



**U.S. Army**

*Protection of Water Quality on  
U.S. Installations in Europe*

presented by

**U.S. Army Corps of Engineers,  
Europe District**

*A Presentation to  
Southeastern European Defense Ministerial  
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# Agenda

- ***Europe District's Mission***
- ***Support of Training***
  - *Erosion Damage Assessments*
  - *Erosion Control Measures*
  - *Pollution Prevention Facilities*
  - *Pollution Prevention Operations*
  - *Water Quality Monitoring*
- ***Summary***

## *Europe District's Mission*

- Technical & Contract Management Services to U.S. Army Europe
- Support U.S. Forces military contingencies, training & peacekeeping operations
- Revitalize military bases to provide quality living and working conditions for U.S. soldiers/airmen and their families.
- Promote peace and prosperity by assisting other countries with our technical expertise.



## Europe District's Major Customers



- U.S. European Command
- U.S. Army, Europe
- U.S. Air Force, Europe
- European Regional Medical Command

- Department of Defense Schools
- Defense Commissary Agency
- Community and Family Support Center
- Office of the Secretary of Defense
- Defense Logistics Agency



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# Components of Successful Training

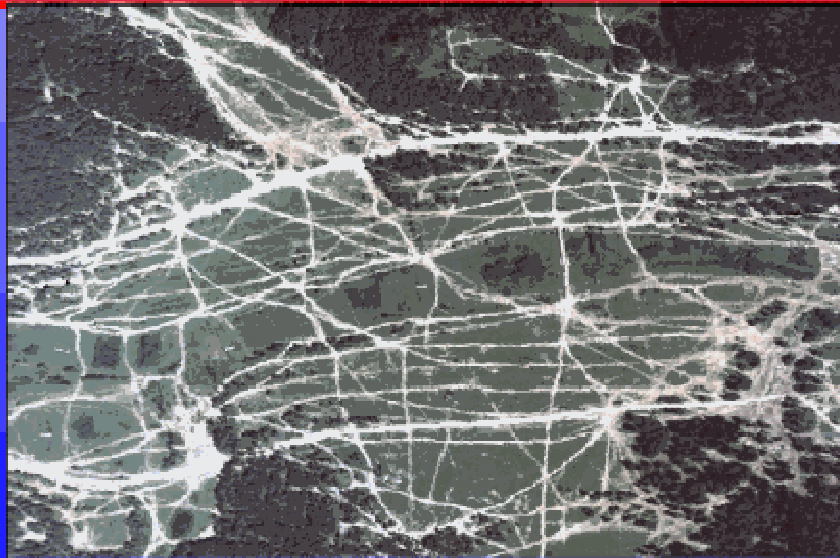


# Assessment of Training Damages

- Intensive military maneuver training has severe impacts on the landscape
- Soil erosion poses a major concern



# *Assessment of Training Damages*

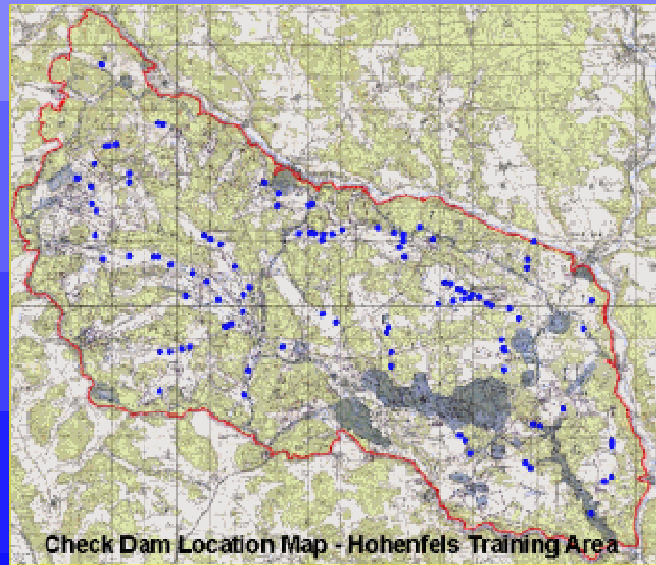


Airborne Multi-spectral Scanner Survey

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# Erosion Control Measures

- Bavaria, Germany
- NATO Training installation
- 40,000 acres
- Karst topography
- High biological diversity
- Shallow, erosive soils
- Training exercises occur  
*50 weeks per year*



Check Dam Location Map - Hohenfels Training Area





## Erosion Control Measures

- **Torrent Structures and Check Dams**



Torrent Structure at Hohenfels Training Area



Check Dam at Hohenfels Training Area

## Erosion Control Measures



Check Dam at Grafenwoehr Training Area

# Pollution Prevention Facilities



Refueling pad at Hohenfels Training Area

- Fuel Facilities with containment and POL separators



Fuel transfer terminal with spill apron

# Pollution Prevention Facilities



Vehicle wash rack at Hohenfels Training Area

## Pollution Prevention Facilities



Cleaning vehicles at environmentally equipped wash rack

# Pollution Prevention Facilities

- **Storage Facilities with secondary containment**



Fuel Storage on Hardstand with POL Separator



Hazardous Waste Storage Shed

## Pollution Prevention in Operations

**Soldiers are trained to:**

- Properly dispose of waste POL



- Clean up spills immediately

# Pollution Prevention in Operations

**Convoy Spill Kit to deal with accidental spills while in transit**



**Temporary hazardous waste storage with secondary containment**



## Monitoring Water Quality



Grafenwoehr Meteorological Station

- Water Quality
- Vegetative Cover

- Precipitation
- Stream flows
- Soil moisture



Wetland Habitat at Wuerzburg Training Area



# Summary

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# **U.S. Army Corps of Engineers**

## *International Activities*

### *Questions and Discussion*

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