



Pueblo Chemical Agent-Destruction Pilot Plant

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# Stormwater Pollution Prevention

The Pueblo Chemical Agent-Destruction Pilot Plant, or PCAPP, will safely and efficiently destroy a stockpile of 2,611 tons of mustard agent stored within projectiles and mortar rounds at the U.S. Army Pueblo Chemical Depot.

As stormwater flows over the plant, it may pick up pollutants like sediment, debris and chemicals (petroleum products, solvents, etc.), which can impact the environment. Therefore, control of stormwater runoff is a common practice on large projects, including PCAPP. The PCAPP team is actively addressing several potential sources of stormwater pollution through a variety of means. Some of these sources include:

- Sediment from disturbed soil areas
- Petroleum and coolant leaks or spills
- Industrial wastewaters
- Chemicals used in heating and cooling systems
- Rinsing fluids used to clean tanks and piping
- Slurries from sawing and grinding
- Paints, cleaning agents and thinners from construction
- Slurries from concrete truck washouts
- Hazardous/sanitary waste.

## Regulatory Requirements

Stormwater runoff is managed to the requirements of the [National Pollutant Discharge Elimination System](#) (NPDES), which is part of the Clean Water Act. The NPDES stormwater program requires operators of construction sites, one acre or larger, to obtain authorization to discharge stormwater under an NPDES construction stormwater permit. To address the potential pollution sources listed above and to ensure regulatory compliance, the PCAPP team developed a Stormwater Pollution Prevention Plan (SWPPP), which identifies potential sources of pollution and describes practices to be used to reduce and prevent pollutants in stormwater discharges.

The goal of the SWPPP is to protect surface and groundwater resources by reducing or eliminating potential sources of pollution from coming into contact with stormwater runoff. Elements of the plan:

- Identify and evaluate potential sources of stormwater pollution and their impact
- Manage sources of potential stormwater pollution through the use of interim and permanent industry best practices
- Outline procedures to ensure pollution prevention and control procedures are effective and current
- Provide pollution prevention training to employees
- Provide guidance for proper storage of materials along with spill prevention and spill response practices
- Management and maintenance of the stormwater Best Management Practices for protecting the stormwater system.

## Erosion and Sediment Control

The SWPPP provides an assortment of structural and non-structural Best Management Practices to minimize erosion, reduce sediment and provide materials handling and spill prevention practices. By diverting natural stormwater flows around the project area, detaining stormwater runoff from site activities and managing construction materials used at the site, contamination is reduced or prevented.

Examples of non-structural and structural best practices used at PCAPP include:

### Non-structural

- Active plant-wide housekeeping
- Minimize on-site vehicle usage
- Implement general pollution control measures
- Manage material waste
- Active spill prevention and cleanup procedures
- Managed daily and weekly storm system inspections
- Concrete washouts/manage concrete waste

### Structural

- Check dams, berms and swales
- Silt fences, erosion logs and straw bale barriers
- Detention basin (4.5 million gallon water capacity)
- Slope stabilization
- Site-wide final stabilization through seeding and re-establishment of vegetative cover



*The PCAPP Stormwater Sedimentation Pond captures run-off from heavy rains that occasionally occur in the area.*

## Stormwater Detention Basin

Runoff will likely increase now that construction activities have concluded. One of the structural best practices that has already been implemented is a stormwater detention basin that has been constructed within the PCAPP boundaries. It is designed to reduce high levels of runoff from rain or snow storms and capture pollutants in the stormwater. A secondary function is to prevent downstream contamination in the event of petroleum or materials spill. During most rainstorms, the basin will not completely fill up. However, an emergency spillway is designed to safely release flows from a 100-year rainfall event. The basin is operated with the outlet valve normally closed as a means of preventing unexpected discharges from leaving the site.

For more information on NPDES and environmental regulations regarding stormwater visit the U.S. Environmental Protection Agency website at <http://cfpub.epa.gov/npdes/>. You can also visit the Colorado Department of Public Health and Environment website at <http://www.colorado.gov/cs/Satellite/CDPHE-HM/CBON/1251616699104>.