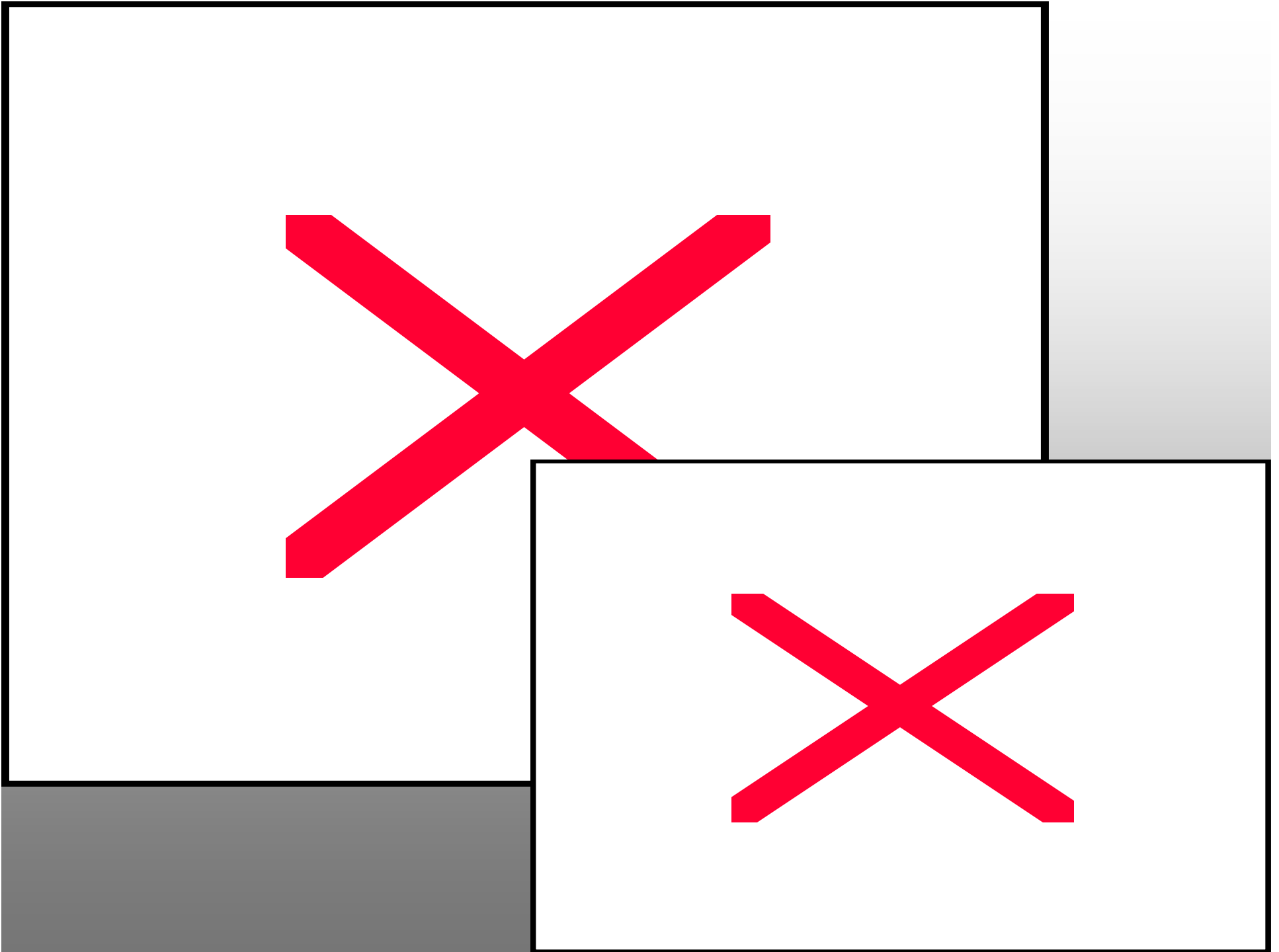
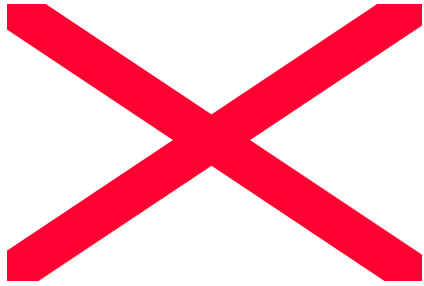




Photo: Sarah Sullivan, Brownsville



Photos: Tracy Randall

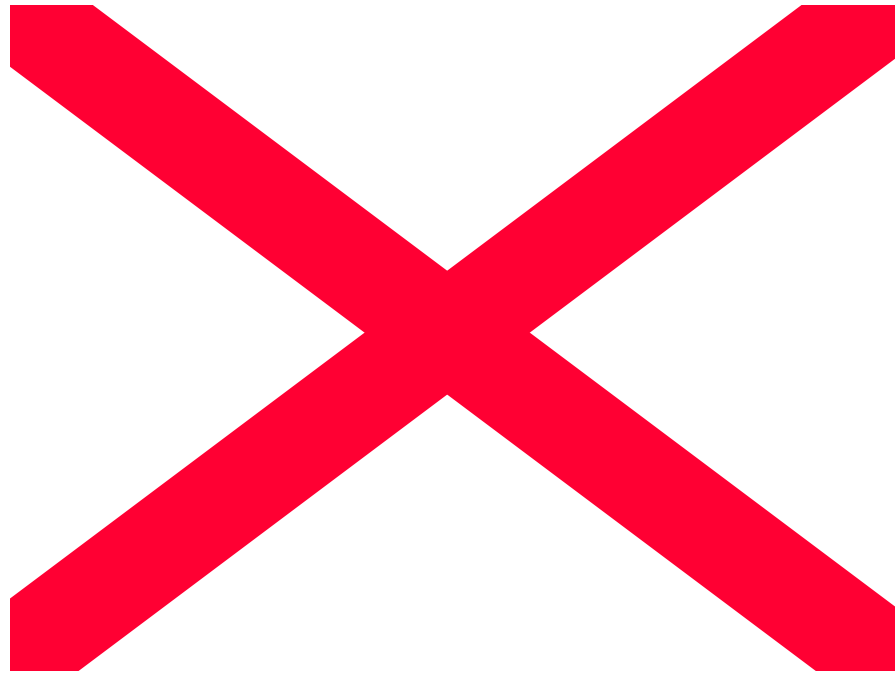


Photo: Brad Horn

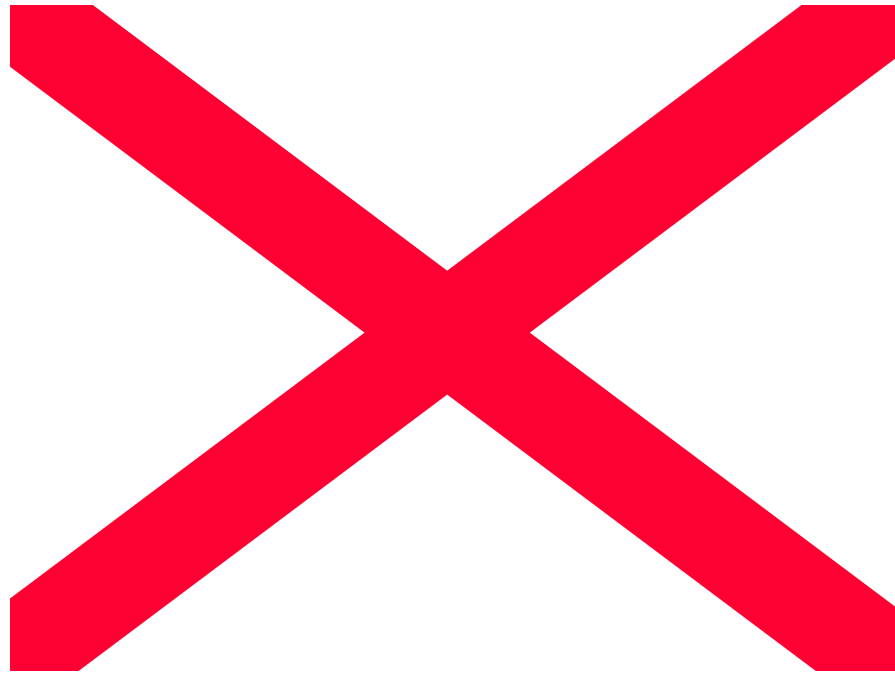


Photo: Brad Horn

Photo: Tracy Randall

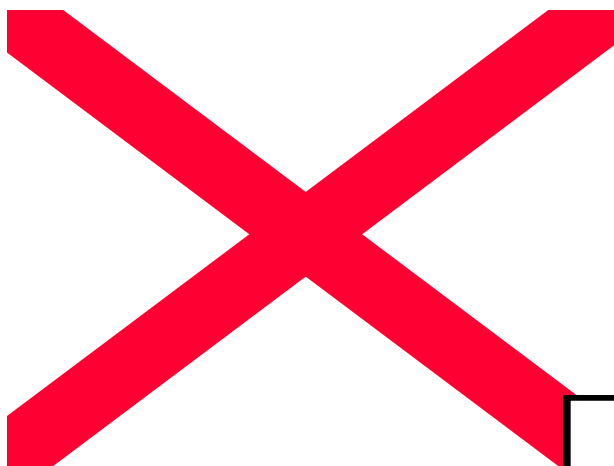


Photo: Brian Verdick



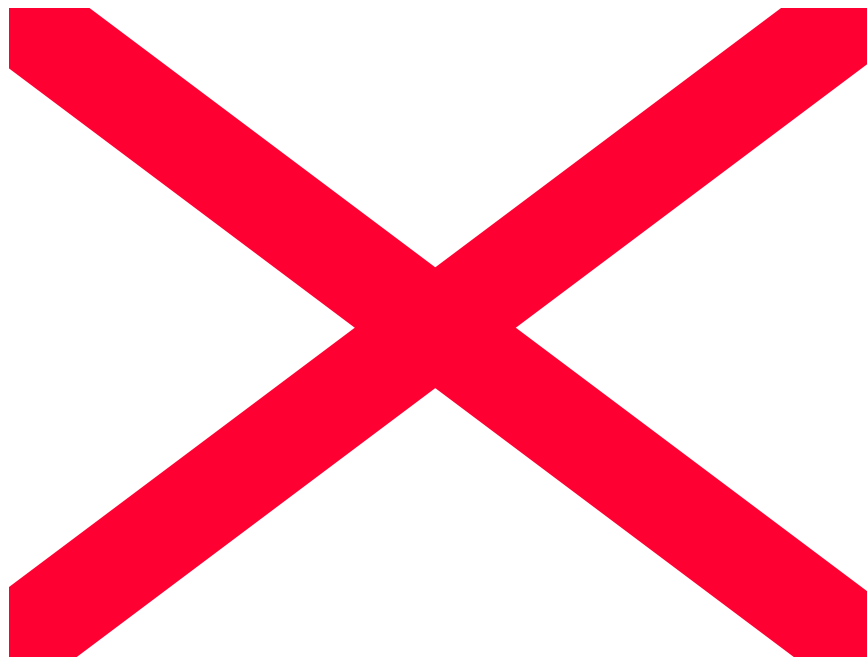
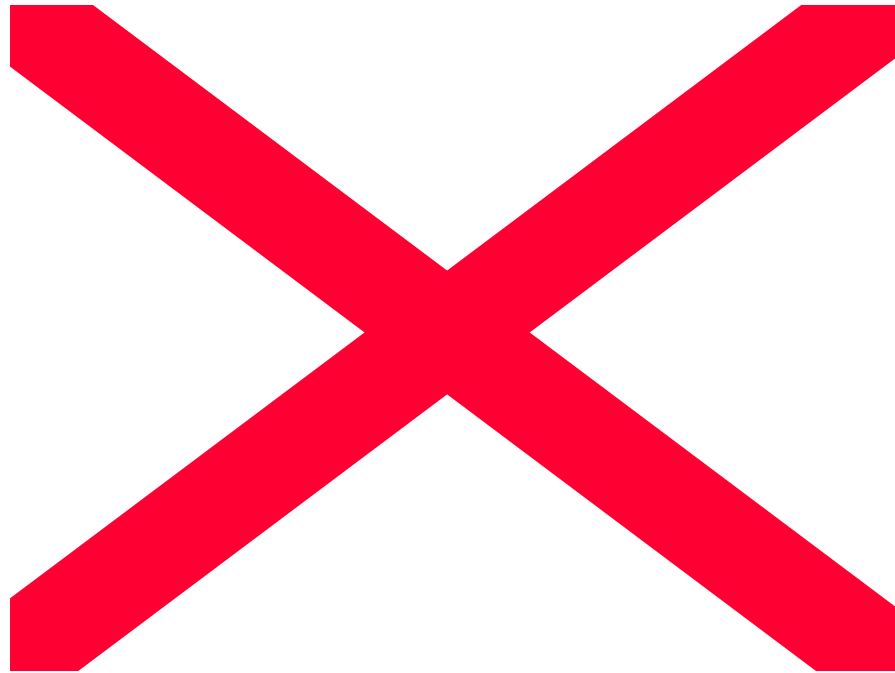


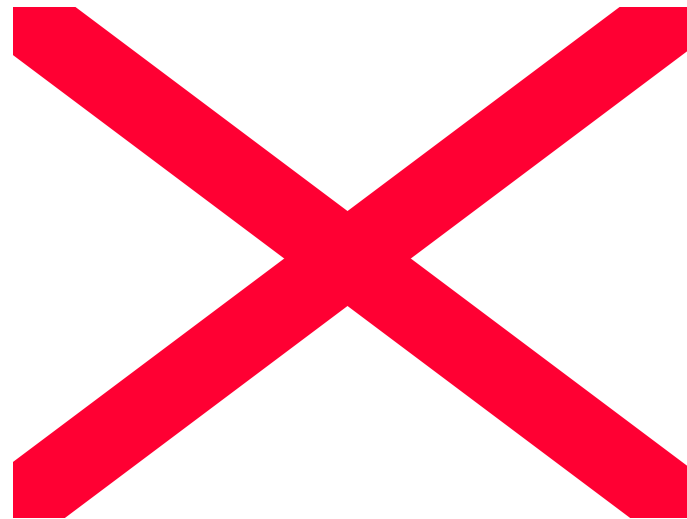
Photo: Matt Johnson

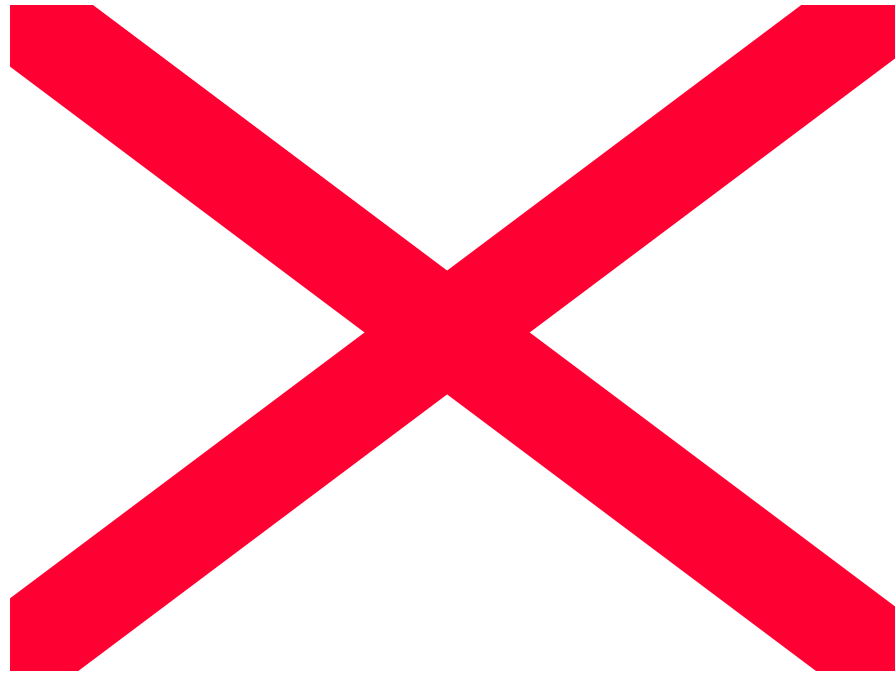


Stream Damage

# Sinkhole Development

(Winona County Manure Basin Wall)

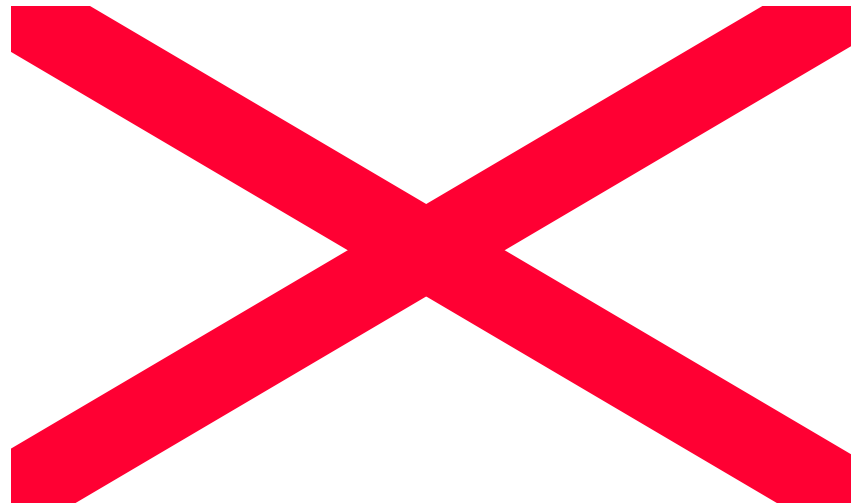




Stockton

# MPCA RESPONSE

Disaster Recovery and Cleanup



75 MPCA Staff involved with response in  
the first two weeks.

# Agency Tasks

- Communications with city/county/state EOCs,
- Emergency Recovery of floating propane tanks,
- Disaster Recovery plan implementation assistance to communities, debris management.
- Waste handling- assisting city/county planning, checklists, sequencing, approving temporary transfer facilities, etc.
- Wastewater treatment facilities- operator relief, removing mud, rebuilding facilities, re-starting treatment, response to bypasses
- Household hazardous waste- sorting, pickup, transfer, disposal.

# Agency Tasks Cont.

- Petroleum tanks- Cleanup and off-loading of residential fuel oil tank releases,
- Mud collection, management, disposal.
- Solid waste management, white goods, electronics, etc.
- Spills from small businesses and flooded facilities
- Feedlot Assistance
  - (Virtually all manure basins in Winona county full and overflowing).
- Commercial UST facilities recovery assistance (flooded service stations),
- Waterway booming, oily runoff management, Making absorbents available to communities,
- Multi-agency technical support: MDA, DNR, MDA, etc.

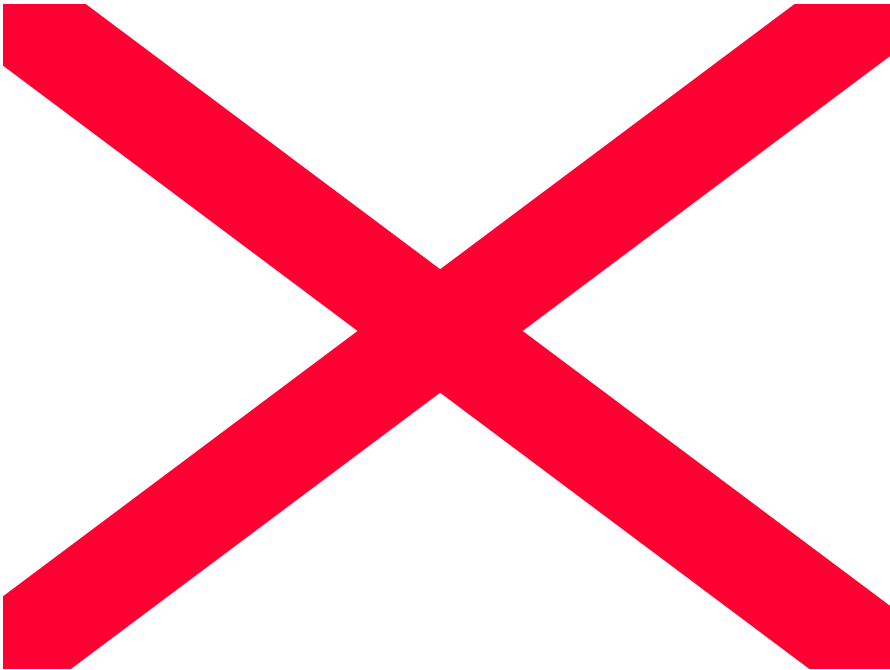
# Agency Tasks Cont.

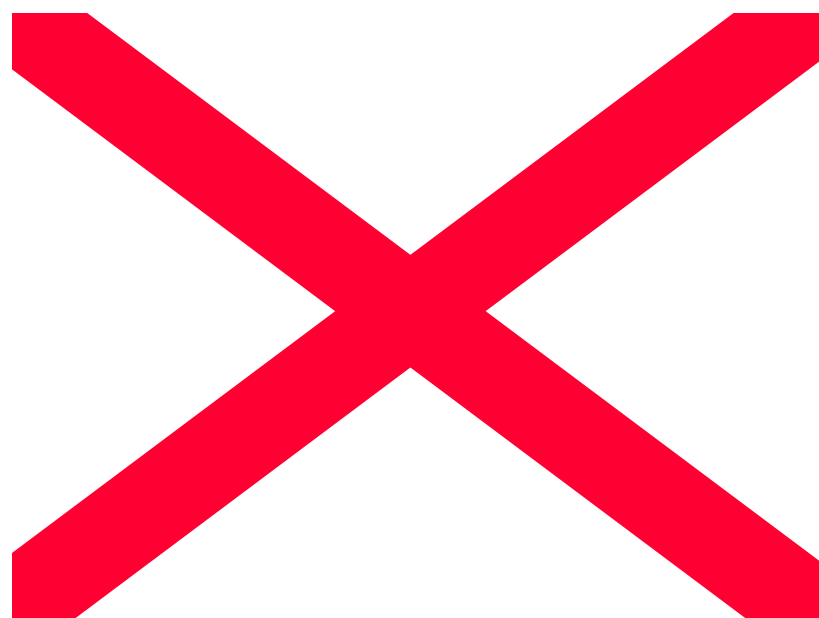
- Public Information Coordination, fact sheet dissemination, press releases,
- Permitted facilities assistance,
- Flooded wells, (non-bacterial contamination)
- Landfill operations,
- Animal carcasses
- Impaired waters issues
- Safety for workers in field, traveling
- Sewage system (ISTS) impacts
- Water Quality and flow monitoring

## Other

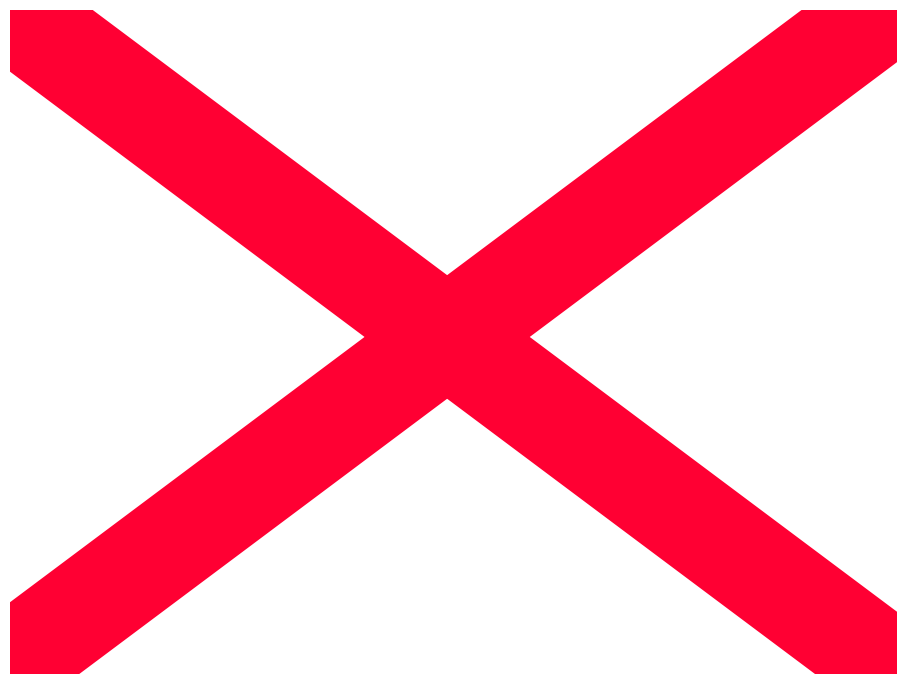
- FEMA declaration,
  - Federal solid waste bidding requirements,
  - Homeowner and public entity registrations.
- Structures- pre-demolition inspections, waste transfer procedures and sites, demo waste sites
- Damaged closed landfills,
- Legislative/Governor/Policy/ etc.
- Stormwater issues during cleanup and reconstruction
- Lake Drawdown approvals
- Trout stream destruction, alterations

Corraling Propane Tanks floated into Lake Goodview



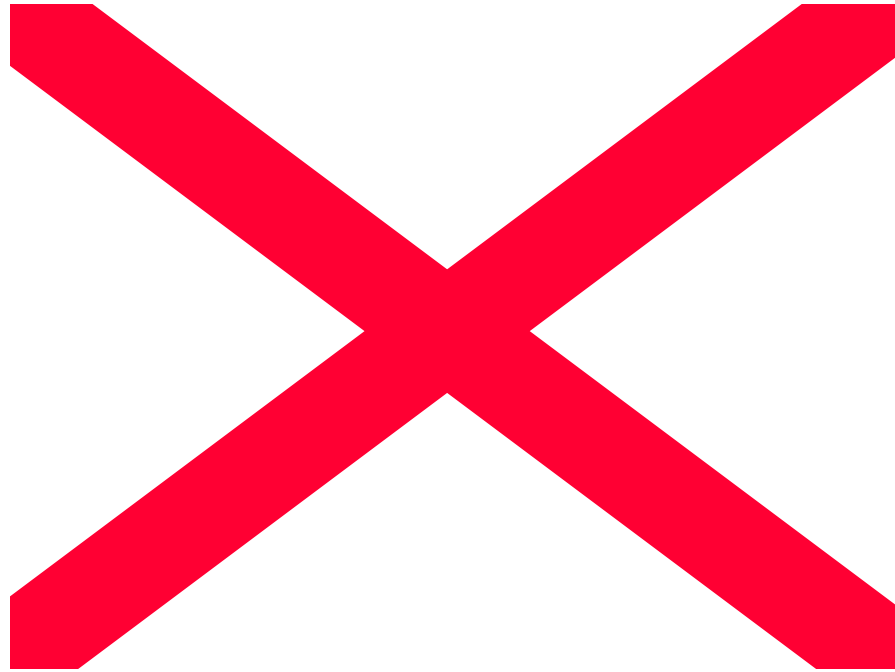


Municipal Waste Transfer area, Rushford





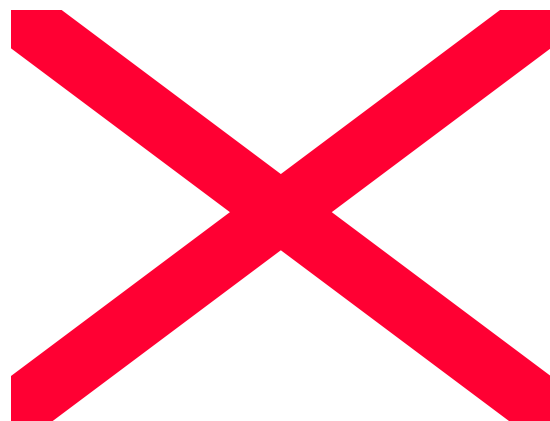
Municipal waste transfer site, Goodview/Minnesota City

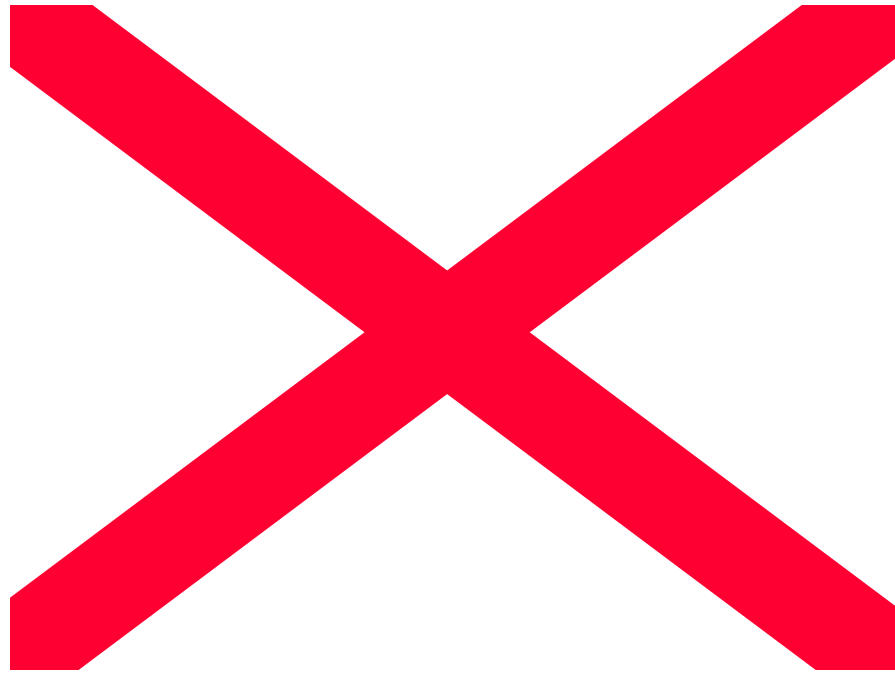


Appliance site, Rushford



Appliance site, Goodview





Inspecting Every Load !

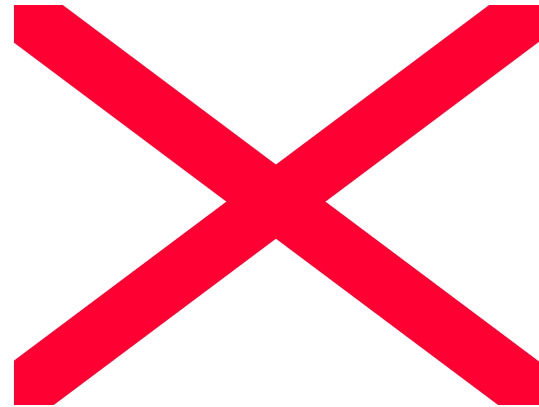
# Municipal Solid Waste

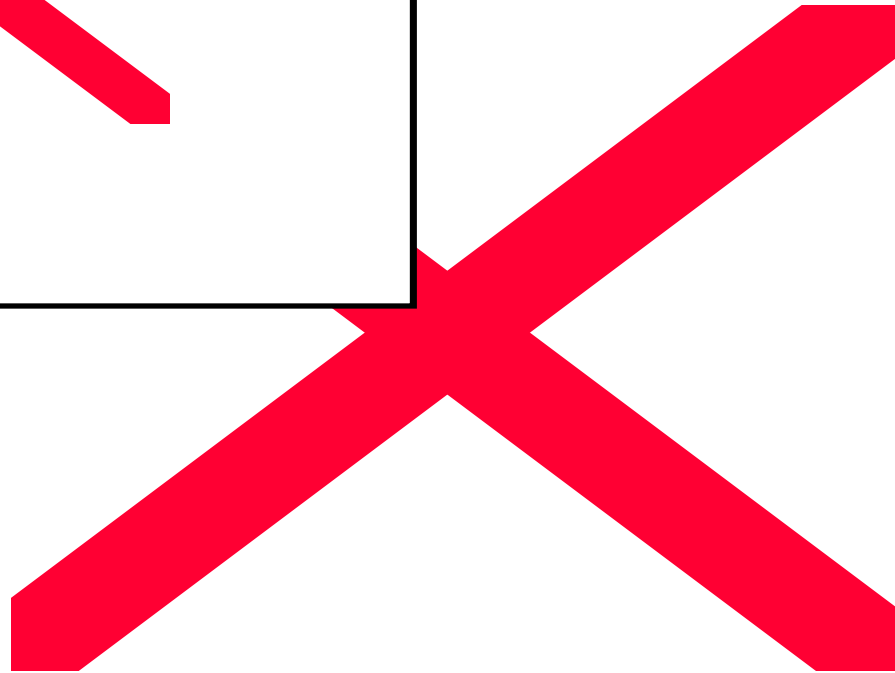
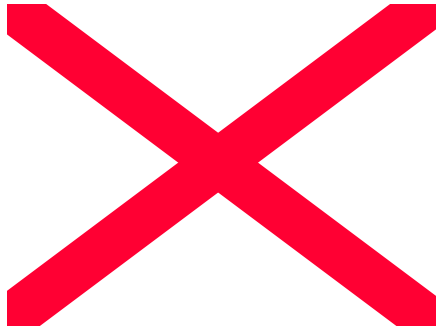


- Winona County Transfer Site
  - 50,000 Cubic Yards and Counting.
- Fillmore County/Rushford
  - 17,000 Cubic Yards, Waste Management,
  - 11,000+ CY, Harder.
- Dozens of other Communities w/Cleanup.

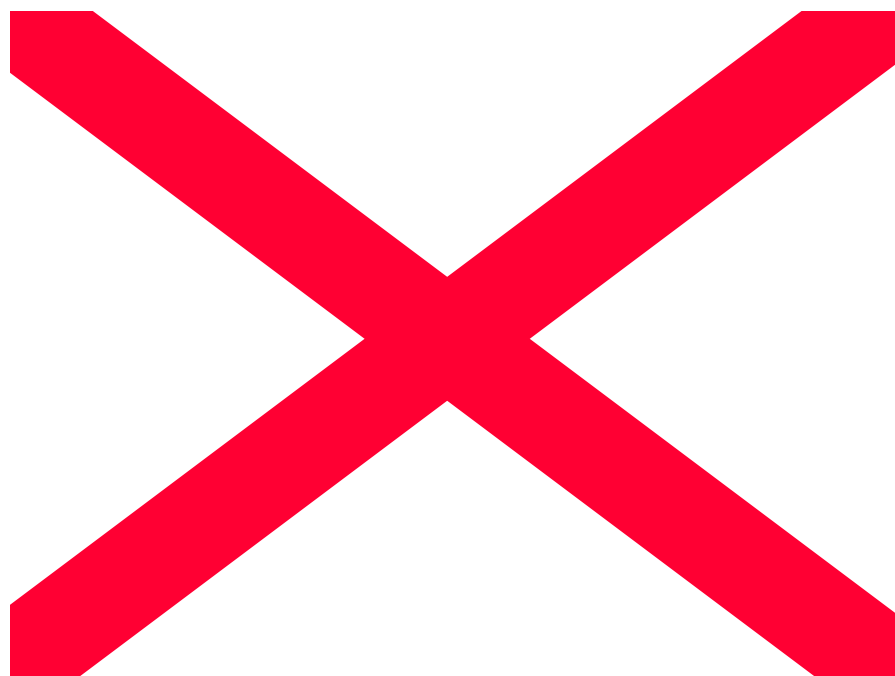
# Houston County Drop Sites

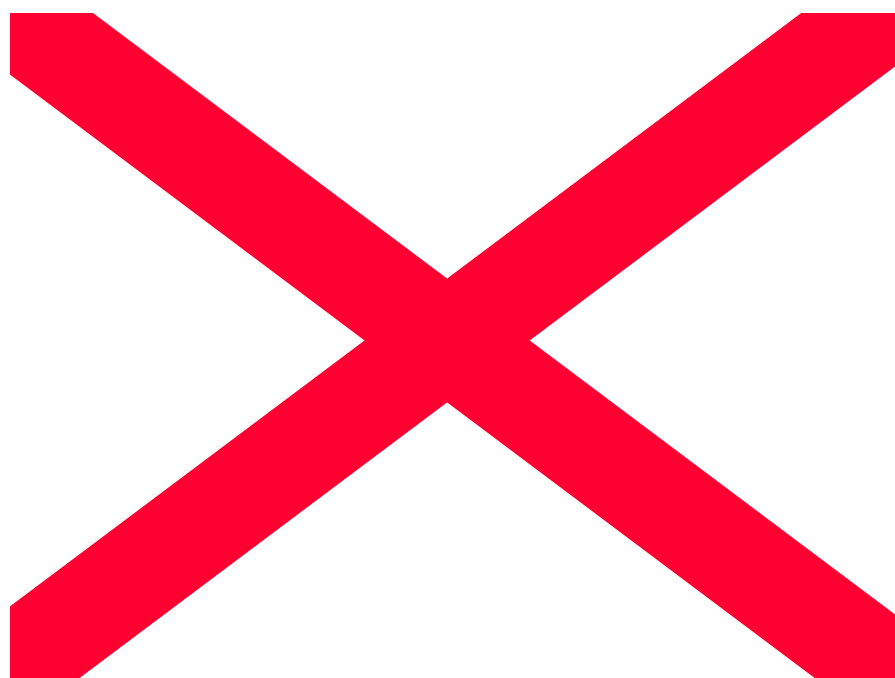
- 470 tons mixed municipal/Demo (sorted).
- Roughly 200 tons individual scattered drop boxes.
- 78.7 tons sorted scrap metal.





**Household Hazardous Waste**





# HHW County Disaster Assistance (volunteer staff & equipment)

- Ken Frederick, Blue Earth Co.
- Al Faulhaber, Dodge Co.
- Mark Gamm, Dodge Co.
- Terry Selthun, Dodge Co.
- Jon Martin, Fillmore Co.
- Colin Whitmer, Freeborn Co.
- Randy Tuchtenhagen, Freeborn Co.
- Karl Nilsen, Goodhue Co.
- Rick Frank, Houston Co.
- Brendon Flynn, La Crosse Co.
- Jeff Gloyd, La Crosse Co., WI
- Dean Loeffler, La Crosse Co.
- Darron Grahn, Lyon Co.
- Roger Schroeder, Lyon Co.
- Scott Martin, Olmsted Co.
- Brad Behrens, Rice Co.
- Paul Pieper, Rice Co.
- Greg Boe, Scott Co.
- Bill Phillips, Scott Co.
- Tom Mosher, Wabasha Co.
- Kim Nelson, Winona Co.



Stockton

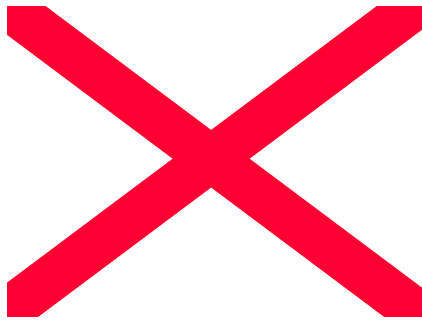
## Household Hazardous Waste Winona County Transfer Facility

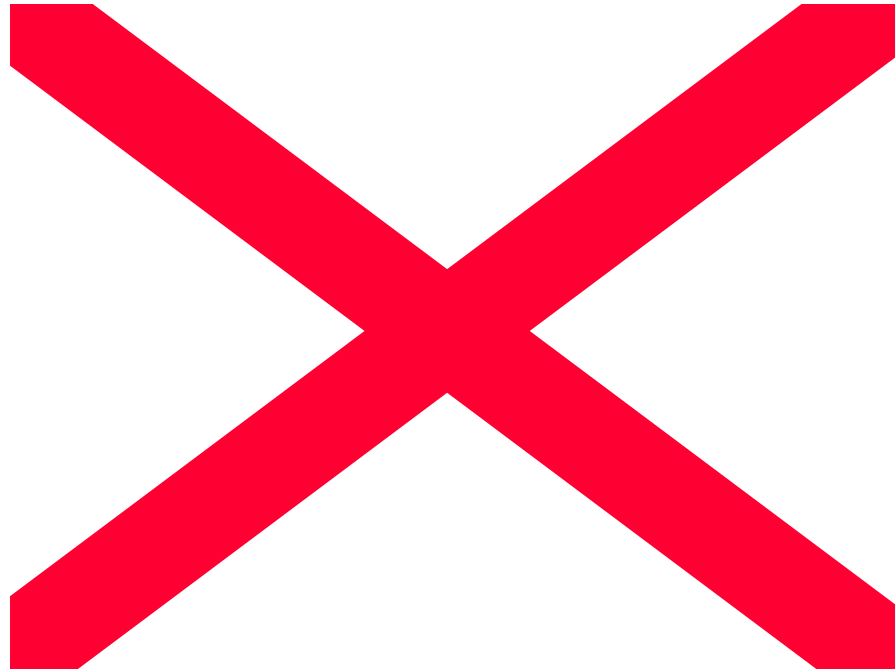
- Latex Paints 15,000 lbs.
- Oil Base Paints 7,700 lbs.
- Pesticides 1,114 lbs.
- Bases 632 lbs.
- Acids 437 lbs.
- Flammable Products 2,739 lbs.
- Solvents 2,000 lbs.
- Aerosols 1,188 lbs.
- Propane cylinders 103 (1# & 20#)
- Fire Extinguishers 36
- Dioxins 14 lbs.
- Absorbents & Debris (paint) 389 lbs.
- Absorbents and Debris (fuel oil),
- Automotive Batteries,
- Fluorescent Bulbs,
- Pharmacy/Pharmaceutical waste
- Other



# Houston County HHW

- 12.7 tons of HHW sent to La Crosse, WI.
- 46.2 tons of appliances from drop sites.
- 24.5 tons of electronic goods at drop sites.
  - (roughly 7 to 8 tons e-waste direct hauled).

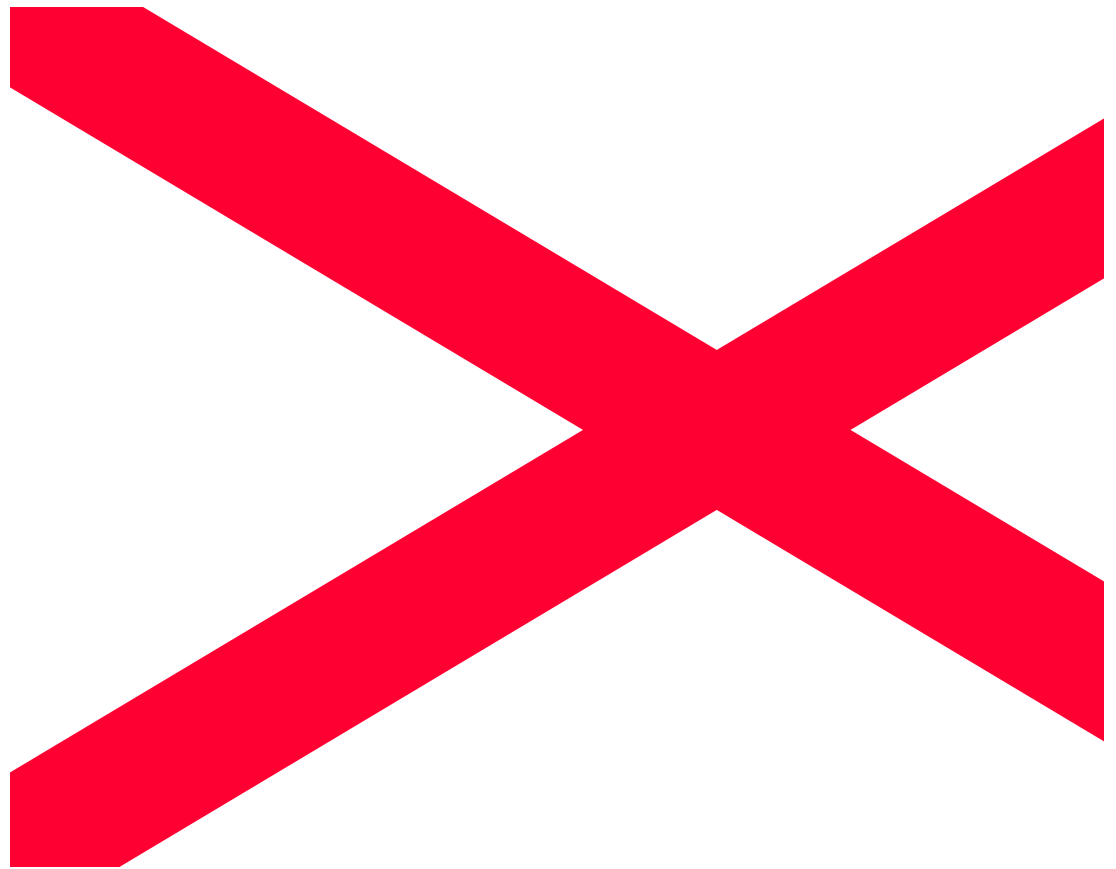




Stockton White Goods

# City of Goodview Wastewater Issues

## The Bypass, Lesser of two evils



## Dilemma:

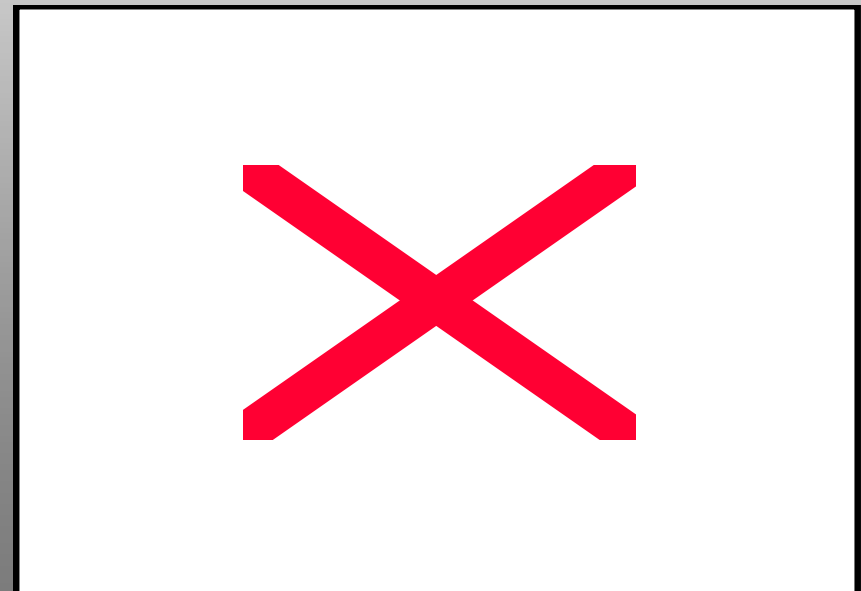
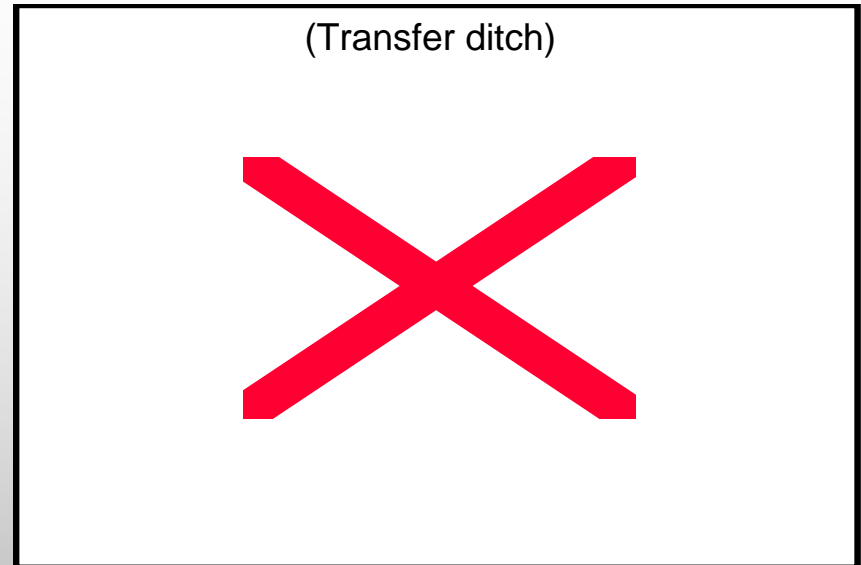
The City of Goodview waste water collection system is under water because Lake Goodview rose 15 feet and has no outlet.

## The Solution.

- Pump the sewage tainted lake flood water back into Lake Goodview to Prevent sewage backups into homes previously unaffected by the flooding...or
- Shut the pumps off because the discharging diluted wastewater is flowing through flooded apartments !

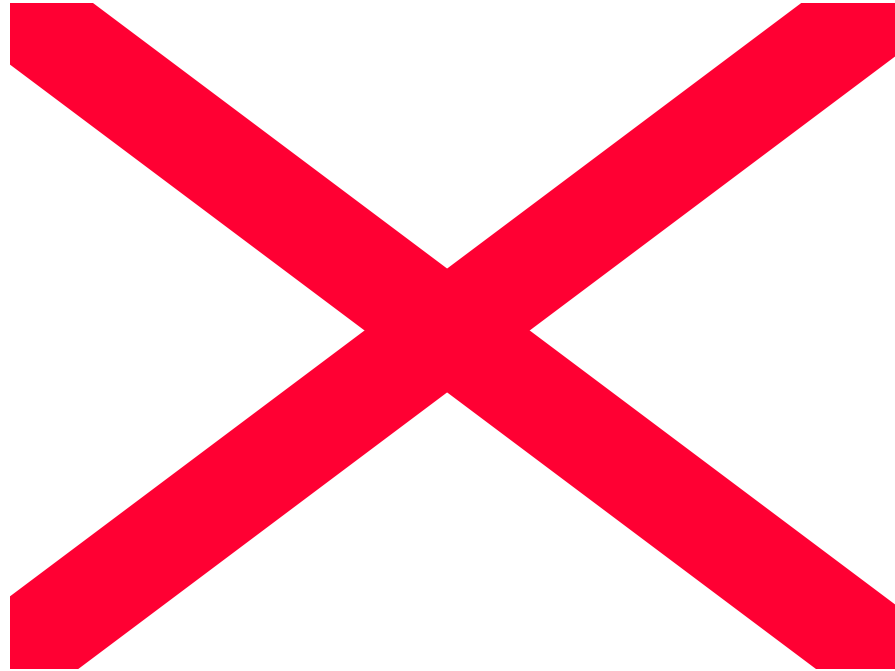
# 8/22/2007 Keep Working the Problem.

- Dig a trench from the lake to a nearby quarry to draw-down the lake and relieve the flooding.
- Pipe the bypass 1800 feet to a point where it can go to the City of Winona WWTF.
- Problem, this caused more sewage backups in Winona, so back to discharging to the lake.



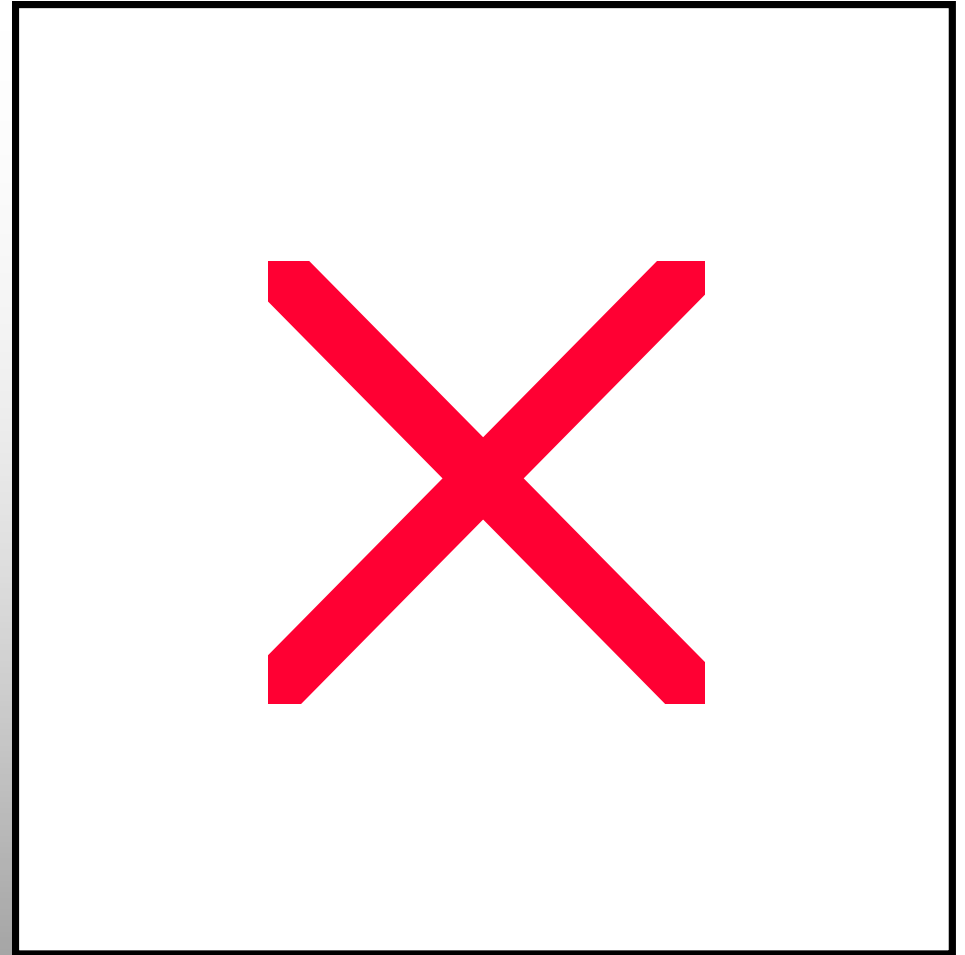
(Railroad culvert used to assist with the transfer of water from Lake Goodview to the quarry lakes)

Flood Mud Disposal, Best options ?



# Flood Mud Options.

- Dewatered mud could be used for controlled fill, or landfilled.  
(prevent exposure or unintended re-use)
- May not be placed as fill in floodplain.
- Mud Mixed with the debris can be disposed of with debris.
- Mud mixed with spilled material must have specific approval for treatment/disposal.



**FEMA Reimbursement:** All dewatered flood-mud in a town with a flooded WWTF will be sent to a municipal landfill ! (handled as municipal waste).

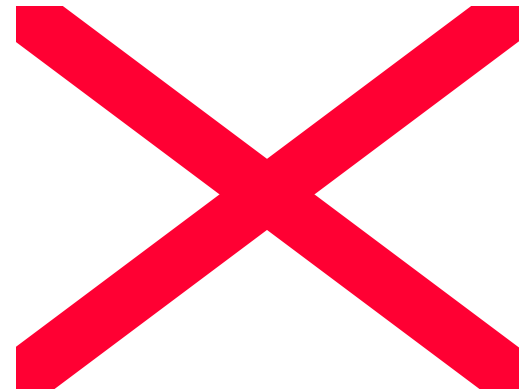
# Post-Flood Demolition, City of Rushford

(11,600 Cubic Yards of Demolition Debris Waste.)

- 46 Homes demolished in November, 2007.
- 33 Mobile Homes in cleanout process.

Estimate: (200 yds<sup>3</sup>/home)

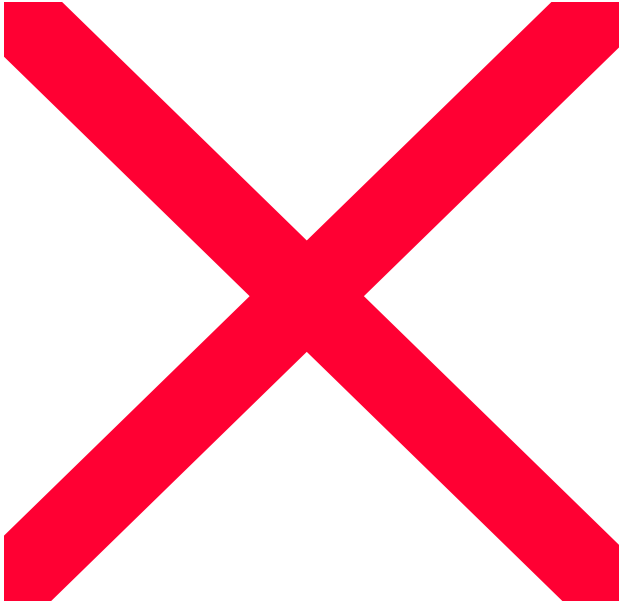
Estimate: (75 yds<sup>3</sup>/mobile home)



# **Emergency Management of Natural Disasters**

(lessons learned from the flood)

Don't Burn Yourself Out !



Affected persons and families should not be carrying the burden of managing the emergency.

Ask for assistance !

Ask through the Incident command system.

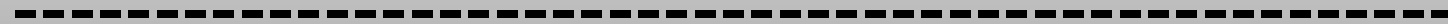


Communication is Critical: In a natural disaster, there are many state, federal and local people “on the ground”.

- Note: The State EOC may be represented by and “Area Command”.
- The State EOC is also where the Federal Programs will plug in.

# National Incident Management System (NIMS)

- The FEMA National Integration Center offers training courses, many on-line. (ICS100 through ICS 800).
- <http://www.fema.gov/emergency/nims/>



- NIMS-related courses also offered by the Emergency Management Institute:
  - Example: IS-100 ICS-100 An Introduction to ICS for Public Works Personnel.

# Minnesota Department of Agriculture

20 field staff, 10 laboratory staff,  
15 staff at MDA St. Paul office coordinating the response and inspections.

- Seed
- Dry Pesticide
- Liquid Small Package Pesticide
- Liquid Bulk Pesticide
- Dry Fertilizer
- Bulk Liquid Fertilizer
- Waste Pesticide
- Commercial Feed
- Medicated Feed
- Grain
- Nursery Stock
- Certified Organic growers
- Food – Processing
- Food – Grocery
- Food – Convenience Store
- Laboratory – Biological Analysis
- Laboratory – Chemical analysis
- Dairy Farm
- Dairy Processing
- Meat
- Domestic Livestock

# Minnesota Department of Health Department Operations Center (DOC)

Approximately 150 staff directly involved in response,  
25 staff in the field,  
(plus another 25 staff covering for staff working on the response)  
Plus an estimated 150 behavioral health volunteers in the field.

- Environmental Health (EH),
- Infectious Disease Epidemiology, Prevention, and Control (IDEPC),
- Public Health Laboratory (PHL),
- Office of Emergency Preparedness (OEP),
- Communications office, Finance and Facilities Management (FFM),
- Information Systems and Technology Management (IS&TM),
- Community and Family Health (CFH).

# Minnesota Department of Health

- DOC with coordinators at State EOC:
  - Coordination with National Guard, Voluntary organizations, Public Safety, HSEM, Dept. of Human Services, Local Health Departments, others.
- Environmental Health (EH):
  - well water testing & decontamination, public water supplies, food safety with volunteer organizations and restaurants, indoor air quality and mold.
- Infectious Disease Epidemiology, Prevention, and Control (IDEPC):
  - Health information and Tetanus and Hepatitis B/A vaccination clinics (over 3,000 doses to victims and responders/volunteers)
- Public Health Laboratory (PHL),
  - about 2,300 Well test kits developed
- Office of Emergency Preparedness (OEP),
  - Overall coordination of MDH response to floods/ public health emergency, behavioral health, evacuations of nursing homes, special populations, healthcare resource tracking, hotline, public information, etc.
- Communications office, Finance and Facilities Management (FFM),
- Information Systems and Technology Management (IS&TM),
- Community and Family Health (CFH).

# The Minnesota State Duty Officer 1-800-422-0798.

**(If there is an immediate threat to life or property, call 911 first.)**

- •Natural disasters (tornado, fire, flood etc)
- •Requests for National Guard
- •Hazardous materials incidents
- •Search and rescue assistance
- •AMBER Alerts
- •Requests for Civil Air Patrol
- •Radiological incidents
- •Aircraft accidents/incidents
- •Pipeline leaks or breaks
- •Substances released into the air

# Resources Available through the Duty Officer.

- Department of Agriculture
- Department of Public Safety
- Department of Commerce
- Bureau of Criminal Apprehension
- Department of Education
- Department of Health
- Homeland Security and Emergency Management
- Department of Human Services
- Minnesota Joint Analysis Center
- Department of Military Affairs
- Department of Natural Resources
- Minnesota State Patrol
- Department of Transportation
- Office of Pipeline Safety
- Minnesota Office of Enterprise Technology
- State Fire Marshal
- Minnesota Pollution Control Agency
- Minnesota Arson Hotline
- Local bomb squads
- Chemical assessment teams
- Emergency response teams
- Fire and rescue mutual aid
- Amateur radio (ARES/RACES)
- Minnesota voluntary organizations
- Fire chiefs assistance teams
- Search-and-rescue dogs
- Interagency Fire Center
- U.S. Air Force Search and Rescue Center