

Ohio Oil and Gas Emergency Response Framework

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Presentation Overview

- Background
- Need for Information
- Collaboration
- Interactive Maps
- Map Books
- Future Enhancements

Emergency
Response Framework

Prior to 2001, owners of Ohio oil and gas wells reported all information required by EPCRA in hardcopy format to the Ohio EPA, the county LEPC, and the jurisdictional fire department.

Background

This was a paper-intensive process requiring that local government officials file, index and archive records for use during an emergency response



Background

One County EMA Director described his paper storage system as a worthless fire hazard.

In 2001, the Ohio General Assembly determined that the best method for reporting essential information to emergency responders during an oil and gas incident was electronically via an interactive GIS system through an emergency response website.

System built by Argonne National Lab, through U.S.DOE funding, through a team including DOGRM staff, emergency responders, and an oil and gas operator

Background

Eisenbarth Pad Fire, Monroe County



*New Challenges Posed by
Multi-Well Pads*

Aerial image of the burning frack spread



**New Challenges Posed by
Multi-Well Pads**

Risks associated with wells in multiple phases
Seven wells, including three that were being stimulated
when the fire began.

Twenty-four responding agencies including multiple
volunteer fire departments.

MSDSs were in a trailer consumed by the fire.



**New Challenges Posed by
Multi-Well Pads**

Time for an Upgrade



*New Challenges Posed by
Multi-Well Pads*

Collaborative Effort:

Contributing State Agencies:

Emergency Management
Public Safety
Administrative Services
Natural Resources
Environmental Protection

Other Contributing Agencies:

Commerce
Public Utilities Commission
Transportation

**Response Framework
Emergency**

Interactive Map:

Emergency Oil and Gas Well Locator

Ohio Oil & Gas Wells Emergency Application
Ohio Dept of Natural Resources

Legend & Layers

- Oil and Gas Wells
 - Horizontal Wells
 - Horizontal Wells Only
 - UIC
 - Producing
 - Drilling
 - Permitted
 - Inactive
 - Dry and Abandoned
 - Plugged
 - Horizontal Line
- Well Pads
 - Ingress/Egress to Well Pad
 - Well Pad Entry Roads
 - Well Pad Boundaries
 - All Active Wells
 - All Inactive Wells
 - Directional Line
- FAA (Air ports and Air pads)
- Community Anchor
- Nuclear Facilities
- National Hydrography Database
- Roads (LBRS)
- Elevation
- OEMA Response
- Land Base

Basemaps

Enter user + password then Submit:
Username:
Password:
Submit

Interactive Map:

Layers:

- Oil and gas wells color coded by operational phase in real time
- Links to expanded emergency contact information
- Well Pad maps and access info
- 2006 Elevation data
- Best Available Imagery
- Response Features: containment areas, staging areas, capture points etc.
- Hospitals, Fire, EMS, misc. community data layers

Emergency Oil and
Gas Well Locator

Interactive Map:

Emergency Oil and Gas Well Locator

The screenshot displays the 'Ohio Oil & Gas Wells Emergency Application' web interface. The top header includes the Ohio Department of Natural Resources logo and a search icon. The left sidebar, titled 'Legend & Layers', contains a list of map features with checkboxes, including 'Oil and Gas Wells', 'Horizontal Wells', 'Well Pads', 'Ingress/Egress to Well Pa', 'Well Pad Entry Roads', 'Well Pad Boundaries', 'All Active Wells', 'All Inactive Wells', 'Directional Line', 'FAA (Air ports and Air pads)', 'Community Anchor', 'Nuclear Facilities', 'National Hydrography Datas', 'Roads (LBRS)', 'Elevation', 'OEMA Response', and 'Land Base'. Below the legend are sections for 'County Bookmarks', 'Other Tools', 'Print', and 'Search'. The main map area shows an aerial view of a well pad complex with several wellheads labeled with IDs: 24440, 24463, 24421, and 24420. A red star icon is placed on the pad. A white information popup is open over the wellheads, displaying the following details:

Elevation and Location:
Elevation: 1275.7 Feet
Latitude: 39.697068
Longitude: -80.898331

(1 of 2)

Pad Name: EISENBARTH
Pad ID: Eisenbarth
Pad Status: Has Producing Well
API: 34111242850000
Latitude: 39.69769
Longitude: -80.89896

Well Company Information
STATOIL USA ONSHORE PROP INC
7139188200

[Zoom to](#)

The bottom of the map interface includes a 'DRAFT' watermark, a north arrow, and a footer for the 'State of Ohio GIS Support Center | USGS TNM - National H...'.

Map Books:

Lock box onsite
Print on demand

Emergency Oil and
Gas Well Map Books

CROSS CREEK A NAC 4H-20

UNCLASSIFIED

PAD ID: 2

Site Overview

Please call 614-799-6525 (24/7,365) for additional information about this site.

Site Purpose

Industry role inserted here

Site Access

Address	Latitude	Longitude
42350 Long Ridge Rd, Clarington, OH 43815	39.697618	-80.899053

Resource	Latitude	Longitude	Location Description
Ingress/Egress	39.697	-80.898	Approximately 1.4 miles North of OH 536 on Long Ridge Rd (Route 43)
Lockbox & COMM Station	39.697	-80.897	100 yards south of ingress point, on the West side of Long Ridge Rd

Site Point of Contact

Point of Contact	Cell Phone	Facility COMM Station Phone
Mr. or Mrs.	(XXX) XXX-XXXX	(XXX) XXX-XXXX

Relevant Medical Facilities *

Facility	Address	Phone Number	Beds	Helipad	Trauma Level	Burn
Trinity Medical Center West	4000 Johnson Rd, Steubenville, OH 43952-2364	740-283-7761	?	?	NULL	NULL
Acuity Specialty Hospital - Ohio Valley	380 Summit Ave, Steubenville, OH 43952-2667	NULL	?	?	NULL	NULL
Trinity Medical Center East	380 Summit Ave, Steubenville, OH 43952-2667	740-283-7761	?	?	NULL	NULL

* Medical facilities listed are the three closest resources to the facility detailed in this record. If the three closest hospitals are not trauma or burn centers, the closest facilities meeting these criteria are listed as well.

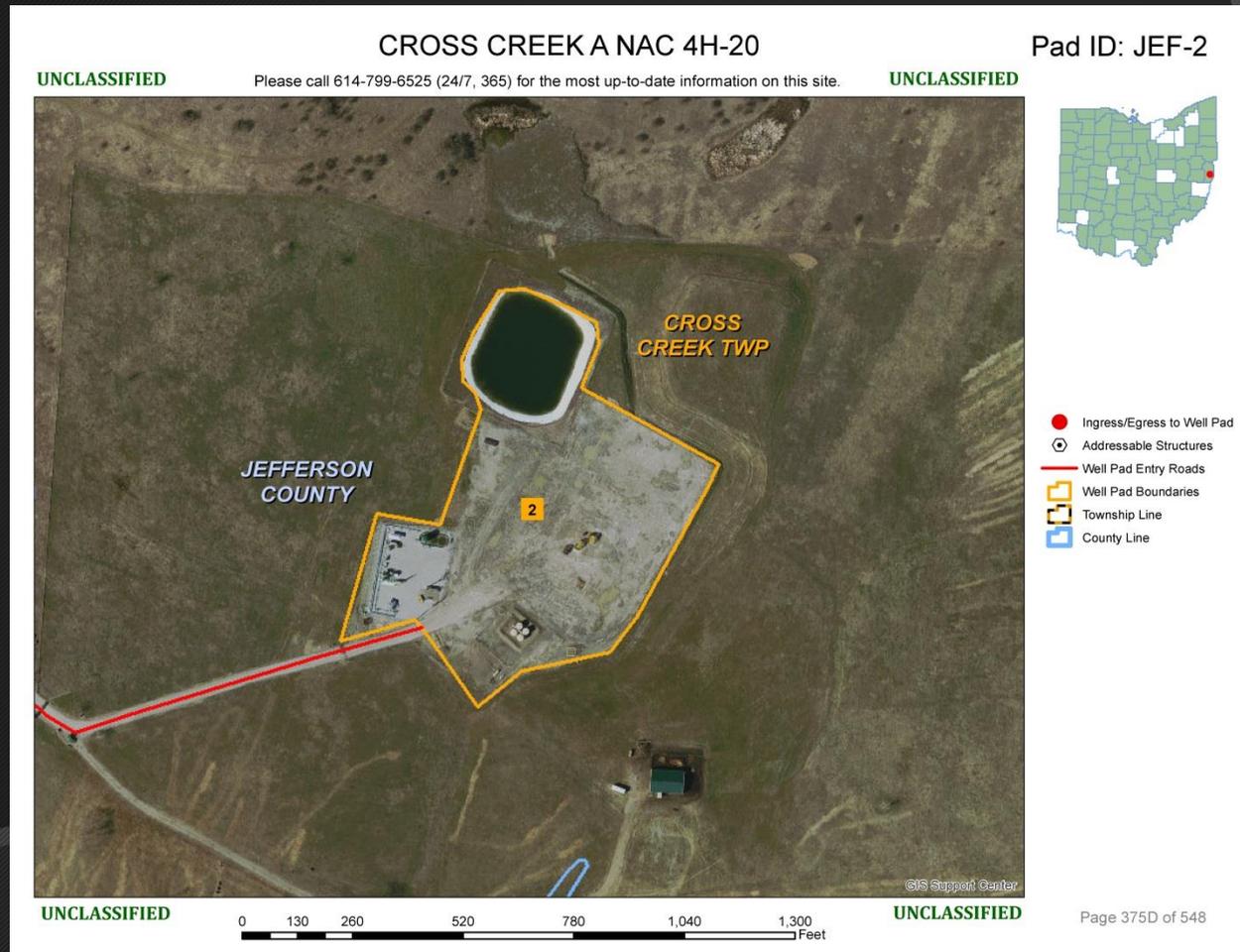
UNCLASSIFIED

Map Books:

Lock box onsite

Print on demand

Emergency Oil and Gas Well Map Books

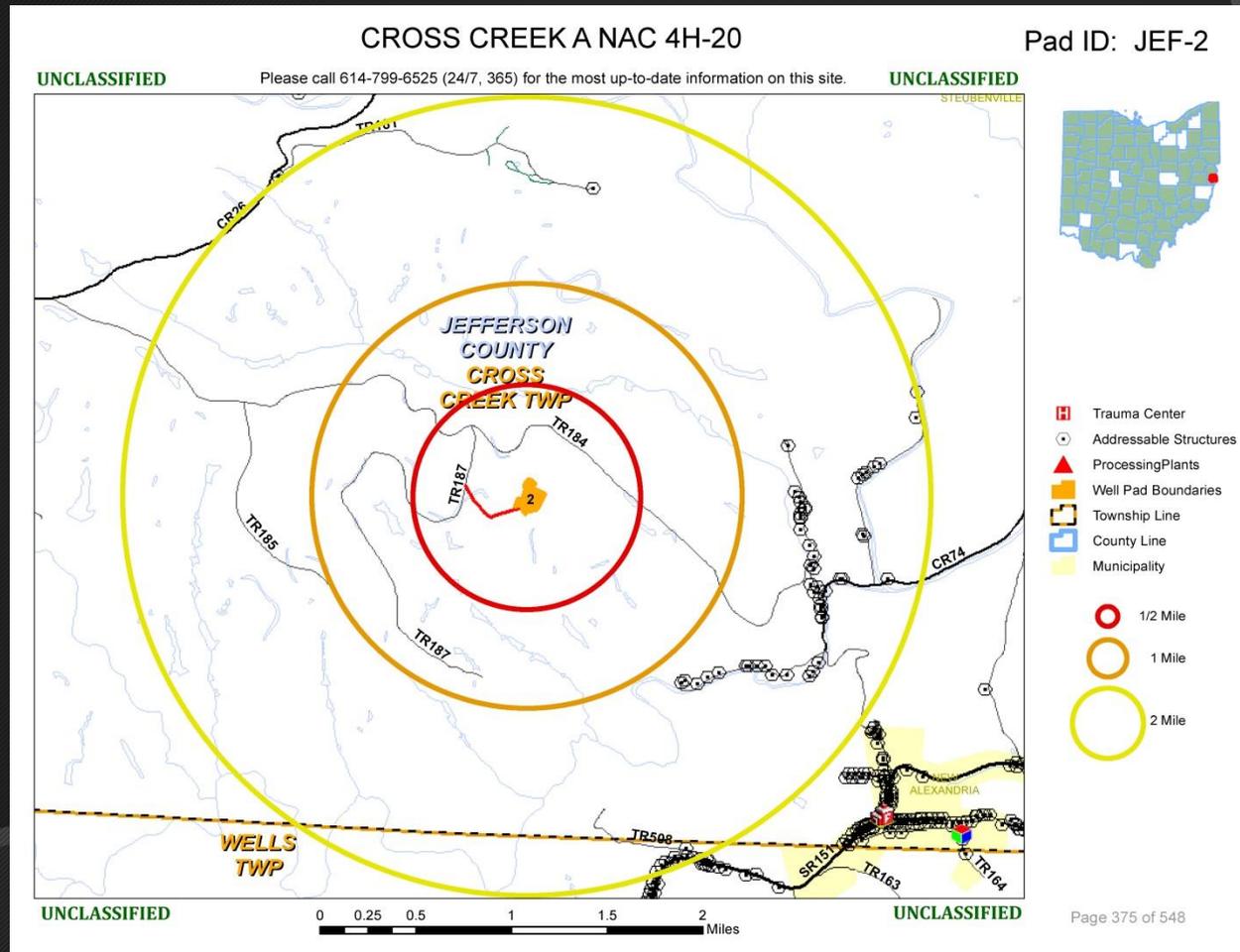


Map Books:

Lock box onsite

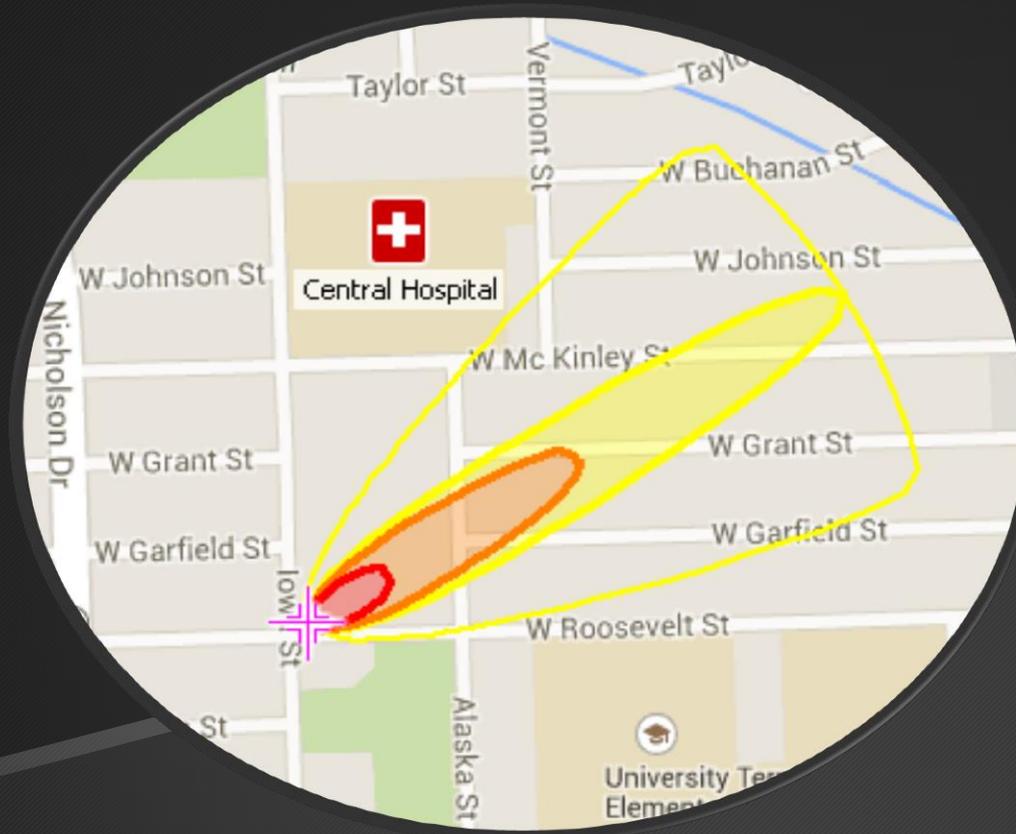
Print on demand

Emergency Oil and
Gas Well Map Books



Future Enhancements:

- Plume Modeling



Emergency
Response Framework

Future Enhancements:

Statute/Rule Changes:

- Permitting of horizontal well sites requires GIS data for pads and associated access roads and location of nearest capture points
- Expanding emergency contact information required to obtain a permit to drill
- Requires our data manage system to house all information required by EPCRA
- Incident notification standards

Response Framework
Emergency

Future Enhancements:

- Imagery and Elevation data for each new sites

1IN, 3IN, 6IN, 1FT
Imagery



1IN Small Format



3IN Small Format



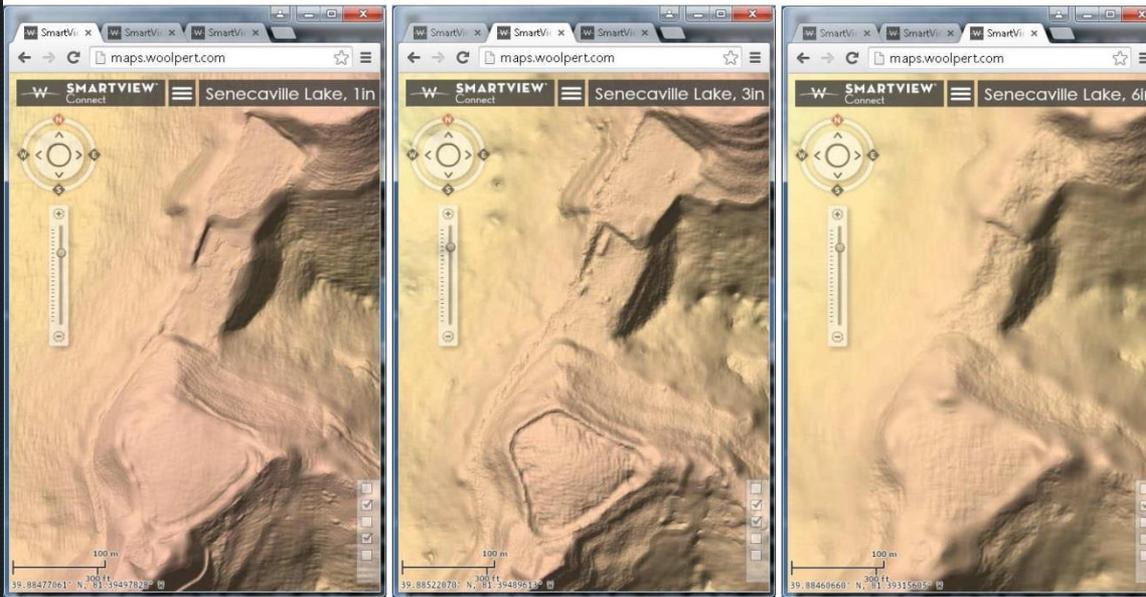
6IN Small Format

Response Framework
Emergency

Future Enhancements:

- Imagery and Elevation data for each new sites

Auto Correlated DEMs



1IN Small Format

3IN Small Format

6IN Small Format

Response Framework
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Future Enhancements:

- The new system will be created through a collaborative process involving input from our counterparts with other emergency response agencies, OGEEP's fire fighter training program, and the regulated industry.
- The ODNR is committed to providing up-to-date and accurate information to guide the safety of all emergency response personnel, including our own staff.

Response Framework
Emergency

Thank You!

Ohio.gov