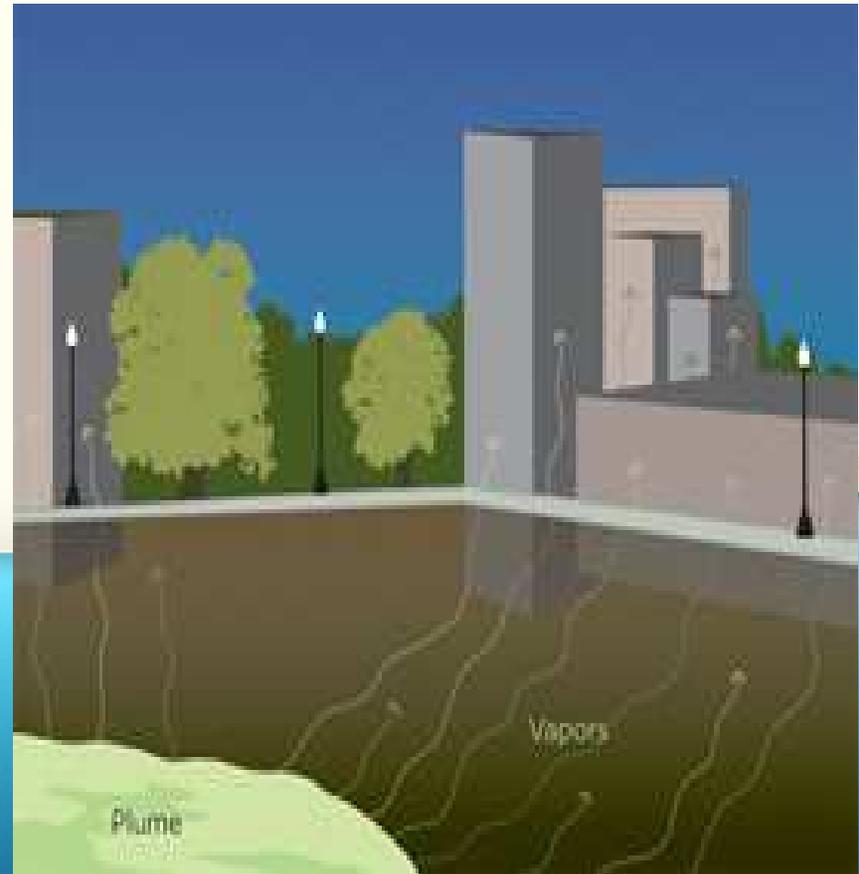


# VAPOR INTRUSION & BROWNFIELDS

Petroleum Vapor  
Intrusion Workshops  
*December 4 & 5, 2013*

Department of  
**Environmental Quality**  
PURE MICHIGAN

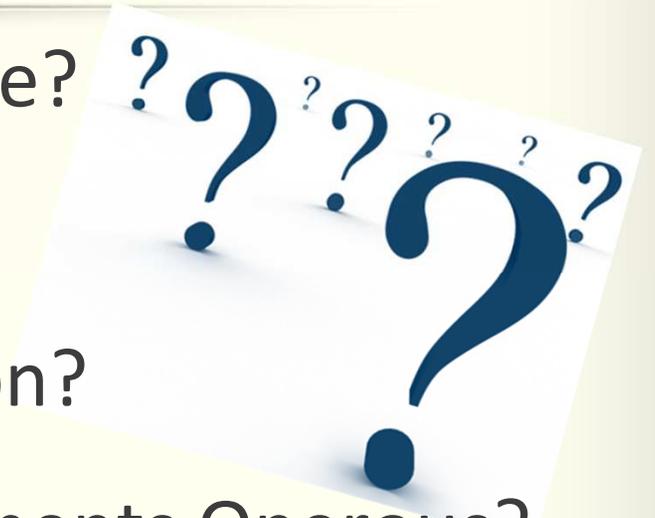


**Carrie Geyer**

*Chief, Brownfield Redevelopment Program  
Remediation & Redevelopment Division*

# Questions Regarding Vapor Intrusion

- Do I Have to Use the Guidance?
- Which Numbers Do I Use?
- Can I Use the OSHA Exemption?
- Aren't the Sampling Requirements Onerous?
- How Does it Impact My Redevelopment?
- How am I Going to Pay for It?



# 2013 VI Guidance

## Do I Have to Use This?

# NO!

- Alternate Approaches Can be Proposed
- Written from Closure Perspective
- Not even SOPs



# What is the Deal with the Numbers?

## Part 201 & 213

### Generic Volatilization to Indoor Air Criteria

- Groundwater – GVIIC
- Soil – SVIIC

### 2013 VI Guidance Screening Levels

- Groundwater
- Soil Gas
- Soil

# Can I Still Use GVIIC and SVIIC?

- **YES!** When Appropriate for Your Site Conditions
- When NOT Appropriate:
  - A Site Specific Approach is Needed
  - Not One “Right” Way to do This
  - “Can” Use VI Guidance Screening Levels as a Site Specific Approach

# Can I Use the OSHA Exemption?

- Yes, IF:
  - Facility classified as Manufacturing (SCIC code);
  - Complies with the MIOSHA; &
  - Air monitoring and hazard communication program account for all hazardous substances of concern



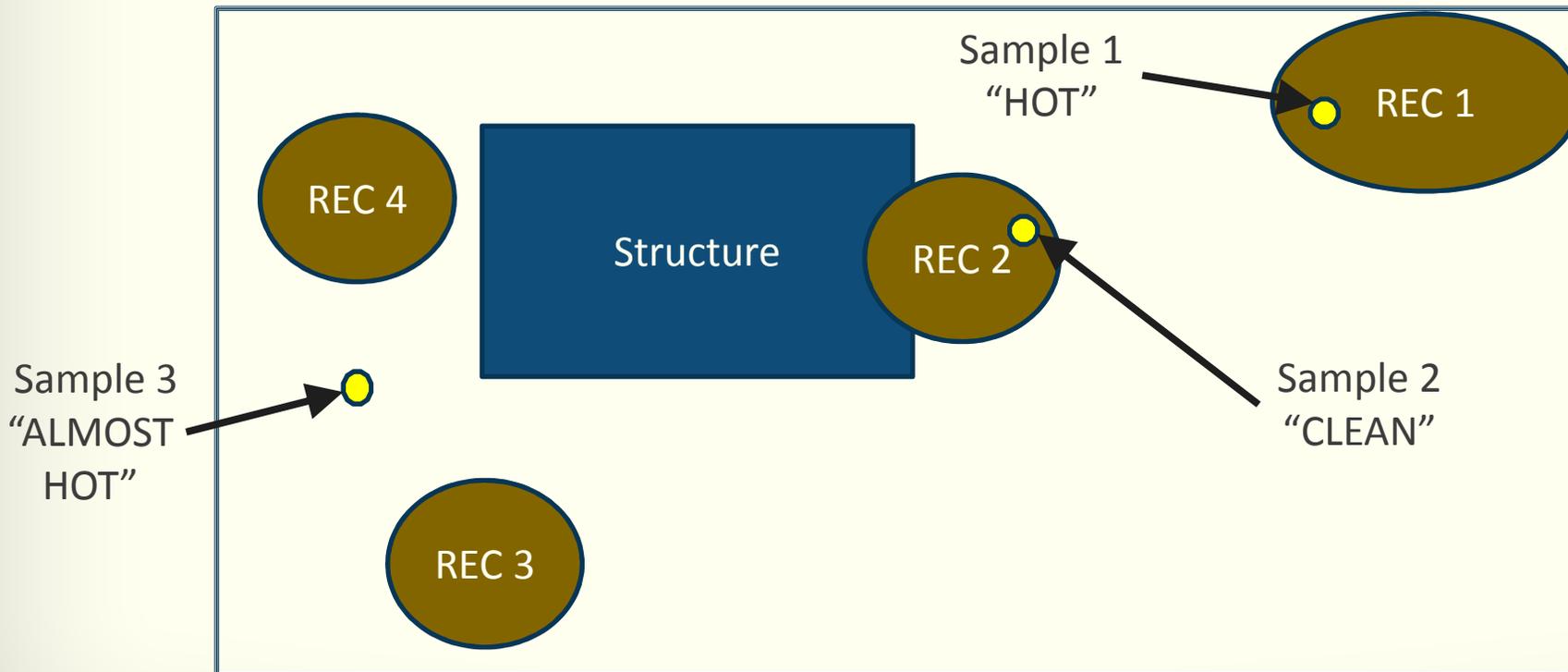
# Do I Need Multiple Rounds of Sampling?

## Collecting Quality Data:

- Location of Samples Relative to Structure and RECs
- Use of Proper Sampling Techniques
- Use of CSM
- Understand what the Data Means or Hire Someone Who Does

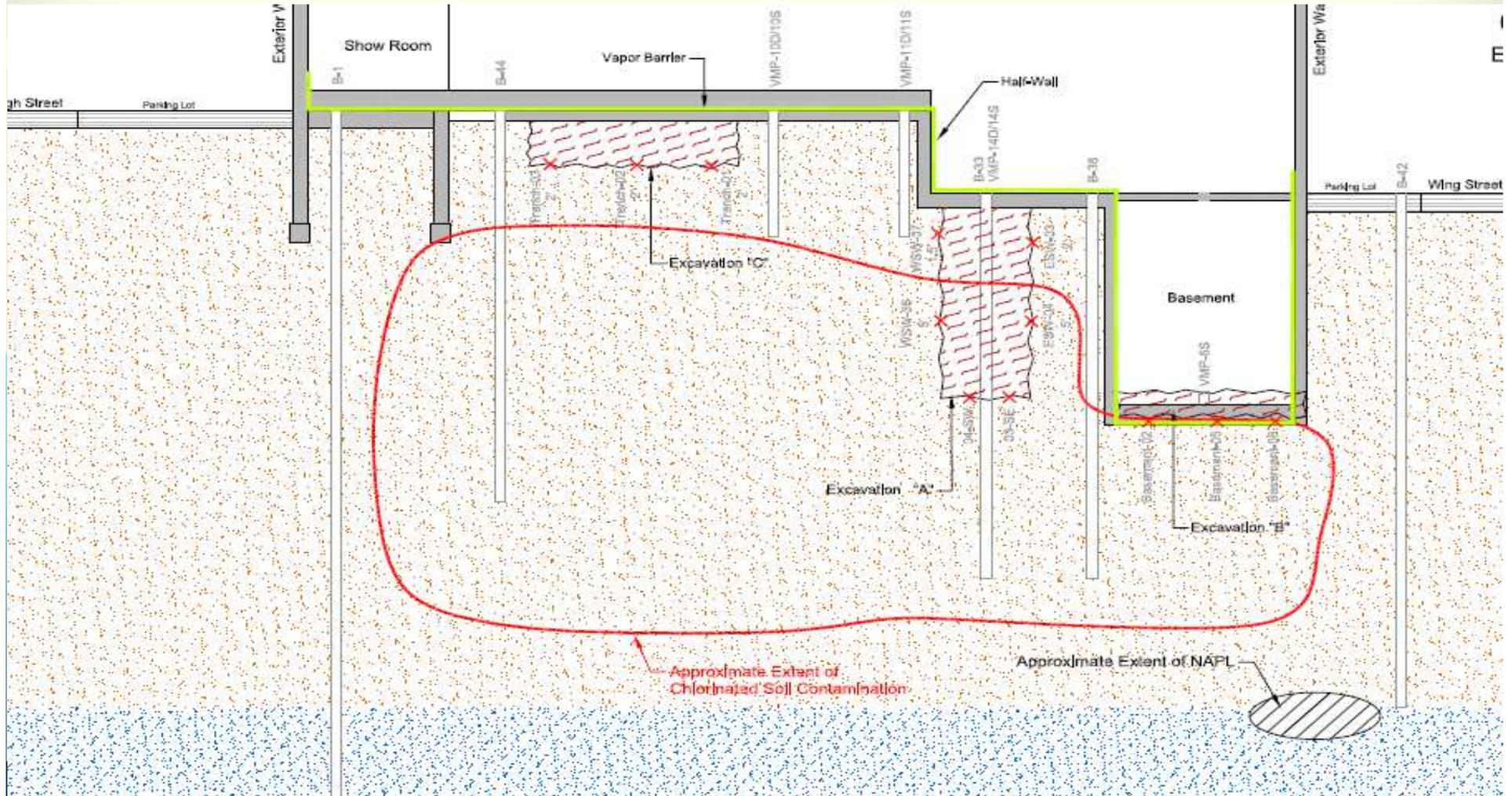


# Characterize Your RECs



Can you assume no VI?

# Use a CSM!



# How Does All of This Impact My Redevelopment Plans?

- Need to Evaluate the Risk for VI
- Need Enough Data to Make the Evaluation
- Data is More About Quality than Quantity\*



\*Reliable data possible in as little as 1 event

# Investigate vs. Presumptively Mitigate

Extra time & cost  
required for  
investigation

vs.

Cost to  
presumptively  
mitigate the site



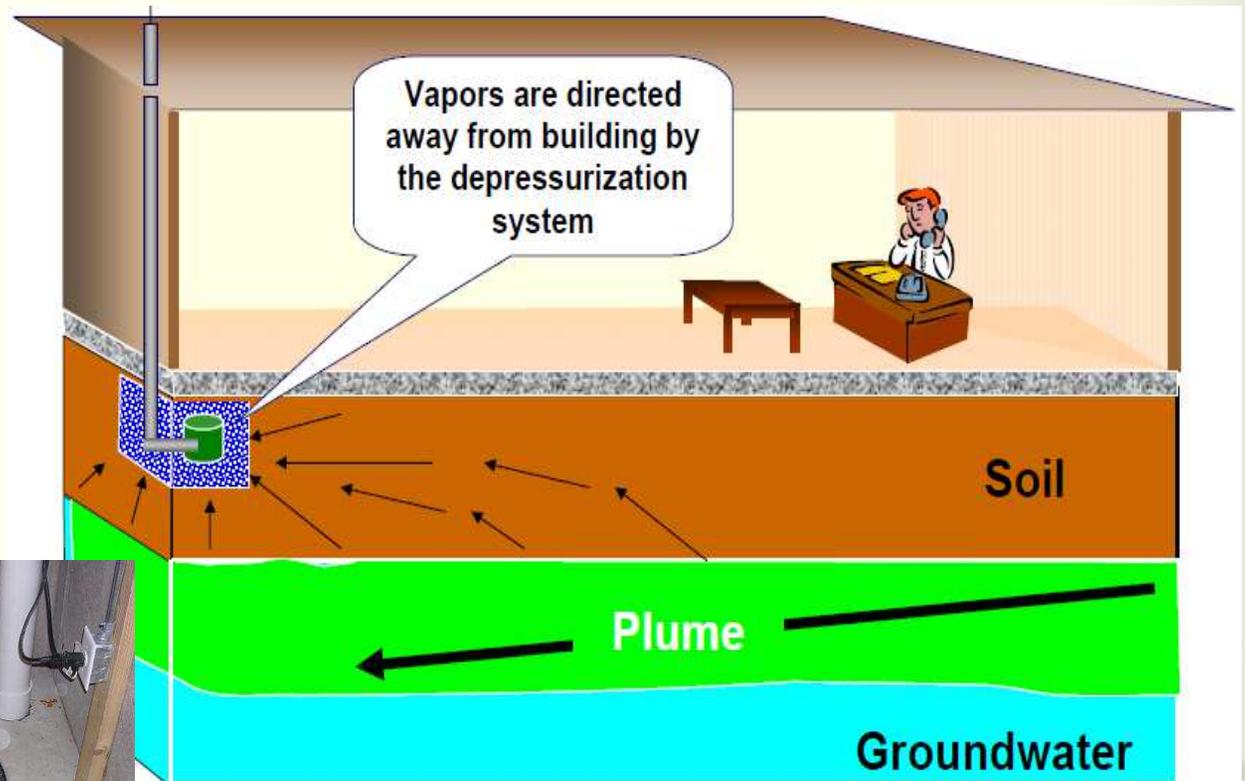
# Typical Presumptive Remedy

## Liner and Passive Ventilation



# Typical Presumptive Remedy

## Active/ Sub Slab Depressurization System



# VI and Brownfield Redevelopment Not Mutually Exclusive!



**The Garage - Northville**

# VI and Brownfield Redevelopment Not Mutually Exclusive!



FC Mason - St. Johns

# VI and Brownfield Redevelopment Not Mutually Exclusive!



St Anne - East Lansing

# VI and Brownfield Redevelopment Not Mutually Exclusive!



Four Corners CVS - Traverse City

# VI and Brownfield Redevelopment Not Mutually Exclusive!



Arbor Hills Crossing - Ann Arbor

# VI and Brownfield Redevelopment Not Mutually Exclusive!



Abercrombie Construction - Southgate

# Available DEQ Brownfield Funding

**Grants**

**Loans**

**Brownfield TIF**



# Available DEQ Brownfield Funding

## What is Eligible?

### ENVIRONMENTAL ACTIVITIES!

- Investigations
- Mitigation Systems
- Etc.



# Available DEQ Brownfield Funding

**How Do I  
Qualify?**



# Brownfield Funding Considerations



- Applicant a LUG
- Contaminated Property
- Redevelopment
- Liability Issues
- Environmental!!!

# Brownfield Funding - Grants



Up to \$1 Million

# Brownfield Funding - Loans



- Up to \$1 Million
- 15-Year Term
- First 5-Years Payment/Interest Free
- 1.5% Interest Rate

# Brownfield Funding – Act 381 TIF



TIF = Tax Increment Financing

Act 381 Established Ability to use TIF to reimburse developer for eligible Brownfield Activities

# Brownfield Funding – Act 381 TIF

The Increment: How TIF Works

## Pre-Development

Base Taxable Value of Property Established

Base  
Taxable  
Value  
\$

# Brownfield Funding – Act 381 TIF

## The Increment: How TIF Works

**Developer Makes  
Improvements**

Value of Property Increases

**Base  
Taxable  
Value  
\$**

**New  
Taxable  
Value  
\$\$\$**

# Brownfield Funding – Act 381 TIF

## The Increment: How TIF Works

**Increment =**  
(New – Base)

Incremental  
Increase in  
Taxable  
Value  
\$\$

Base  
Taxable  
Value  
\$

New  
Taxable  
Value  
\$\$\$

# Brownfield Funding – Act 381 TIF

## The Increment: How TIF Works

- Taxes on Increment Captured
- Paid to Developer
- Often Used with DEQ Loans



# Takeaways - Brownfields and VI



Property transactions ARE  
possible with VI!

# Takeaways - Brownfields and VI

**Many sites with VI related activities qualify for Brownfield Incentives**



# Takeaways - Brownfields and VI



Need to **Understand the Site!**

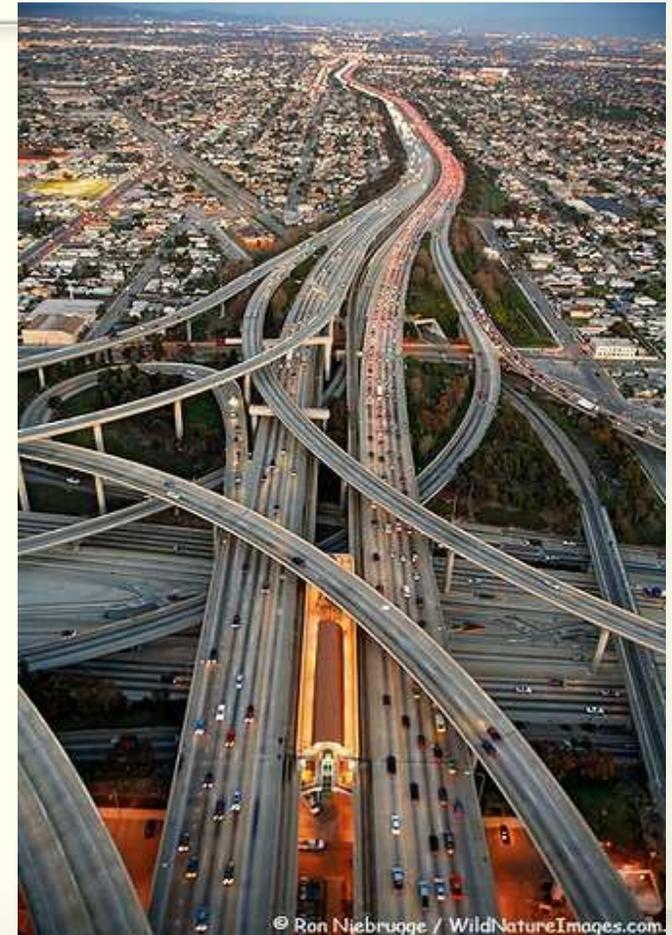
- Quality of Data
- CSM

# Takeaways - Brownfields and VI

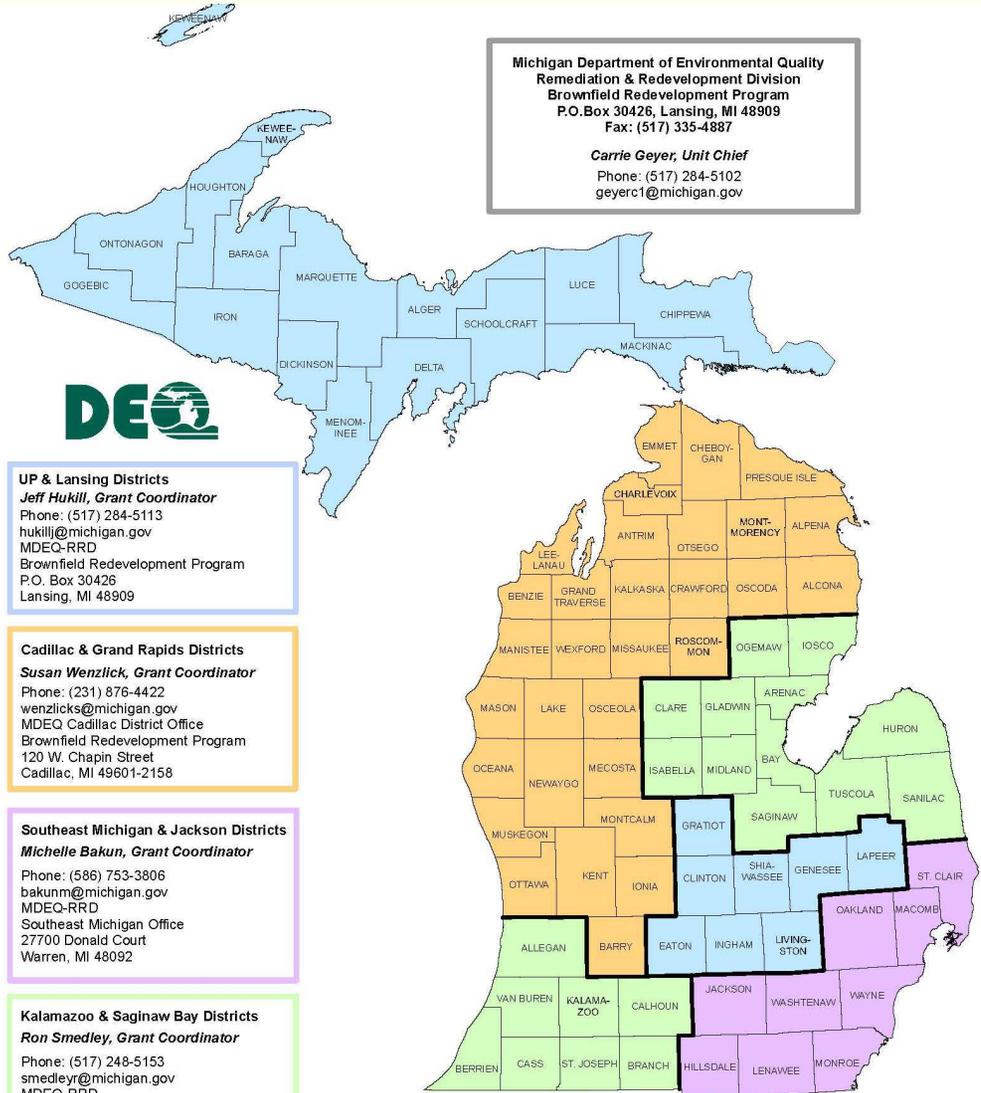
There are Many  
Paths...

DEQ VI Guidance is just  
one of them!

*It is NOT Required!!!*



# DEQ Brownfield Contacts



Michigan Department of Environmental Quality  
 Remediation & Redevelopment Division  
 Brownfield Redevelopment Program  
 P.O. Box 30426, Lansing, MI 48909  
 Fax: (517) 335-4887  
  
**Carrie Geyer, Unit Chief**  
 Phone: (517) 284-5102  
 geyerc1@michigan.gov



**UP & Lansing Districts**  
**Jeff Hukill, Grant Coordinator**  
 Phone: (517) 284-5113  
 hukillj@michigan.gov  
 MDEQ-RRD  
 Brownfield Redevelopment Program  
 P.O. Box 30426  
 Lansing, MI 48909

**Cadillac & Grand Rapids Districts**  
**Susan Wenzlick, Grant Coordinator**  
 Phone: (231) 876-4422  
 wenzlicks@michigan.gov  
 MDEQ Cadillac District Office  
 Brownfield Redevelopment Program  
 120 W. Chapin Street  
 Cadillac, MI 49601-2158

**Southeast Michigan & Jackson Districts**  
**Michelle Bakun, Grant Coordinator**  
 Phone: (586) 753-3806  
 bakunm@michigan.gov  
 MDEQ-RRD  
 Southeast Michigan Office  
 27700 Donald Court  
 Warren, MI 48092

**Kalamazoo & Saginaw Bay Districts**  
**Ron Smedley, Grant Coordinator**  
 Phone: (517) 248-5153  
 smedleyr@michigan.gov  
 MDEQ-RRD  
 Brownfield Redevelopment Program  
 P.O. Box 30426  
 Lansing, MI 48909

Remediation & Redevelopment Division  
[www.michigan.gov/deqbrownfields](http://www.michigan.gov/deqbrownfields)

Rick Snyder, Governor • Dan Wyant, Director

For pollution emergencies only: 1-800-292-4706  
 For general MDEQ information: 1-800-662-9278

July 2013





**QUESTIONS?**

***Carrie Geyer***

*Chief, Brownfield Redevelopment Program*

*MDEQ - RRD*

[geyerc1@michigan.gov](mailto:geyerc1@michigan.gov)

(517) 284-5182