

### Groundwater Contamination Mapping Project



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MINNESOTA POLLUTION CONTROL AGENCY

### The Problem: Data Accessibility Gap



## What we are doing



### What's in an Environmental Report?

- Text —
- Tables and figures
- The data \_

Appended documents mostly laboratory reports



### Closing the Data Accessibility Gap

## Old Way data lives in documents

# New Way

data lives in a publically accessible database

### **EQuIS Implementation Project**



### A Tale of Two Projects



Transformed data system

Increased capacity to share data and information



## "I can tell you everything you need to know in one word...STORY"

– Hans Zimmer

Pirates of the Caribbean Sherlock Holmes The Dark Knight Interstellar The Lion King Gladiator

### A Tale as Old as Time



#### Data Accessibility Project or Story Telling Project?

### Data accessibility project







### **Application Elements**

## Story

- What is it?
- Where did it come from?
- What's been done about it?
- What work is planned?
- What does it mean for me?



- Groundwater wells
- Areas of contamination
- Contamination source areas

## Data Download

### Our strategic plan

Sixteen strategic goals for our agency | 2018-2022

MINNESOTA POLLUTION CONTROL AGENCY



#### **Project Timeline**

#### 2017-2019 Data Harvest



#### **Project Timeline**

#### **2019 Map Contamination**

#### Mapping

1<sup>st</sup> draft of groundwater contamination maps Peer review of groundwater contamination maps and dataset

Mapping

Complete by May 2020

2020 Publish

#### Data Transcription

- Student workers transcribed sample location information into electronic data deliverable (EDD)
  - Unique identifiers, coordinates, well construction information
- Taken from printed reports, PDF reports, spreadsheets
  - Found in MPCA digital file storage
  - Found in physical storage systems
  - Sometimes found in a longforgotten box

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### Location Unique Identifiers





#### Location types include

- Wells
- Temporary wells
- Boreholes
- Indoor air
- Outdoor air
- Subslab gas
- Surface soil
- Lakes/streams/wetlands

#### Interagency Standardization

- EQuIS is the state's enterprise database for environmental data
- The Minnesota County Well Index is the primary source of well information for the state of Minnesota
  - MPCA, DNR, MDA, MDH, MGS all have data primacy over certain wells in this database
- Efforts to reduce disparate datasets
  - CWI is official
- EQuIS's role in improving interagency communication

#### Results



- Over 14,000 unique locations established!
  - 11,000 permanent wells and 3000 temporary wells and boreholes
- Over 36,000 samples added!
  - Almost 15,000 field samples
    - 545k results
  - 19,000 QC samples
    - 425k results

#### Data Flow – From a Report to the Web



#### Draft Map



City of Minneapolis, Three Rivers Park District, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

Powered by Esti

### **Draft Story**

#### Learn more about the Superior Plating Inc. Site

Superior Plating Inc. Superfund Site 315 First Avenue NE, Minneapolis, MN 55413 MERLA ID: SR0000131

**Cleanup Progress** 

Discove	ery Investigati	on Cleanup Plan Identified	Cleanup Implemented	Remedy Complete	Long-Term Monitoring	Site Ready for Reuse
(						
0	10	20	30	40 50	60	70

The image above shows the site remedy is ongoing and there remain other stages before the site is ready for reuse. Click on cleanup terms for definitions.

#### **Contamination Summary**

#### What is the source of the contamination?

The site was originally developed by Twin City Rapid Transit Co. in 1891, owned by McMahon Fuel Company from 1923-1954, after which Superior Plating acquired the site and occupied it until 2012. Release was caused by intermittent leaks or seeping from tanks, abandoned barrels, and poorly maintained piping. Disposal occurred from about 1956-2012.

The property was purchased by LMC, A Lennar Company in 2015 and has been redeveloped into Nordhaus Apartments with retail space included.

#### Contamination Summary

- What is the source of the contamination?
- What is the contaminant?
- Where is the contaminated groundwater?
- Where does drinking water come from?
- Is drinking water contaminated, if so, what treatment is in place?
- Is soil or sediment contaminated?
- Are there vapor intrusion concerns?
- Cleanup Actions
  - What cleanup work has been done?
  - What contamination remains at the site?
- What's next?
- Contacts

#### Benefits of Groundwater Contamination Mapping Project



- Map and data will be accessible to
  - Internal staff
  - External parties
  - Public
- The information will be
  - Easily accessible
  - Well documented
  - Meaningful
  - Useable

# Thank you!

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https://www.pca.state.mn.us/groundwater-contamination-mapping-project

