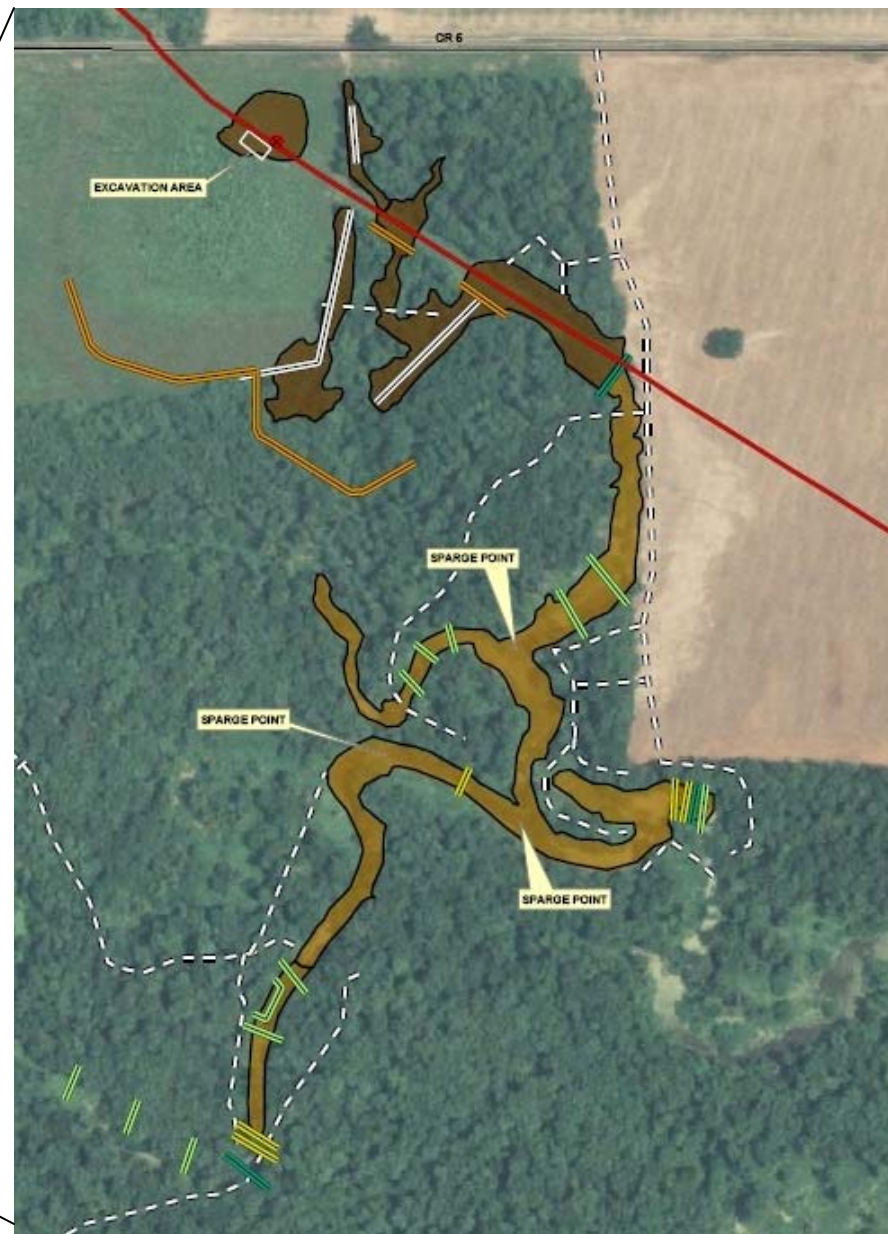


US EPA ARCHIVE DOCUMENT

# Marathon Mt. Erie Pipe Line Release

## Case Study



# Marathon Mt. Erie Pipeline Release

On August 10, 2008 sometime before 0730, an oil pipeline failure occurred releasing approximately 5,790 barrels (or 243,180 gallons) of Mississippi Sweet Crude Oil

The release occurred in a rural area 6 miles east of Fairfield, IL in Wayne County

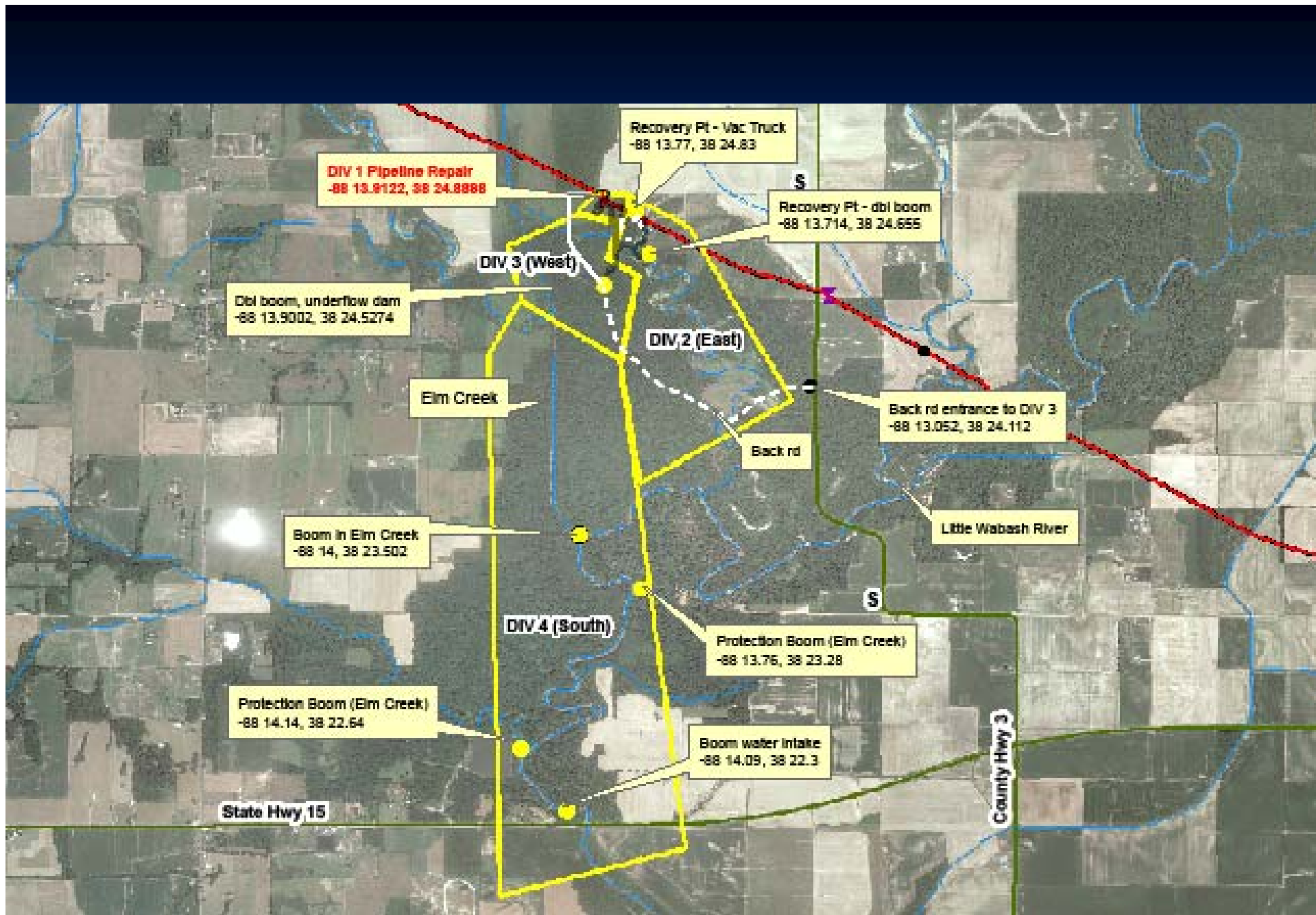








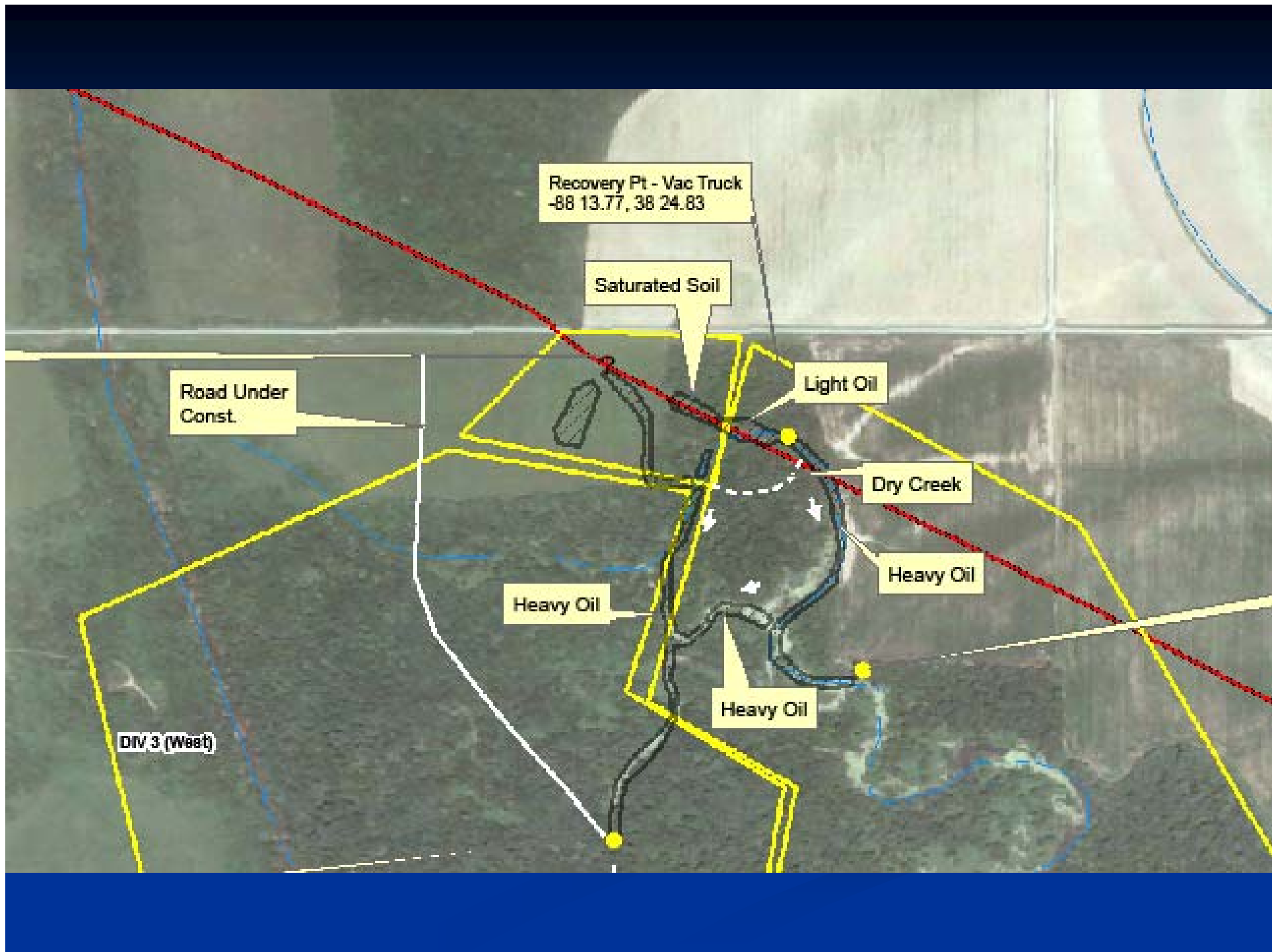




















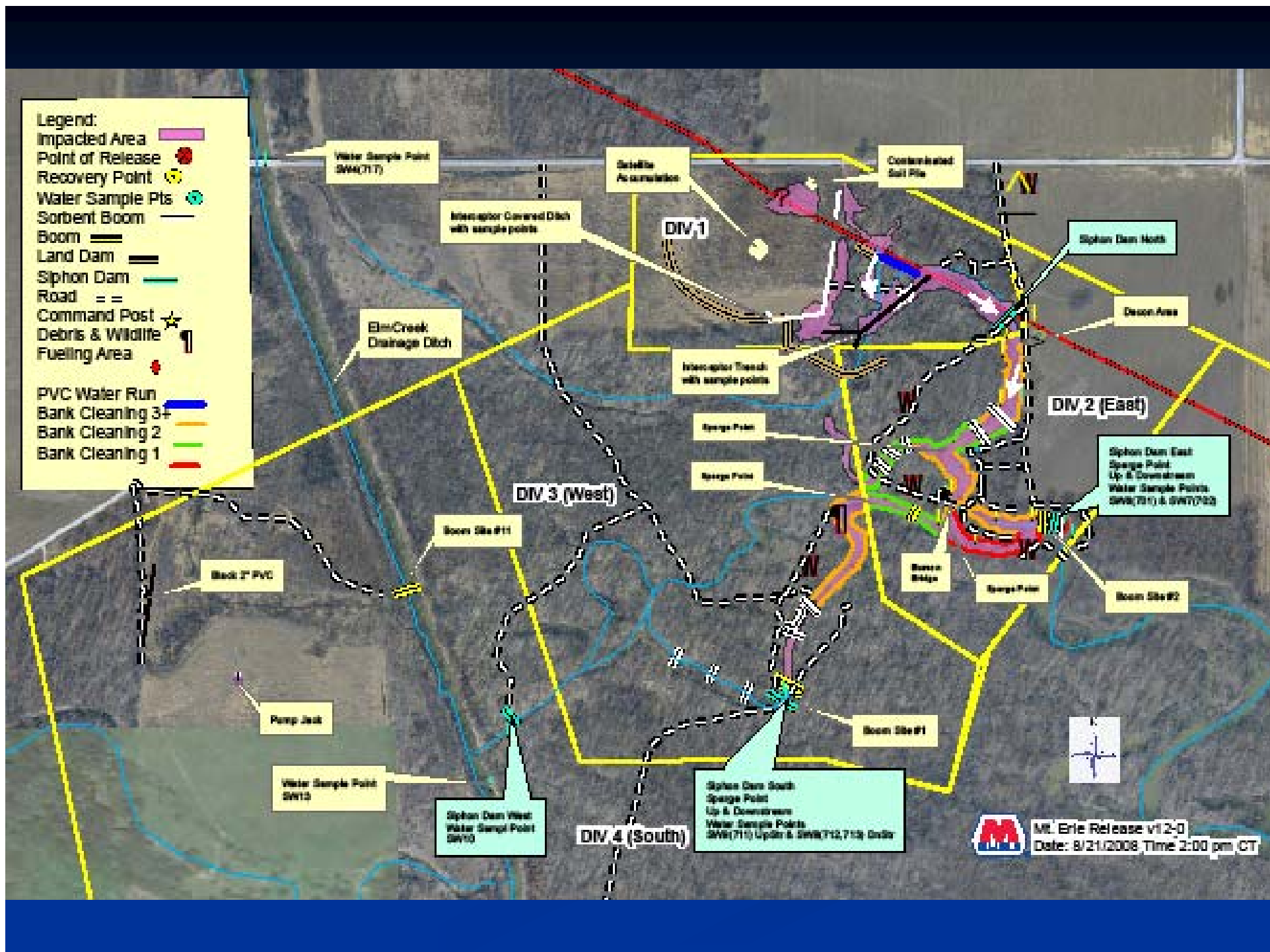




















# Marathon Mt. Erie Pipeline Release

- 5790 bbls (243,180 gallons) released
- 12 day emergency response phase
- 300+ responders
- 3 miles of access roads constructed
- 5000 linear feet of creek affected
- 2213 bbls (92,946 gallons) recovered during the ER phase



# National Contingency Plan

40 CFR 300.135(j)(2)

On-Scene Coordinator notifies Trustees

40 CFR 300.615

Responsibilities of the Trustees

---

Endangered species consultation

Minimize resource impacts

Bird Salvage

# Endangered Species Consultation

- ❑ Are listed endangered species present?
- ❑ What are their habitat needs?
- ❑ Avoid harm or “take” of listed species.
- ❑ Endangered Species Act - Section 7.



## *e.g.* Indiana Bats

Winter – hibernates in caves

Summer range – maternity roots in trees

Midwest nearly state wide species

In cavities and under bark

Avoid cutting down occupied trees

Dead snags - issues with “snow makers”



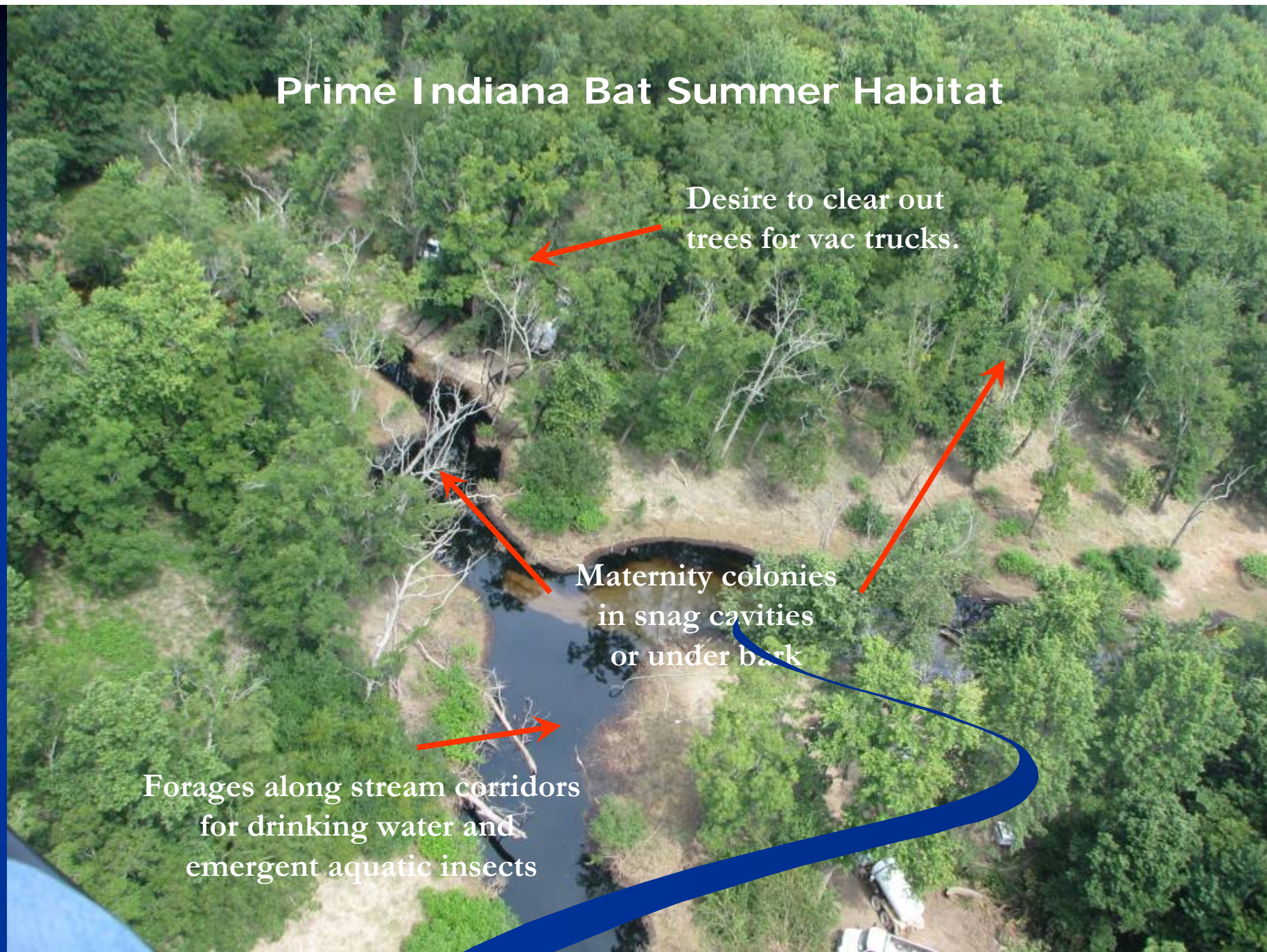


## Prime Indiana Bat Summer Habitat

Desire to clear out  
trees for vac trucks.

Maternity colonies  
in snag cavities  
or under bark

Forages along stream corridors  
for drinking water and  
emergent aquatic insects





# Minimized Resource Impacts

- ❑ Constructed roads & bridges to provide heavy equipment access. Developed parking areas and roads minimized impacts.
- ❑ Selected routes through habitat that caused least amount of adverse impact.
- ❑ Avoided sensitive areas and sensitive species.
- ❑ Selected construction materials that aided in the repair and rehabilitation of habitat.
- ❑ Inventoried impacts (acres affected, soil and vegetation type and quantity removed).





Truck staging area

Road fabric  
and gravel

Neat stacking to avoid  
physical hazards



# Bird Salvage

- ❑ Recovered dead animals to prevent secondary poisoning.
- ❑ Documented date, collector, condition, specimen, and location. Photographed carcasses.
- ❑ Bagged, tagged, inventoried and stored in freezer.
- ❑ Precautions to consider:



Permits (USFWS Law Enforcement; use of  
Letter of Authorization - LOA)

Diseases (fluids and inhalation)

# Site Characterization



## Media and Potential Exposure Pathways:

- Surface Water
- Surface Soils
- Subsurface Soils
- Groundwater
- Sediments





# Surface Water Sampling --- Phased Approach

- 12 locations, daily sampling --- August 2008
  - VOCs, SVOCs, Metals, TSS, BOD, COD, and TPHs
- 6 locations, weekly --- Sept. to Dec. 2008
  - VOCs and TPH GRO / DRO
- 4 locations, bi-weekly --- Jan. 2009 through present
  - BTEX, Naphthalene, TPH DRO, 2-methylnaphthalene

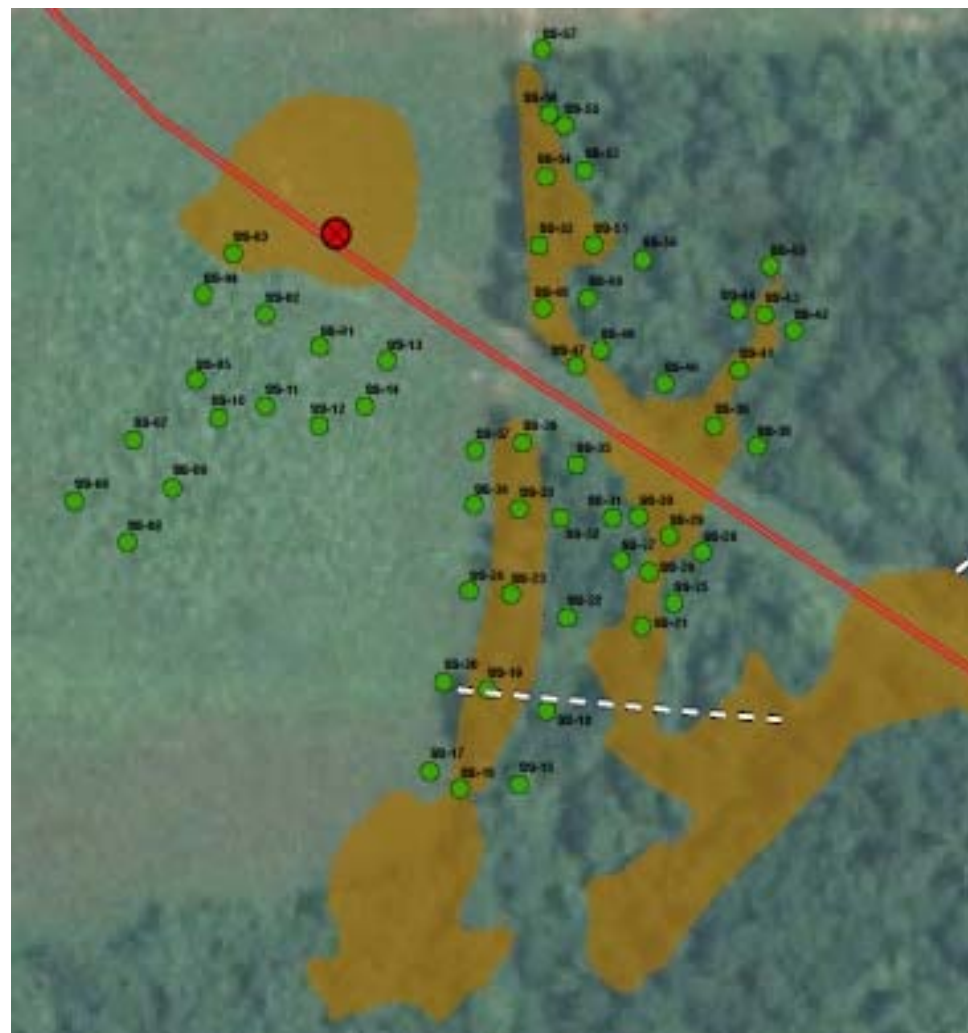




# Surface Soil Sampling

*Approach* --- Areas where oil was released, with minimal absorbent exposure time

- 57 locations sampled
- BTEX, PAHs, TPH DRO / GRO / ERO
- 11 BTEX and 18 TPH exceedances

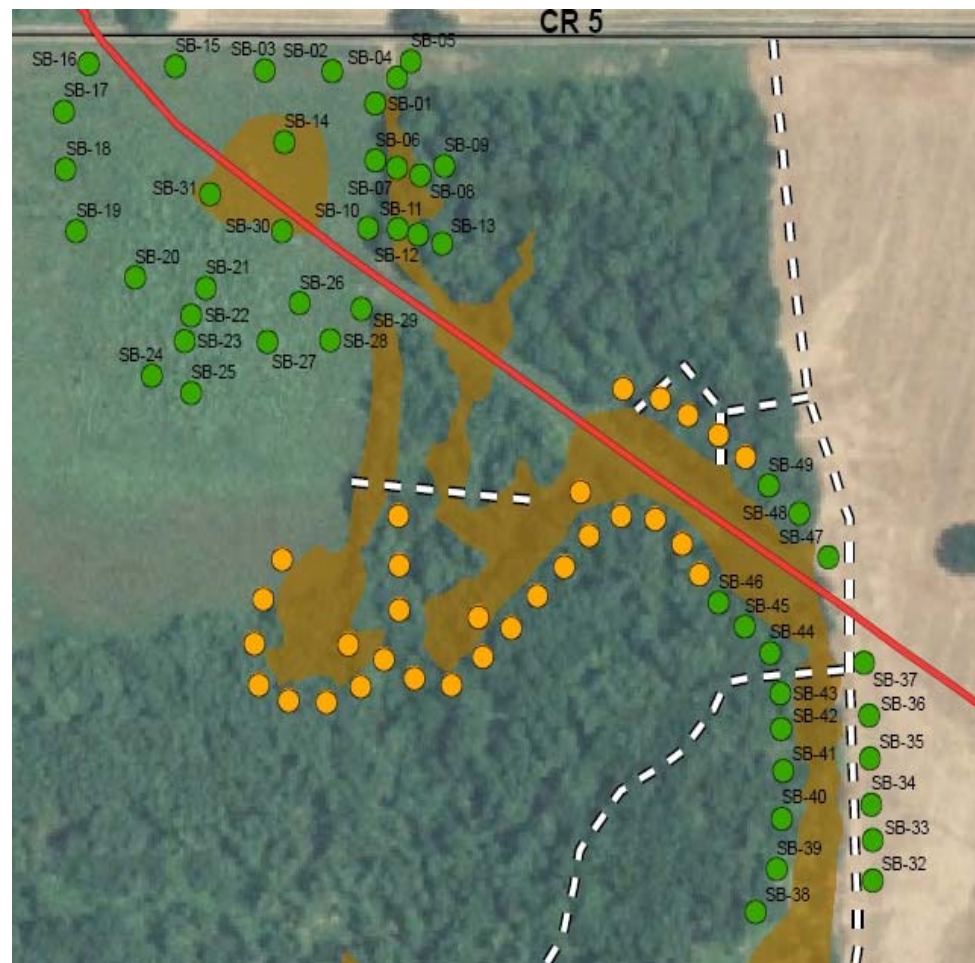




# Subsurface Soil Sampling

*Approach* --- Perimeter delineation with “step-out” methodology; define “pooled” areas.

- 49 locations sampled
- Minimum 2 samples per boring
- BTEX, PAHs, TPH DRO / GRO / ERO
- 18 BTEX and 5 TPH exceedances
- No PAH exceedances
- Test pits to be completed
- 30 soil borings to be completed (has been hindered by flooding)





# Groundwater Sampling

*Approach* --- Residential wells in area; 5 grab samples for preliminary screening

- [Six residential properties sampled](#)
- BTEX, MTBE, Naphthalene, trimethylbenzene, PAHs, Metals
- No detections greater than Federal MCLs
- Five grab samples from soil borings
- BTEX, PAHs, TPH DRO / GRO / ERO
- Benzene exceedance
- Permanent monitoring wells to be installed

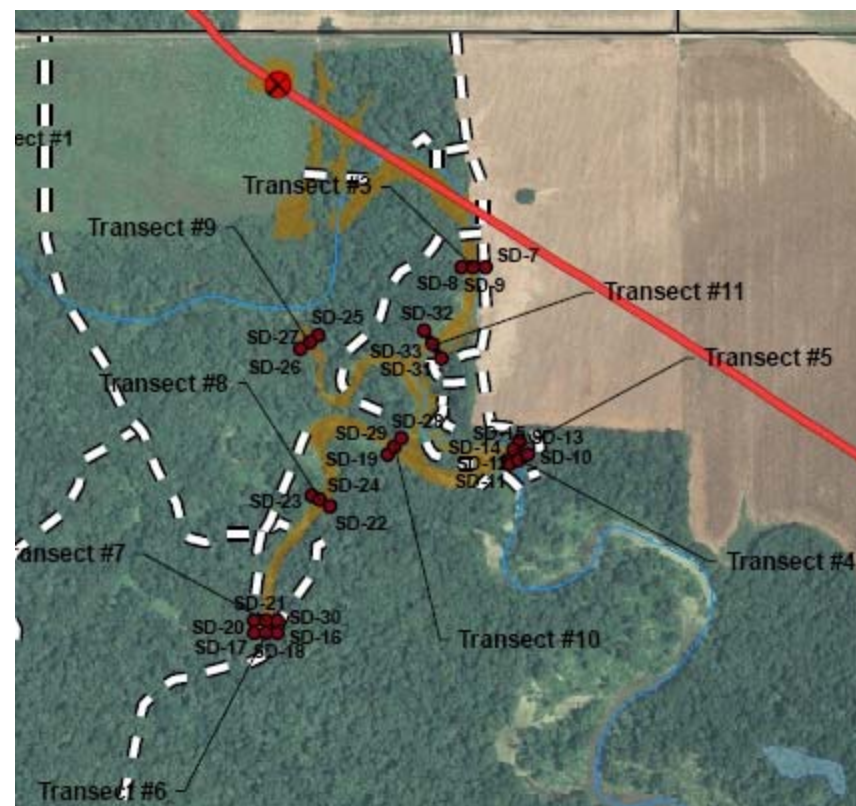




# Sediment Sampling

*Approach* --- 14 “transects” sampled; off-site reference sample locations also sampled

- 9 transect locations “on-site”
- 5 reference “off-site” locations
- 3 samples collected per transect
- BTEX, PAHs, TPH DRO / GRO / ERO
- One exceedance --- 2-methylnaphthalene
- Additional sampling to include benthic macro invertebrate sampling coupled with chemical data ---- used for NRDA assessment





# NRDA Regulations

15 CFR 990 for OPA

## Step 1: Pre-Assessment

- Determination of the likelihood for a successful damage claim - has an injury occurred, can it be tied to the incident, is there a responsible party, and will the cost of doing the assessment be less than the likely damages? If all yes > proceed...

## Step 2: Assessment

- Confirm exposure of trust resources to discharged oil.
- Assess the amount of loss of trust resources and services by first, a) determining whether injury has occurred as a result of the discharge or release, then b) quantifying the amount of resource or services injured relative to the baseline condition, and c) for what duration of time (recovery period).
- Determine appropriate restoration actions.



## Step 3: Restoration

- Draft Damage Assessment and Restoration Plan report
  - Summary of incident
  - Summary of injuries
  - Restoration strategy
  - Preferred restoration actions
- Do NEPA, seek public comment, and finalize the restoration plan.
- Implement the restoration plan.

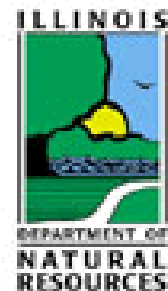
## Step 4: Post Restoration

- Monitor performance
- Make adjustments
- Close out





# DISCUSSION & CLOSING



Day 27 After Release  
(day prior to "emergency response  
phase" completion)

Day 1 After Release

