



ADAPTIVE SITE MANAGEMENT

Expedited Site Investigation and Dynamic Remedy Deployment to Reduce Risks and Exceed Regulator Expectations

BATTELLE CHLORINATED CONFERENCE 2024
DENVER, COLORADO

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Sustainability is our business

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Motivated & Proactive Response



- Chicago (1982) criminal tampering of OTC medicine
- Recall issued
- **Active & transparent communication**
- Reforms in OTC drugs & federal anti-tampering laws
- Market share rebounded by 27% (1-year) due to their response

Though there is no way we could have anticipated...or prevented it, we wanted to do something for the families and finally get this tragic event behind us

— Robert Kniffen, Johnson & Johnson Spokesman

Johnson & Johnson has effectively demonstrated how a major business ought to handle a disaster

— Washington Post

Tylenol to Resume Sales, Triple-Sealed

Continued From First Business Page
ference that permitted exchanges with reporters in 30 American cities, Mr. Burke said the impact on Johnson & Johnson's profits of absorbing the additional packaging costs would depend on sales.

"The key to that will be what our volume will be — something we don't know," he said. He asserted that the lacing of Extra-Strength Tylenol capsules with cyanide in the Chicago area was a "terrorist act," and he said Johnson & Johnson considered it "a moral imperative, as well as good business, to restore Tylenol to its pre-eminent position in the market place."

Asked about possible reaction in the investment community to the company's plan to absorb the new packaging costs, he answered: "I really believe most of our shareholders are with us for the long term."

Johnson & Johnson stock rose \$1.50 yesterday to \$27.75 in trading on the



The New York Times/Edw. Fran
James E. Burke, chairman of Johnson & Johnson, at news conference yesterday, and triple-sealed tamper-resistant packaging that has 1, glued flaps on box, 2, tight plastic neck seal, and 3, inner foil seal over mouth of bottle.

And the bottle's mouth will have a foil inner seal that must be broken before the capsules can be touched.

As an additional precaution, the title is to be labeled: "Do not safety seals are broken."

Before the Tylenol poisonings, not capsules were packaged in 1 that were essentially similar to they had caps that could be easily and then closed, leaving a cation that they had been tampered with. And they had no additional ing feature, except some cotton the bottle. Similarly, in the 1 packaging, the outer box could be opened and then closed again without leaving any sign that it had been tampered with.

After the Illinois tampering known, Mr. Burke said, "over third of our Tylenol users thought the Tylenol capsules they had feared generated during the fear of the tragedy."

Clear and transparent communication throughout the process of assessing the problem, led to significant trust through government entities...

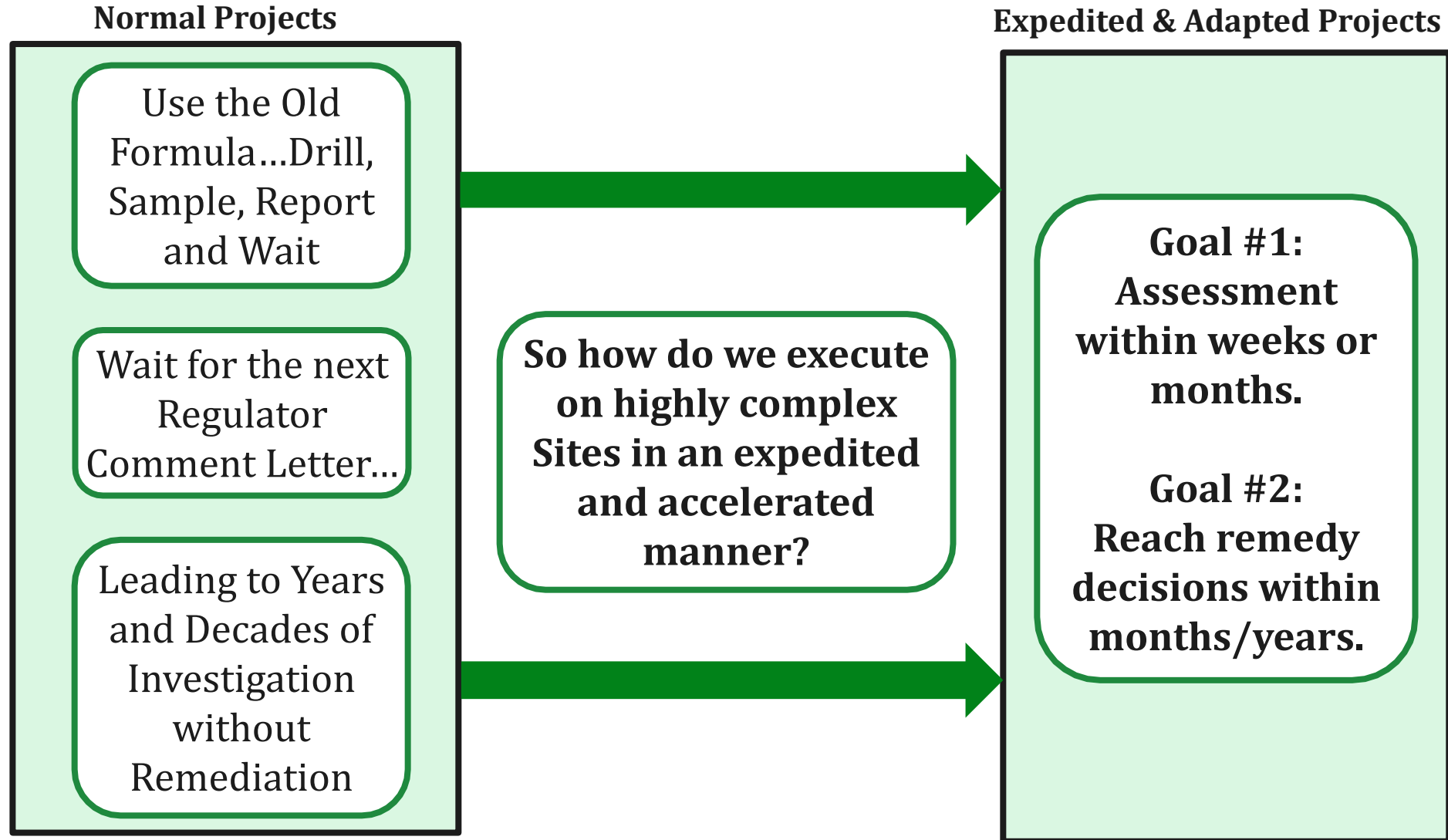
So can we apply this same strategy to environmental projects at an expedited pace?



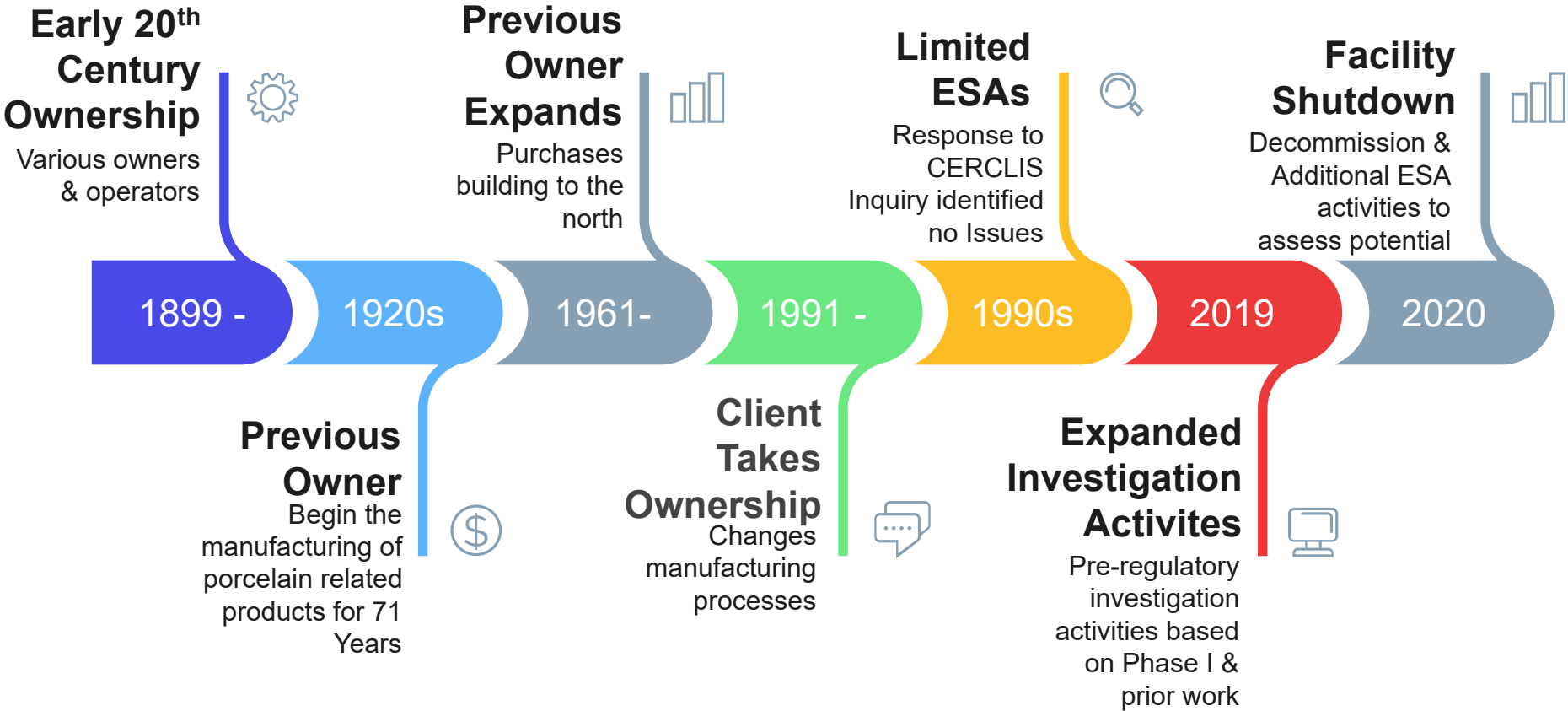
ERM

Expedited Site Investigation and Dynamic Remedy Deployment to Reduce Risks

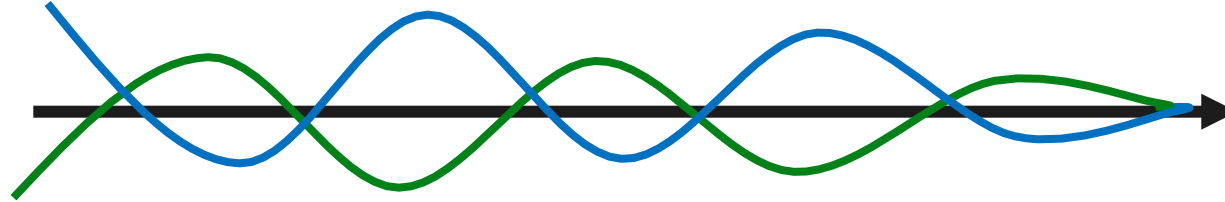
Adaptation to Expedited CSM and Remediation Deployment



Site Background



Balanced Communication



Identify & Address Concerns

early when solutions may be easier and concerns less entrenched

Promote Understanding

and facilitate stakeholder involvement to inform, counter misinformation, gain acceptance

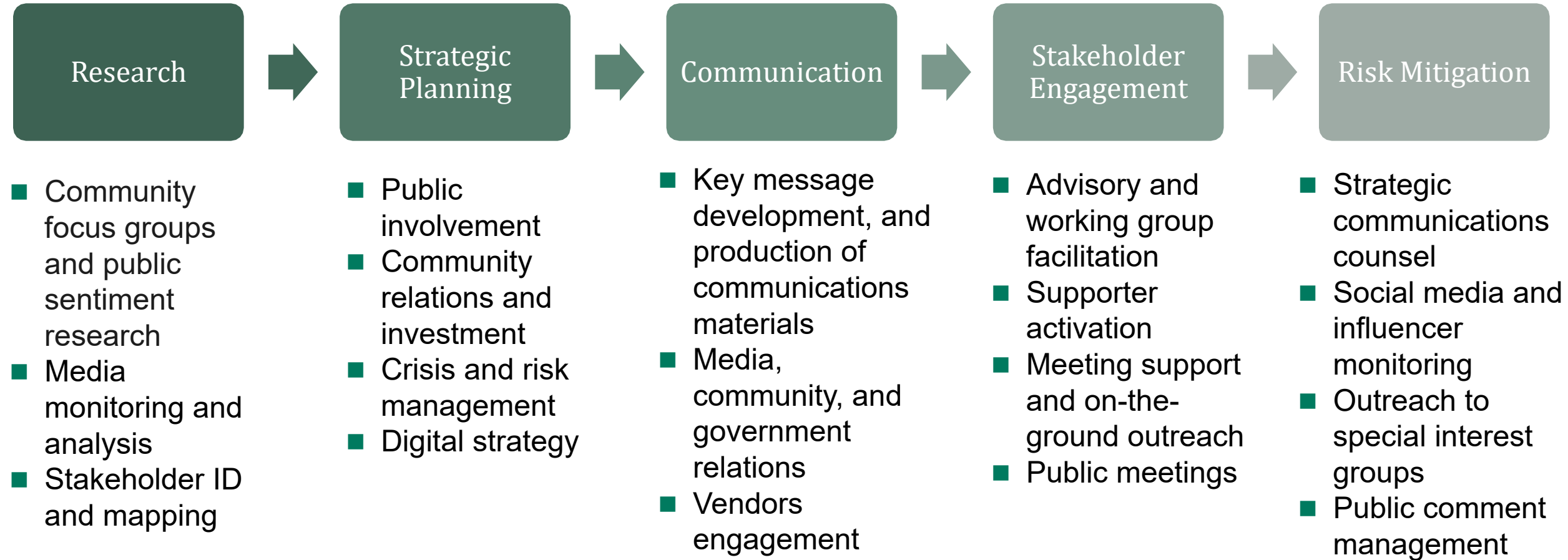
Earn Trust

by listening, looking for common ground and being responsive in order to achieve mutual gains and right to complete work

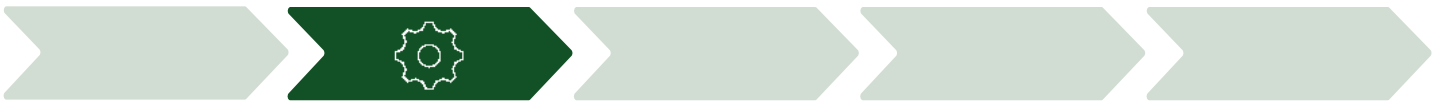
Executed Project Communication Strategy



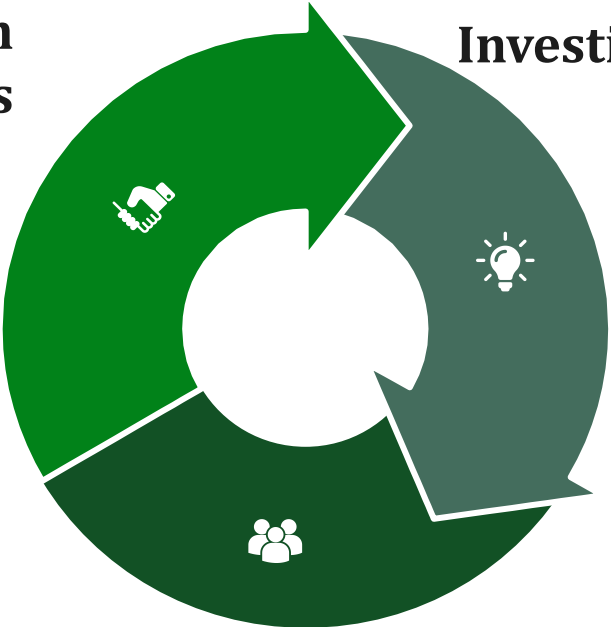
“North Star” based on what happened in Chicago (1982)...



Core & Dynamic Approaches

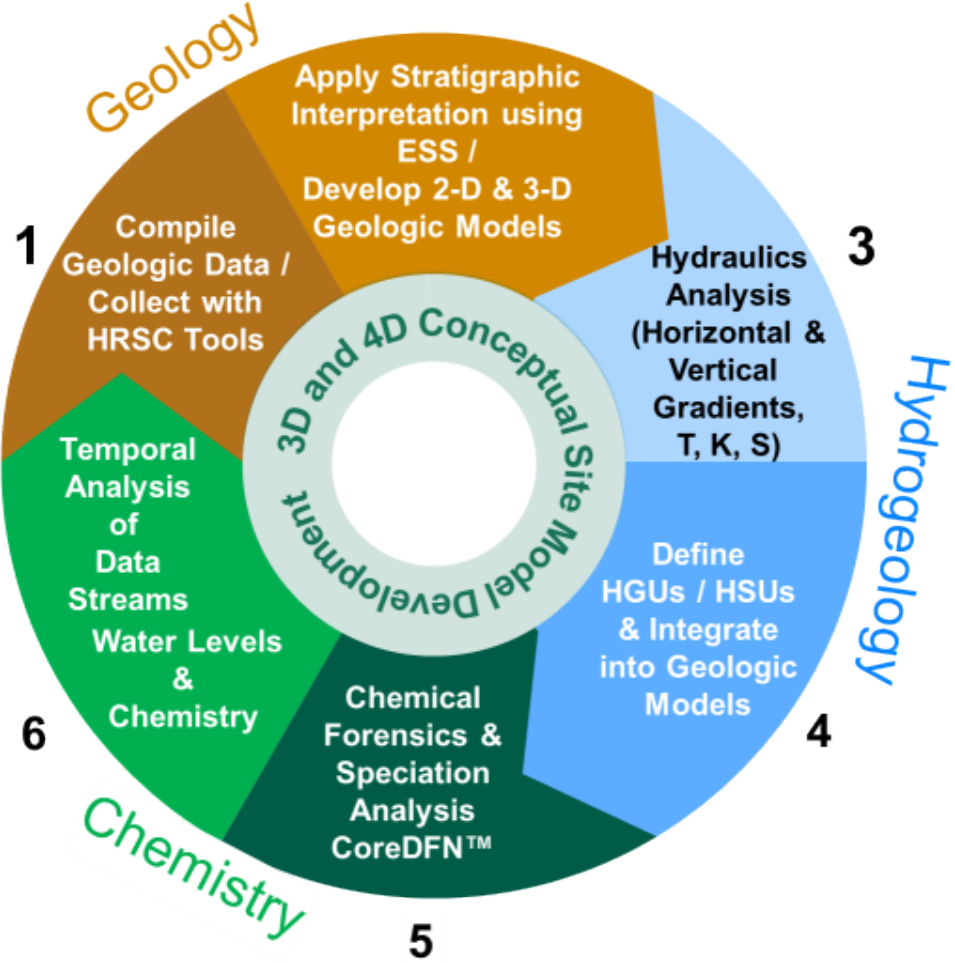
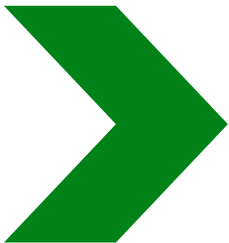


Communication
with
Stakeholders



Develop & Dynamic
Investigation Strategy

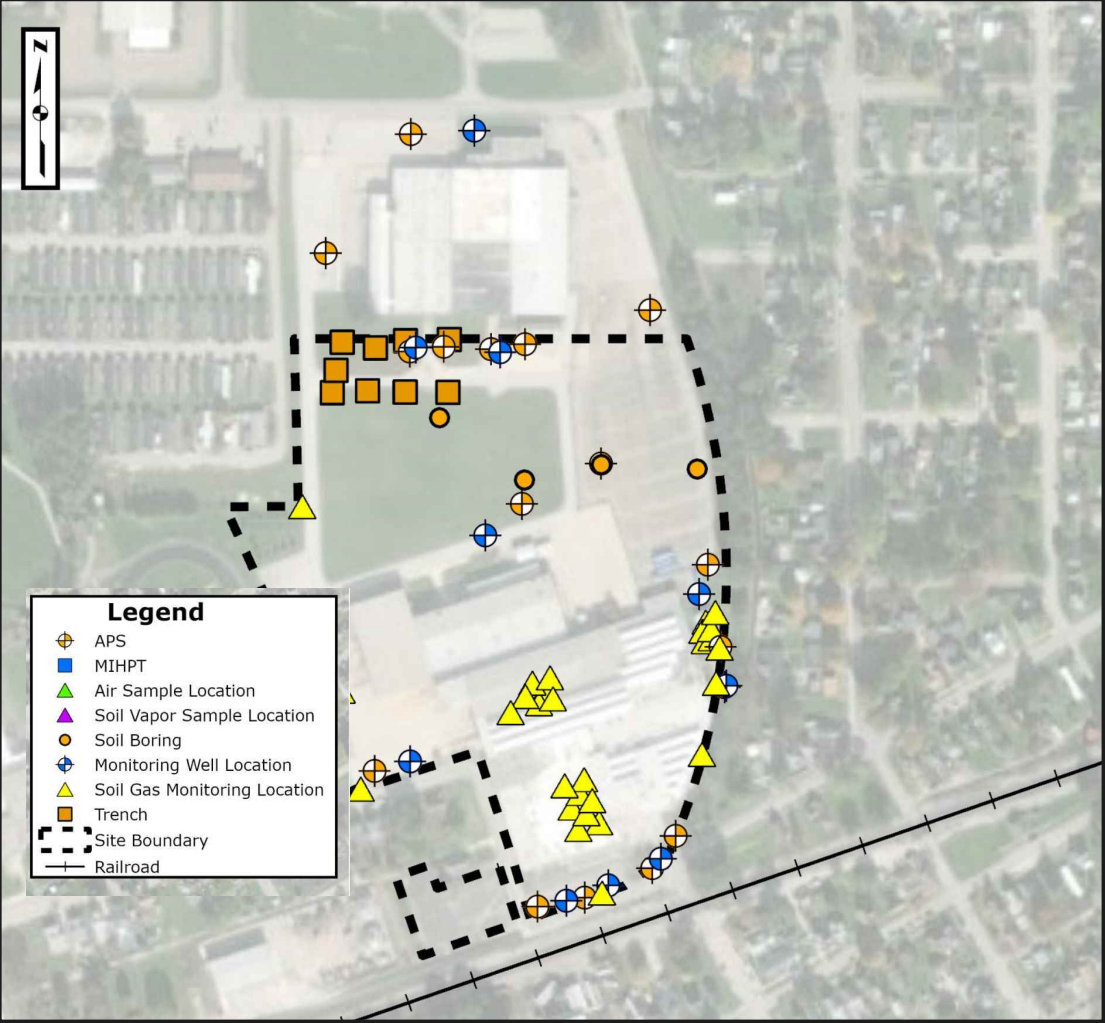
Eliminate Risk
through Interim &
Final Measures



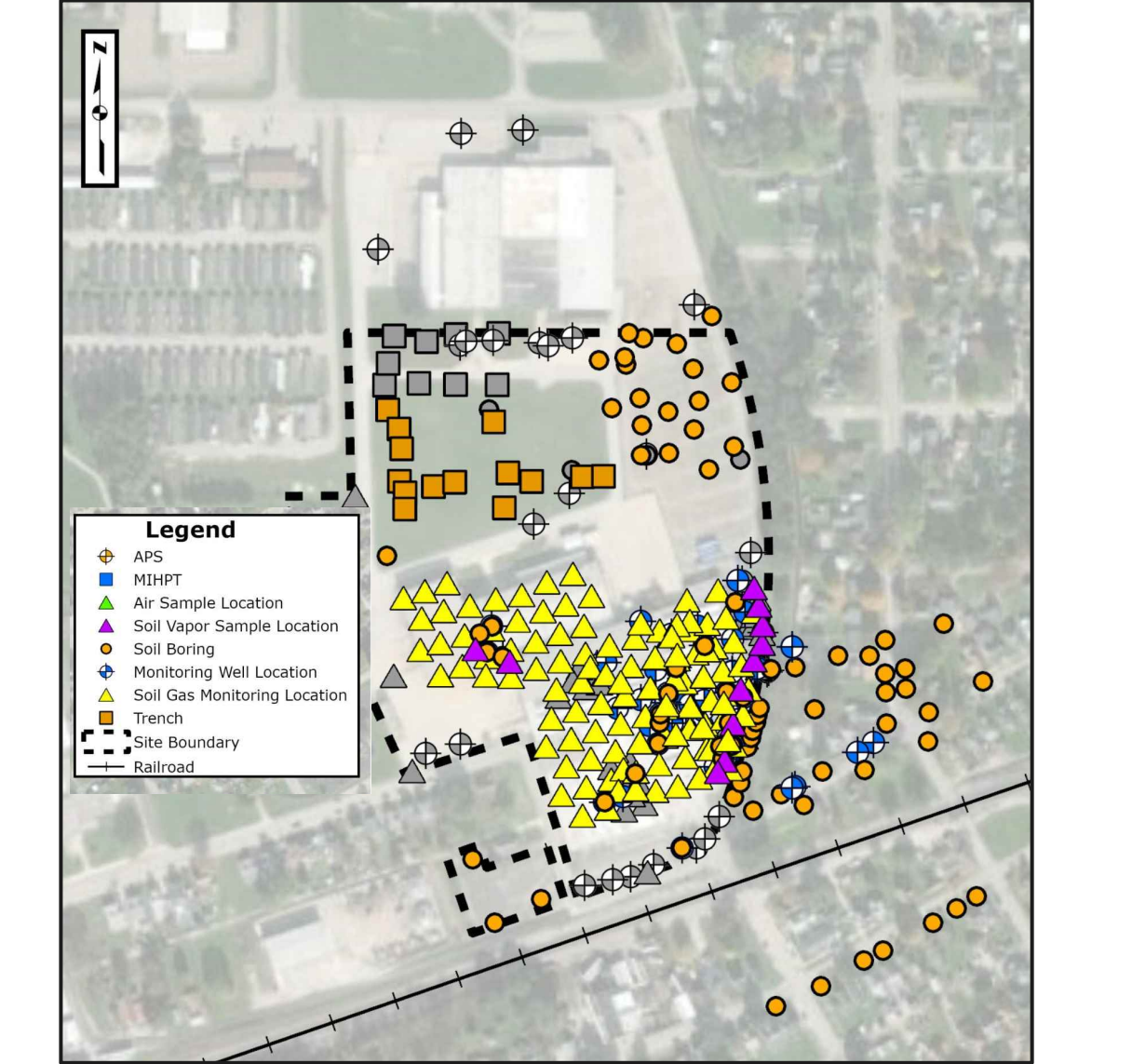
Investigation & CSM Expansion



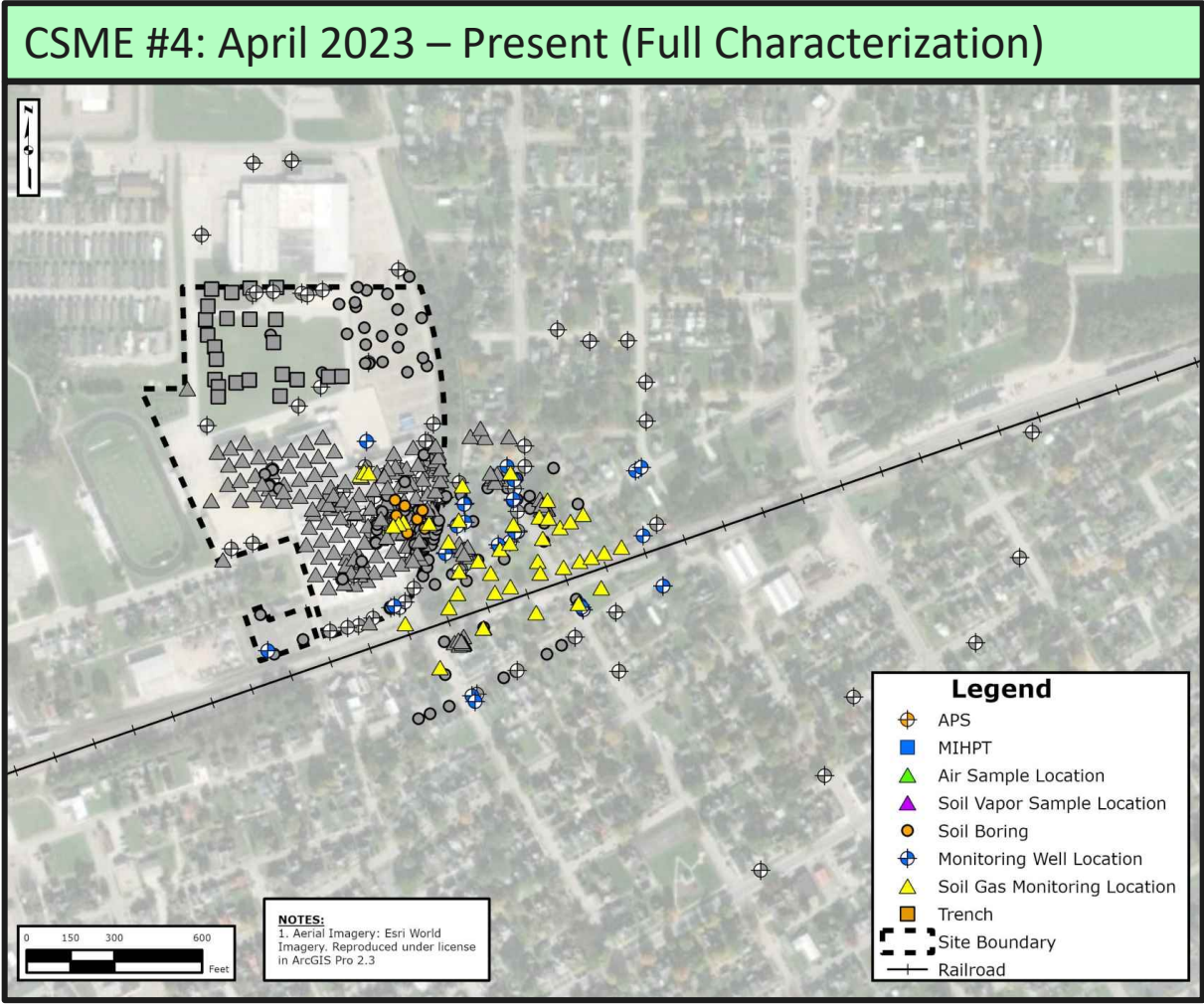
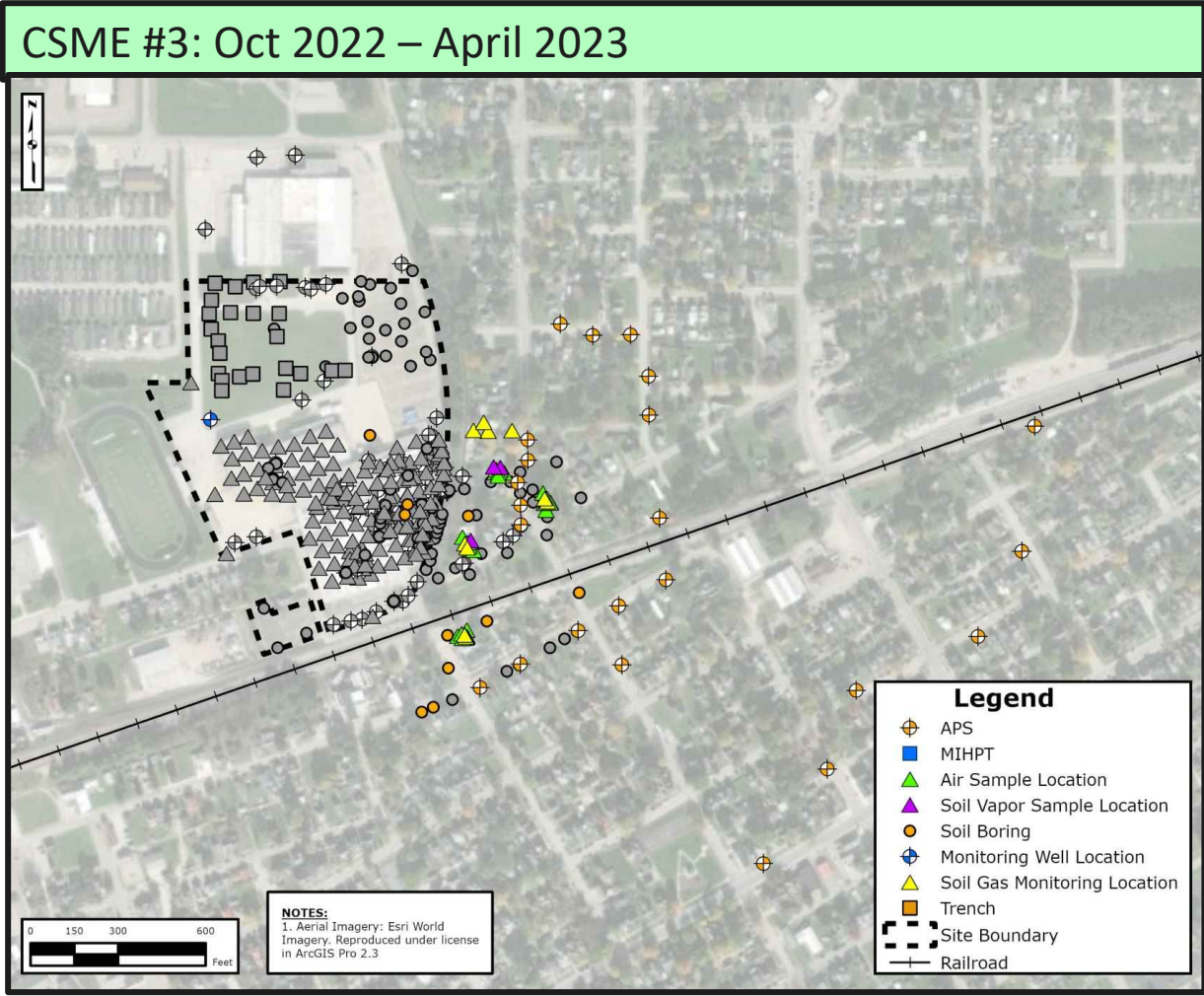
CSME #1: Jan 2019 - Dec 2020 (Pre-Regulatory)



CSME #2: Jan 2021- Sept 2022 (Up to & Post Regulatory)



Investigation & CSM Expansion



Timeline (Pre-Regulatory)

Initial On-Site Investigation:
Passive soil gas
Indoor air sampling
Soil borings
Waterloo^{APS}
Monitoring wells

Passive Soil Gas Sampling :
Potential Risk Identified

On-Site Investigation:
Subslab SG
GW Sampling
Soil borings
MIHPT
Hydraulic testing
Potential Risk Identified



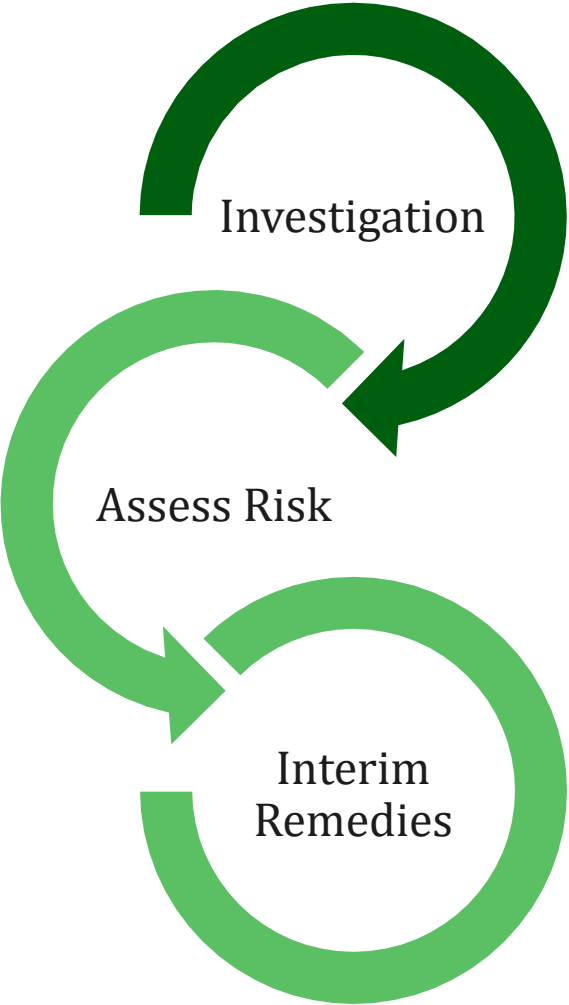
Facility
Decommissioning

SVE & SSD
Pilot
Testing;
SVE
Install

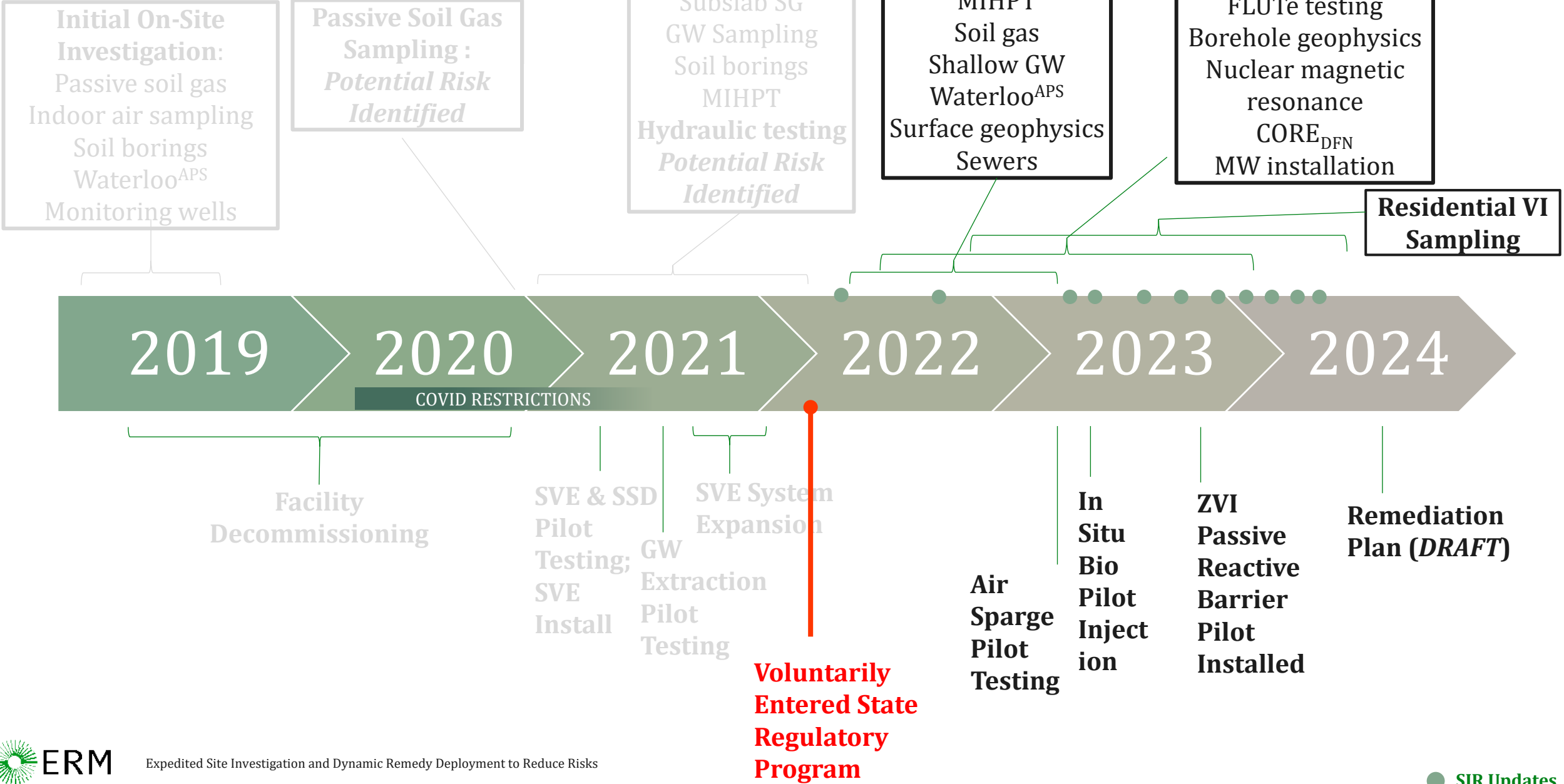
GW
Extraction
Pilot
Testing

SVE System
Expansion

**Voluntarily
Entered State
Regulatory
Program**

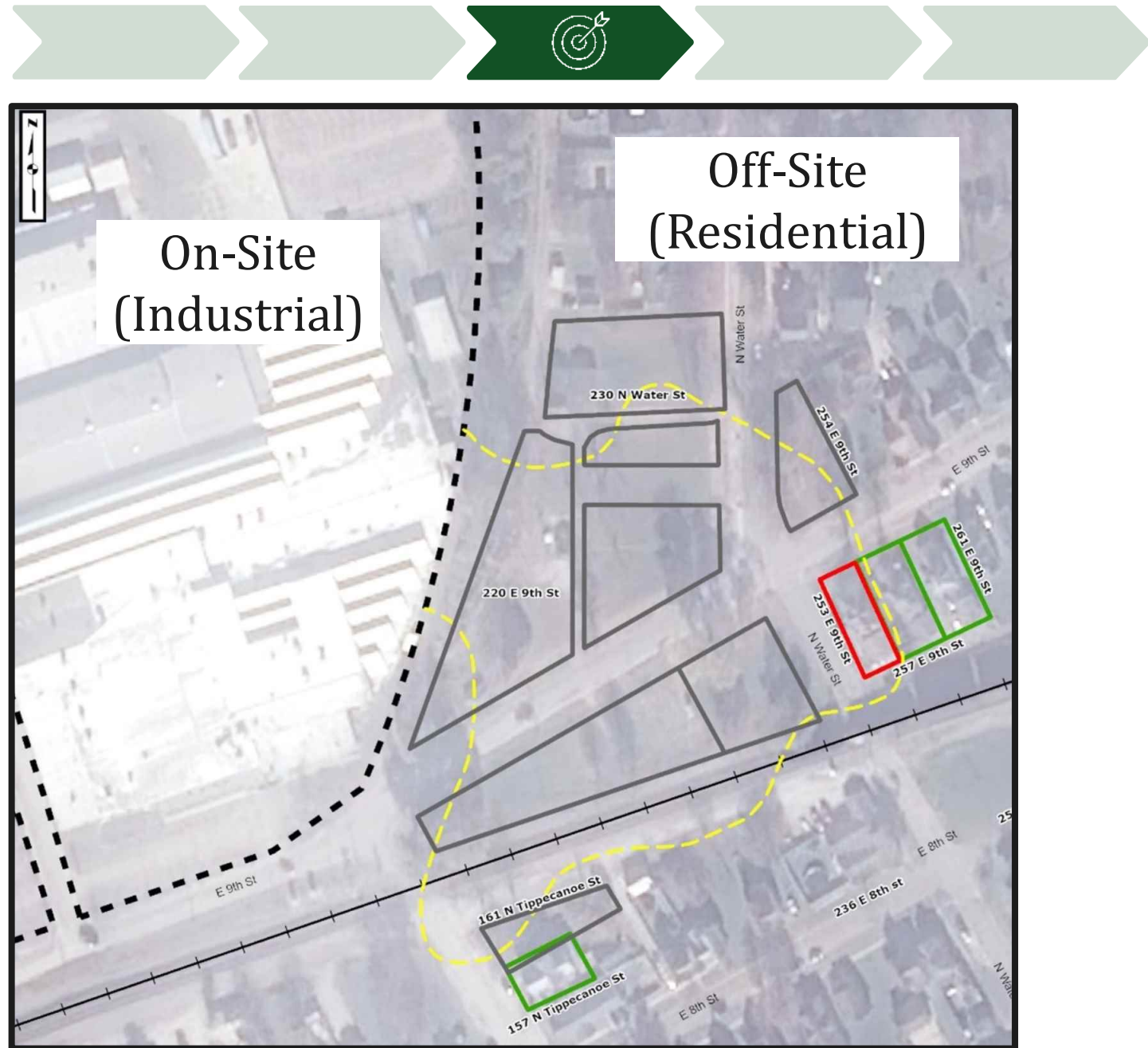


Timeline (Post-Regulatory)



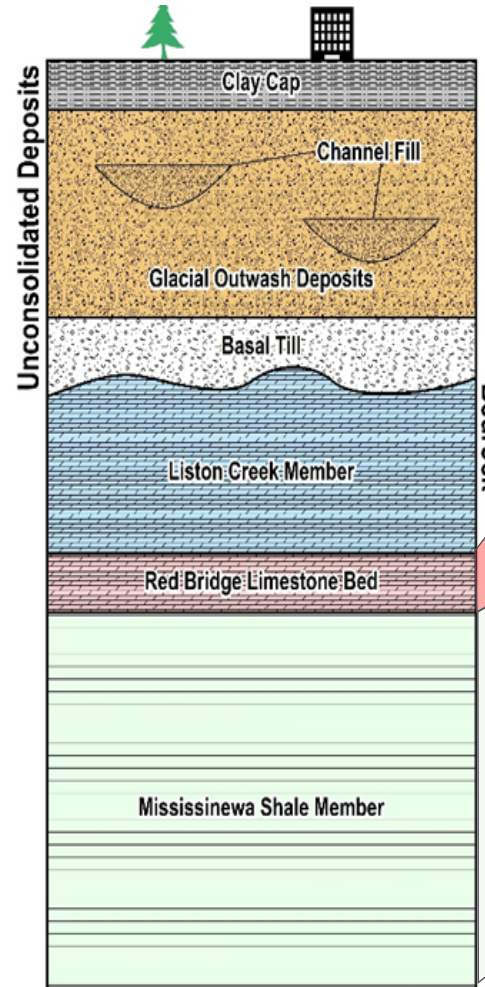
VI Strategy

- **On-Site (Industrial)**
 - SS + IA Sampling
 - Mitigation design ready at sampling
 - No risks identified
 - No occupancy
 - Sale of property postponed
- **Off-Site (Residential)**
 - Developed TCE risk matrix
 - Establish access
 - Mitigation design ready
 - Exterior soil gas & assess risk
 - Resident home entry for IA/SS
 - Multiple media samples/home
 - Presented options to mitigate
 - Eliminated risks within 1 year



Academic Engagement & External Resources

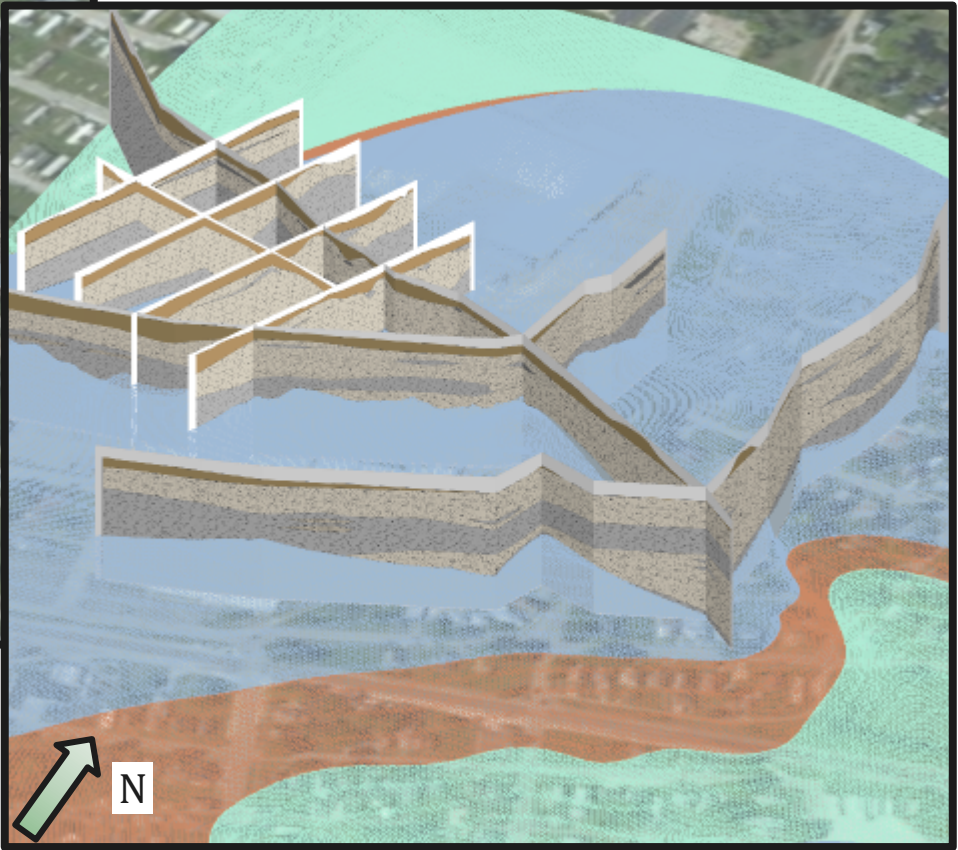
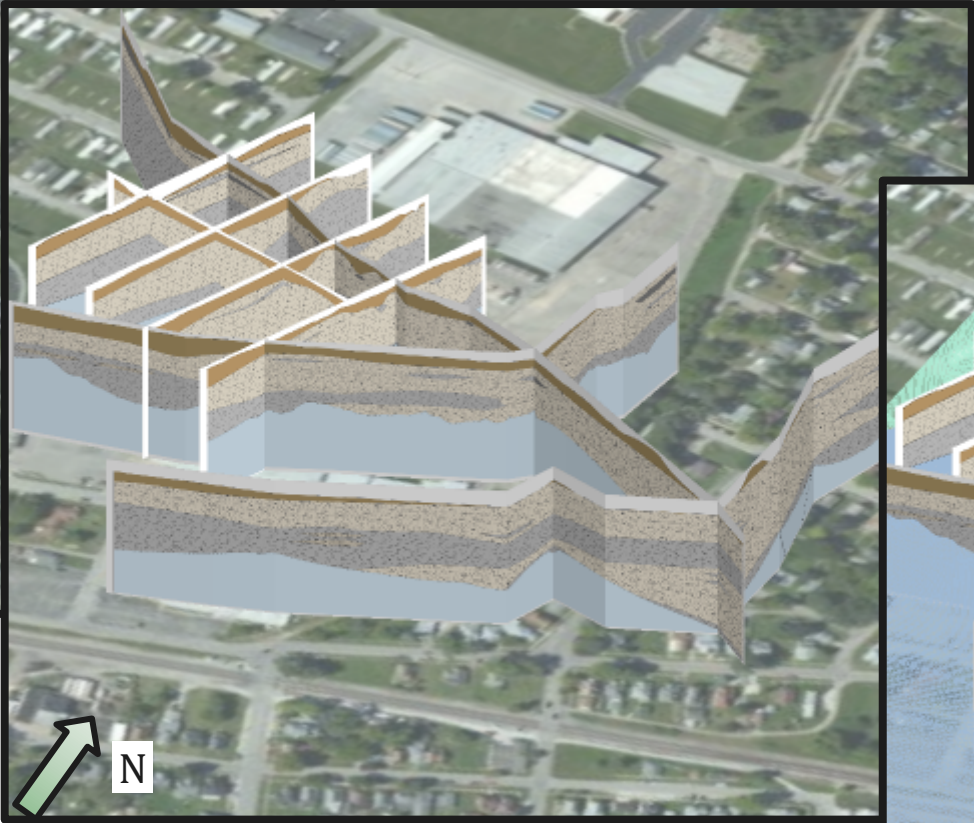
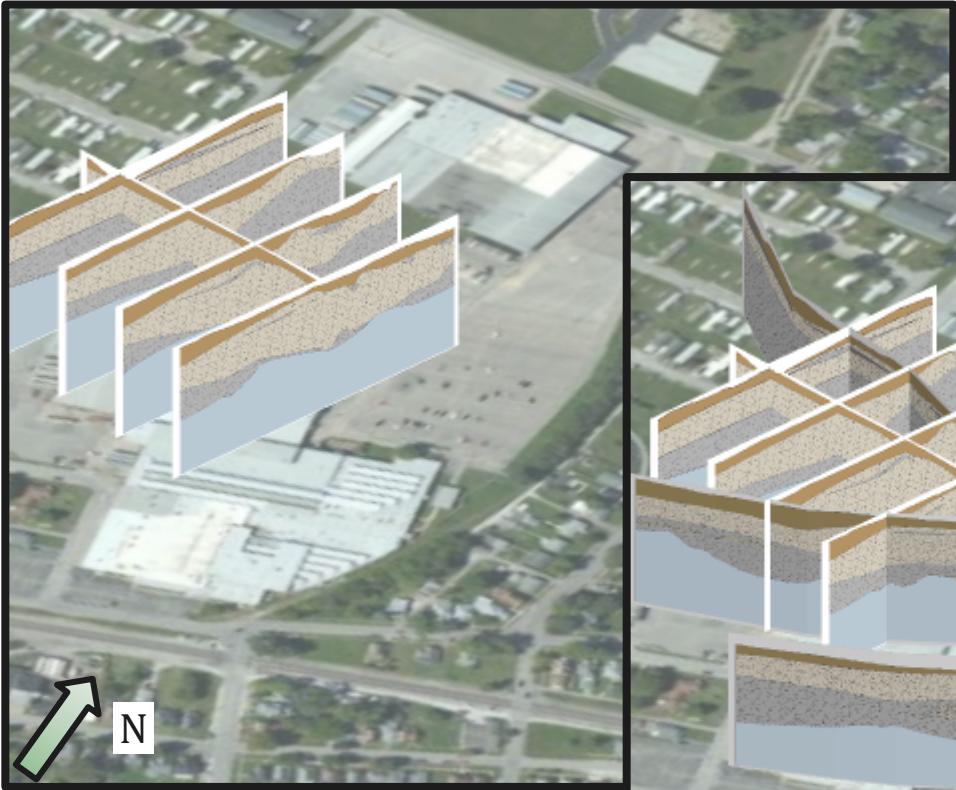
- Engaged with academic institutions (Indiana University)
- Retained bedrock geologists specific to area
- Established communication with thought leaders from the Illinois & Indiana Geological Surveys



IMI Aggregates Quarry



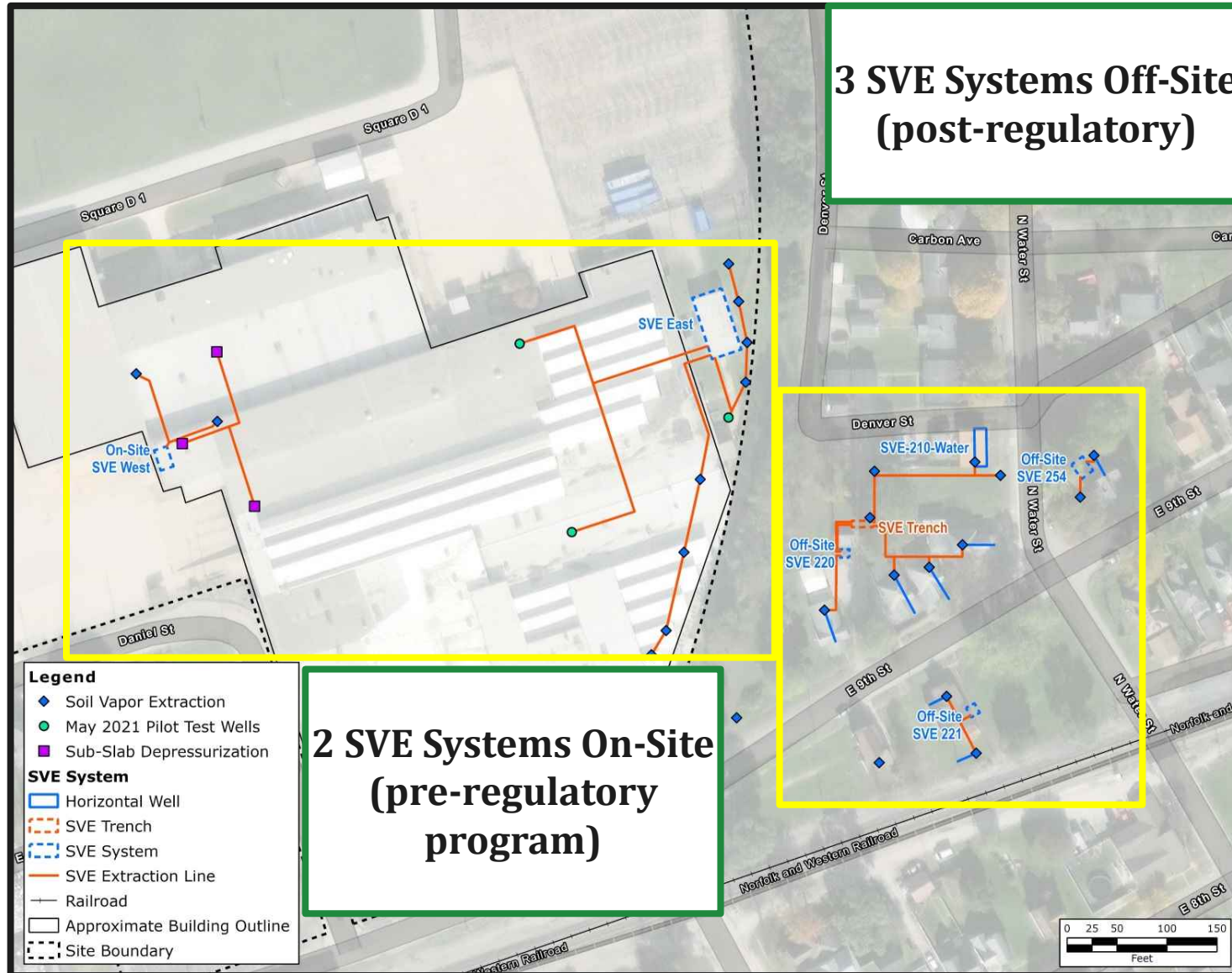
Three Dimensional CSM



Interim Remedies - SVE



Limited SG-IA risks
with areas of VOC
concentrations
slightly above
thresholds

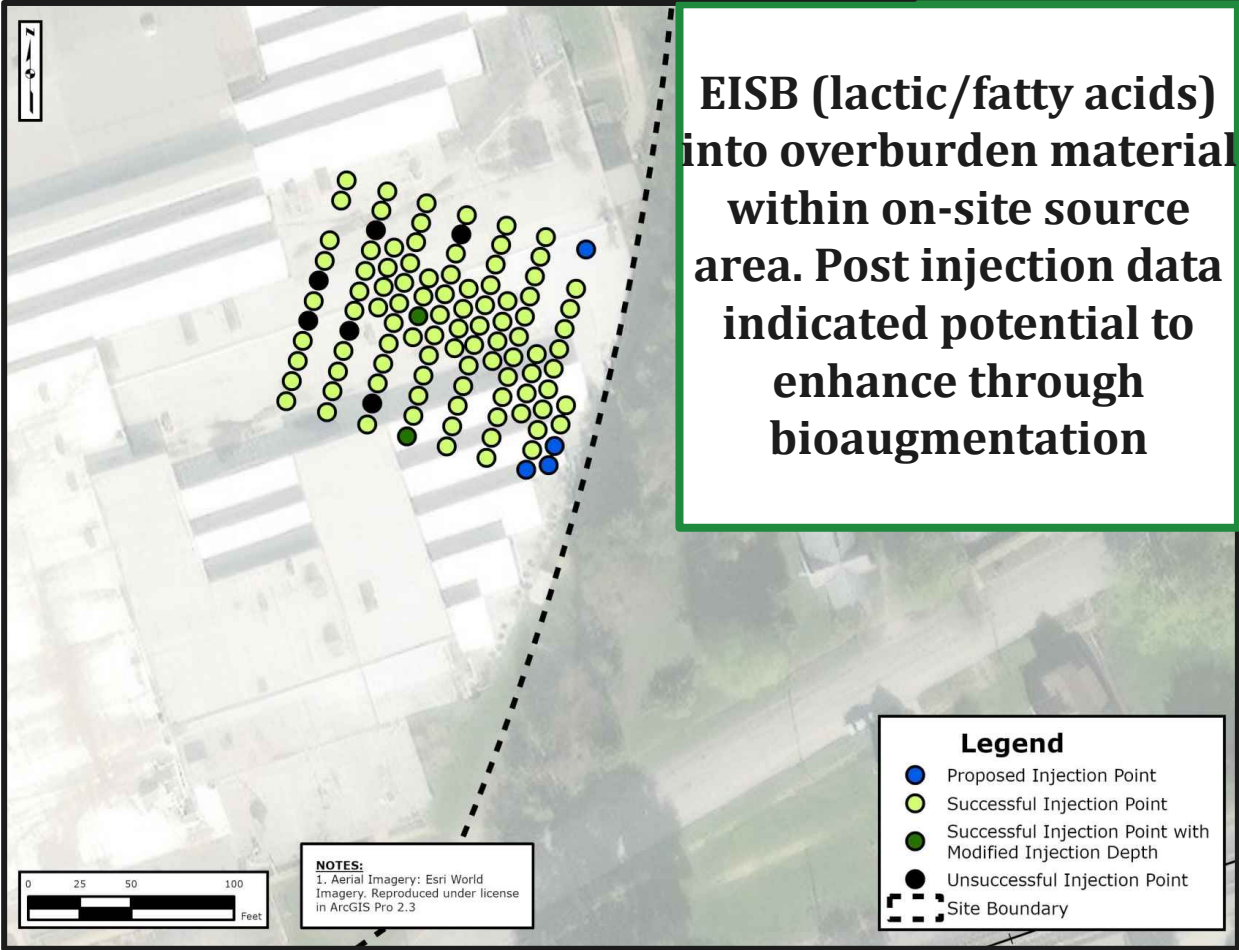


5 SVE systems
operating continuously
to reduce soil gas mass
under the main
building & in the off-
site adjacent areas

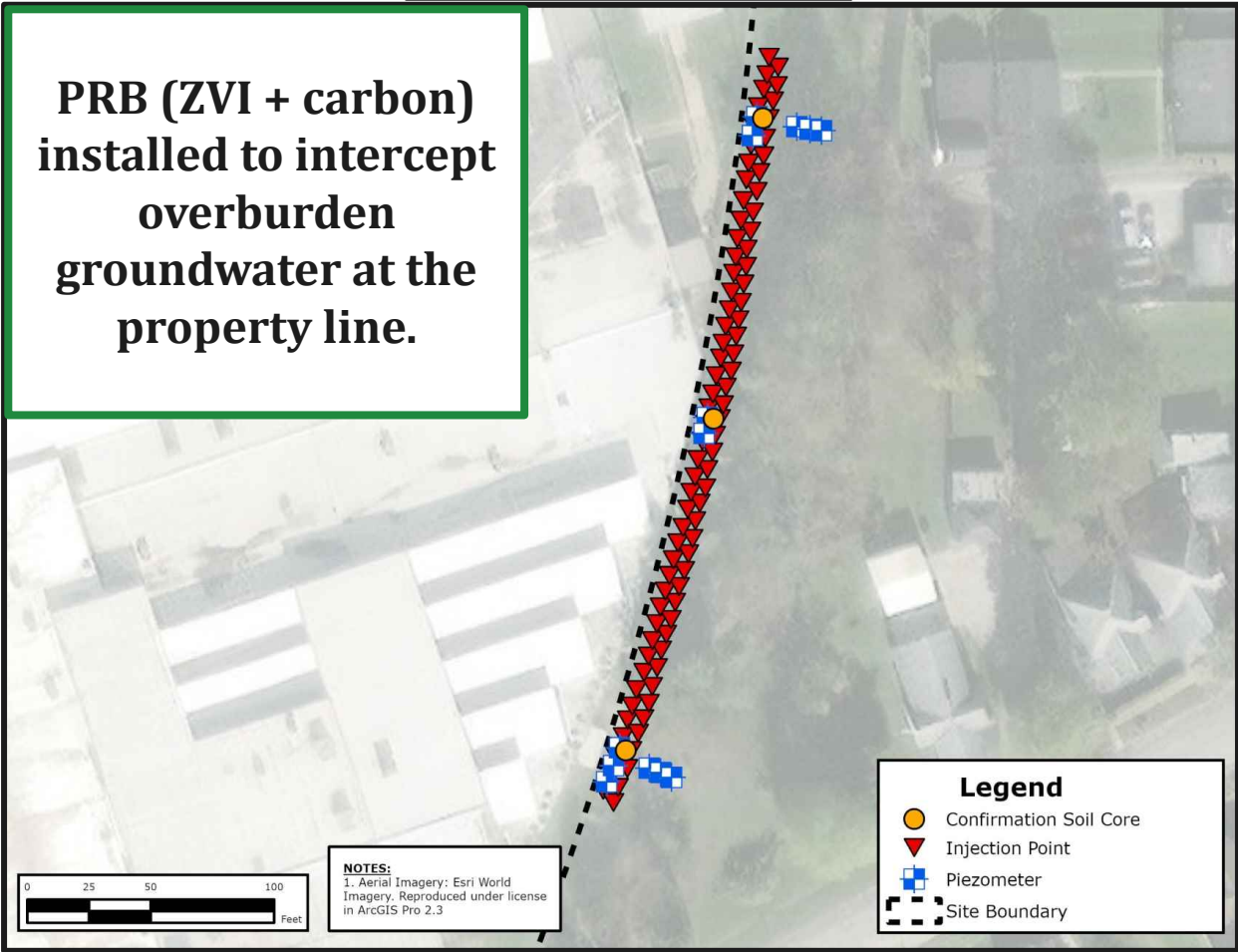
Interim Remedies – PRB & EISB



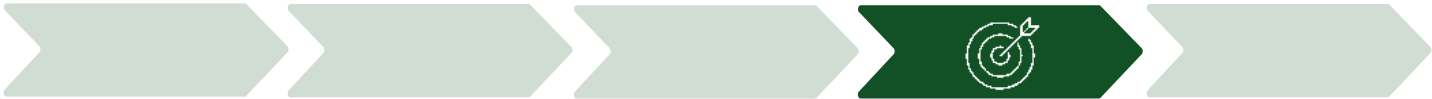
April 2023 & March 2024



December 2023

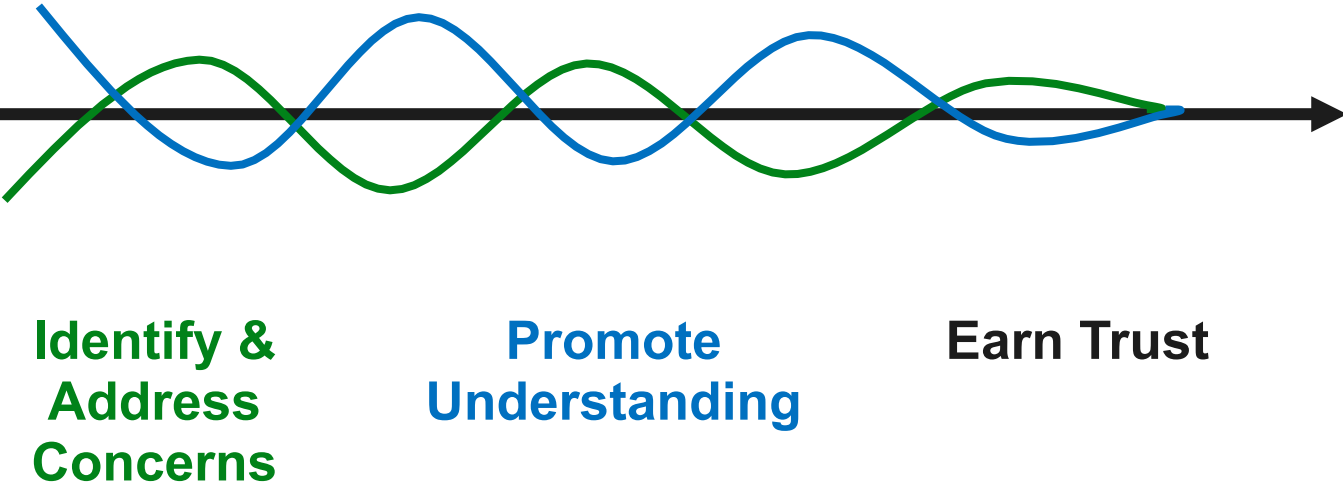


How & Why Should We Exceed Regulator Expectations?



The How

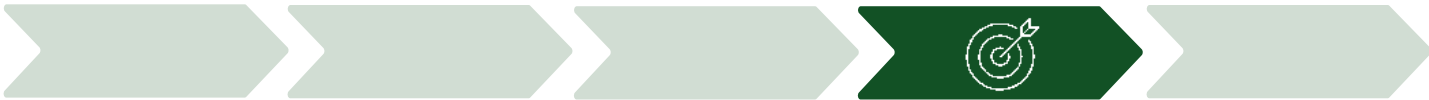
- Quickly align strategy with the RP and guidance
- Communicate often and regularly with the regulator
- Communicate status to local government officials
- Present technical strategies to third parties



The Why

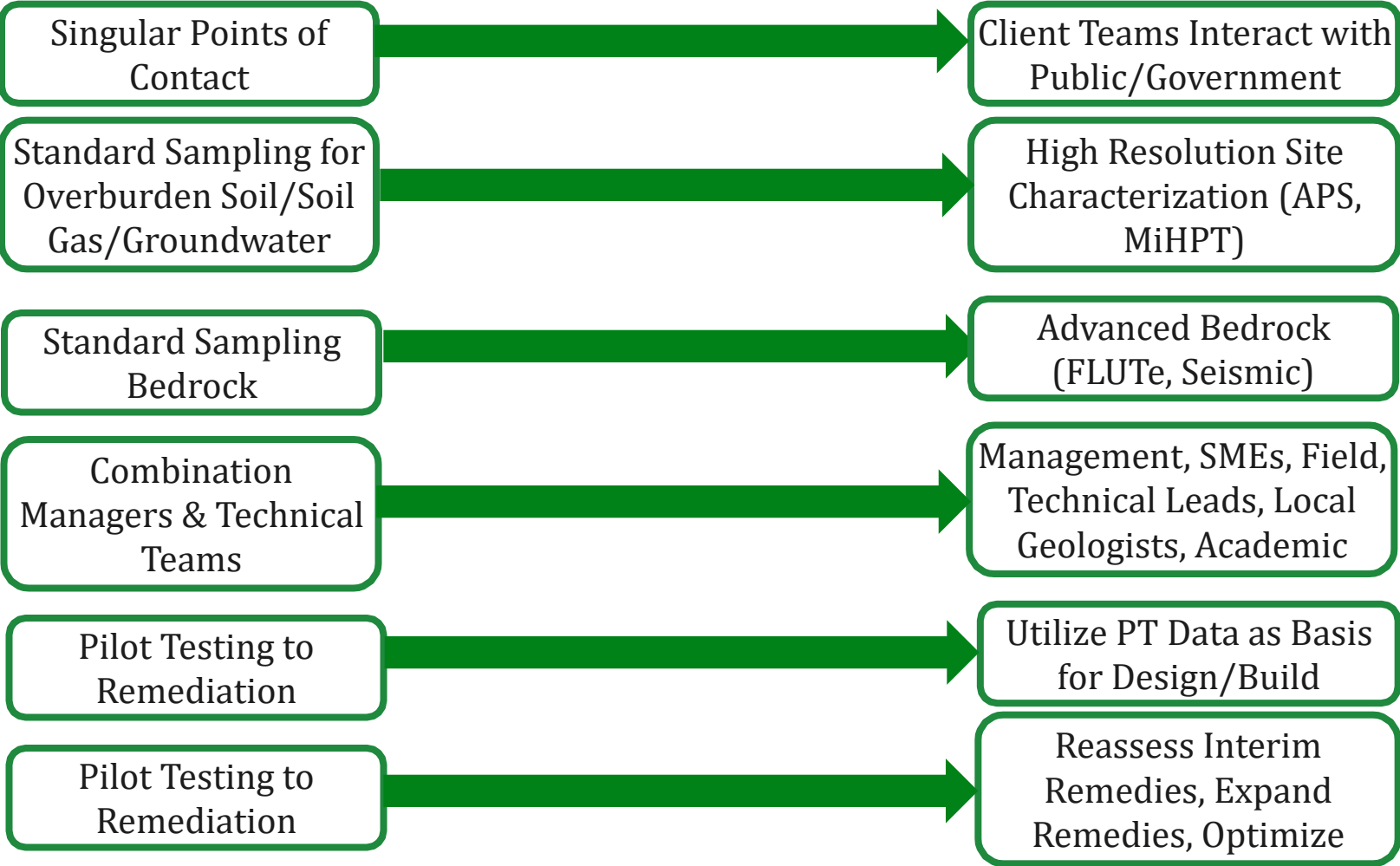
- Gain Work Plan approval expeditiously
- Limit comment letter generation by regular engagement
- Team with regulator for third party engagement & public mtgs
- Reduce public concern means reducing regulator concerns

Conclusion: Successful Outcome



Steady Pace Projects

Accelerated & Adapted Projects



Built trust with the regulators and third parties to gain trust and execute work quickly.

Complete complex characterization & remediation within a few years

Thank you

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