# State of Illinois

# Environmental Protection Agency

## IEPA Document Explorer

http://external.epa.illinois.gov/DocumentExplorer

Category:
Open Government and Data

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# I. Executive Summary

The Illinois Environmental Protection Agency (Illinois EPA) recently implemented a self-service web application to improve public access to agency records formerly requested under the Freedom of Information Act. This application improves transparency, responsiveness and FOIA compliance. The project follows the Illinois "First" technology strategy which is focused on "Smart Citizen" enablement, and strives to collectively improve services and experiences for all citizens, businesses and visitors across the State through the improved use of technology.

The Illinois Freedom of Information Act provides the public with a method to submit requests for public records to state and local government entities, with the goal of providing the public with full and complete information regarding governmental affairs. Since 2012, the Illinois EPA has received over 5,000 Freedom of Information Act (FOIA) requests annually. Annually, these requests represent over 200,000 documents consisting of over four million pages of information. Standard FOIA requests require a response within five business days of receipt, and this statutory deadline may only be extended by an additional five days for certain reasons specified under FOIA. Given the high volume of requests, the Illinois EPA had historically struggled to remain in compliance with the strict statutory timelines imposed by FOIA. From 2012 to 2014 Illinois EPA accrued an approximate four month backlog of pending FOIA requests.

In July 2015, the Agency introduced a self-service web application called IEPA Document Explorer to improve transparency and access to frequently requested Agency documents. Prior to the introduction of the IEPA Document Explorer application, the only method available to the public for obtaining records was through the Agency's FOIA request submission process. When FOIA requests are received, Illinois EPA personnel are responsible for locating documents responsive to the request, often requiring the compilation of hundreds or thousands of pages of records.

The new IEPA Document Explorer web application allows businesses and the public to easily search more than 26,000, sites/facilities for air construction and operating permits, National Pollution Discharge Elimination Systems water discharge permits, Leaking Underground Storage Tank technical documents, Site Remediation Program technical documents and State Response Action Program sites technical documents. The application enables Illinois EPA to provide citizens and businesses with immediate access to over 520,000 documents consisting of more than 13.6 million pages. During the first five months of the applications launch, the Agency realized a 42% percent reduction in total FOIA requests. Implementation of the application has been extremely successful in leveraging technology to improve services and experiences to citizens and business seeking agency records.

## II. Project Narrative

## a) Concept

The primary objective of this project was to increase Agency transparency by providing open access to agency records. This in turn would lead to a reduction in overall FOIA requests allowing the Agency to create business efficiencies that would reduce the FOIA backlog and improve compliance with FOIA response timelines.

The technology behind this web application relies upon several components that all work seamlessly together through back-office Agency integrations. From the outset the goal was to bring together the Agency's core business data, the Agency's document imaging system, and the Agency's extensive Geographic Information System capabilities to create a robust user experience for self-service document retrieval. Users can not only perform searches based upon several tabular data searches, but also can to conduct location based searches using intuitive mapping functions for identifying locations based upon proximity and interest. In addition, this application is mobile ready allowing customers and citizens the ability to use any mobile platform while on the go.

The IEPA Document Explorer application architecture is based upon the latest N-Tier web technologies. At its core the IEPA Document Explorer uses the Model, View, Controller (MVC) development framework for applications. The Bootstrap framework was leveraged to provide a consistent, streamlined, and aesthetically pleasing user experience. This framework also provides mobile ready transitions enabling the application to dynamically scale to any device.

Behind the IEPA Document Explorer application is a robust data engine that drives both tabular data searches as well as geospatial map searches. Data from several Agency data systems is indexed and warehoused to provide the basic context for searching and retrieving records all within a few seconds response time.

From inception this project posed numerous technical challenges. The largest of these challenges was working within the construct of a heterogeneous data environment. Data infrastructure needed for contextual customer searches resided in multiple data systems across multiple platforms. To ensure a robust user experience, data, from these systems was first warehoused and indexed providing both speed and reliability for searching.

Another significant technical challenge was working with our infrastructure team in migrating to the latest version of our document imaging system. This allowed for the newest capabilities in searching and retrieval of imaged documents and provided our customers with the best overall user experience.

## b) Significance

Leaking underground storage tanks (LUSTs) are a significant source of environmental contamination and often pose substantial threats to human health and safety, including the following: fire and explosion; inhalation of dangerous vapors; contamination of soil and groundwater; contamination of drinking water; and contamination of streams, rivers, and lakes. Additionally, the responsibility for clean-up and remediation of these sites is often an important consideration in the sale of property that has been impacted by a LUST incident, as well as efforts to clean-up sites that have been impacted by other incidents of environmental concern.

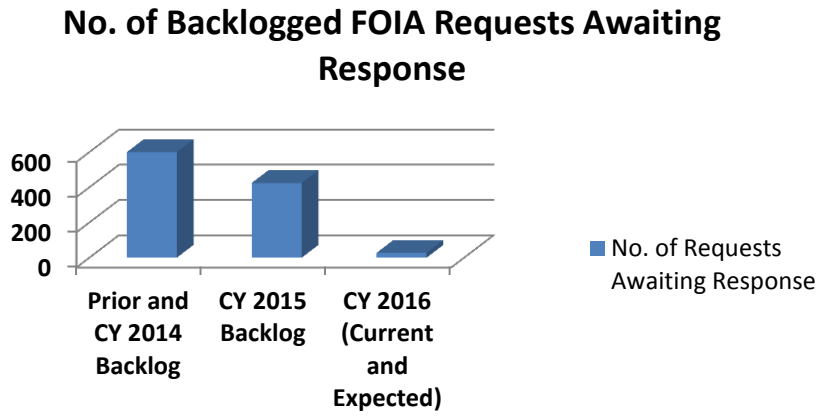
The public has a significant interest in environmental concerns and information related to site remediation activities. To facilitate quick and easy access to such records, the Illinois EPA has made a substantial portion of records related to these types of activities available to the public through the IEPA Document Explorer tool. In addition, IEPA records that are related to other areas of environmental concern, including water discharge permits and air permits, are available through the IEPA Document Explorer tool as well.

Due to the immediate success of the IEPA Document Explorer tool the Agency will continue to make additional records available through the use of this new tool.

## c) Impact

Prior to implementation of this tool, the Illinois EPA routinely handled over 6,000 individual FOIA requests consisting of 15,000 to 20,000 site files. Due to the volume of material requested, the agency was unable, in most instances, to comply with the statutory FOIA response deadlines.

Upon initial launch of the application, the Agency experienced an initial 42% decrease in total number of FOIA requests. Since inception, a 33% reduction in previous year FOIA requests has been realized. This reduction continues and has played a significant role in allowing the Illinois EPA Records Division to significantly reduce the FOIA backlog (see graphic below).




The implementation of the IEPA Document Explorer application has allowed Illinois EPA to provide the public with immediate and direct access to Agency records that would otherwise had to be provided through the Agency's FOIA request process. In addition to the efficiencies already realize above, the Agency has been able to save approximately $250,000 in annual personnel costs by not backfilling FOIA staff members that recently retired. The IEPA Document Explorer application serves a good example of how technology deployed in an efficient manner can streamline Government and improve access to vital government information.