

Safety Around Irrigation Systems



Irrigation System Accidents

- There are different types of potential accidents that can cause injury or death when working on or around irrigation systems including:
 - Electrical Contacts/Accidents
 - Contacts/Entanglements with Moving Parts
 - Chemical Exposures/Poisonings
 - Falls from the System
 - Drowning
 - Physical (Head, Eye, Ear, Hand & Foot) Accidents

Irrigation Hazard

Electrical Contacts

- Electrical safety concerns related to irrigation systems are important because:
 - Pumps and other equipment operating in a wet or damp environment increases the chance of equipment failure if parts become wet.
 - Personnel working around this equipment are often wet or damp so their susceptibility to electric shock is greater.
 - Many of these systems may not have had proper maintenance performed on them over the years.

Irrigation Hazard

Electrical Contact Accidents

- Faulty Equipment & Wiring Installations & Maintenance.
- Unsafe Work Practices
 - Failure to turn off power before working on system.
- Overhead Power Lines
 - Irrigation Pipe, Standing on Systems, Spraying Water on Overhead Lines.
- Lightning

Electrical Safety Goal

- Don't let any part of your body be a path for electricity to flow through you.



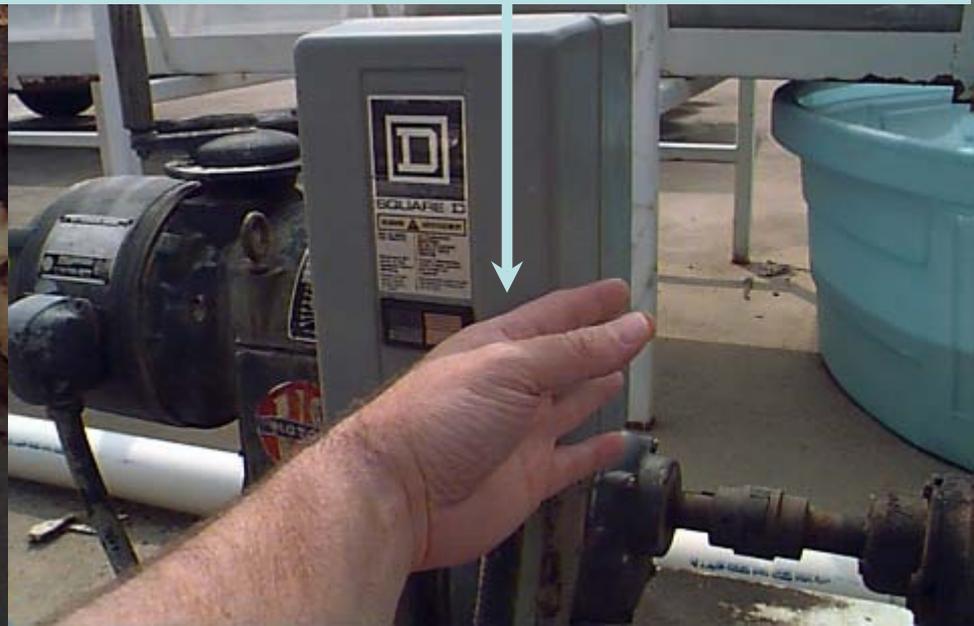
Back-Hand the System

- Make it a practice to always lightly brush the BACK of your hand against any irrigation system metal structure or enclosure before grasping with your palm.
- Grasping an energized metal component will cause your hand to clamp around it.

Don't test this way!



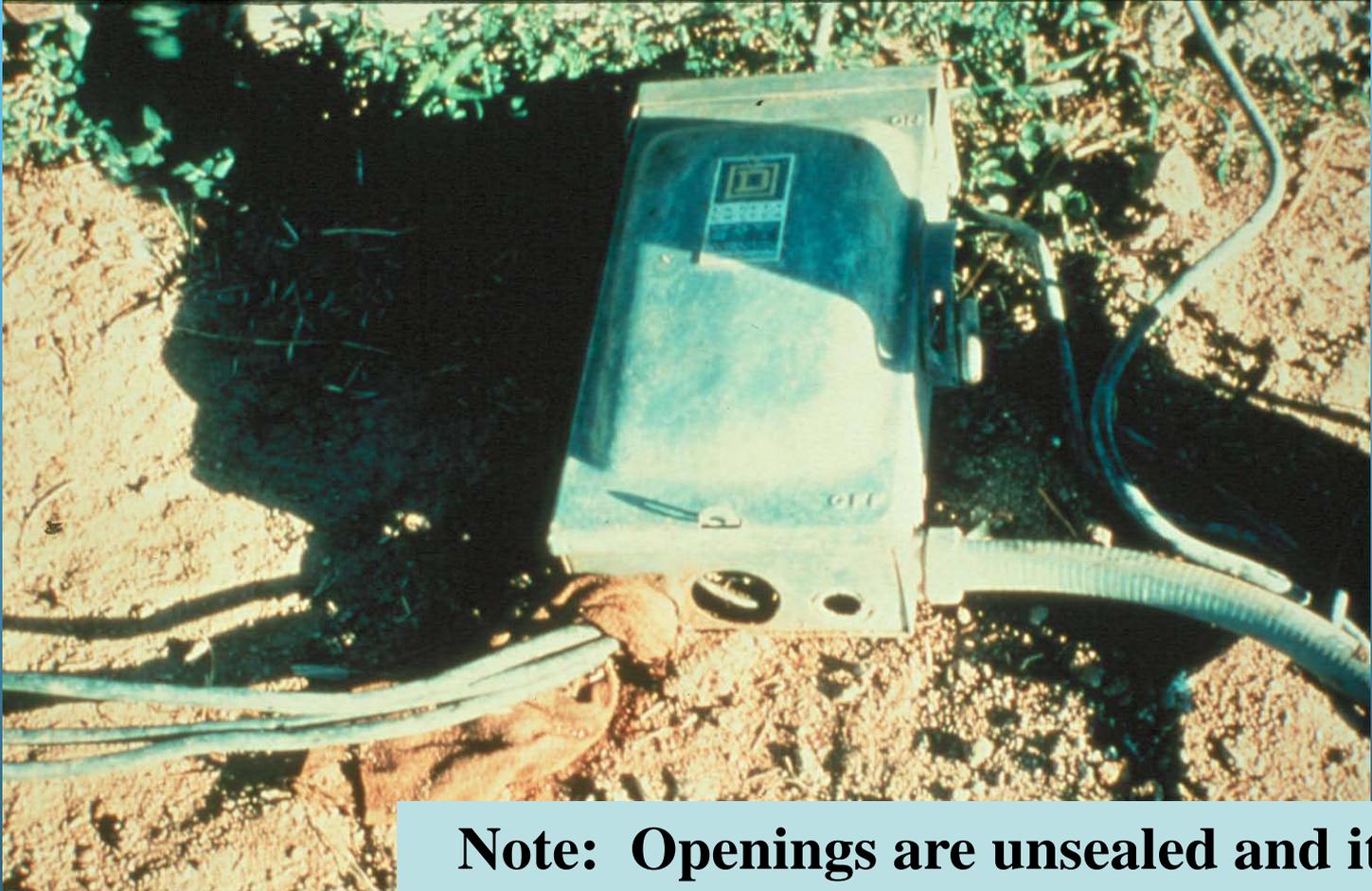
Do Test This Way.



Broken/Separated/Corroded Electrical Conduit



Electrical Enclosures



Note: Openings are unsealed and it is not installed at the required height or mounted to a permanent structure.

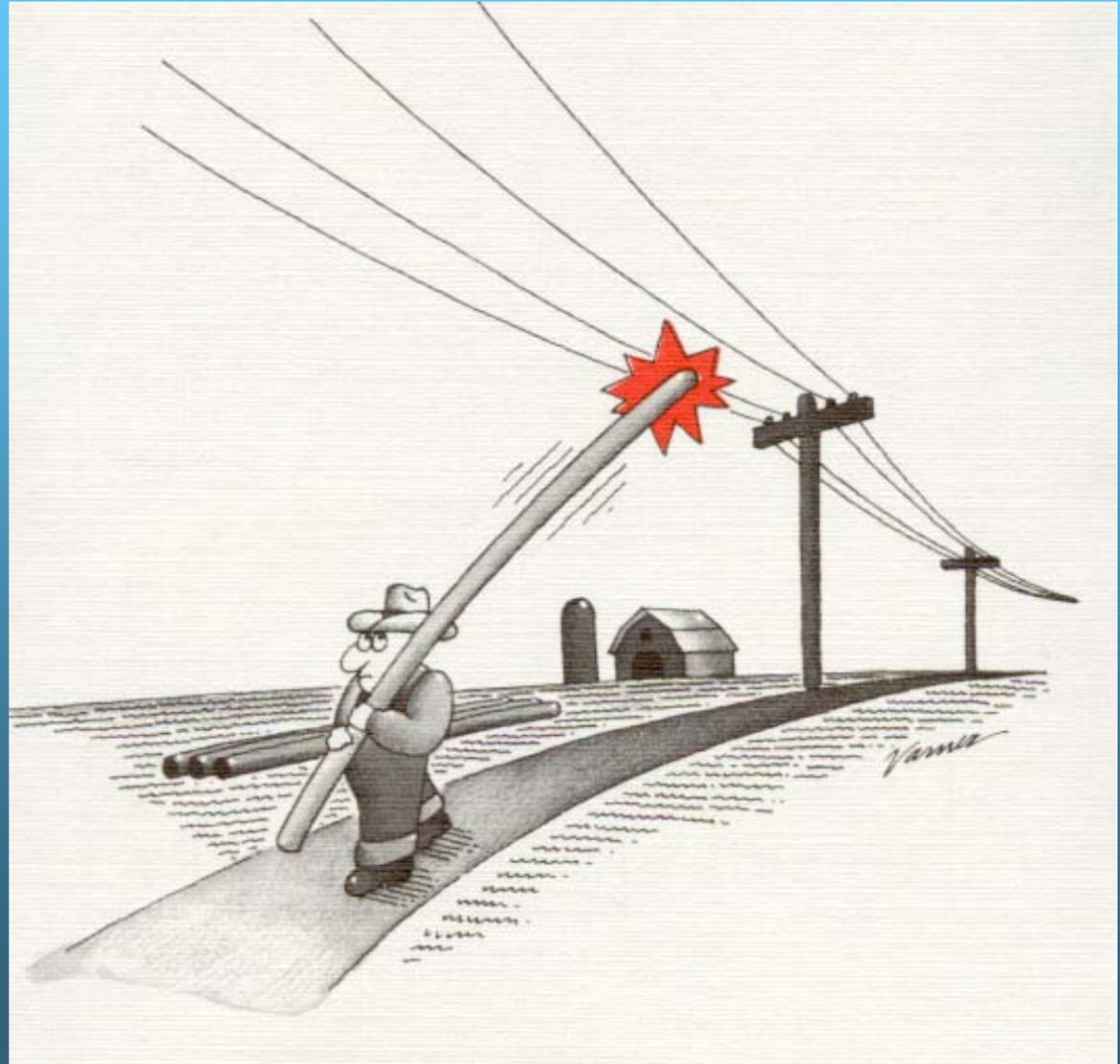
Equipment & Installation Problems



Irrigation Hazard

Overhead Power Lines

- Irrigation concerns with overhead power lines include:
 - Lifting aluminum irrigation pipe into overhead power lines.
 - Standing on irrigation systems while performing maintenance near overhead power lines.



Irrigation Hazard

Spraying Water on Power Lines

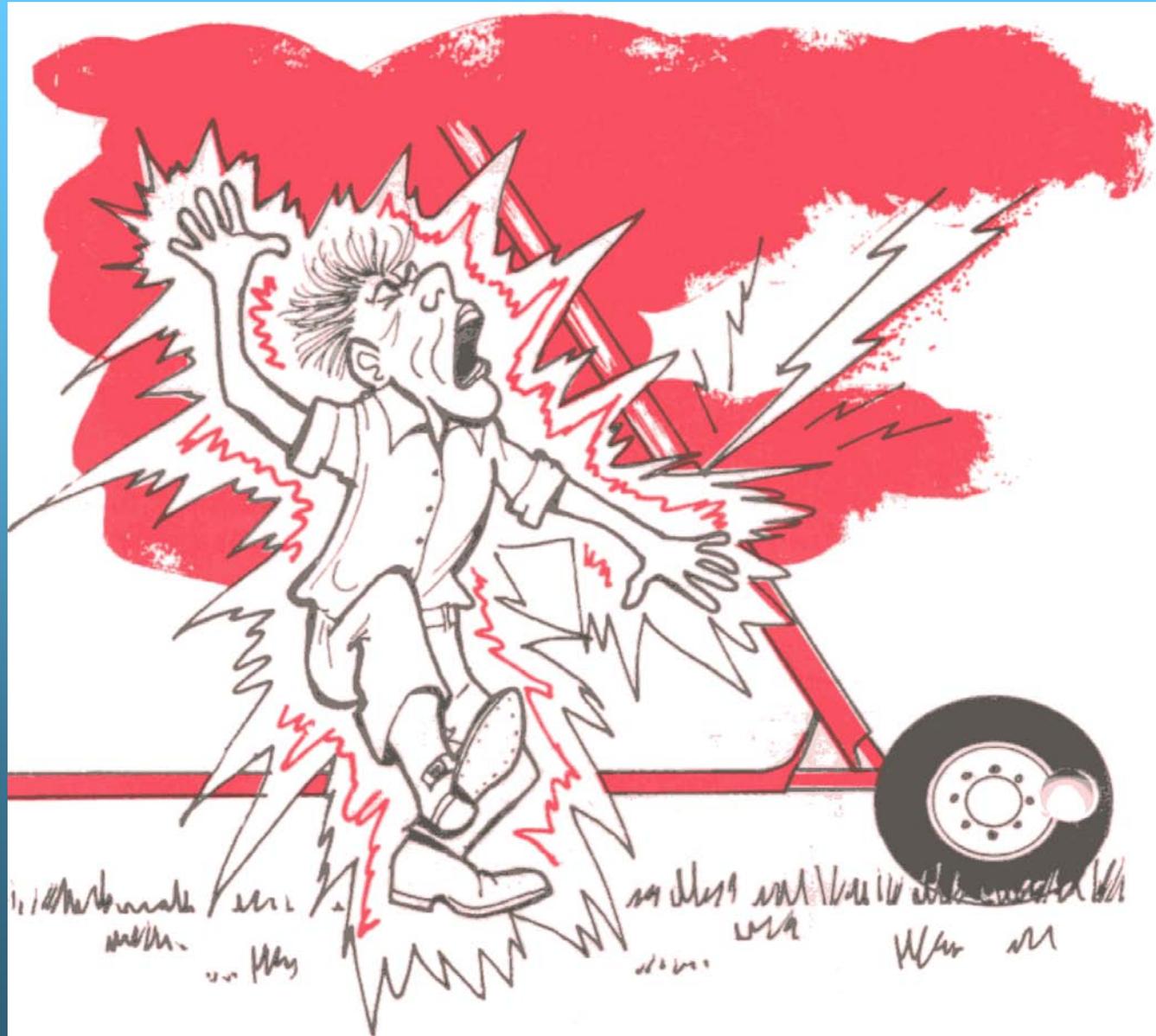
- Don't touch irrigation systems while they are spraying water on power lines.



End gun spraying power lines & transformers

Irrigation Hazard - Lightning

- Stay away from irrigation machines during storms. They make great lightning rods!



Electrical Disconnects

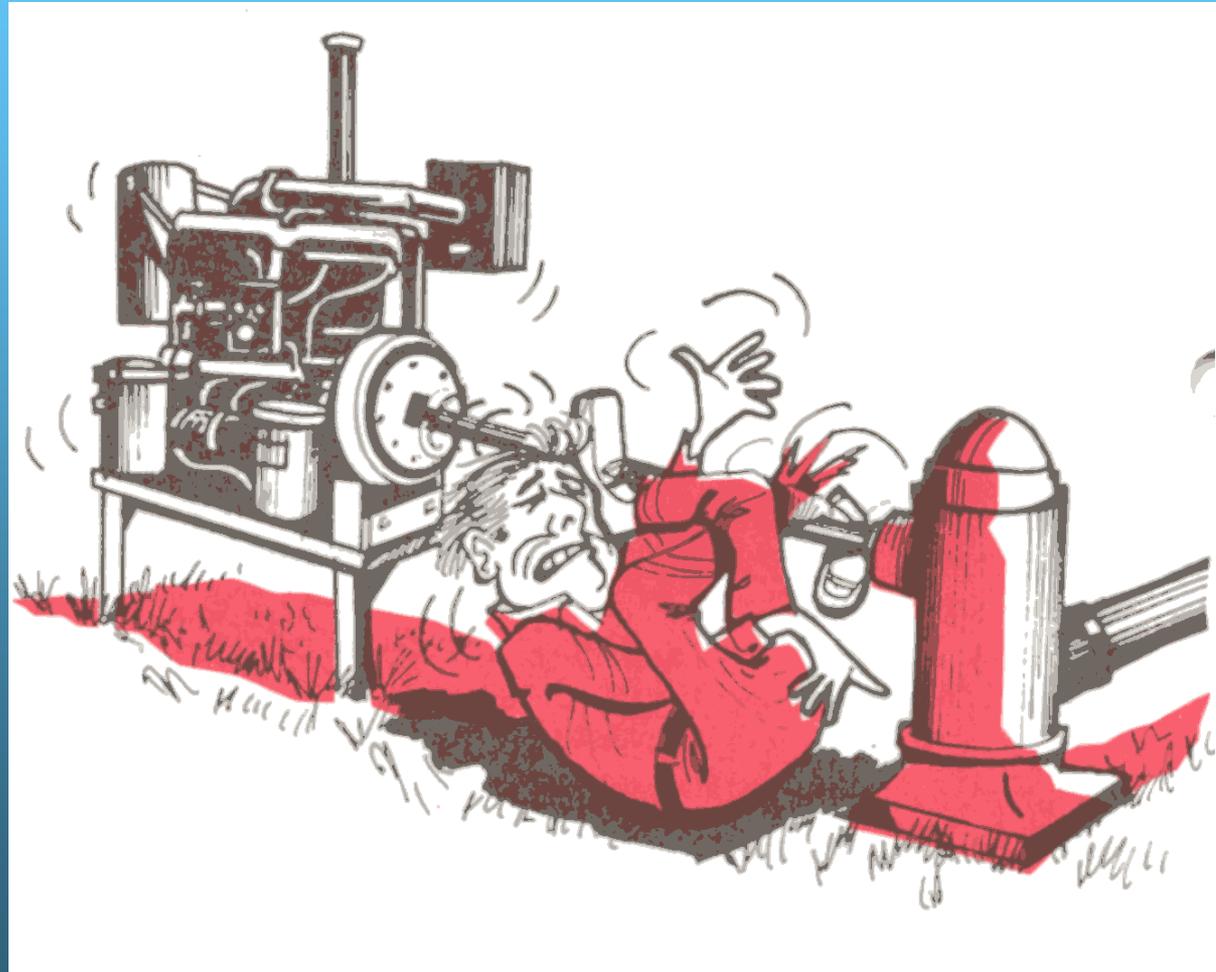


Irrigation Machine Disconnect



Irrigation Hazard - Entanglements

- Do not approach or work around unguarded power take-off shafts, belts and other power transmitting devices.
- Alert others in the vicinity and the owners or operators to the hazard.
- Avoid wearing loose clothing or long hair in the vicinity of rotating equipment.



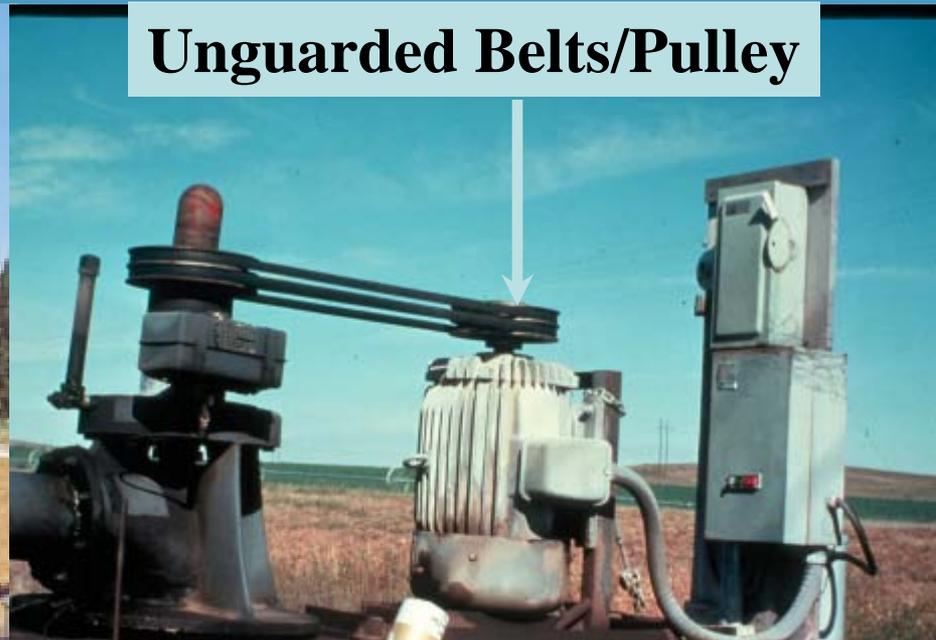
Irrigation Hazard - Entanglements

- Be alert to unguarded power take-off shafts, belts, and other power transmitting devices.
- Replacements and retro-fit guards are available from dealers for older machines.

Unguarded Drive Shaft



Unguarded Belts/Pulley



Irrigation Hazard - Entanglements



Irrigation Hazard - Run Overs

- Keep vehicles and other equipment out of the paths of self-propelled machines.
- Many of these machines have excellent traction and can “climb” over and crush fairly large objects like cars, pick-ups, and even small buildings due to their weight.



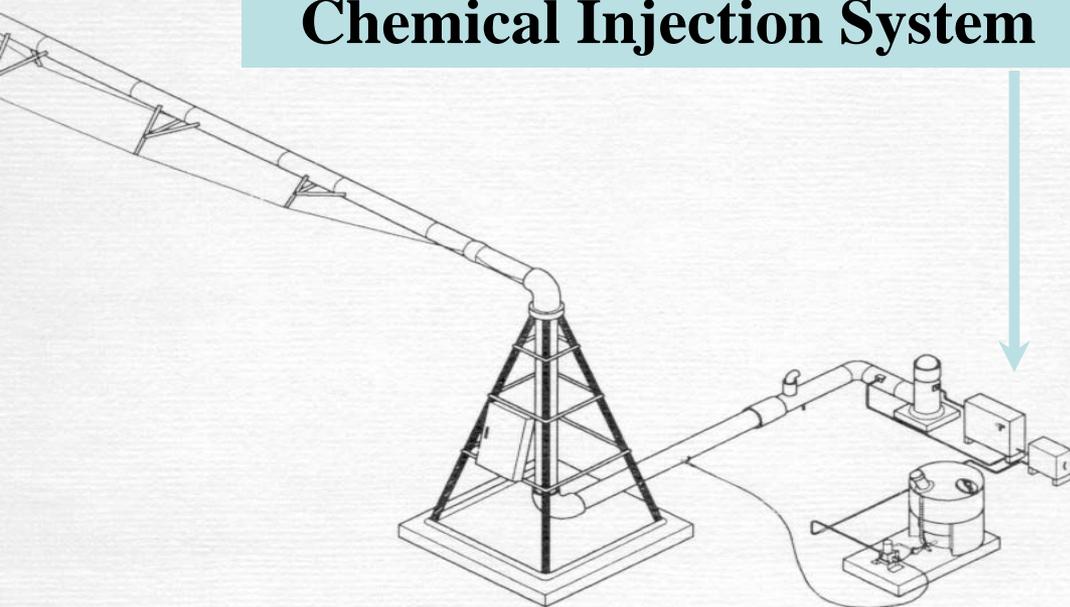
It's not funny when it's your vehicle

Irrigation Hazard

Chemical Exposure/Poisoning

- Increased use of chemigation/fertigation through irrigation systems has resulted in increased numbers of chemical exposures & poisonings.
- Chemical exposures can be through exposure to system water, standing water, crops, or drinking water from systems used for this purpose.

Chemical Injection System



Other Dangers

- Falls from Equipment
- Drowning – Irrigation Ponds
- High Pressure Water and/or Fuel
- Injuries to Head, Eyes, Hands, and Feet

Precautionary Measures

- Gloves
- Hardhat
- Ear Plugs
- Safety Glasses
- Proper Clothing
- Bio-Security (wastewater application)