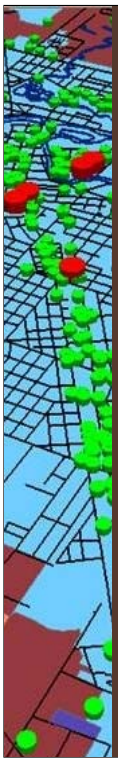


Preventing Brownfields by Digitizing & Scoring Your Inventory

Laura Coyne
lcoyne@elkhartcounty.com
September 2008

Region 5 Message

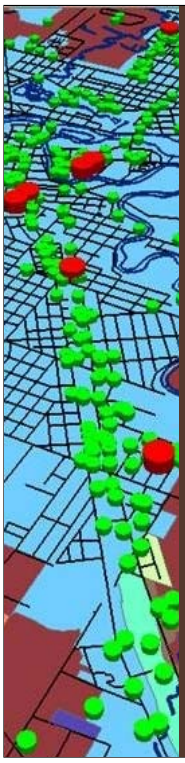
- Municipalities can take **easy** steps toward preventing Brownfields by being proactive.
- By helping companies in your community, it is possible to identify potential problems and intervene before sites develop into Brownfields.
- Prevention partners activities lead to project benefits.

Steps Local Governments can consider:

- **Incorporate Brownfields Prevention into inspections;**
- **Incorporate Brownfields Prevention into your assessment of properties;**
- **Consider using ordinances;**
- **Work with your State agency; and**
- **Incorporate Brownfields Prevention in your Comprehensive Plan**

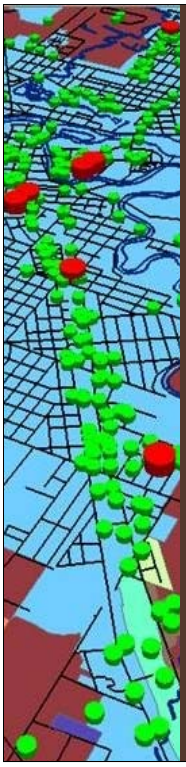
Desired Results

- **Local governments will be exposed to ideas that can be used to help manufactures and commercial enterprises leave a cleaner footprint on their cities, counties and villages.**
- **This can be accomplished by building on lessons learned from peers**



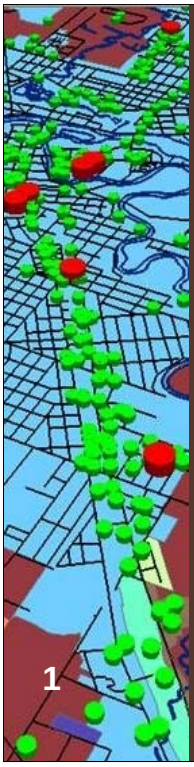
Region 5 Challenge

- Embrace this initiative
- Add to the dialogue
- Become a partner



Speakers

- John Hulewicz, Environmental Health Supervisor, Elkhart County Health Department
- Ryan Eckdale-Dudley, GIS Coordinator, Symbiont



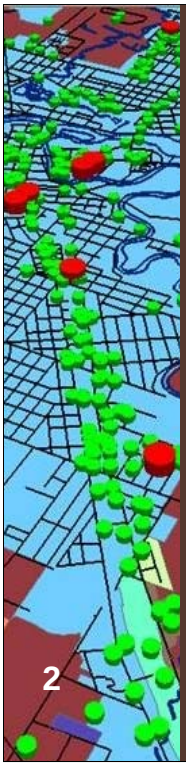
Managing your inventory for Brownfield Prevention

We have it in our power
to begin the world over again

--- Thomas Paine 1776
--- Ronald Reagan 1980

1

Elkhart County Indiana

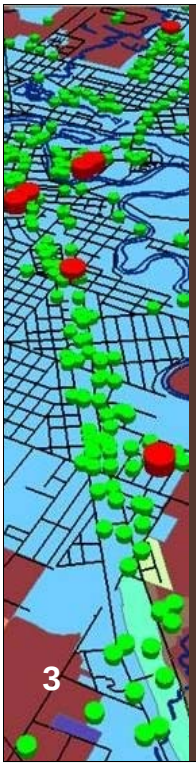


The Brownfield Prevention Initiative

John J. Hulewicz

Environmental Health Supervisor

Elkhart County Health Department



The Brownfield Prevention Initiative

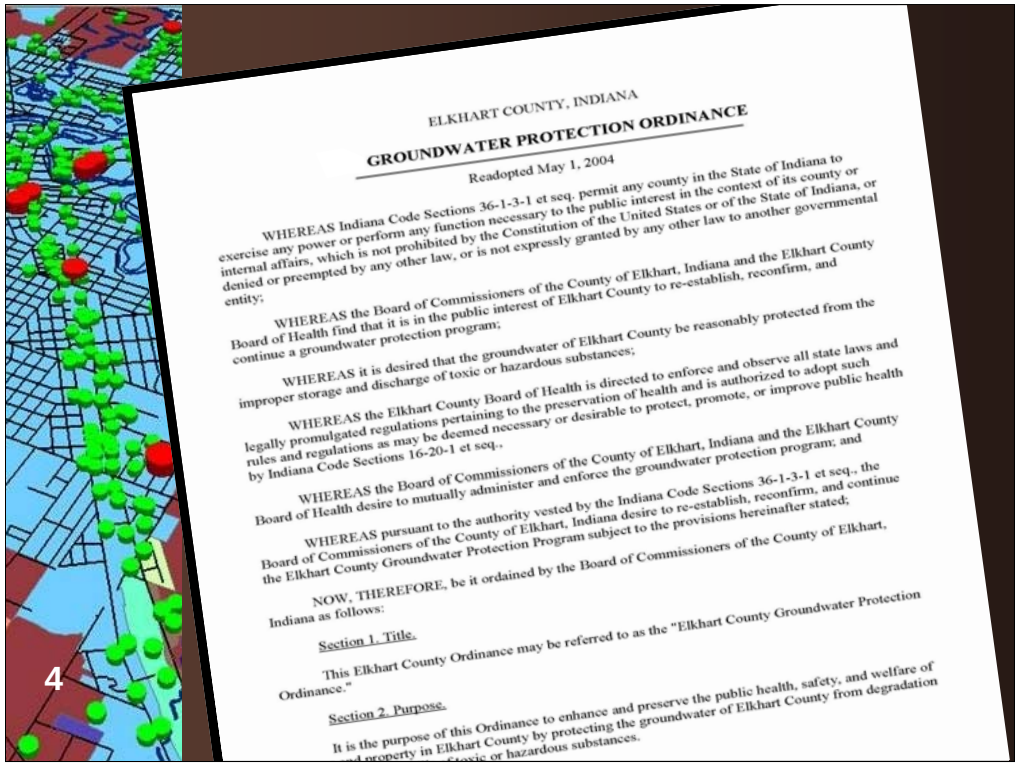
Consider building a Brownfield prevention program by recycling.

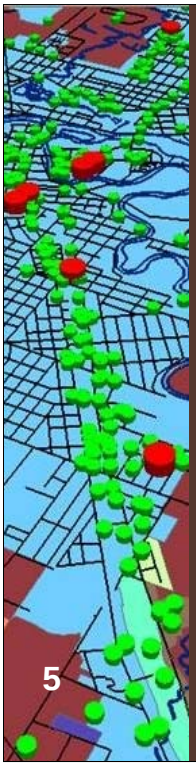
You can forge new tools from old ones

such as . . .

3

Elkhart County Indiana


4
ELKHART COUNTY, INDIANA
GROUNDWATER PROTECTION ORDINANCE
Readopted May 1, 2004
WHEREAS Indiana Code Sections 36-1-3-1 et seq. permit any county in the State of Indiana to exercise any power or perform any function necessary to the public interest in the context of its county or internal affairs, which is not prohibited by the Constitution of the United States or of the State of Indiana, or denied or preempted by any other law, or is not expressly granted by any other law to another governmental entity;
WHEREAS the Board of Commissioners of the County of Elkhart, Indiana and the Elkhart County Board of Health find that it is in the public interest of Elkhart County to re-establish, reconfirm, and continue a groundwater protection program;
WHEREAS it is desired that the groundwater of Elkhart County be reasonably protected from the improper storage and discharge of toxic or hazardous substances;
WHEREAS the Elkhart County Board of Health is directed to enforce and observe all state laws and legally promulgated regulations pertaining to the preservation of health and is authorized to adopt such rules and regulations as may be deemed necessary or desirable to protect, promote, or improve public health by Indiana Code Sections 16-20-1 et seq.,
WHEREAS the Board of Commissioners of the County of Elkhart, Indiana and the Elkhart County Board of Health desire to mutually administer and enforce the groundwater protection program; and
WHEREAS pursuant to the authority vested by the Indiana Code Sections 36-1-3-1 et seq., the Board of Commissioners of the County of Elkhart, Indiana desire to re-establish, reconfirm, and continue the Elkhart County Groundwater Protection Program subject to the provisions hereinafter stated;
NOW, THEREFORE, be it ordained by the Board of Commissioners of the County of Elkhart, Indiana as follows:
Section 1. Title.
This Elkhart County Ordinance may be referred to as the "Elkhart County Groundwater Protection Ordinance."
Section 2. Purpose.
It is the purpose of this Ordinance to enhance and preserve the public health, safety, and welfare of

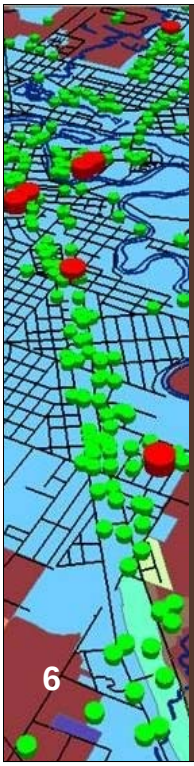


The Groundwater Protection Ordinance of Elkhart County

- Prompted by groundwater contamination events almost three decades ago, including NPL Superfund sites
- 5 years from input, writing, hearings, to authorization

5

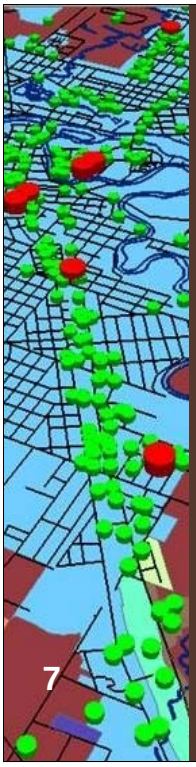
Elkhart County Indiana



The Groundwater Protection Ordinance of Elkhart County

April 1984	Formation of GW advisory committee
Summer 1985	Survey of local industries to ascertain potential problems
Summer 1986	Voluntary compliance follow-up
Spring 1987	Formation of GW technical/citizen review group
Summer 1987	Draft GWPO released
Winter 1987	Comments incorporated and redraft released
Fall 1988	Comments incorporated/final draft released
May 1, 1989	GWPO adopted into rule

6



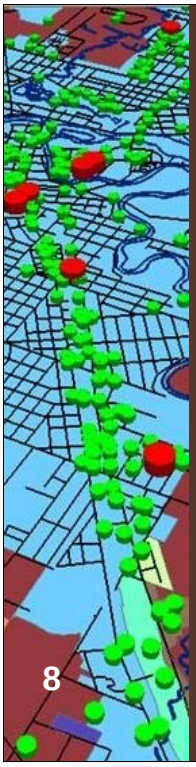
The Groundwater Protection Ordinance of Elkhart County

The purpose is prevention:

- To help prevent groundwater contamination
- To measure, document and follow sites with chemical activity
- To reflect and comply with applicable state and federal codes

7

Elkhart County Indiana



The Groundwater Protection Ordinance of Elkhart County

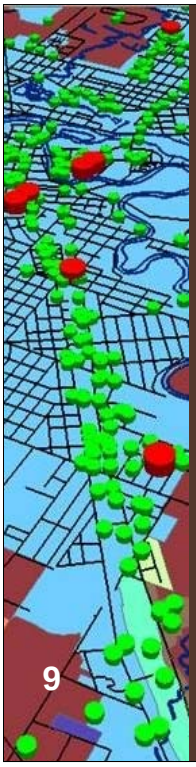
The Inspection Process

Scope:

1. Gives power of entry and routine inspection, to determine compliance with ordinance provisions, at facilities with
   - toxic / hazardous materials
   - onsite wastewater systems (septic or drywells)

8

Elkhart County Indiana



The Groundwater Protection Ordinance of Elkhart County

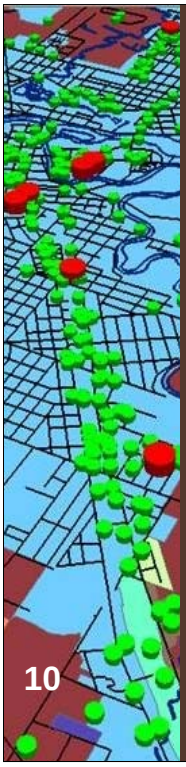
The Inspection Process

Scope, continued:

2. Proper storage of toxic/hazardous materials
3. Testing of wastewater systems
4. Reporting and cleanup of spills
5. Perform unofficial basic audits for compliance with RCRA, NPDES, and air permitting

9

Elkhart County Indiana



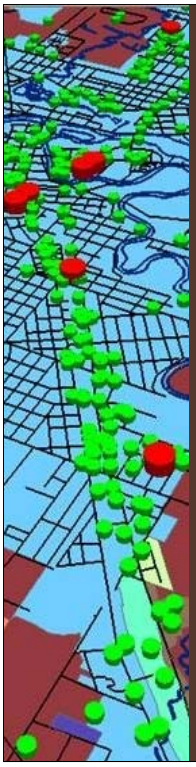
The Groundwater Protection Ordinance of Elkhart County

The Inspection Process goes the extra mile with onsite prevention tips, training and education.

- The ordinance has evolved to include education as well as enforcement
- Industry is receptive to this non-threatening approach and educational component

10

Elkhart County Indiana

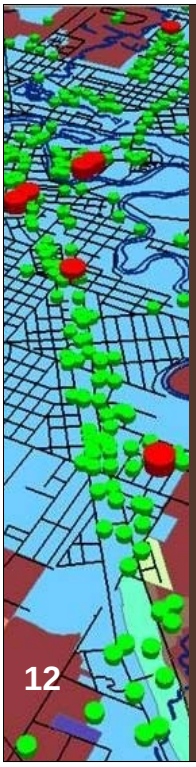


The Groundwater Protection Ordinance of Elkhart County

Chronology of DATA MANAGEMENT

- Incident and historic paperwork (1970s)
- + inspection reports (1989)
- + an R-based system (to create index)
- + state and fed actions at properties
- + MS Access for facilities and inspections (1998)
- and at this point...

Elkhart County Indiana

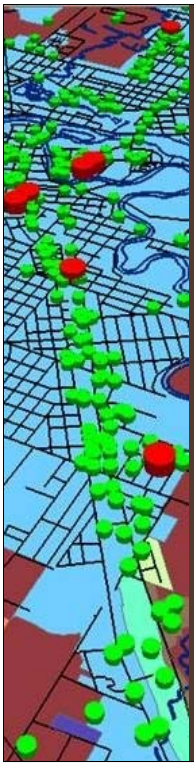


Our DATA MANAGEMENT was an oxymoron

- 5,100 sites in 44 file drawers
- filed by business name, not location
- so properties with several businesses over time = piecemeal property histories
- labor intensive queries only
- not all city/state/fed actions or testing
- no community-wide picture

12

Elkhart County Indiana

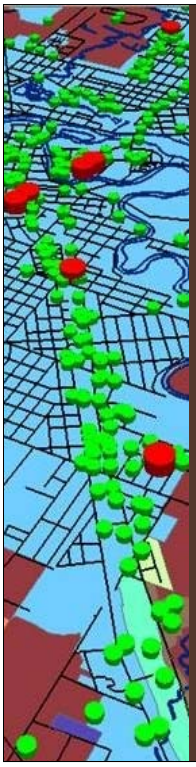


Our DATA MANAGEMENT was an inefficient, ineffective, and time consuming.

At the same time, Elkhart County like other communities was told

You need a dynamic Brownfield INVENTORY !

Elkhart County Indiana

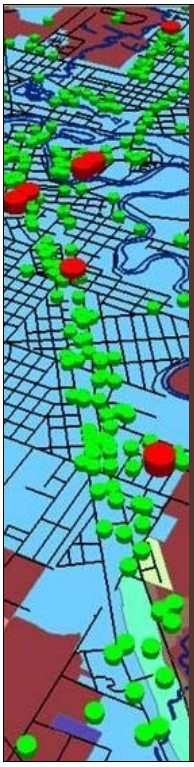


Chronology of DATA MANAGEMENT continued

2006: a new County Comprehensive Plan called for better land use management:

- reduce urban sprawl by redeveloping Brownfield and other underutilized sites and existing infrastructure
- incentivize Brownfield reuse
- regard Brownfield inventory as a repository of economic development opportunities

Elkhart County Indiana



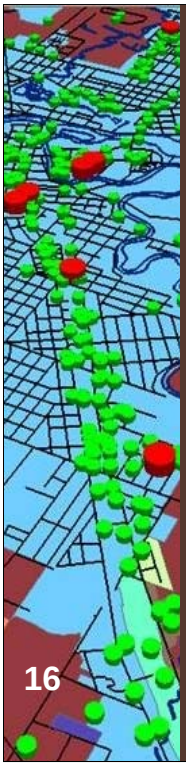
Chronology of DATA MANAGEMENT continued

At the same time access to public records and information increased, demanding more time and attention prompting the need for drastic change

You cannot manage
what you cannot measure
John W. Thompson

We had yet to identify,
let alone measure and manage,
the Brownfields of Elkhart County

Elkhart County Indiana



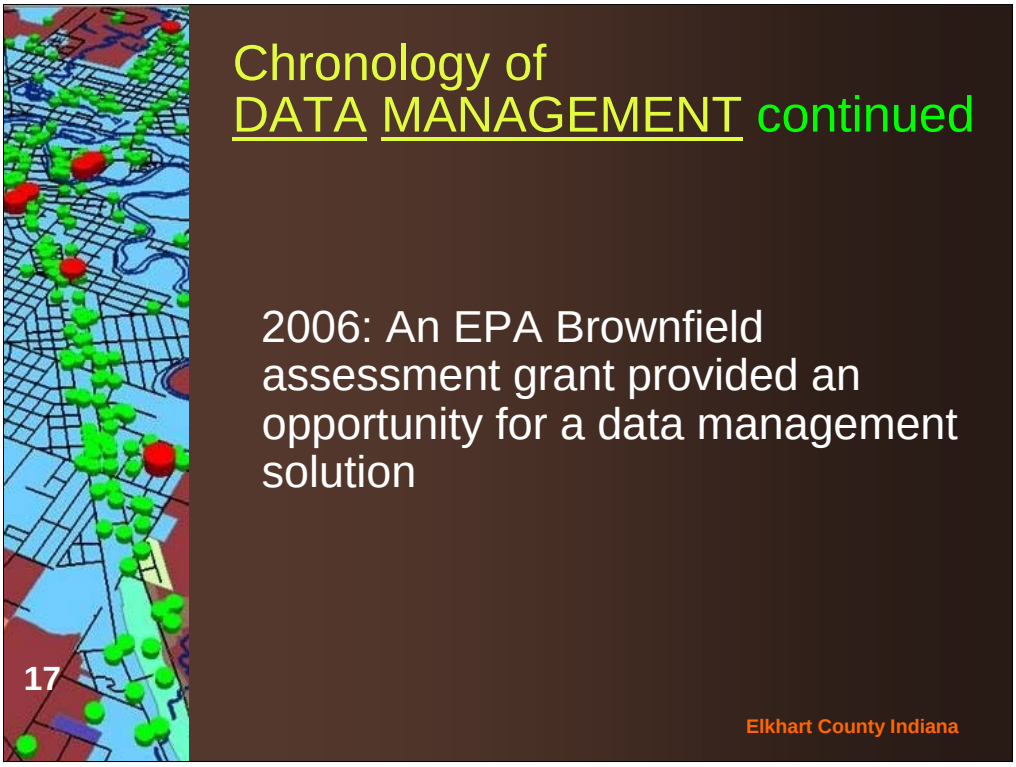
The Brownfield Prevention Initiative

Ryan Eckdale Dudley

GIS Coordinator
and
Computer Applications Designer

16

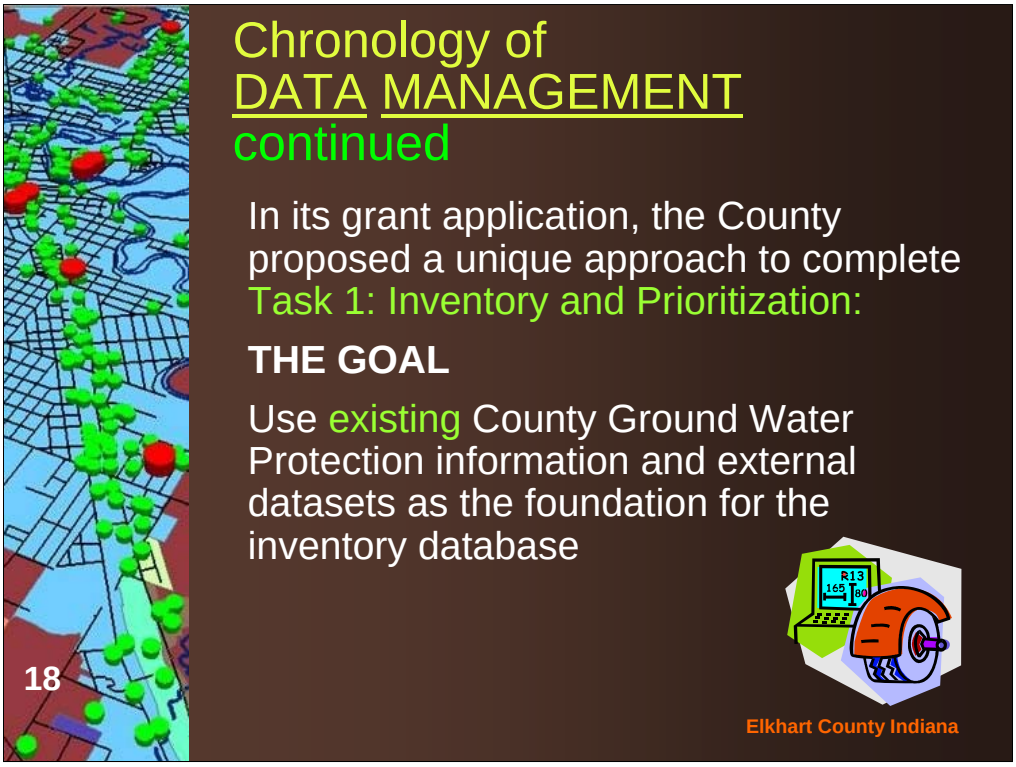
Elkhart County Indiana



<In 2006, Elkhart County was awarded it's first 2 USEPA Community Wide Site Assesssement Grants

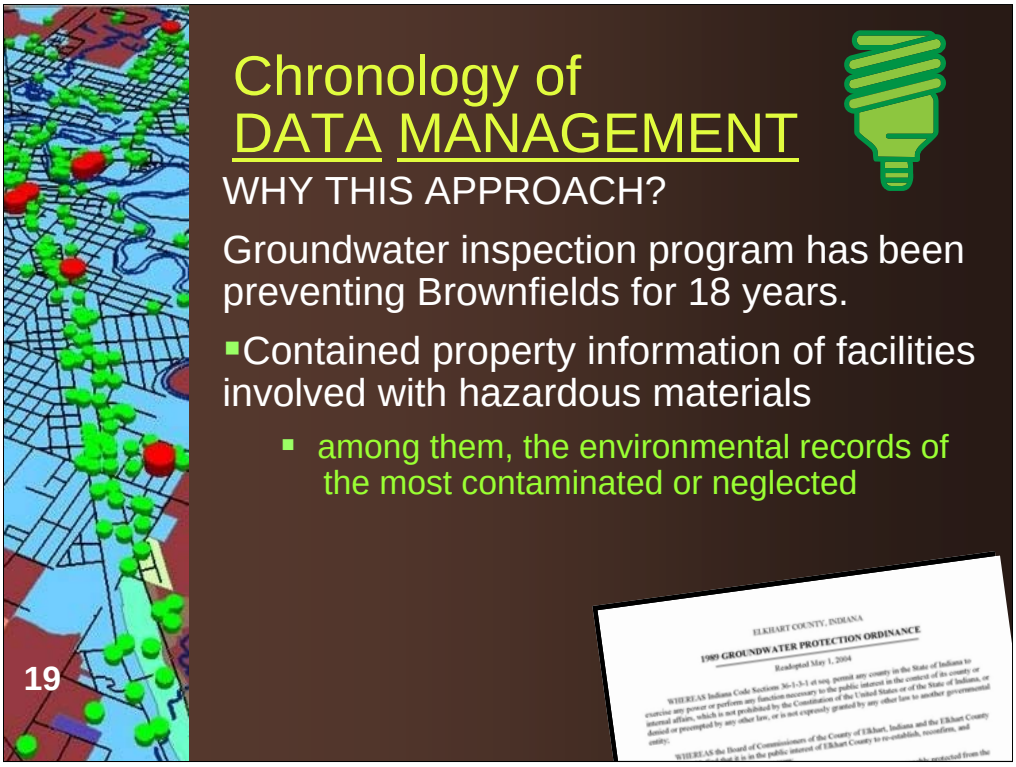
<Elkhart is one of the top ten counties, highest percentage of manufacturing employment in the

<This opportunity provided Elkhart with the necessary funding to develop a comprehensive data management solution and build upon efforts to prevent Brownfields



In it's grant application the County proposed an unique approach to complete a County-Wide Inventory and Prioritization Task>

THE GOAL, was to utilize existing information including the Counties Groundwater Protection Information and External datasets as the foundation of the inventory database



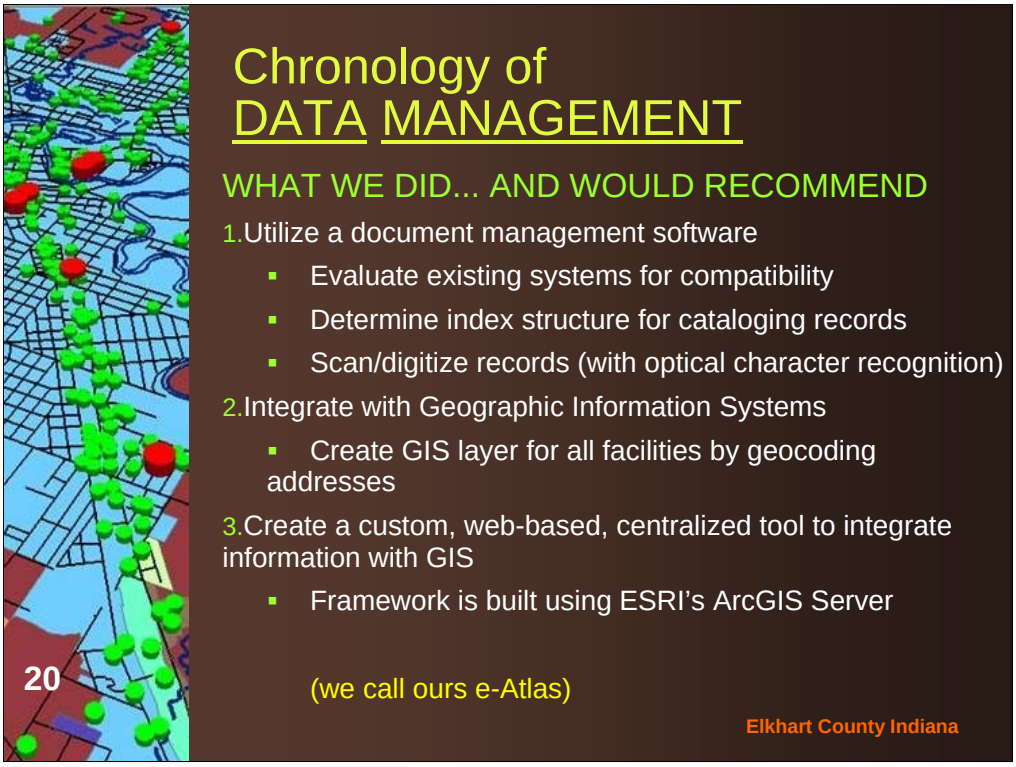
In reality, the Groundwater Inspection Program had been developing an inventory and preventing potential Brownfields throughout the County for the past 18 years>

It's RECORDS CONTAINED property information for facilities involved with Hazardous Materials, which is a key factor in assessing Brownfields.

And among them, records of the most contaminated or neglected.

With over 5100 sites in the program, and nearly 30% transition to new ownership, each year, the Benefit to using these records to create an Brownfield inventory was realized.

Unlike many grantees, who may have to create an Inventory from scratch, Elkhart was fortunate and had a big head head start.



In order to effectively utilize the Groundwater Inspection Program Records as an basis for Inventory and Prioritization the county faced few challenges.

CHALLENGE 1

<As mentioned previously, over the last 18 years the County had accumulated over 44 file drawers of paper based records containing important historic information to each facility.

<Access to the records was cumbersome and labor intensive

<Records were cataloged by Facility Name only

<Retrieving records based on location was very difficult

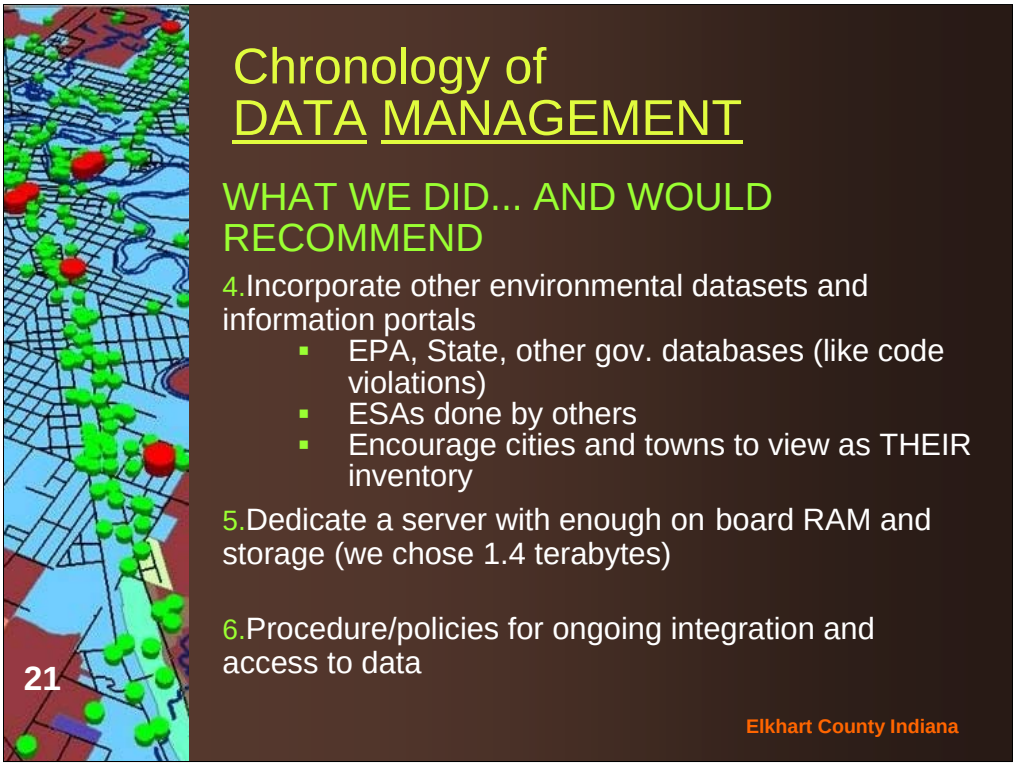
Utilizing a Document Management System to manage historic and ongoing paper-based information was an key component to creating an comprehensive Inventory

<A Document Management System computer system used to track and store electronic documents and/or images of paper documents

<A Document Mangment System Provided quick, easy access to all inspection records using a computer.

<The health Department selected Laserfiche as an Enterprise Level Document Management Solution Experience based on experience and availability in other departments and the cost savings of upgrading verses an purchasing a complete new system

<We also determined that utilizing an web-based module would allow more flexibility for access to documents and integration with other proposed applications developments



Challenge 4

MANY external (location based) environmental data resources were available to the county thru various organizations.

<Such as EPA Facilities, State UST databases, and other governmental databases/GIS layers

<Our goal was to include those datasets into e-Atlas for “one point” access.

<In addition, Elkhart has been promoting to other entities in the county (such as the City of Elkhart, and Goshen, both grant recipients) to provide them with completed ESA’s to be accessible thru e-Atlas

<Also, to encourage these entities to view as their inventory

Challenge 5

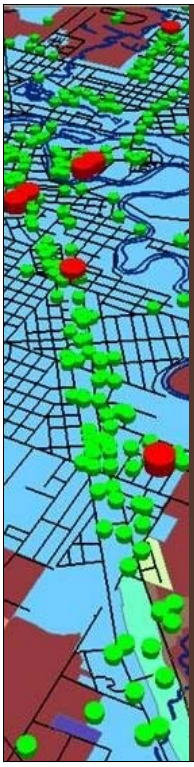
These types of applications require lots of processing and storage

<Recommend evaluating existing Hardware, prior to developing this type of application

<Elkhart decided to purchase a new server to run e-Atlas.

Challenge 6

Ongoing management of such a system is important

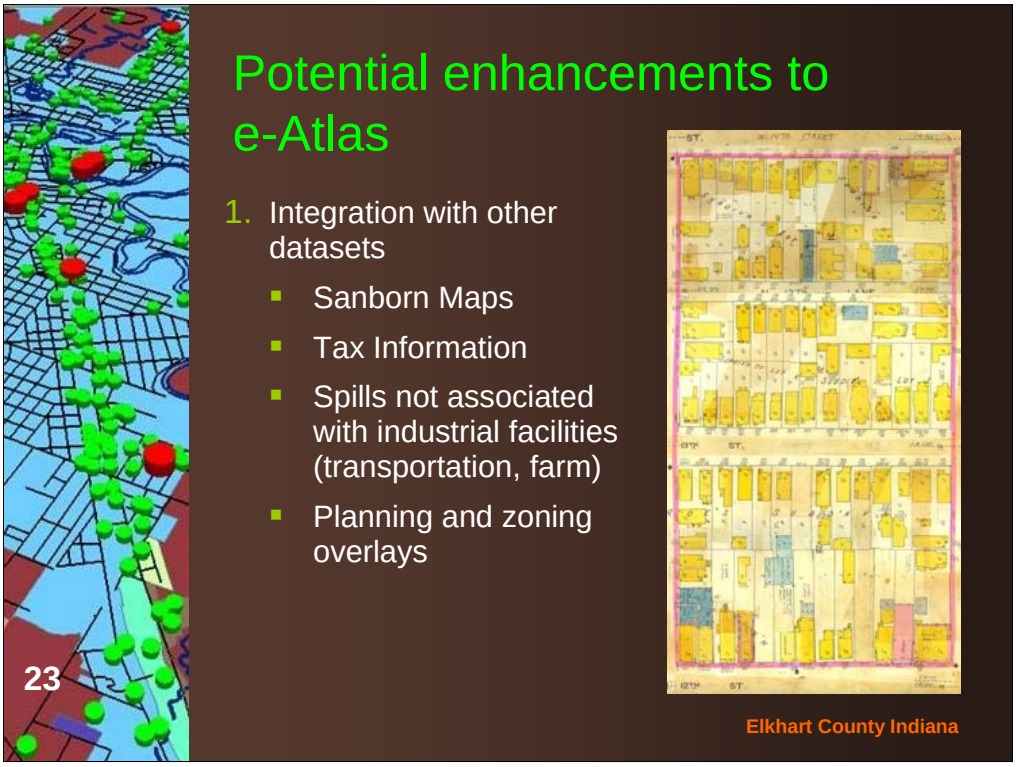


The intent of e-Atlas

1. Make it scalable, flexible, integrated, accessible and become a centralized resource for data management and information retrieval
2. Perform a variety of queries
   - Keywords, Attributes
   - Spatially
3. Able to rank/prioritize inventory sites county-wide
   - Utilization Factors
   - Environmental Status

Elkhart County Indiana

<Keywords, Attributes



I am going to demostrate by showing some screen shots, but first I would like to discuss some potential future enhancements

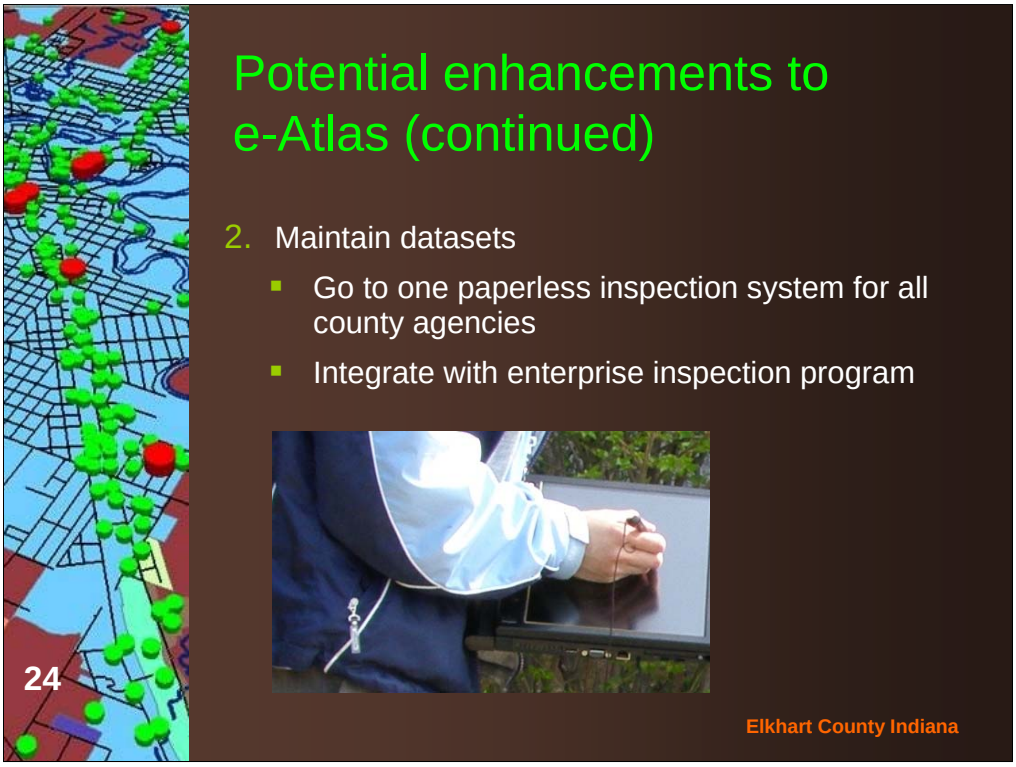
<Incorporate Sanborn Map Data

<Integrate with Tax Information

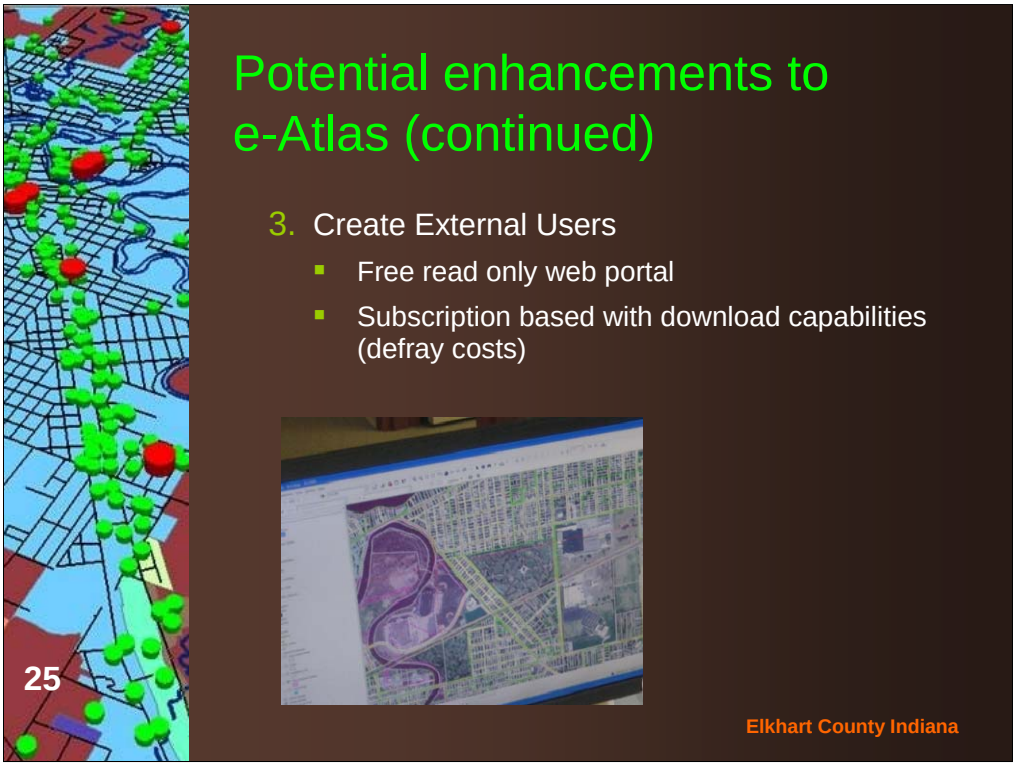
Tax Delinquent or Not

<Include Spill information that is not directly associated with industrial faclities that might impact the assessement of a site (such as transportation, farming)

<Include additional planning and zoning overlays



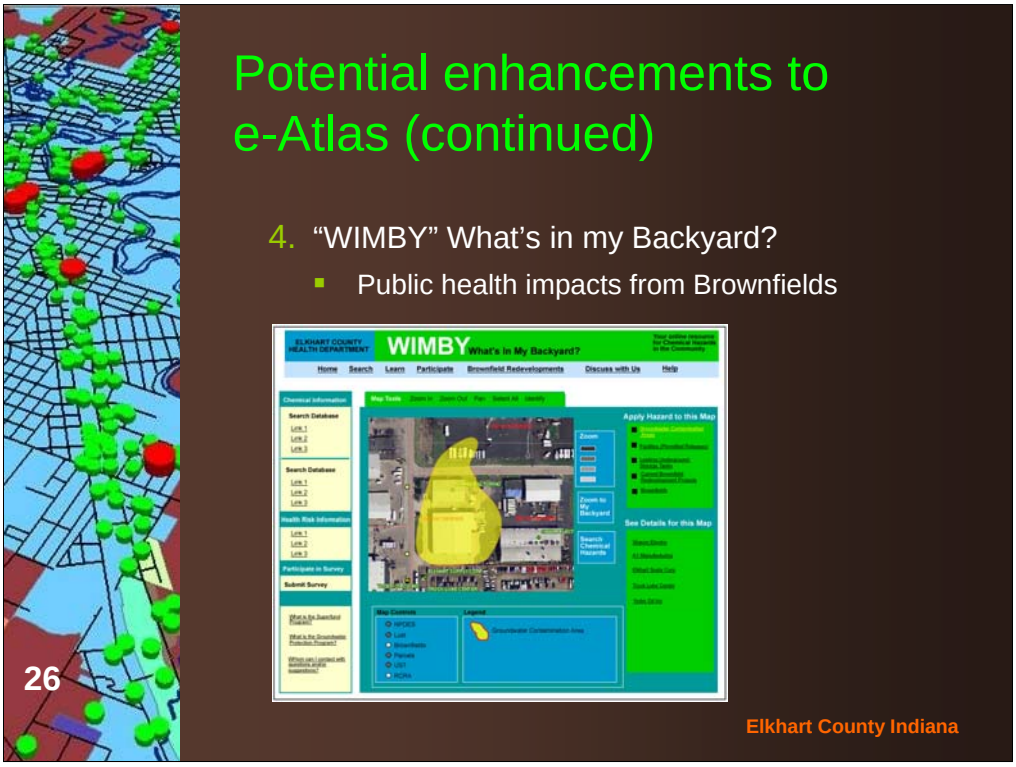
Currently the County is evaluating Enterprise Paperless Inspection applications, which would allow Inspectors to maintain the dataset without adding additional documents to the Document Management System.



Create external users,

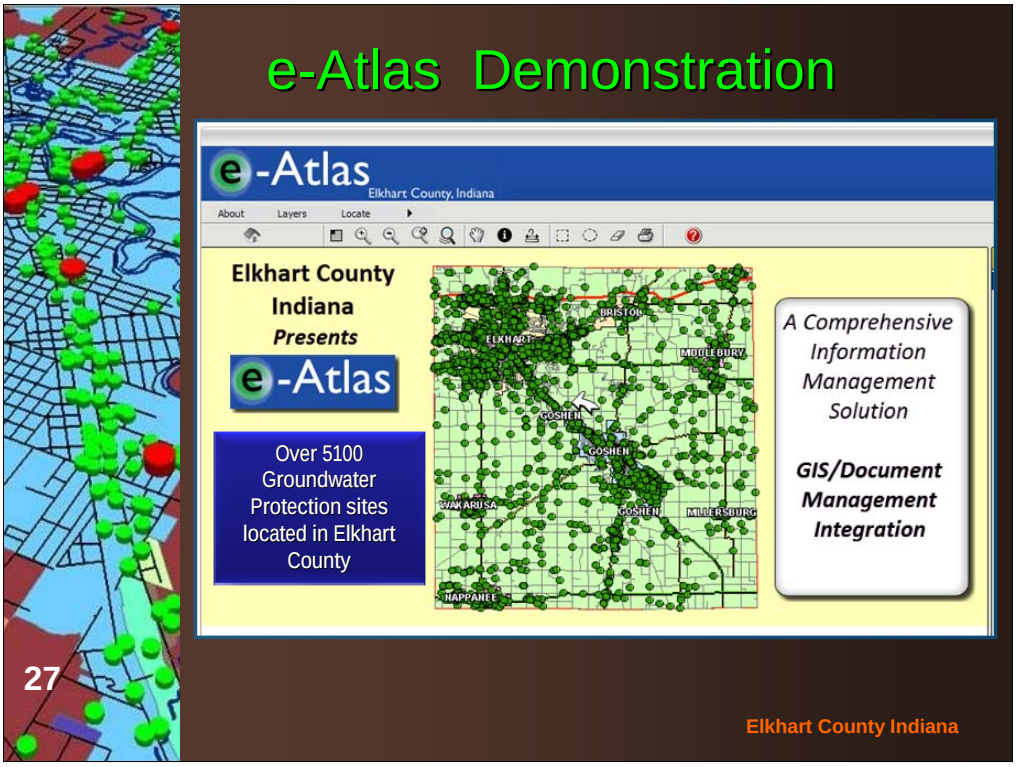
currently the system is only available at the county but was designed to be deployed over the internet.

The county has discussed options for generating additional revenue to defray the ongoing costs associated with Maintenance.



<Utilize as basis for other projects

<Recently Elkhart County was awarded an grant from The Center of Disease Control where they proposed to develop an GIS-Based website to educate users about public impacts from Brownfields. It's being call "WIMBY", or what's in my backyard.



I would like to take this opportunity to demonstrate the look ,feel, and functionality of e-Atlas by viewing series of screen captures…

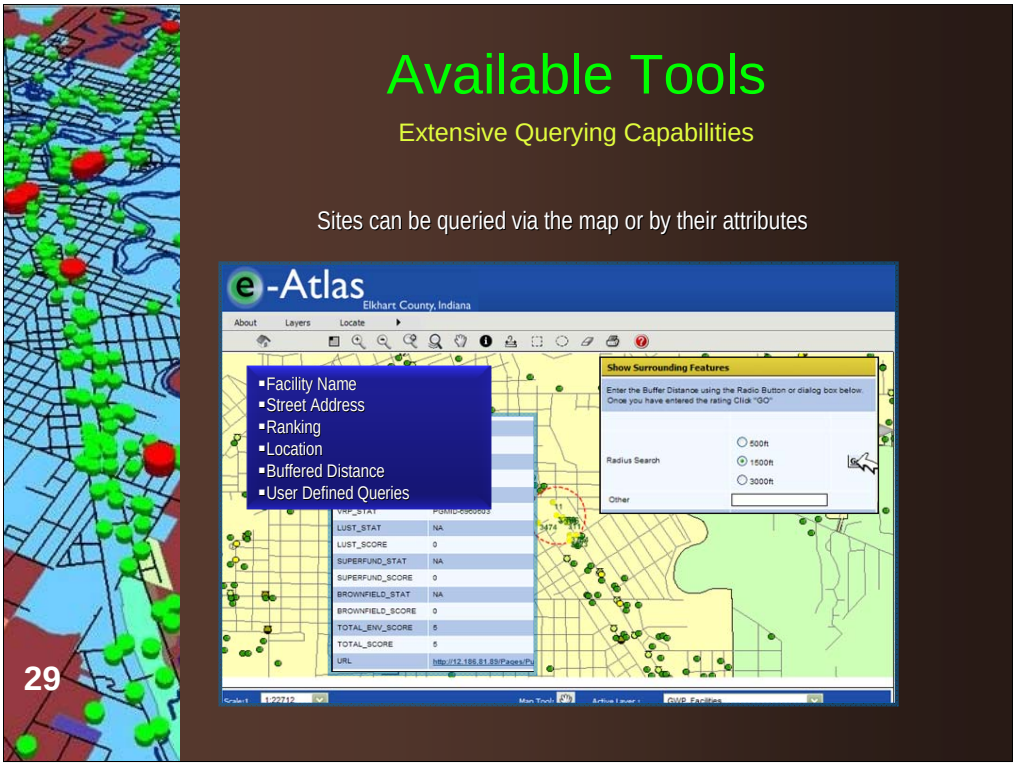
< As you can see e-Atlas offers a map based interface for interacting and viewing the available data.

<Shown above, are the 5100 Groundwater Protection Sites located in Elkhart County

Map Layers change based on your extent..

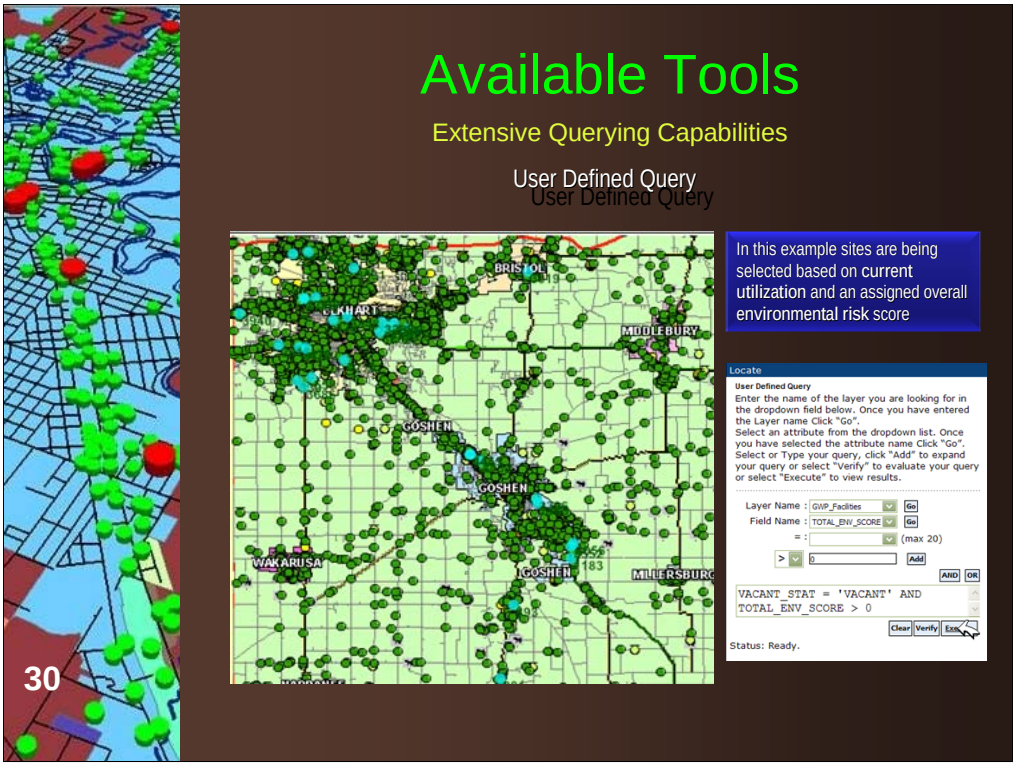
<Mapping tools provide easy access to site information, with the ability to interact with the map in many ways

<After querying for or selecting sites via a variety of map tools, USERs of the system have access to site history and scoring information



Sites can be queried via the map or by their attributes such as (Facilty Name, Street Address, Ranking, Custom)

Illustrated above is a query which allows users to select sites based on the Buffer Distance



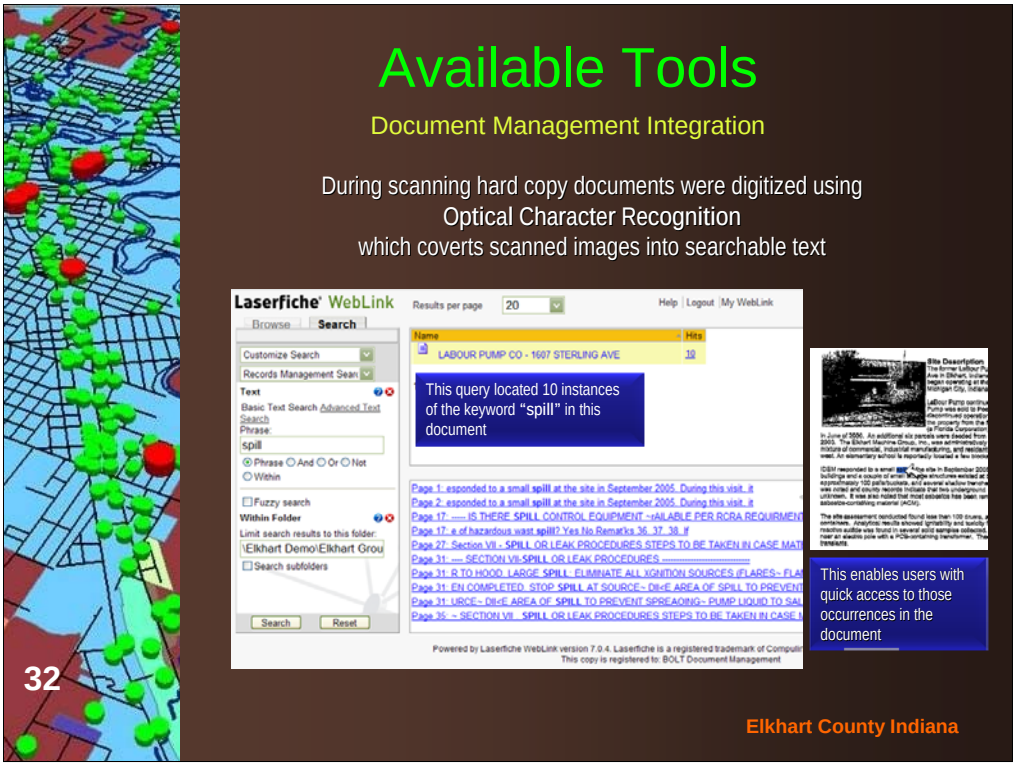
e-Atlas has the ability to perform user defined queries.

In this example… sites are being selected based on current utilization and an assigned overall

environmental risk score

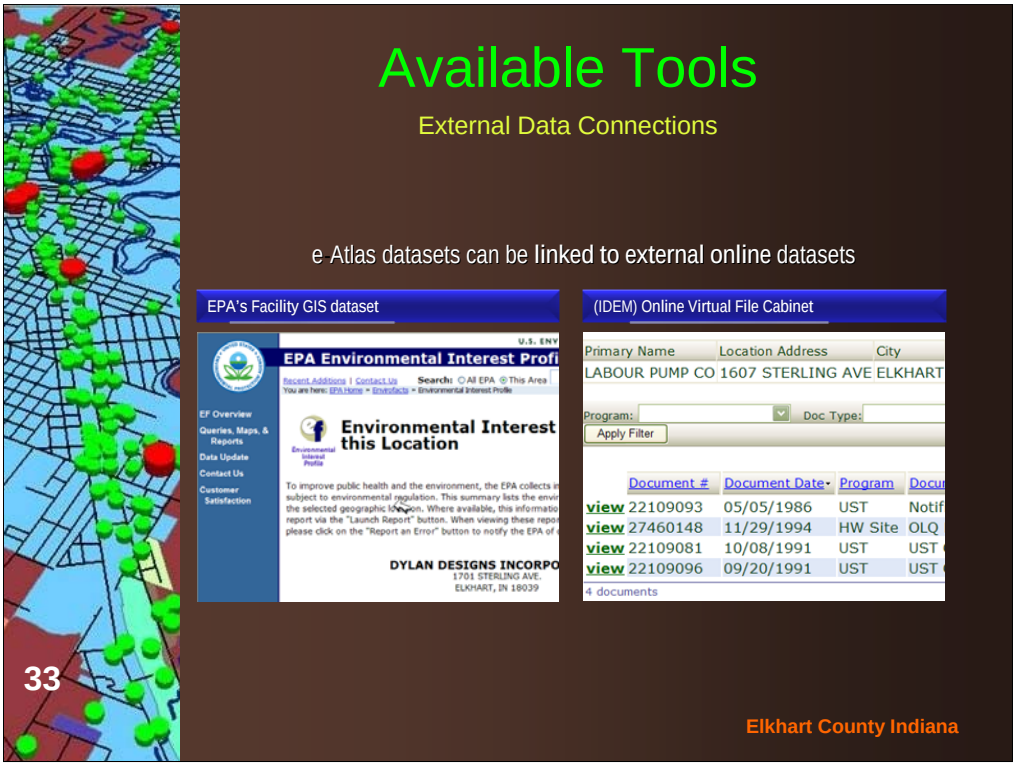
<After selecting a site, users have access to all of Elkhart County's Groundwater Protection Program scanned records using a linked DMS.

<e-Atlas currently maintains over 180,000 pages of historic site information and new records are being created and updated daily



During scanning hard copy documents were digitized using Optical Character Recognition which coverts scanned images into searchable text

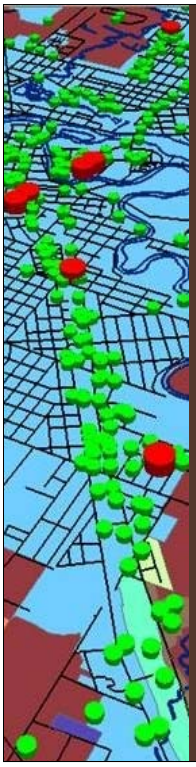
This enables users with quick access to those occurrences in the document



e-Atlas datasets can be linked to external online datasets

EPA's facility GIS dataset

IDEM-Online Virtual File Cabinet



For More Info

GWPO-Elkhart County

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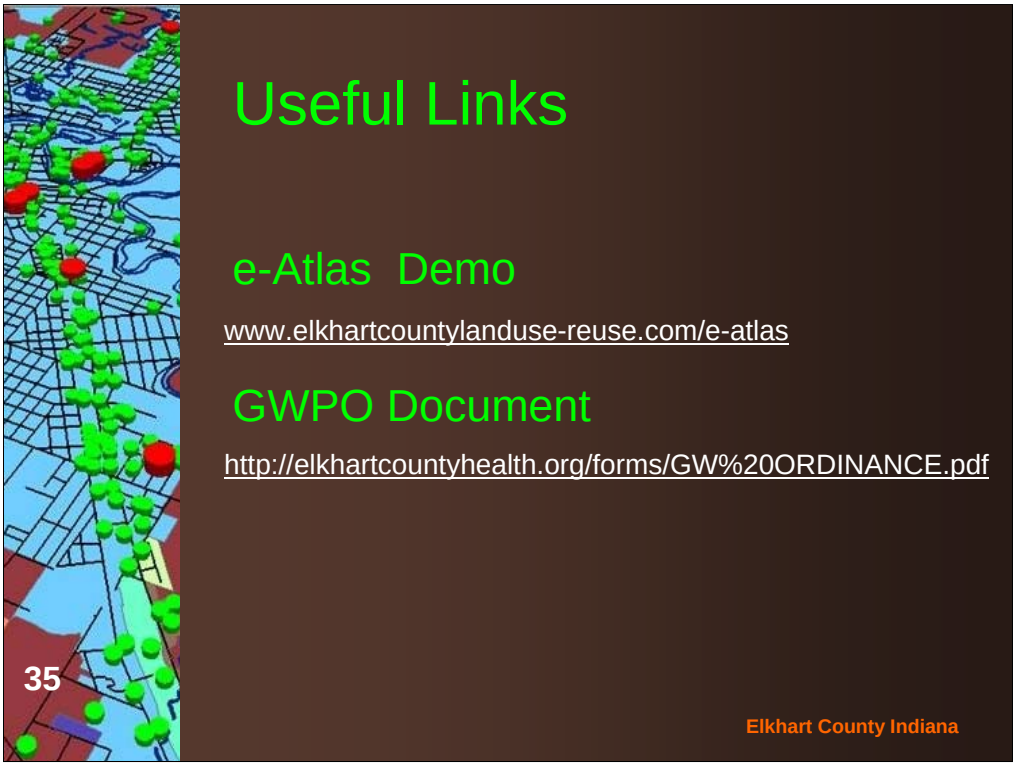
Environmental Health Supervisor
Jhulewicz @ elkhartcounty.com
574.875.3391

e-Atlas SYMBIONT

Ryan Eckdale-Dudley, GISP
GIS Coordinator
ryan.dudley @ symbiontonline.com
414.755.1131

Elkhart County Indiana



On this slide, we have added the URL to an short movie that we use to demonstrate e-Atlas

Also,

The URL for downloading the Groundwater Protection Ordinance