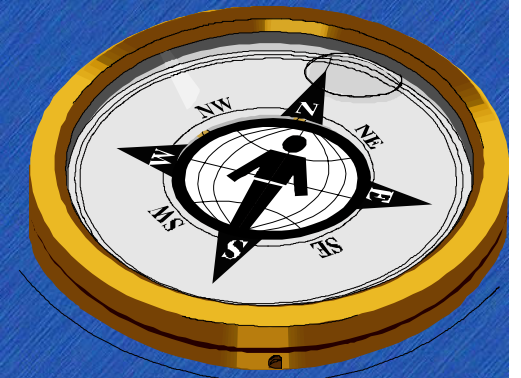


# Integrating Information Technology into the Spill Prevention and Response Environment

Donald P. Smith

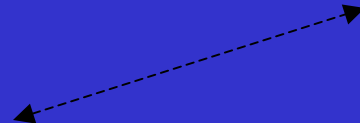
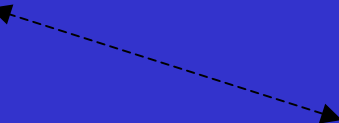
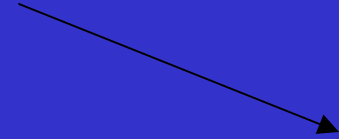
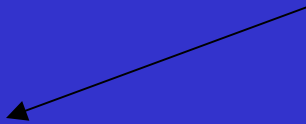
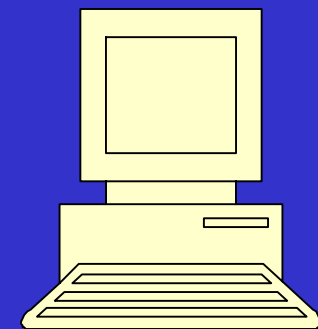
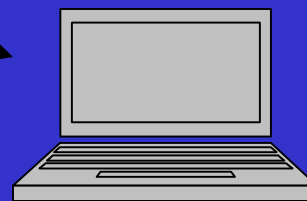
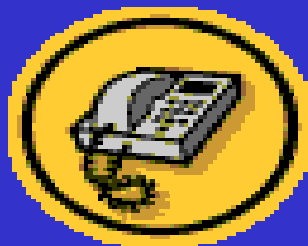
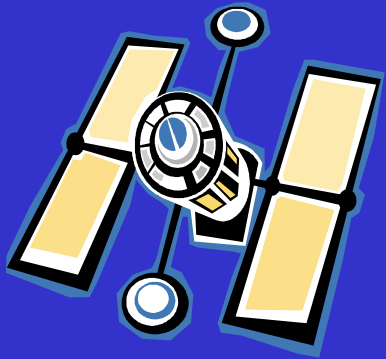
US Environmental Protection Agency  
Fresh Water Spill Symposium  
March 2002





# Presentation Outline

- Developing A Mobile Solution for a Mobile Workforce
- S.W. Arkansas Environmental Improvement Project
- Electronic FRP Management System
- E-Plan Hazmat Site
- Lake Oologah Remediation Site.
- Presentation Summary



# Mobile Strategy

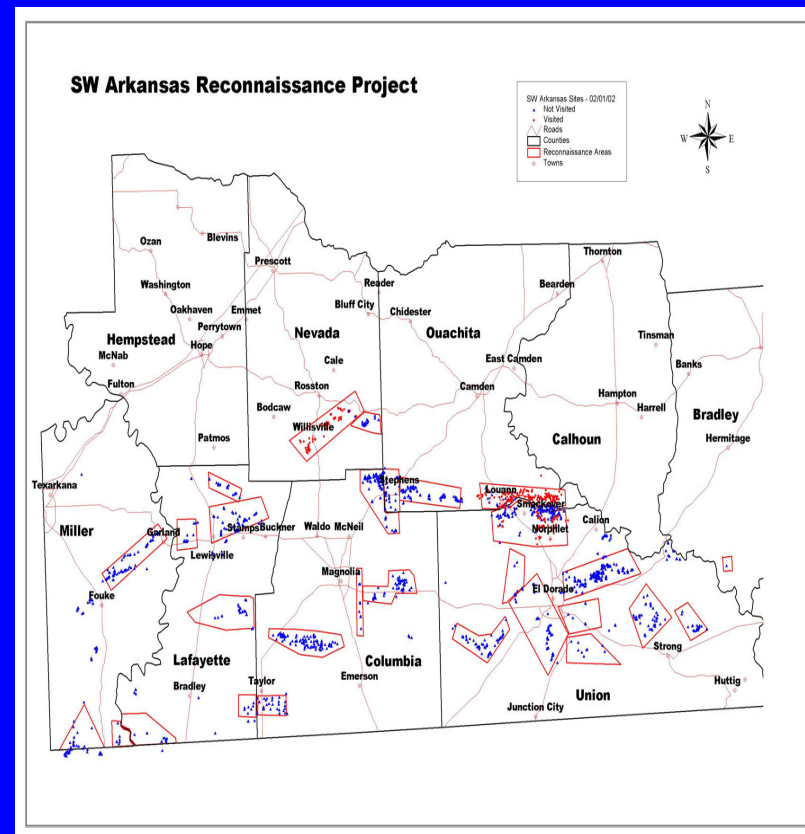
- Identify activities & programs which can benefit from a mobile environment.
- Identify productivity issues.
- Identify areas for increased efficiencies.
- Cost effectiveness.
- Identify the supply/demand factors and the potential user base.



# South West Arkansas Environmental Improvement Project

# Background

- Six hundred square miles
- Twenty nine identified recon areas covering nine counties in SW Arkansas
- Project Parameters
  - Photographic Analysis
  - Site Assessment/Characterization
  - Responsible Party Identification
  - Site Prioritization
  - Inventory Tracking
  - Site Decision Matrixes



# Implementation Breakout

## ➤ Project Management

### ➤ Site Assessment Database

- Hazard Analysis & Evaluation

- Prioritization

- Decision Matrix

### ➤ Scheduling & Logistics

### ➤ Geographical Mapping

### ➤ Communications



# Aerial Photography/Videography

- Geographical area flown utilizing Digital Video/Still Imagery and Global Positioning Systems.
- Data merged into Relational Data Base Management System (RDBMS).
- Site Assessment data collected and merged into RDBMS.
- More than 1900 sites located and classified.
- Data layers created for geographical mapping.



# Relational Database Management System

Microsoft Access - [frmMain : Form]

File Edit View Insert Format Records Tools Window Help

EPA United States Environmental Protection Agency REGION 6 Arkansas Louisiana New Mexico Oklahoma Texas

Southwest Arkansas Recon Tracking System

Site ID 3000

Input/Update Information

- Site Information
- Social/Environmental
- Site Spill Information
- Site Activity Records
- Site Photo Records

View Reports

- Site Information
- Demography
- Environmental
- Site Spill Information
- Site Spill Source
- Spill Pathway
- Site Score
- Site Activity Records

Utility

- Print All Reports
- Print Hard Copies
- Add/Delete Site

Close

WESTON

Record: 1 of 1

Form View

Start SQL Server ... Exploring - D: ... Microsoft ... C:\WINNT\P... TempScreen... Inbox - Micro... 2:05 PM

# Relational Database Management System

Microsoft Access - [Geographical Consideration]

File Edit View Insert Format Records Tools Window Help

Arial 9 B I U

**Site ID** 3000 Close

Land Type Forest Land Land Category Public-Federal

City Name hoo loo loo  
Urban Or Rural Rural Population Center Impact No  
City Category No Threat of Impact to Population Center Medium  
Resident Category Light Distance 1 Mile

**Demographics**  
Caucasian  Hispanic   
African American  Other  Income Level Medium/High

**Environmental Considerations**  
Wetland Yes Archeological Yes Native Land Yes Grassland Yes  
Park Federal Wildlife Refuge Federal Conservation Area State Preserve State

**Wildlife Considerations**  
Evidence of Wildlife Present/Mortality Evidence of Water Foul Present/Mortality  
Wildlife Habitat Present/Mortality

Record: 1 of 1

Form View

Start SQL Server ... Exploring - D: ... Microsoft ... C:\WINNT\P... TempScreen... Inbox - Micro... 2:05 PM



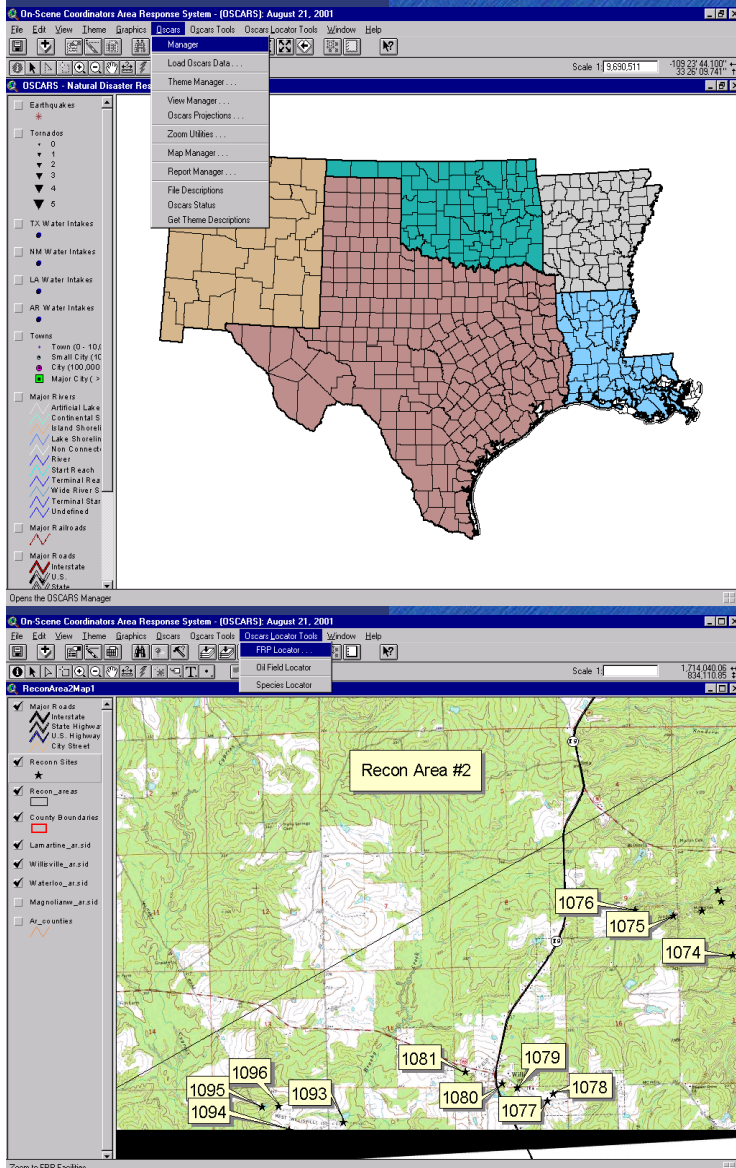
# Relational Database Management System

- RDBMS – SQL Server D.B. with access front end/local version.
- Designed to hold site information both pre-inspection and post – inspection.
- Designed to prioritize sites based on different criteria.
- Computes statistics, and pre-formatted reports.
- Determined those sites with most severe contamination.



# GIS Development

- GIS data layers included sites, roads, TIGER data, and USGS topos in Mr. SID format.
- EPA On-Scene Coordinator Area Response System (OSCARS) GIS application used, with an extension that added special tools.
- Sites were brought into GIS using GPS Coordinates.

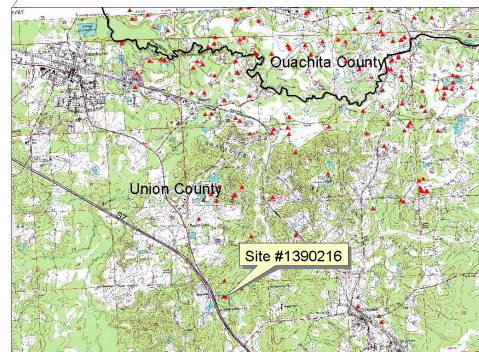
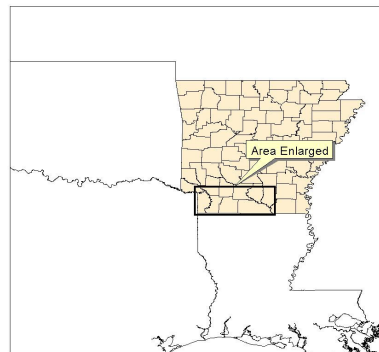
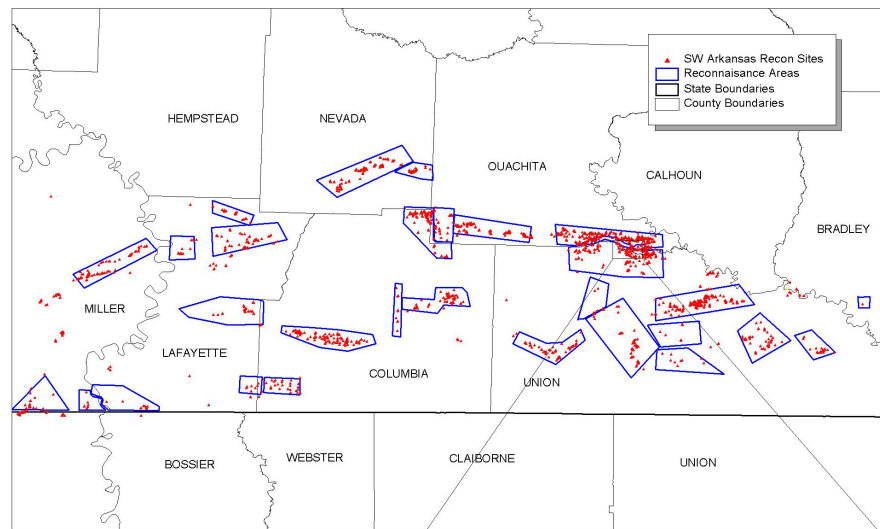




# GIS Development

- GIS Overview Maps
- Field Teams used to locate sites
- GIS application allowed easy retrieval of information

## SW Arkansas Reconnaissance Project





# Field Data Collection Solution

The screenshot shows a software application window titled "Pocket\_PC2" with a menu bar containing "File", "Zoom", "Tools", and "Help". The application title bar displays "SWAR Main Entry", the time "12:34p", and an "ok" button. The main content area is titled "Edit Site Data" in green text. It features a dropdown menu labeled "ID" and a grid of eight buttons: "Basic Site Info", "Environment", "Owner/Operator", "Demographics", "Spill Info", "Site Photo", "Activity Record", and "Site Visited Recent". Below this grid is a section titled "Add New Site" in red text, which includes a text input field and an "Add ..." button. At the bottom right of the window, there is a keyboard icon and a small upward-pointing arrow.

- Compaq Ipaq's, with Windows CE as the operating system were used.
- Using Embedded visual tools 3.0, and application was created to support data field data entry
- Active Sync 3.1 used for field synchronization/backup issues.



# Field Data Collection Solution

Pocket\_PC2  
File Zoom Tools Help

**Site Basic Infomator** 12:35p

Site ID

Lease / Site Name

Latitude North

Longitude West

ADEQ\_CCSN#

OnG\_Comm#

ADEQ\_SWD\_Permit#

NRC#  FPN#

TDD#  DCN#

**Recommended Action**

RCRA  Removal

SUFWS  Spill Response

Compliance Inspection

Pocket\_PC2  
File Zoom Tools Help

**Spill Source Definition** 12:36p

Site ID

Notes

Corrosion  Drips Weeps Stain

Oil Stain  Leak Joins Valves

Dead Vegetation  Capacity Not Adequ.

Pooling Oil  Not Sufficient Stored

Leaking  Material w. Dike-Bern

Overflow  Debris w. Dike-Bern

Breach  Errosion Dike-Bern

Standing w. Dike-Bern

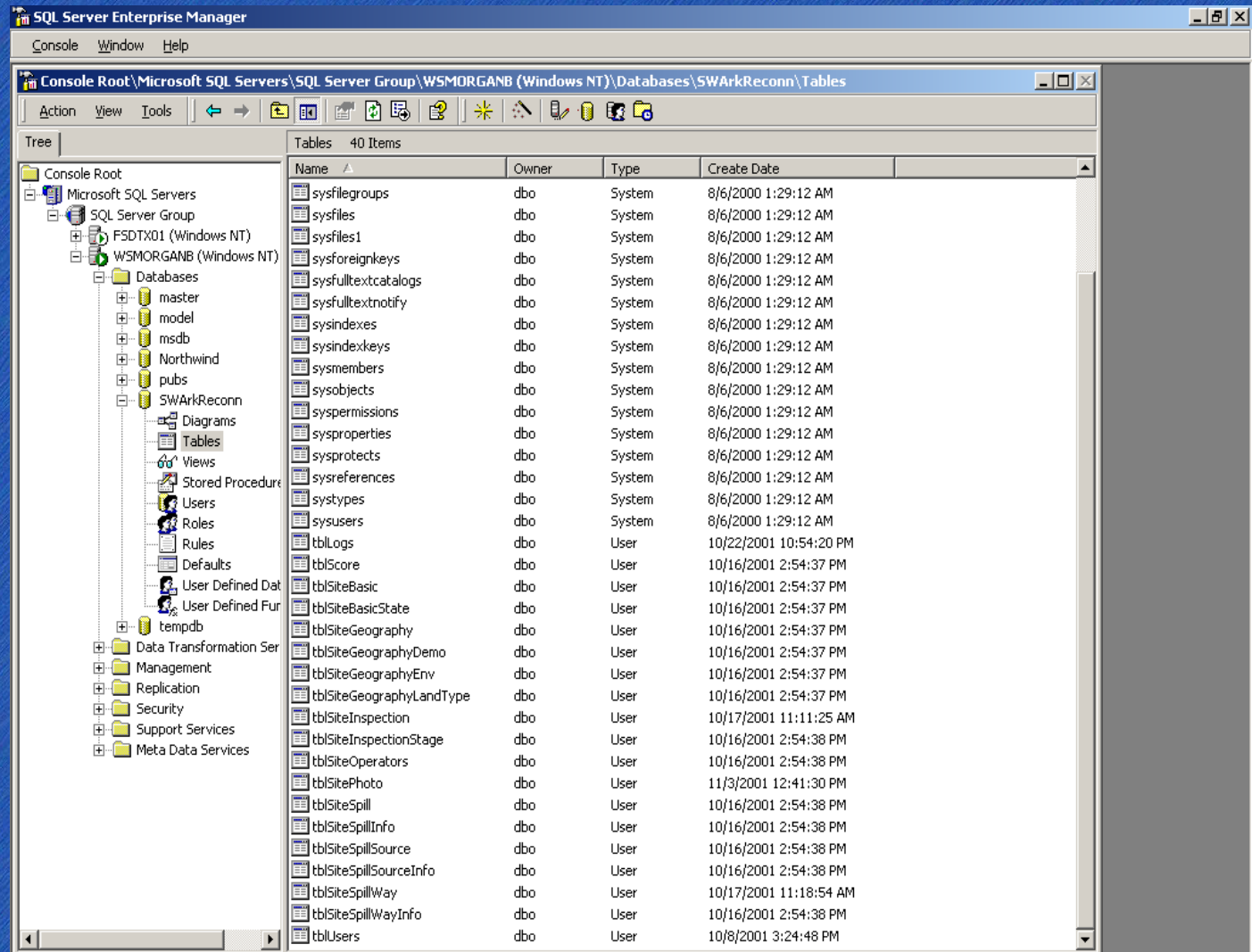
# Data Synchronization Issues

- To solve these issues we set up 2 different Windows CE applications.
- Data is synchronized 1 of two ways.
- RDBMS is SQL Server, access version used as a staging cleaning area.
- Field personnel used access version of D.B. to synchronize their data twice a day. This served as a data backup in the field.
- SQL version of application used to synchronize through the web.



# Data Validation

- Data synchronized to local access version and validated in office.
- Then the DBA validates data and synchronizes to the SQL RDBMS



The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays a tree view of the server hierarchy, including the 'SWArkReconn' database. The right pane shows a table list for the 'SWArkReconn' database, with columns for Name, Owner, Type, and Create Date. The table list contains 40 items, including system tables and user-defined tables.

Name	Owner	Type	Create Date
sysfilegroups	dbo	System	8/6/2000 1:29:12 AM
sysfiles	dbo	System	8/6/2000 1:29:12 AM
sysfiles1	dbo	System	8/6/2000 1:29:12 AM
sysforeignkeys	dbo	System	8/6/2000 1:29:12 AM
sysfulltextcatalogs	dbo	System	8/6/2000 1:29:12 AM
sysfulltextnotify	dbo	System	8/6/2000 1:29:12 AM
sysindexes	dbo	System	8/6/2000 1:29:12 AM
sysindexkeys	dbo	System	8/6/2000 1:29:12 AM
sysmembers	dbo	System	8/6/2000 1:29:12 AM
sysobjects	dbo	System	8/6/2000 1:29:12 AM
syspermissions	dbo	System	8/6/2000 1:29:12 AM
sysproperties	dbo	System	8/6/2000 1:29:12 AM
sysprotects	dbo	System	8/6/2000 1:29:12 AM
sysreferences	dbo	System	8/6/2000 1:29:12 AM
systypes	dbo	System	8/6/2000 1:29:12 AM
sysusers	dbo	System	8/6/2000 1:29:12 AM
tblLogs	dbo	User	10/22/2001 10:54:20 PM
tblScore	dbo	User	10/16/2001 2:54:37 PM
tblSiteBasic	dbo	User	10/16/2001 2:54:37 PM
tblSiteBasicState	dbo	User	10/16/2001 2:54:37 PM
tblSiteGeography	dbo	User	10/16/2001 2:54:37 PM
tblSiteGeographyDemo	dbo	User	10/16/2001 2:54:37 PM
tblSiteGeographyEnv	dbo	User	10/16/2001 2:54:37 PM
tblSiteGeographyLandType	dbo	User	10/16/2001 2:54:37 PM
tblSiteInspection	dbo	User	10/17/2001 11:11:25 AM
tblSiteInspectionStage	dbo	User	10/16/2001 2:54:38 PM
tblSiteOperators	dbo	User	10/16/2001 2:54:38 PM
tblSitePhoto	dbo	User	11/3/2001 12:41:30 PM
tblSiteSpill	dbo	User	10/16/2001 2:54:38 PM
tblSiteSpillInfo	dbo	User	10/16/2001 2:54:38 PM
tblSiteSpillSource	dbo	User	10/16/2001 2:54:38 PM
tblSiteSpillSourceInfo	dbo	User	10/16/2001 2:54:38 PM
tblSiteSpillWay	dbo	User	10/17/2001 11:18:54 AM
tblSiteSpillWayInfo	dbo	User	10/16/2001 2:54:38 PM
tblUsers	dbo	User	10/8/2001 3:24:48 PM



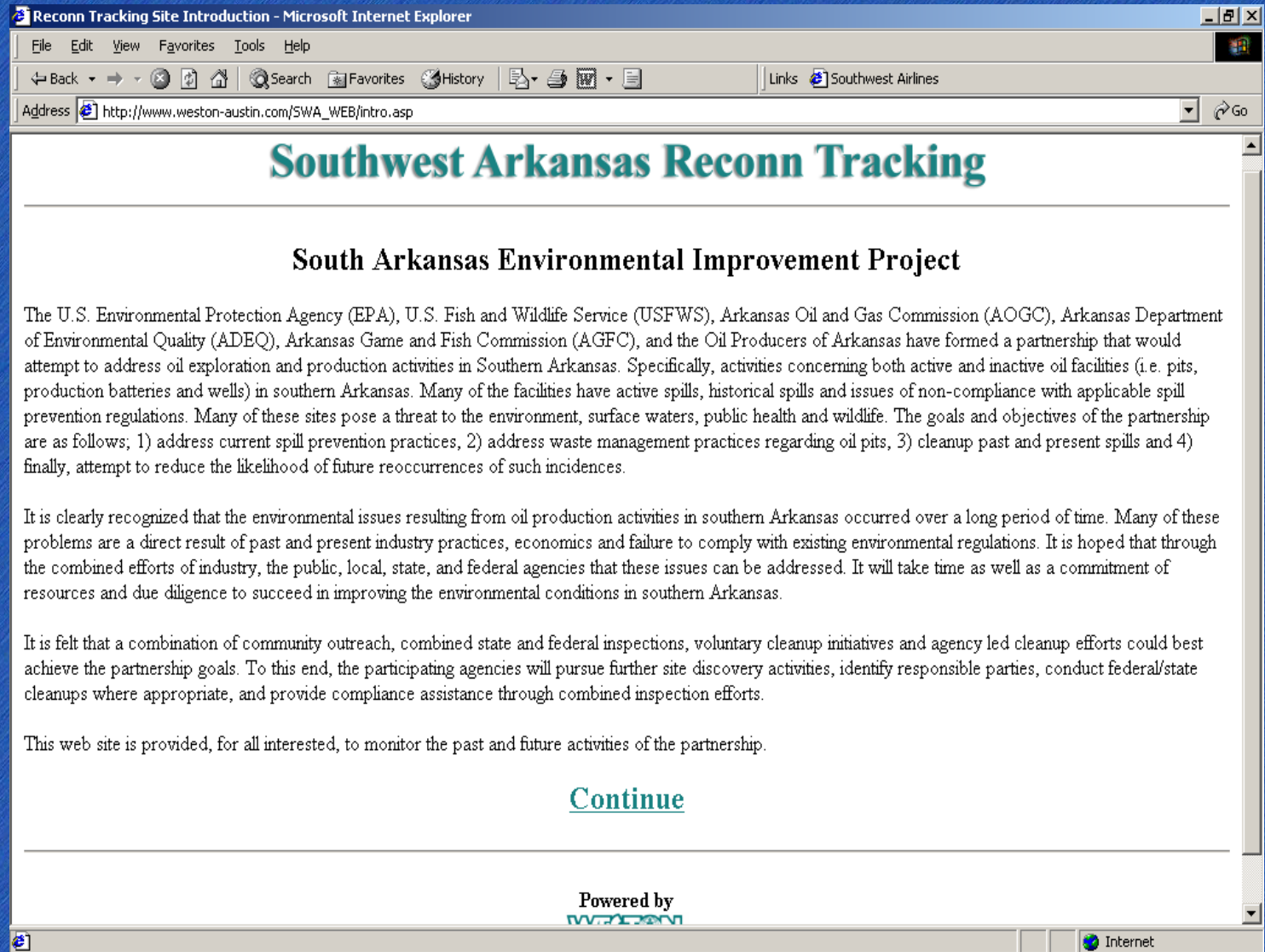
# Web Access

- Web page created to inform agencies/facilities involved with initiative.
- Also served as an alternate means of submitting data to the RDBMS.
- Other agencies/organizations could view data, and submit data.
- Once data is synchronized through the web, it goes to a staging area to be validated by DBA.
- Web site includes interactive mapping GIS page. This allows users to find sites through database or via the interactive map.



# Web Access

- Web-site includes overview of project.
- Calendar of recon's and access to site data if the user is allowed access to that portion.



The screenshot shows a Microsoft Internet Explorer browser window titled "Reconn Tracking Site Introduction - Microsoft Internet Explorer". The address bar displays "http://www.weston-austin.com/SWA\_WEB/intro.asp". The main content area features the heading "Southwest Arkansas Recon Tracking" in a large, bold, teal font. Below this is a sub-heading "South Arkansas Environmental Improvement Project" in a bold black font. The text describes a partnership between the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), Arkansas Oil and Gas Commission (AOGC), Arkansas Department of Environmental Quality (ADEQ), Arkansas Game and Fish Commission (AGFC), and the Oil Producers of Arkansas. It outlines the goals and objectives of the partnership, including addressing current spill prevention practices, waste management practices, and cleanup of past and present spills. A "Continue" link is visible at the bottom of the page. The browser's status bar at the bottom indicates "Internet".

Reconn Tracking Site Introduction - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Links Southwest Airlines

Address http://www.weston-austin.com/SWA\_WEB/intro.asp Go

## Southwest Arkansas Recon Tracking

### South Arkansas Environmental Improvement Project

The U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), Arkansas Oil and Gas Commission (AOGC), Arkansas Department of Environmental Quality (ADEQ), Arkansas Game and Fish Commission (AGFC), and the Oil Producers of Arkansas have formed a partnership that would attempt to address oil exploration and production activities in Southern Arkansas. Specifically, activities concerning both active and inactive oil facilities (i.e. pits, production batteries and wells) in southern Arkansas. Many of the facilities have active spills, historical spills and issues of non-compliance with applicable spill prevention regulations. Many of these sites pose a threat to the environment, surface waters, public health and wildlife. The goals and objectives of the partnership are as follows; 1) address current spill prevention practices, 2) address waste management practices regarding oil pits, 3) cleanup past and present spills and 4) finally, attempt to reduce the likelihood of future reoccurrences of such incidences.

It is clearly recognized that the environmental issues resulting from oil production activities in southern Arkansas occurred over a long period of time. Many of these problems are a direct result of past and present industry practices, economics and failure to comply with existing environmental regulations. It is hoped that through the combined efforts of industry, the public, local, state, and federal agencies that these issues can be addressed. It will take time as well as a commitment of resources and due diligence to succeed in improving the environmental conditions in southern Arkansas.

It is felt that a combination of community outreach, combined state and federal inspections, voluntary cleanup initiatives and agency led cleanup efforts could best achieve the partnership goals. To this end, the participating agencies will pursue further site discovery activities, identify responsible parties, conduct federal/state cleanups where appropriate, and provide compliance assistance through combined inspection efforts.

This web site is provided, for all interested, to monitor the past and future activities of the partnership.

[Continue](#)

Powered by  
WESTON

Internet

# Web-based RDBMS

- Roll-based security insures only specific users can edit data.
- Web-site tracks who has logged on, and what functions were performed

The screenshot shows a Microsoft Internet Explorer browser window displaying a web application titled "General Site Information - Microsoft Internet Explorer". The address bar shows the URL: [http://www.weston-austin.com/SWA\\_WEB/info/general.asp](http://www.weston-austin.com/SWA_WEB/info/general.asp). The main content area is titled "Southwest Arkansas Reconn Tracking" and "Site Information".

**General Information**

View Map

Site ID: 0990118	Site Name: Nacatoch Unit Tank Battery No. 2		
FPN No: NA	TDD No: NA	NRC No: NA	DCN No: NA
ADEQ SWD Permit No: NA	ADEQ CCSN No: NA	OnG Comm No: NA	

Site Status: Active

Action Recommended:

- Compliance Inspection: Yes
- Spill Response: No
- USFWS: No
- RCRA: No
- Removal: No

**Legal Description**

Legal Description	State: AR	County/Parish: nevada
Section: NA	Township: NA	Range: NA
Latitude: 33.515	Longitude: -93.29721	

**Facility**

Facility Address: NA		
City: NA	State: AR	Zip: NA

The browser window also shows a navigation menu on the left with categories: Home, Input/Update, View Information, and Utilities. The "Input/Update" category includes links for Site Information, Site Operators, Site Photos, Social/Environmental Spills, Spill Pathways, Site Activity, and Update Calendar. The "View Information" category includes links for Site Information, Site Photos, Demography, Environmental, Spill Information, Spill Sources, Spill Pathway, Site Score, and Site Activity. The "Utilities" category includes links for Add Site, Add User, and Manage Users.



# Web-based calendar

- Events are listed by date. With a description.
- Site visits can be linked to site information in the RDBMS

The screenshot shows a web browser window titled "Calendar - Microsoft Internet Explorer" with the address bar displaying "http://www.weston-austin.com/SWA\_WEB/info/calendar.asp". The main content area is titled "Southwest Arkansas Recon Tracking" and features a calendar for March 2002. The calendar includes navigation links for "Previous Month" and "Next Month", and a "Jump to Month" section with links for Sep, Oct, Nov, Dec, Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, and Sep. The calendar grid shows two events: one on Monday, March 25, and another on Thursday, March 14. The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help), a toolbar with navigation buttons, and a status bar at the bottom showing "Internet".

**Southwest Arkansas Recon Tracking**

<< Previous Month      D W M Y      Next Month>>

Jump to Month: [Sep](#) [Oct](#) [Nov](#) [Dec](#) [Jan](#) [Feb](#) [Mar](#) [Apr](#) [May](#) [Jun](#) [Jul](#) [Aug](#) [Sep](#)

**March 2002**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
24	25 10:00 PM • Congressman Ross Briefing (postponed) • <a href="#">Event Info</a>	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14 01:00 PM • SW AR Recon Db training • <a href="#">Event Info</a>	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

Home  
[View Calendar](#)  
[View Map](#)

**Input/Update**  
[Site Information](#)  
[Site Operators](#)  
[Site Photos](#)  
[Social/Environmental](#)  
[Spills](#)  
[Spill Pathways](#)  
[Site Activity](#)  
[Update Calendar](#)

**View Information**  
[Site Information](#)  
[Site Photos](#)  
[Demography](#)  
[Environmental](#)  
[Spill Information](#)  
[Spill Sources](#)  
[Spill Pathway](#)  
[Site Score](#)  
[Site Activity](#)

**Utilities**  
[Add Site](#)  
[Add User](#)  
[Manage Users](#)

# Web-based Photo Management System

- Photos are listed complete with description and ID.
- Includes Aerial Videography Still Shot.

Site Photos - Microsoft Internet Explorer

Address: [http://www.weston-austin.com/SWA\\_WEB/info/photos.asp](http://www.weston-austin.com/SWA_WEB/info/photos.asp)

## Southwest Arkansas Reconn Tracking

Information for site: 1390617 | Fagg Farm | [Change Site](#)

### Site Photos

View	Date	Direction	Who	Description	Id
<a href="#">View</a>	11/18/2001	E	Charles Alderman	OWNER/OPERATOR	1390617-9990004a01
<a href="#">View</a>	11/18/2001	E	Charles Alderman	OVERVIEW	1390617-9990004a02
<a href="#">View</a>	11/18/2001	N	Charles Alderman	SPILL INTO CONTAINMENT	1390617-9990004a03
<a href="#">View</a>	11/18/2001	S	Charles Alderman	CONTAINMENT	1390617-9990004a04

< << >> >

1 / 1

View Photo - Microsoft Internet Explorer

Address: [http://www.weston-austin.com/SWA\\_WEB/info/photoview.asp?\\_method=goToRecord&pcount=1&p0=10726](http://www.weston-austin.com/SWA_WEB/info/photoview.asp?_method=goToRecord&pcount=1&p0=10726)

## Southwest Arkansas Reconn Tracking

Information for site: 1390617 | Fagg Farm | [Change Site](#)

### Site Photo

Date:	11/18/2001
ID:	1390617-9990004a03
Direction:	N
Who:	Charles Alderman
Description:	SPILL INTO CONTAINMENT
TimeStamp:	1444

Done



# Web-based Interactive Mapping System

- Interactive Mapping system includes GIS layers you can turn on and off

- Site also includes Topos, and site information button

**Southwest Arkansas Recon Tracking Interactive Map - Microsoft Internet Explorer**

Address: [http://www.weston-austin.com/SWA\\_WEB/SWA\\_ARCIMS/viewer.htm](http://www.weston-austin.com/SWA_WEB/SWA_ARCIMS/viewer.htm)

### Southwest Arkansas Recon Tracking

Home

Zoom In Zoom Out  
Zoom Full Zoom Active  
Zoom Previous Pan

Identify Feature Measure Tool  
Set Map Units  
Site Info

Switch to Layers

Legend

- ★ Towns
- Reconnaissance Sites
  - Not Visited
  - Visited
- Highways
  - City
  - County
  - Interstate
  - Other
  - State
  - US
- Rail Road Lines
- Natural Gas Pipelines
- Bradley County Roads
- Calhoun County Roads
- Columbia County Roads
- Hempstead County Roads
- Lafayette County Roads
- Miller County Roads
- Nevada County Roads

Map: 1734044.03, 812498.12 -- Image: 542, 281 -- ScaleFactor: 34.661731276597784

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**Southwest Arkansas Recon Tracking Interactive Map - Microsoft Internet Explorer**

Address: [http://www.weston-austin.com/SWA\\_WEB/SWA\\_ARCIMS/viewer.htm](http://www.weston-austin.com/SWA_WEB/SWA_ARCIMS/viewer.htm)

### Southwest Arkansas Recon Tracking

Home

Zoom In Zoom Out  
Zoom Full Zoom Active  
Zoom Previous Pan

Identify Feature Measure Tool  
Set Map Units  
Site Info

Switch to Layers

Legend

- ★ Towns
- Reconnaissance Sites
  - Not Visited
  - Visited
- Highways
  - City
  - County
  - Interstate
  - Other
  - State
  - US
- Rail Road Lines
- Natural Gas Pipelines
- Bradley County Roads
- Calhoun County Roads
- Columbia County Roads
- Hempstead County Roads
- Lafayette County Roads
- Miller County Roads
- Nevada County Roads
- Quachita County Roads

Map: 1729531.7, 816358.17 -- Image: 519, 142 -- ScaleFactor: 12.604265918772318

**Identify Feature**  
Select a Layer from the layer list and click on the feature from the map to view its information.

Rec	SITEID	SITENAME	LATITUDE_N	LONGITUDE_W	RECONN_ARE	ACTIVE	LEGALSTATE	LEGALCOUNT	LEGALSECTI	LEGALTOWN	LEGALRANGE	FACILITYAI
1	0990082	Unknown	33.51067	-93.29712	16	Active	AR	Nevada	NA	NA	NA	NA



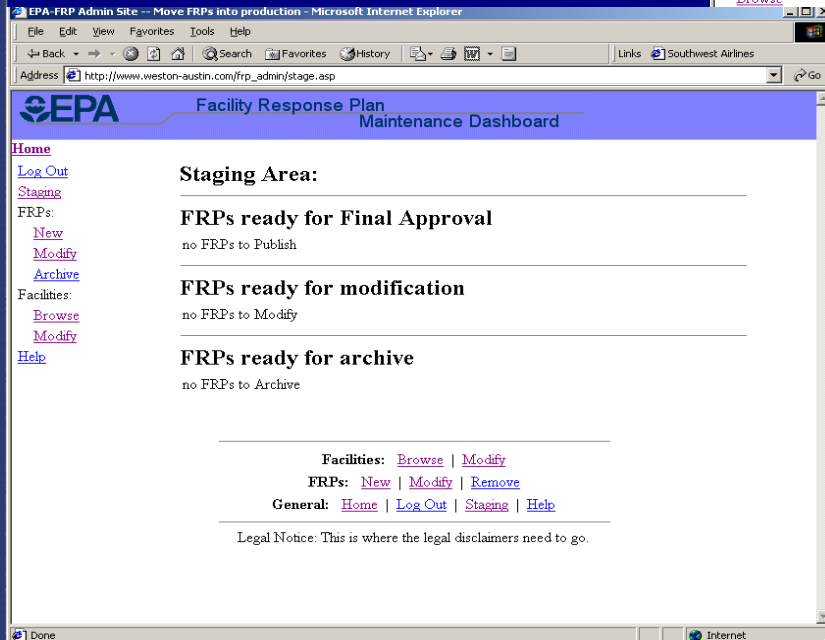
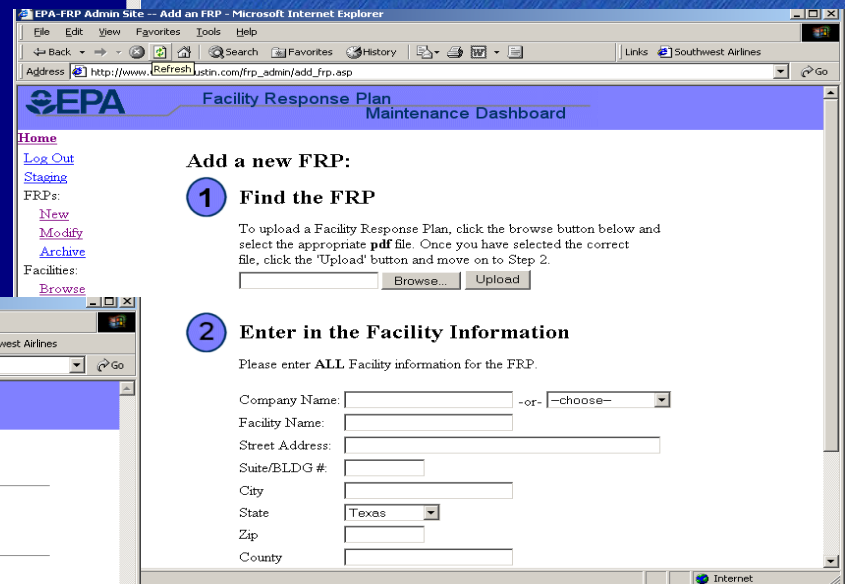
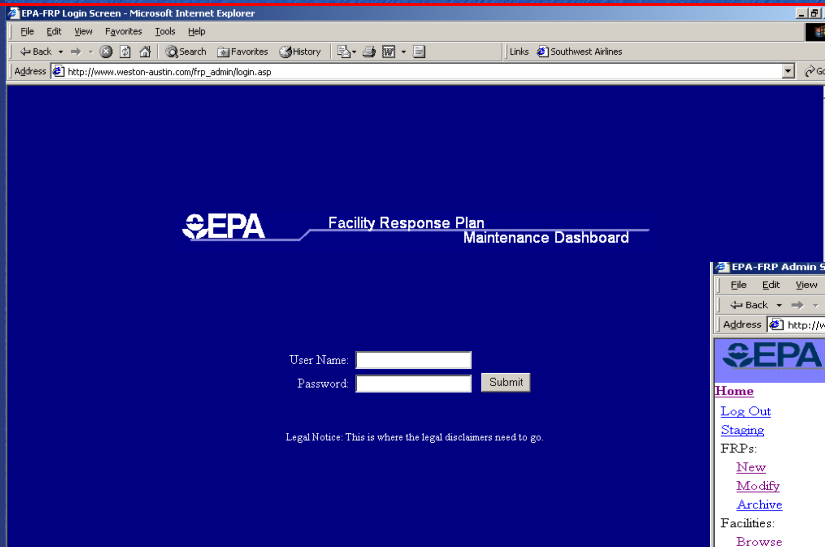
# Web-based FRP Management System

- Currently, EPA houses over 1800 Facility Response Plans (FRP's) for qualifying facilities. By law these facilities must send the FRP's to the EPA.
- The Web-based system is designed to allow facilities to submit, update and maintain their FRP's on-line.
- EPA will then review FRP's and publish them, or send them back for further modification.
- System is currently in beta version, and will link to E-Plan hazmat response system



# Web-based FRP Management System

- Site is password protected and very secure
- Allows facilities to upload new FRP's & updates
- EPA publishes FRP upon approval



# Web-based FRP Management System

- Here is an example of an on-line FRP Table of Contents
- The system links to the table of contents
- User can easily navigate to specific areas

The screenshot shows a Microsoft Internet Explorer browser window displaying a web-based Table of Contents. The address bar shows the URL: [http://www.weston-austin.com/frp\\_admin/public/72/72/E&SRP.pdf](http://www.weston-austin.com/frp_admin/public/72/72/E&SRP.pdf). The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help), a search bar, and a toolbar with various navigation and printing icons. The main content area displays the following Table of Contents:

<b>I. <a href="#">PLAN INTRODUCTION ELEMENTS</a></b>	
1. <a href="#">Purpose and Scope of Plan Coverage</a> .....	<a href="#">I-1</a>
1.a. <a href="#">Location and Facility Descriptions</a> .....	<a href="#">I-2</a>
2. <a href="#">Table of Contents</a> .....	<a href="#">I-6</a>
2.a. <a href="#">List of Tables</a> .....	<a href="#">I-14</a>
2.b. <a href="#">List of Figures</a> .....	<a href="#">I-17</a>
2.c. <a href="#">List of Exhibits</a> .....	<a href="#">I-18</a>
3. <a href="#">Current Revision Date</a> .....	<a href="#">I-20</a>
4. <a href="#">General Facility Identification Information</a> .....	<a href="#">I-21</a>
<a href="#">Aromatics and Olefins Facility</a> .....	<a href="#">I-21</a>
<a href="#">C4 Operations</a> .....	<a href="#">I-23</a>
<a href="#">Oxide and Olefins Facility</a> .....	<a href="#">I-25</a>
<a href="#">Propylene Oxide/Methyl-Tert-Butyl Ether Facility</a> .....	<a href="#">I-27</a>
a. Facility Name	
b. Owner/Operator	

The browser status bar at the bottom indicates "Done" and "Internet".



# E-plan Hazmat Response Web System

- An EPA-sponsored highly secure web-system designed to make industry hazmat information available immediately online.
- It allows hazmat first responders to quickly access important potentially life saving information.
- System is in beta version right now. EPA working with local LEPC's to test the system.
- System designed to be data repository for all important pieces of information. With a Chemical database, interactive GIS map, links to weather, CAMEO, FRP's and other important information.



# E-plan Hazmat Response Web System

- Roll-Based Security
- Search by multiple identifiers, with partial match capabilities
- Other web-links included on the main page

HazMat Home Page - Microsoft Internet Explorer

Address: <https://hazmat.erplan.net/cgi-bin/Hazmat>

Texas Natural Resource Conservation Commission UTD The University of Texas at Dallas EPA United States Environmental Protection Agency

### Hazardous Material Emergency Response Information

**Please Enter User Name and Password:**

User Name:

Password:

**Important Links:**

- Home
- [Contact Us](#)
- [Help](#)

- [Hazmat.erplan.net](#)
- [Hazmat.utdallas.edu](#)
- [Eplan.erplan.net](#)
- [Eplan.utdallas.edu](#)
- [EPA Home](#)
- [Chemical Treatment](#)
- [US Fire Administration](#)
- [US National Response Team](#)
- [US EPA Region 6 Regional Response Team](#)
- [US EPA Chemical Emergency Preparedness & Prevention Office](#)
- [US EPA CAMEQ](#)
- [US EPA Emerofacts](#)
- [US EPA List of](#)

HazMat together with E-PLAN is a web-based integrated contingency handling and planning system. It is intended to simplify the procedure of filing and maintaining regulatory requirement documents by the facilities and to provide rapid access to facility information to emergency responders in the event of an emergency.

HazMat provides confidential and potentially life-saving information about facilities to the people handling emergencies in those facilities. Users must provide a valid Username and Password in order to access the information.

This functionality is very important for Chemical and other industries that store Hazardous Materials. In case of spills or other accidents, responders can find important information using the Internet Government.

HazMat Search - Microsoft Internet Explorer

Address: <https://hazmat.erplan.net/cgi-bin/Hazmat>

Texas Natural Resource Conservation Commission UTD The University of Texas at Dallas EPA United States Environmental Protection Agency

**To Perform a SEARCH:**

1. Enter the full or partial Facility Name or E-Plan ID or Address of the Facility into the Text Box.
2. Click the SUBMIT button to display the required information.
3. Click RESET button to clear the Text Box.

Important Links:

- [Facility Search](#)
- [Contact Us](#)
- [Help](#)

- [Hazmat.erplan.net](#)
- [Hazmat.utdallas.edu](#)
- [Eplan.erplan.net](#)
- [Eplan.utdallas.edu](#)
- [EPA Home](#)
- [Chemical Treatment](#)
- [US Fire Administration](#)
- [US National Response Team](#)
- [US EPA Region 6 Regional Response Team](#)
- [US EPA Chemical Emergency Preparedness & Prevention Office](#)
- [US EPA CAMEQ](#)



# E-plan Hazmat Response Web System

- Facility contact information including Emergency Coordinator
- Chemical storage index linked to ERG, MSDS, and profile information

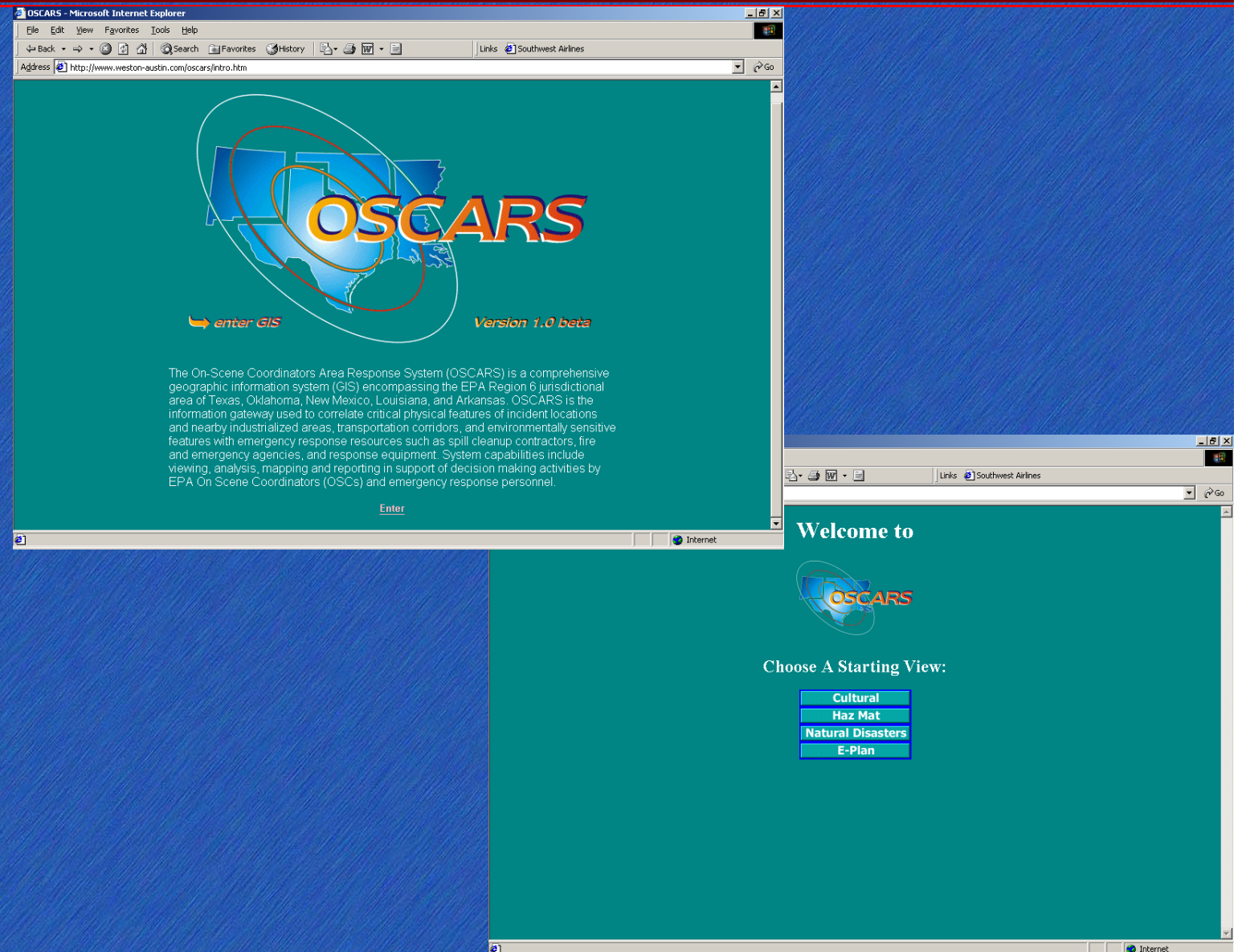
The screenshot displays the HazMat web system interface. The top window shows facility details for KOCH PETROLEUM GROUP, L.P.-EAST PLANT, including company name, phone number, address (1700 NUECES BAY BLVD.), city/county/state (CORPUS CHRISTI / TX), ZIP code (78407), and E-PLAN ID# (CC0126). Below this, emergency contact information is provided for both primary (Willis Jernigan, Health & Safety MGR) and alternate (Eric R. Kayesen, Env. Compl. MGR) contacts.

The bottom window displays the '151 Substances - Toxic (Non-Combustible)' section, which includes potential hazards, health effects, fire or explosion risks, and public safety instructions. The public safety instructions include: 'CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.' and 'Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.'

The right window shows a 'Chemical Inventory Information' table with columns for Chemical (Click for ERG link), Max. Qty., UNDOT#, NFPA Code & Diamond (H, F, R, S, I, N), MSDS, and Profile. The table lists various chemicals such as Activated Carbon, Alumina, Sulfonated Copolymer of Styrene and Divinylbenzene, Aluminum Silicate, Molybdenum (Moinic Catalyst), Aluminum Oxide, Platinum (Platinum/Rhenium Catalysts), Silicon Oxide, Potassium Polyphosphate, and Sodium Tolytriazole.

# E-plan Interactive Mapping System

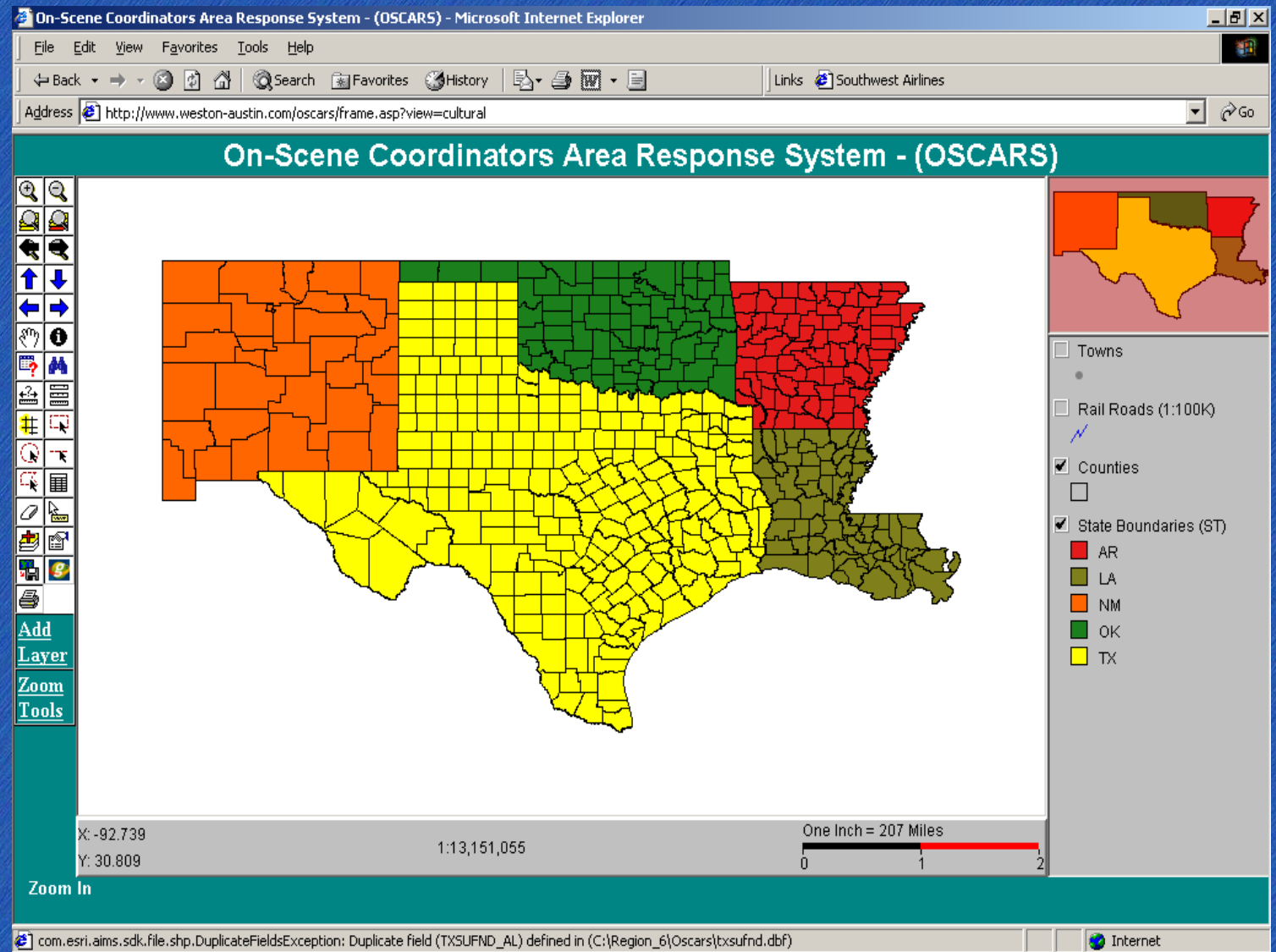
- Site is password protected, with roll based security
- Interactive mapping system allows user to choose starting view





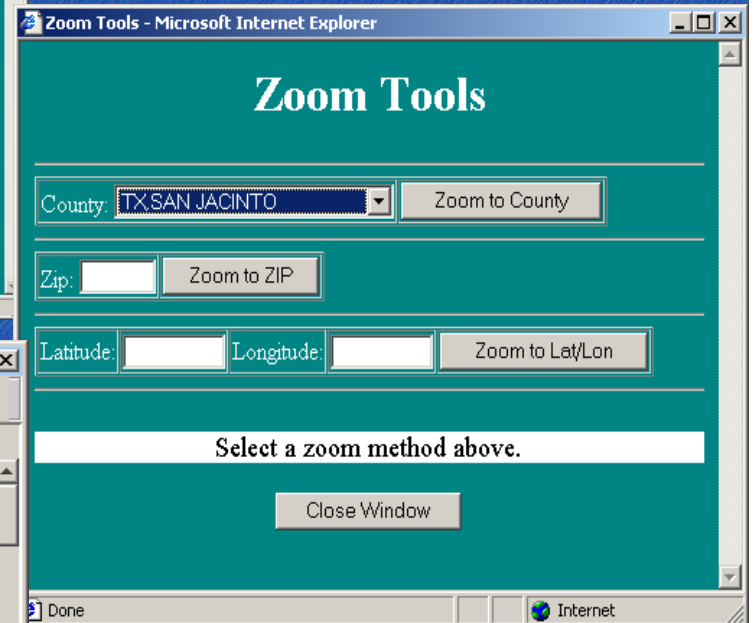
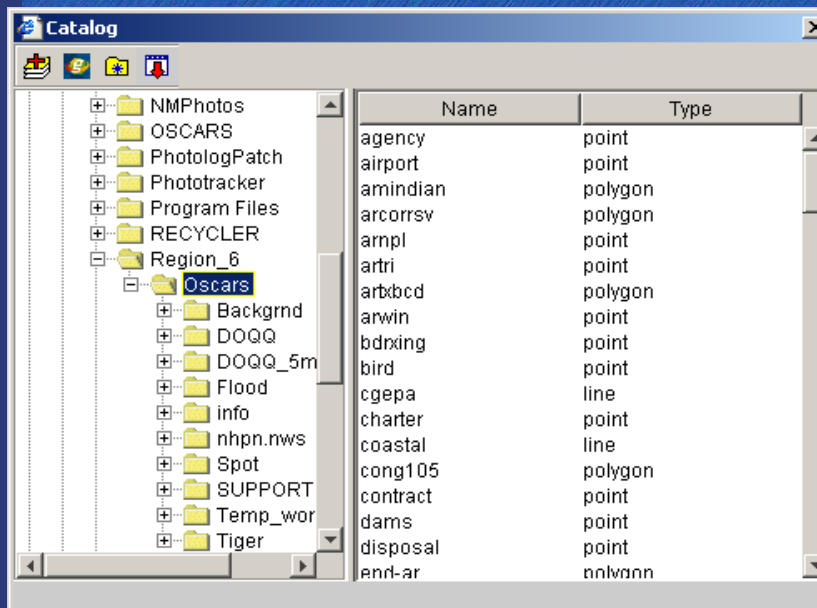
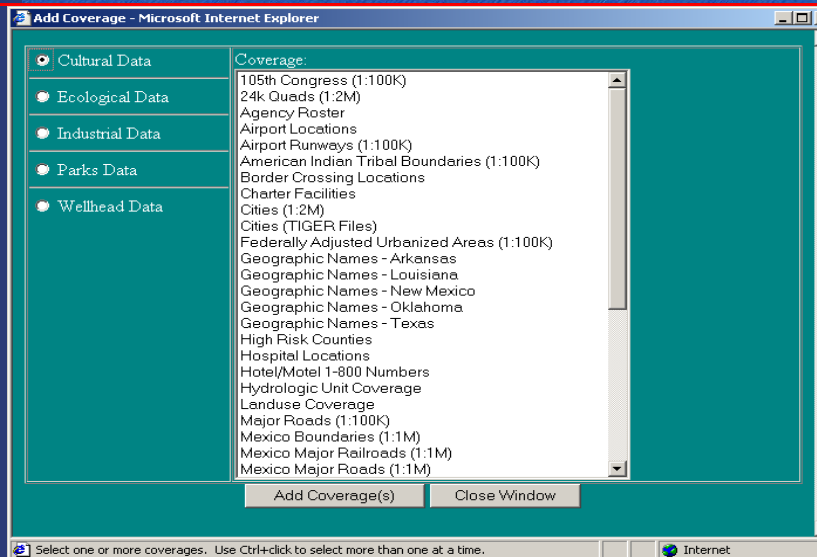
# E-plan Interactive Mapping System

- EPA Region 6 wide data sources
- Layers can be added from multiple data sources and removed as necessary
- GIS-based tools built into the site



# E-plan Interactive Mapping System

- Add layer dialog allows user to choose data type
- Zoom to county, zip code, and lat. long.
- Add layers from local data sources and other web sources





# Lake Oologah Remediation Site

- 45 Square mile area with approximately 10,000 abandoned or little used oil wells
- Wells located adjacent to Lake Oologah Reservoir, major drinking water source for Tulsa, Oklahoma
- Wells need to be located in rough terrain, plugged, and abandoned
- Multiple federal and state agencies involved in clean-up process



# Lake Oologah – Technological Solutions

- Site mapped using Aerial Photography and Color Infrared Photos to determine extent of environmental contamination
- RDBMS, GIS, Field Data Collection, GPS, and Web based solution implemented
- RDBMS and GIS connected to show real time status of sites
- Field data collection used to quickly and accurately collect data and synchronize back to RDBMS
- Web site used to communicate between agencies and to show status etc.



# Lake Oologah – Technological Solutions

- Wells were located by 2 person recon teams
- Teams were equipped with GPS units and PDA's
- Using specialized PDA application teams located wells and created records for the wells with ID and GPS information
- Upon return to command post information was synchronized with RDBMS and sites were plotted on GIS
- During Plugging and Abandonment the well data was captured using PDA and synchronized back to RDBMS in site command post



# Lake Oologah – Technological Solutions

- RDMBS used to maintain site information, and connected to site GIS

- Information maintained on server

The image displays three overlapping Microsoft Access database windows. The top window, titled "frmMain - Form", shows the main interface for the "Lake Oologah Oil Well Tracking System". It features the EPA Region 6 logo and a map of the region. A dropdown menu shows "Well ID 130001". Below this are three columns of buttons: "Input/Update Information" (Well Information, Owners/Operators, Well Photos, Scanned Documents), "View Reports" (Well Information, Owners/Operators, Well Photos), and "Utilities" (Print All Reports, Add/Delete Well, Photo Use Codes, Scanned Doc. Codes, Photographers, Owners/Operators). A "WESTON" logo is visible at the bottom left.

The middle window, titled "Site\_Spill Pathway", displays "Owner/Operator Information" for Well ID 270077. It includes dropdowns for "Current or Previous" (set to "Current") and "Operator or Owner Type" (set to "SurfaceOwner"). A "Name" dropdown is set to "C.G. DELOZIER", with "Add New Name" and "View Details" buttons. An "Owner Percentage" field is present, and a record navigation bar shows "Record 1 of 2".

The bottom window, titled "Site\_Well Information", displays detailed data for Well ID 270077. It includes fields for "Well Inspection Date" (01/31/999), "Location Staked" (checkbox), "Field Investigator 1", "Field Investigator 2", and "Field Investigator 3". It also shows "Current Well Name" (Wichitosh 10) and "Previous Well Name". A "Lot / Lon" button is located to the right. Below this are fields for "Area" (27), "Well Number" (0077), "Well Status" (1), and "Well Type" (PU). Further down are "Quarter Section" (NE SE NE), "Section" (07), "Township" (24N), and "Range" (17E). A "General Comments" section with a text area and "Page 2" indicator is at the bottom.



# Lake Oologah – Technological Solutions

- Special Compaq Ipaq Application created to collect the data
- Application synchronized with RDBMS in command post

Pocket\_PC  
File Zoom Tools Help  
Lake Oologah Main 12:59 ok

**Add New Well**

123457 Add ...

**Edit Well Data**

ID 123456- New Site

Basic Info	Lat / Lon, etc.
Release Info	Owner/Operator
Surface Equipment	Site Photos
Plugging & Survey	

Pocket\_PC  
File Zoom Tools Help  
Well Basic Info 12:59 ok

Well ID 123456 Location Staked

Well Inspection Date 3/13/02 *As mm/dd/yy*

Field Investigator 1 NA

Field Investigator 2 NA

Field Investigator 3 NA

Current Well Name NA

Previous Well Name NA

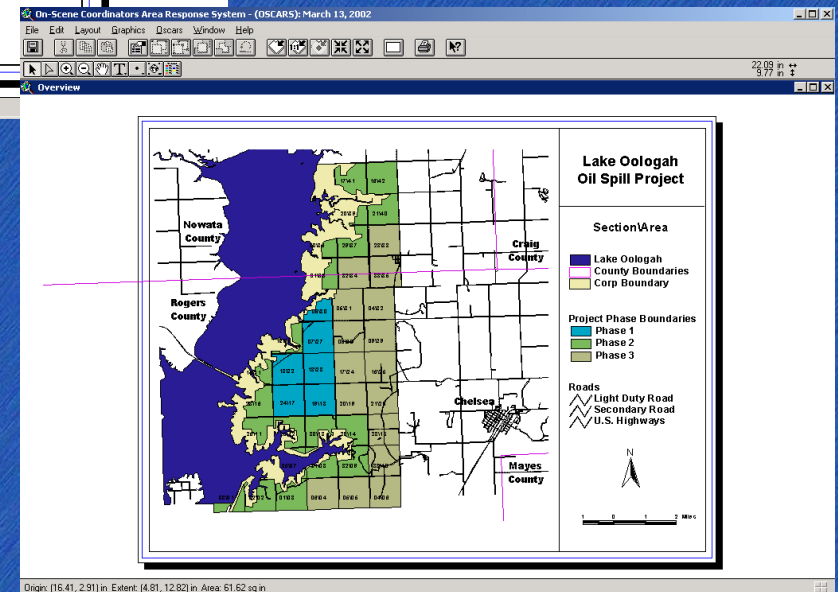
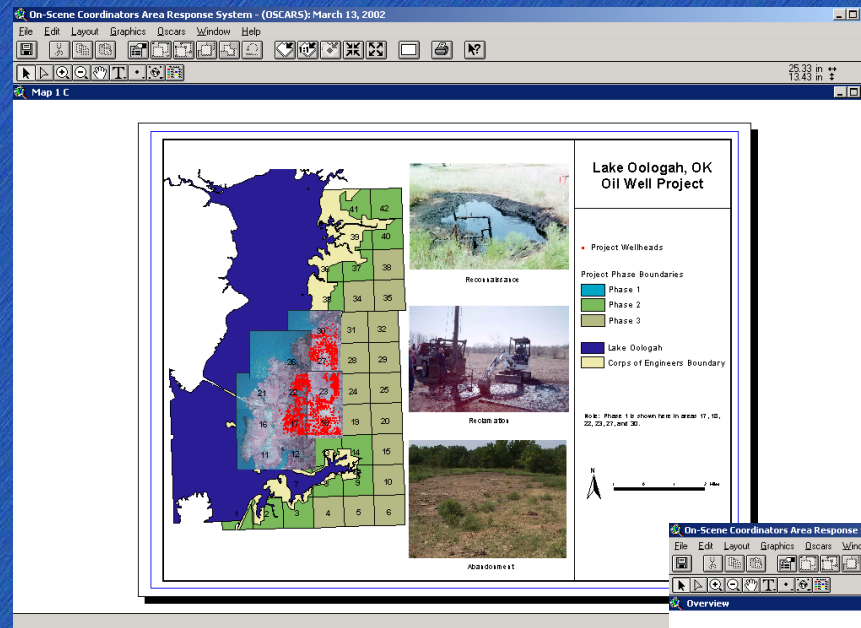
Quarter Section NA

Well Status NA

Well Type NA

# Lake Oologah – Technological Solutions

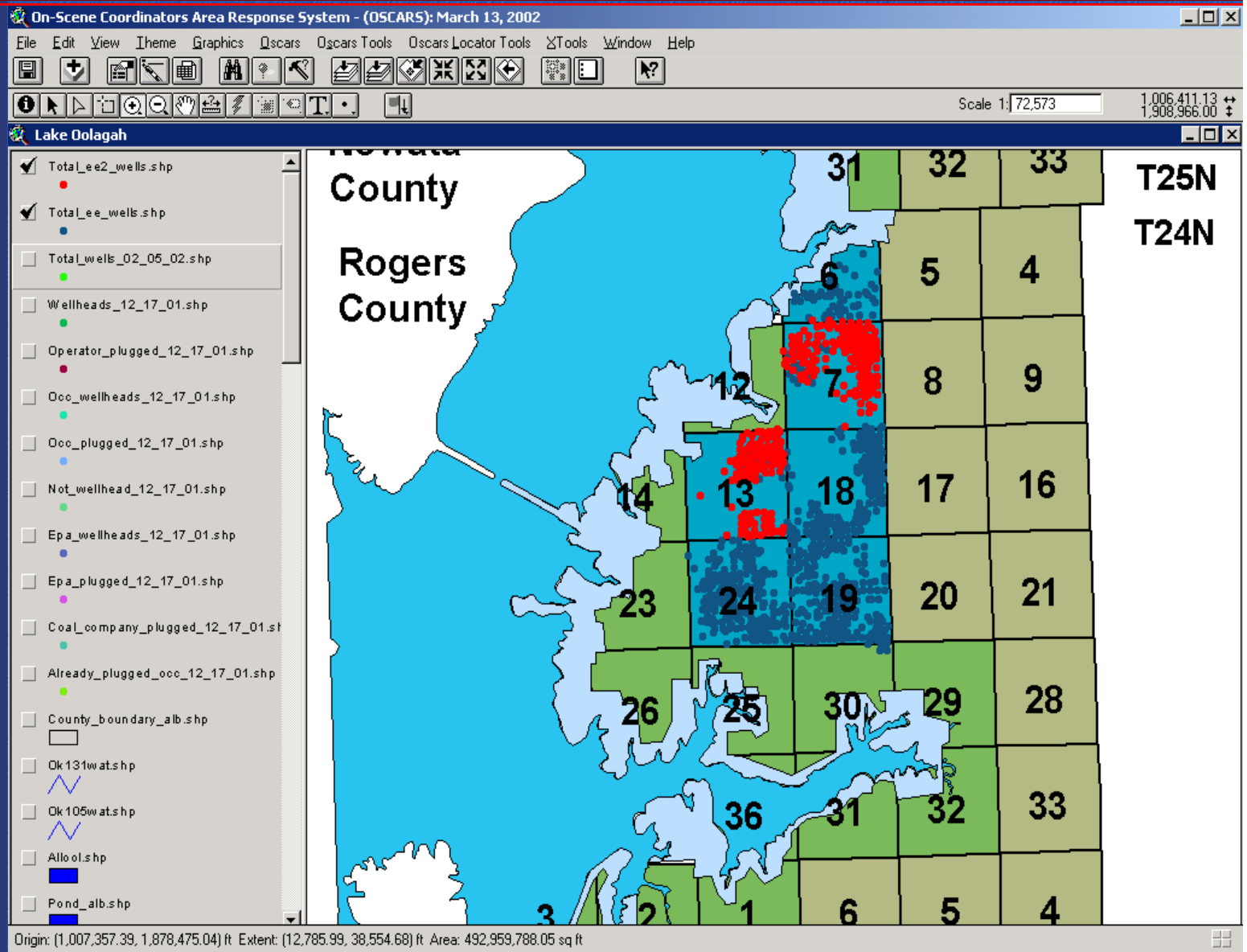
- GIS linked to RDBMS
- Shows well status based on RDBMS
- Ability to make maps on the fly, and make customized maps/reports





# Lake Oologah – Technological Solutions

- Map Showing Phase 1 well locations and current status



# Presentation Summary

- Integrating Technology:
- Web, RDBMS, GIS, GIS-Web, PDA's, Field Data Collection and GPS

Pocket\_PC

Well Basic Info 12:59

Well ID: 123456 Location Staked:

Well Inspection Date: 8/13/02 As mm/dd/yy

Field Investigator 1: NA

Field Investigator 2: NA

Field Investigator 3: NA

Current Well Name: NA

Previous Well Name: NA

Quarter Section: NA

Well Status: NA

Well Type: NA

Microsoft Access - [frmMain - Form]

EPA REGION 6 Southwest Arkansas Recon Tracking System

Site ID: 3000

Input/Update Information: Site Information, Environmental Information, Site Spill Information, Site Spill Source, Spill Pathway, Site Photo Records

View Reports: Site Information, Demography, Environmental Information, Site Spill Information, Site Spill Source, Spill Pathway, Site Score, Site Activity Records

Utility: Print All Reports, Print Hard Copies, Add Create Site

Recon Tracking System - Microsoft Internet Explorer

Information for site: 0110001 | Change Site

Home

Input/Update: General Site Information, Site Operators, Site Photos, Social/Environmental Information, Spill Information, Spill Pathways, Site Activity Records

View Information: Site Information, Site Photos, Demography, Environmental Information, Spill Information, Spill Sources, Spill Pathways, Site Score, Site Activity Records

Utilities: Add Site, Add User, Manage Users, View Log, Change Password, Logout

On-Scene Coordinators Area Response System - (OSCARs) - Microsoft Internet Explorer

On-Scene Coordinators Area Response System - (OSCARs)

Map showing Recon Area #2 and surrounding areas. Includes a legend for Counties (AR, LA, NM, OK, TX) and State Boundaries (ST).

Recon Area #2

Map showing Recon Area #2 with site locations marked by numbers: 1076, 1075, 1074, 1081, 1079, 1078, 1095, 1096, 1093, 1080, 1077, 1094.

Pocket\_PC2

SWAR Main Entry 12:34p

Edit Site Data

ID:

Basic Site Info Environment

Owner/Operator Demographics

Spill Info Site Photo

Activity Record Site Visited Recent

Add New Site

Add ...