Agency for Toxic Substances and Disease Registry (ATSDR) Health Consultation

Amphenol Facility
Franklin, Indiana

Motria Caudill, PhD

Environmental Health Scientist

Public Meeting

June 5, 2019

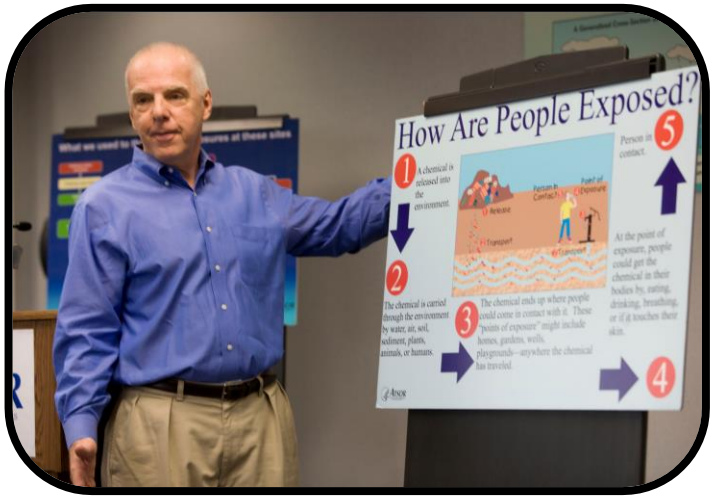
Who is ATSDR ?

A public health agency within the U.S. Department of Health and Human Services. Located in Atlanta, GA with 10 Regional Offices, including Chicago, IL.

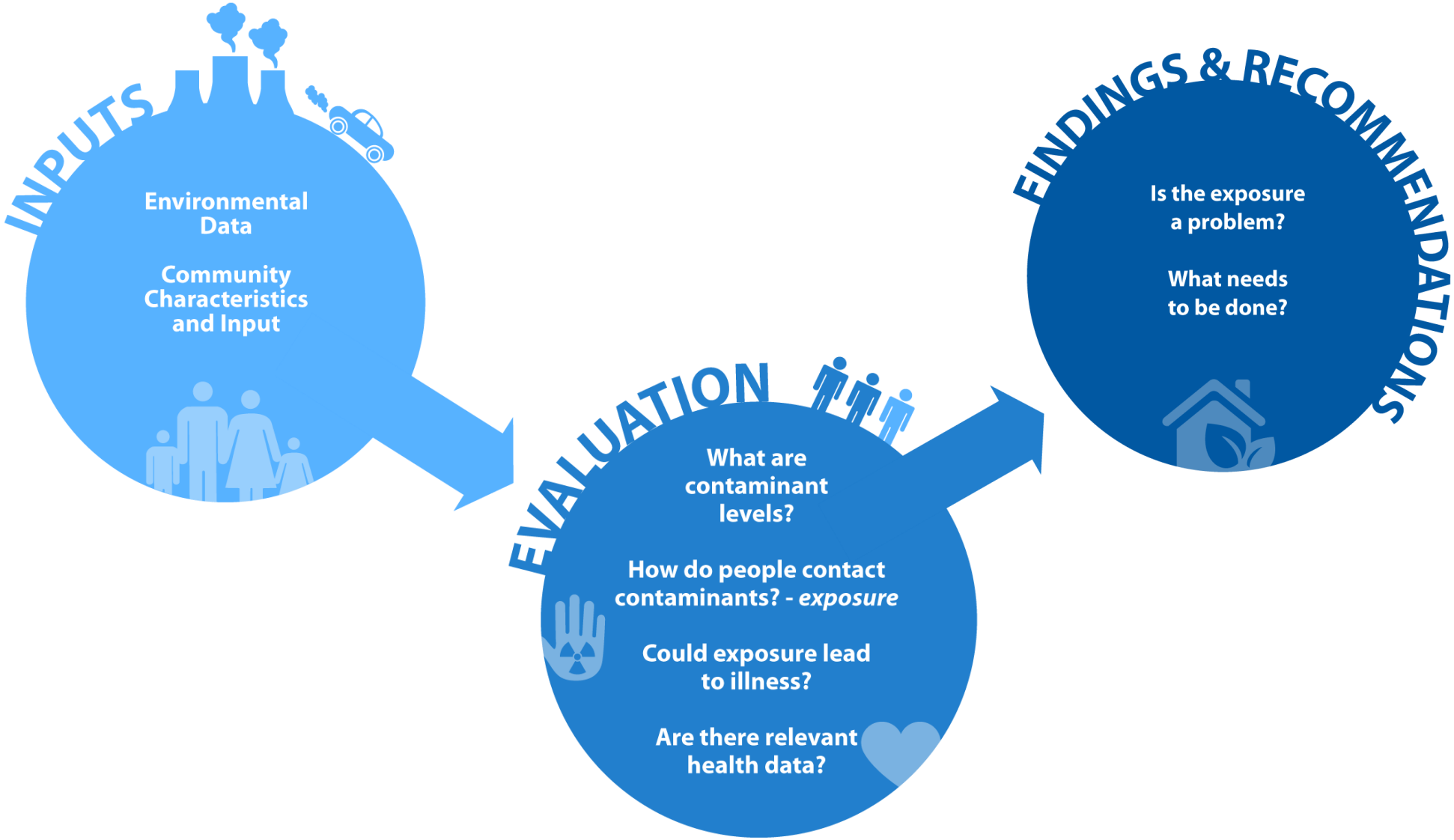
- Not a regulatory or enforcement agency
- Address health issues associated with hazardous materials in the environment

ATSDR works with communities, local, state, tribal governments, and other federal agencies to protect people from environmental exposures

ATSDR does this by investigating chemical exposures, recommending actions to protect people, educating the public, and conducting research to protect health



ATSDR
Public Health Consultation Process



- **For more information about ATSDR's public health activities at this site, please contact:**
- Motria Caudill, PhD, Environmental Health Scientist
- (312)-886-0267
- mcaudill@cdc.gov

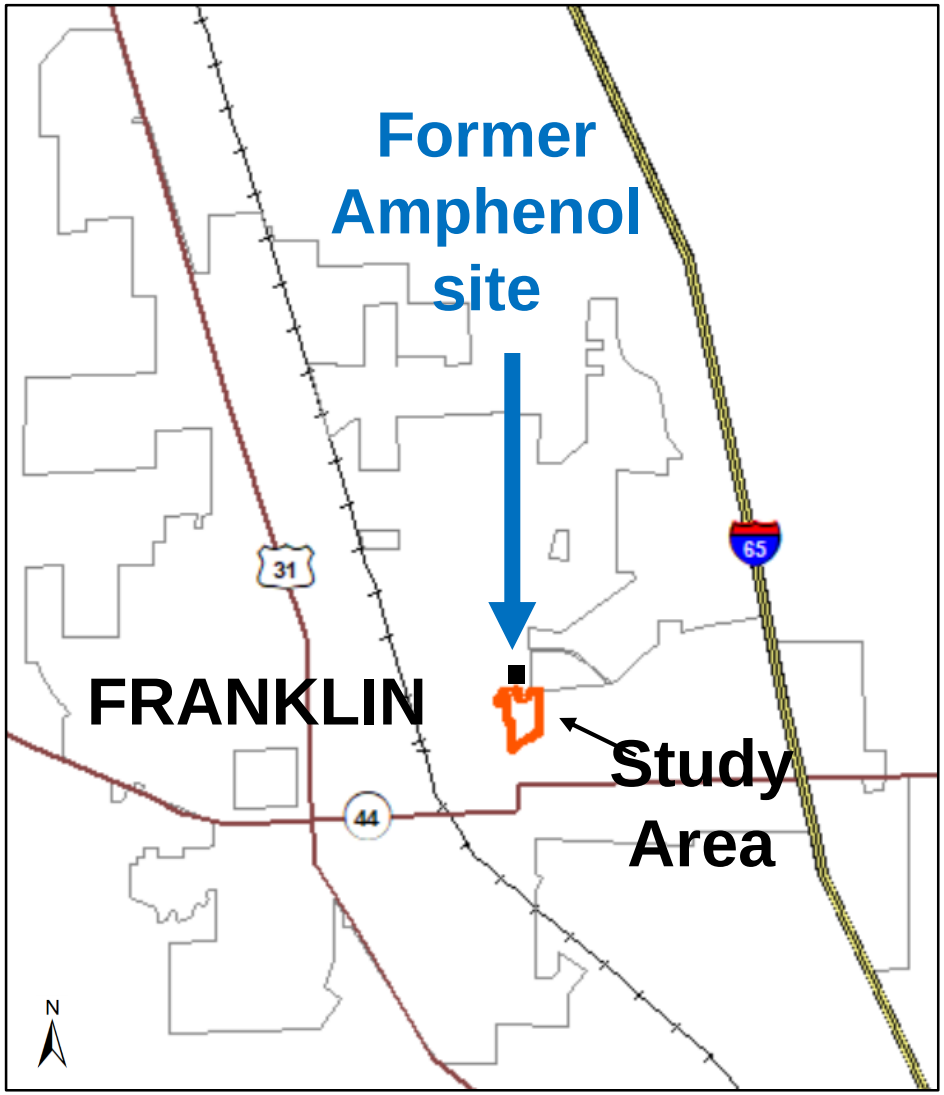
- **For more information about ATSDR visit:**
- 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
- Email: cdcinfo@cdc.gov
- Web: www.atsdr.cdc.gov

U.S. Environmental Protection Agency

Vapor Intrusion Investigation Status and Results and Sewer Line Remedy Former Amphenol Site

Public Information Session
Franklin, IN
June 5, 2019

Former Amphenol site in Franklin, IN



PRESENTATION OVERVIEW

- Vapor Intrusion Investigation Status, Results, Mitigation Work
- Sewer Line Remedy
- What's Next

Brief History of Site

1990's Investigations: groundwater, soil, creek

1996 Vapor Intrusion Risk Assessment concluded no risk to the neighborhood from groundwater plume (study method and health benchmarks at the time)

1994 to Present - Groundwater pump and treat remedy (267,141,650 gallons to-date)

August 3, 2018 Public Meeting:

EPA will "start from scratch"

Several investigations completed since July 2018

Conceptual Site Model

Is contamination still in neighborhood?
How far did contamination travel?
Are homes being impacted by vapors?
Vapor Intrusion Study

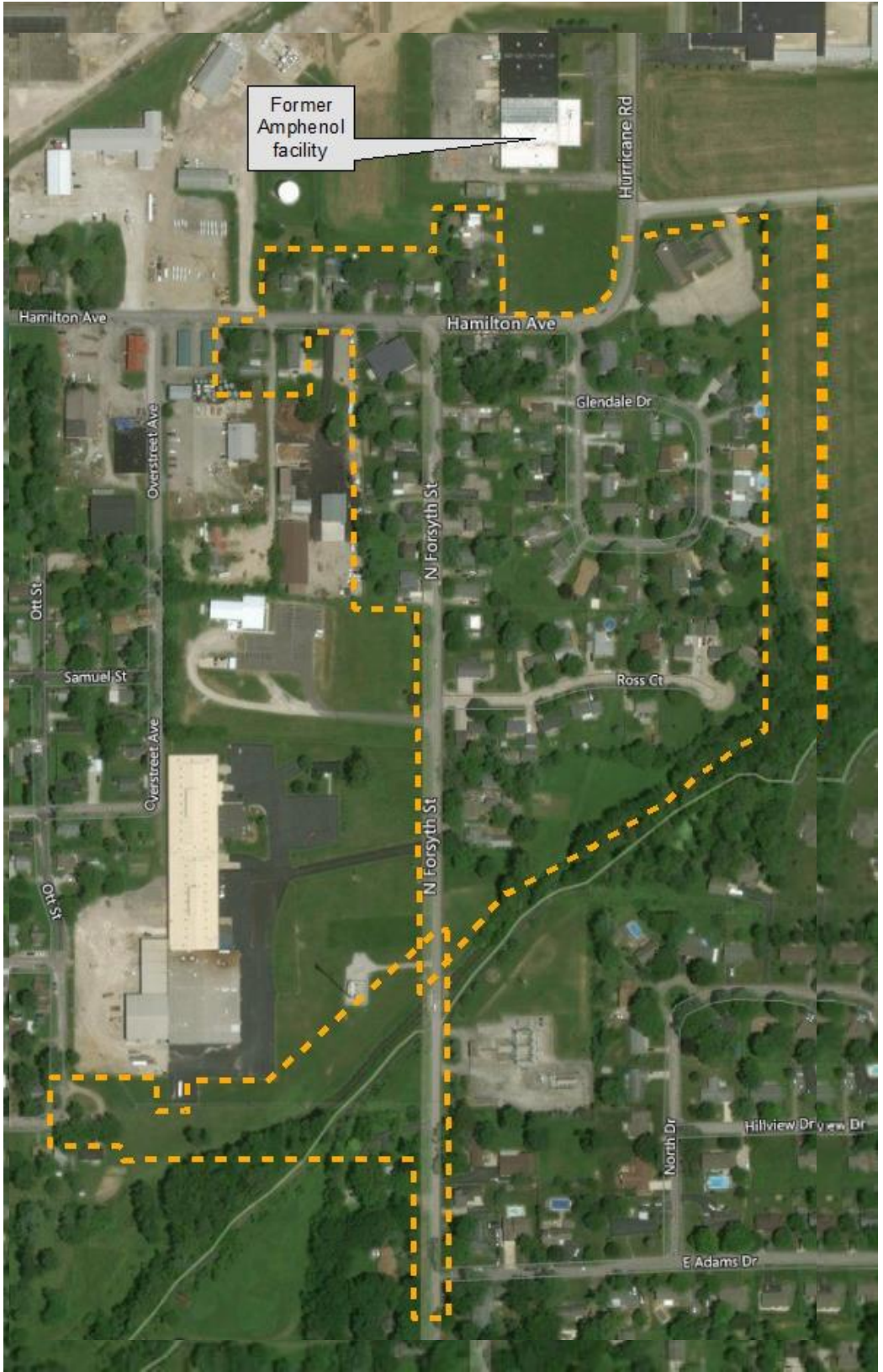
CSM starting from what we know:

- Sewers were a primary conveyance of solvents to neighborhood, 1961 through 1983
- 1990's investigation under EPA Order reported neighborhood chemical contamination in groundwater and chemical vapors in soil

Vapor Intrusion Study Area

Basis of Study Area and conceptual site model:

- Historic data
- Groundwater flow direction
- Sewershed flow direction
- New sampling in 2018 and 2019



Sampling Completed to Support CSM and Decision-Making

Where is the contamination in -

Groundwater?

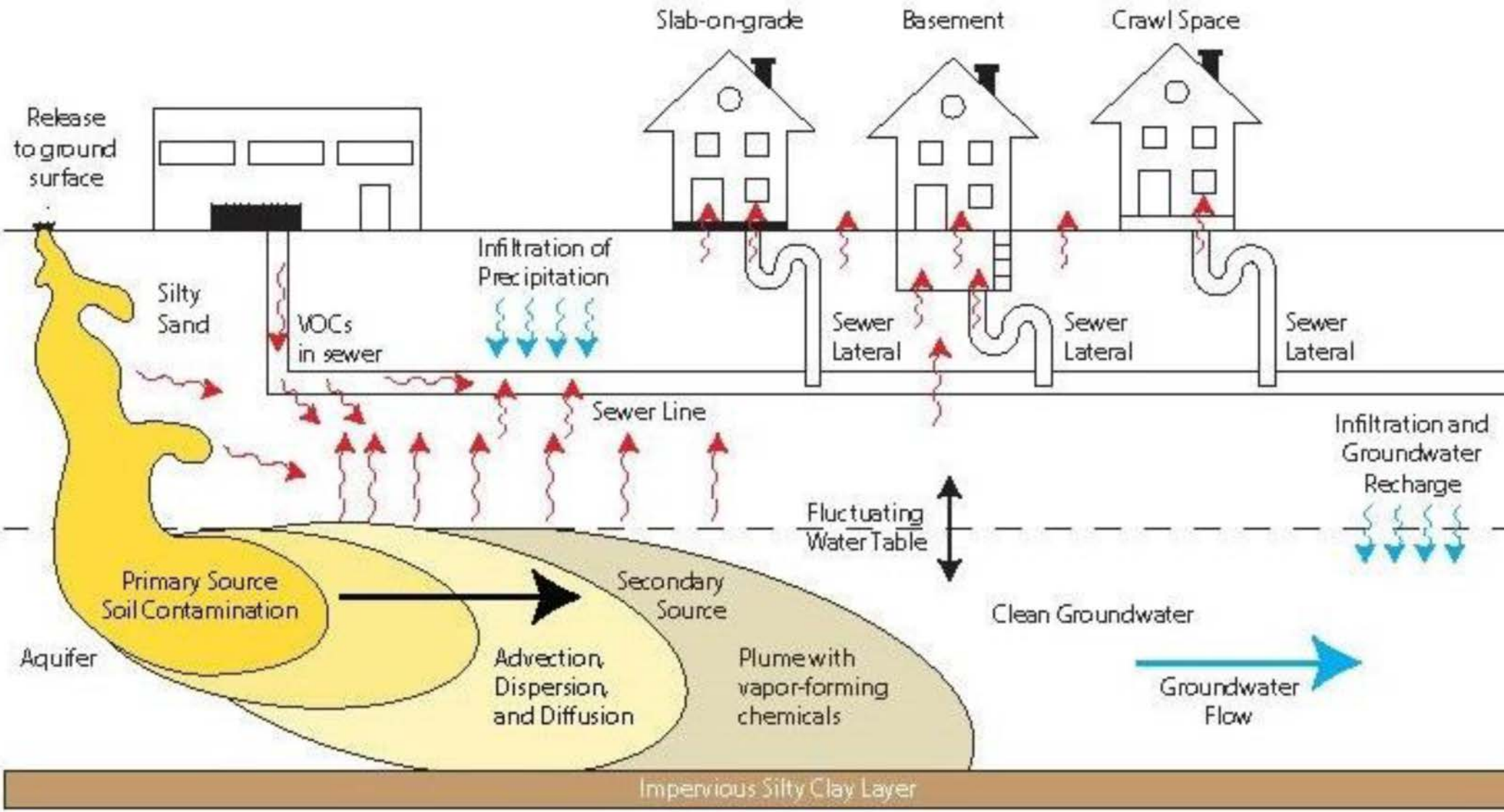
Sewer vapors?

Soil around the sewers?

Outdoor air?

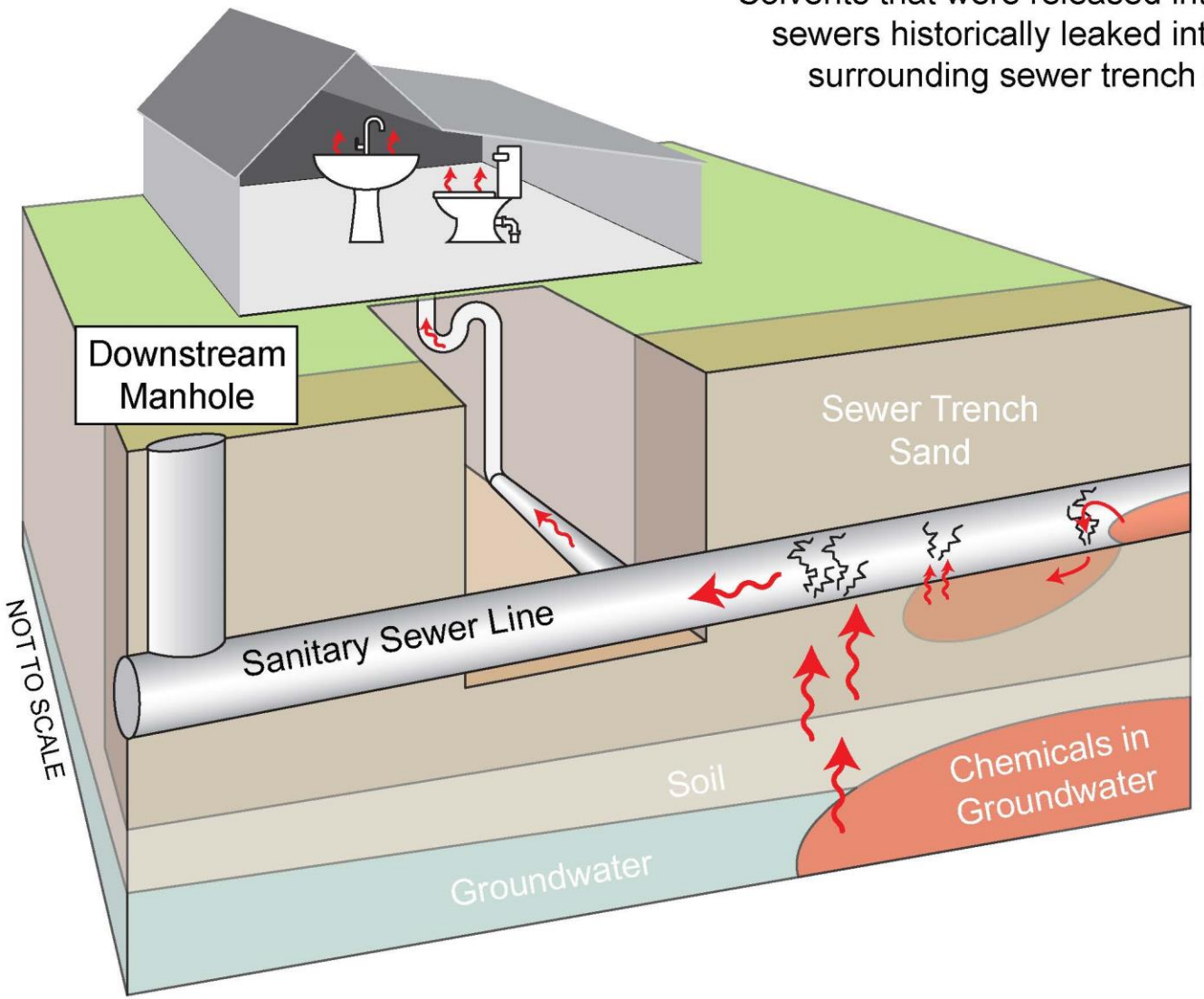
Are homes impacted by Vapor Intrusion?

Possible Vapor Exposure Pathways



Migration of soil vapors via sewer to indoor air

Solvents that were released into the sewers historically leaked into the surrounding sewer trench soils.



EPA United States Environmental Protection Agency

Conceptual Site Model Update - Questions answered by data

First –

Groundwater, soil, sewer vapor sampling indicated:

Potential complete exposure pathways to indoor air via

- Contaminated groundwater
- Connection to the sewer mains

Next –

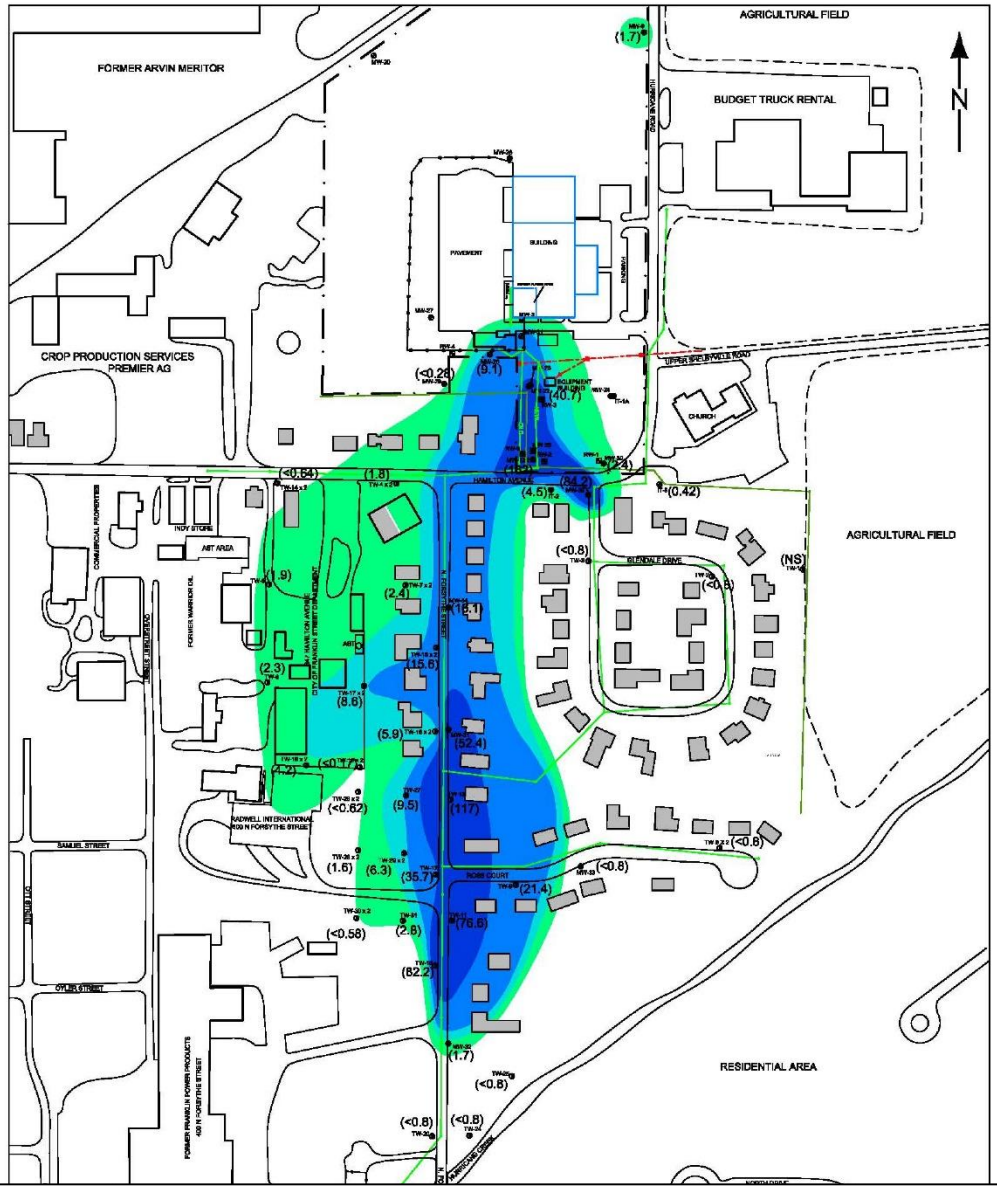
Indoor air testing demonstrated

Complete exposure pathways

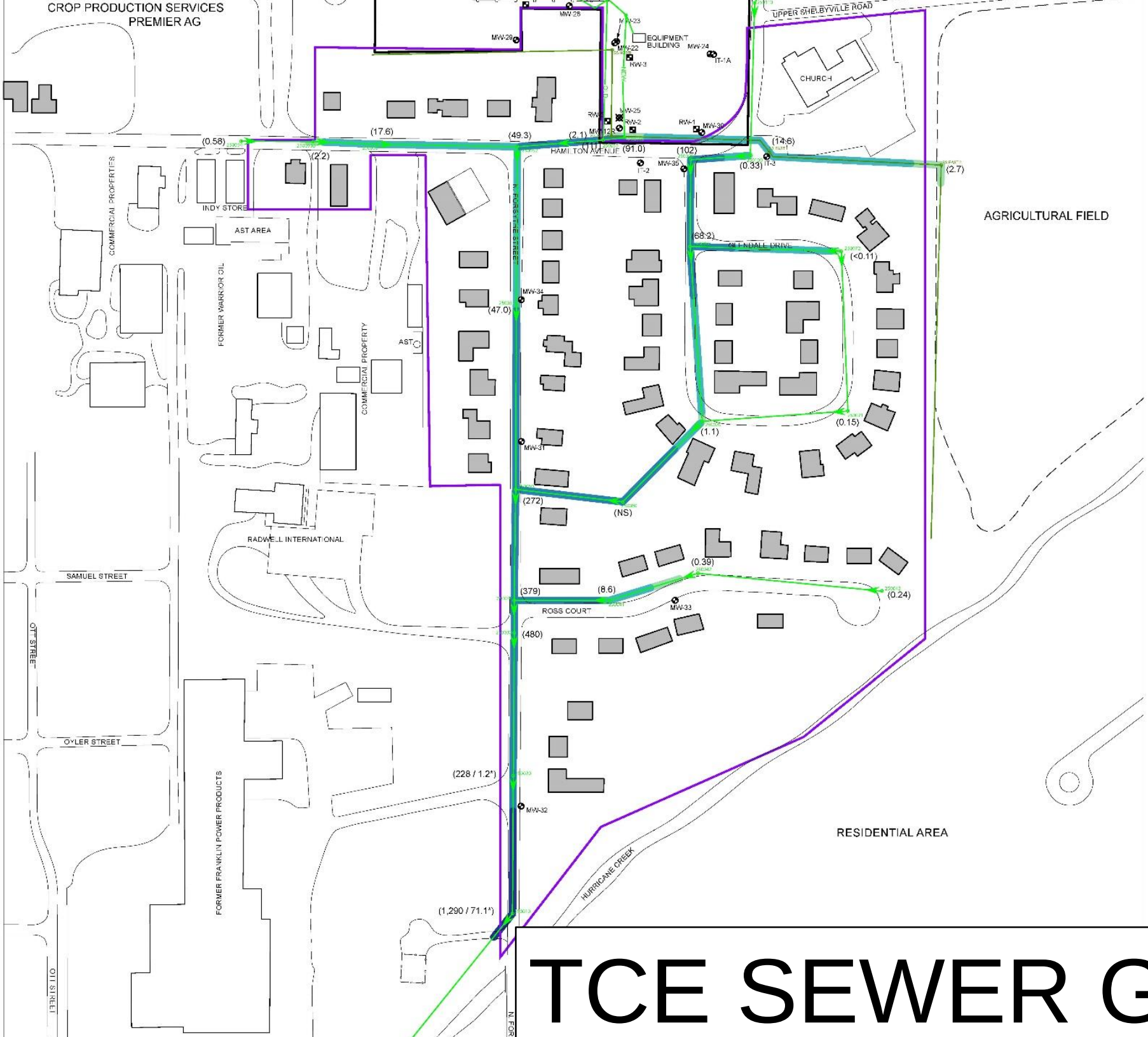
EPA United States Environmental Protection Agency

GROUNDWATER TCE (WATER TABLE)

FORMER AMPHENOL RFI/CMS; 980 HURRICANE ROAD, FRANKLIN, INDIANA



Groundwater Sampling Results TCE/PCE



TCE SEWER GAS

42 Homes Identified for Indoor Air Testing

Results: 15 homes had remediation work

(30 homeowners granted access)

Indoor air exceedances: 5

Indoor air exceedance due to sewer gas: 2

Indoor air exceedance due to soil gas: 1

Indoor air exceedance due to soil and sewer gas: 2

Sub-slab or outdoor soil gas exceedances: 6

Sewer line main vapor exceedances: 19

Response Actions
Impact from groundwater

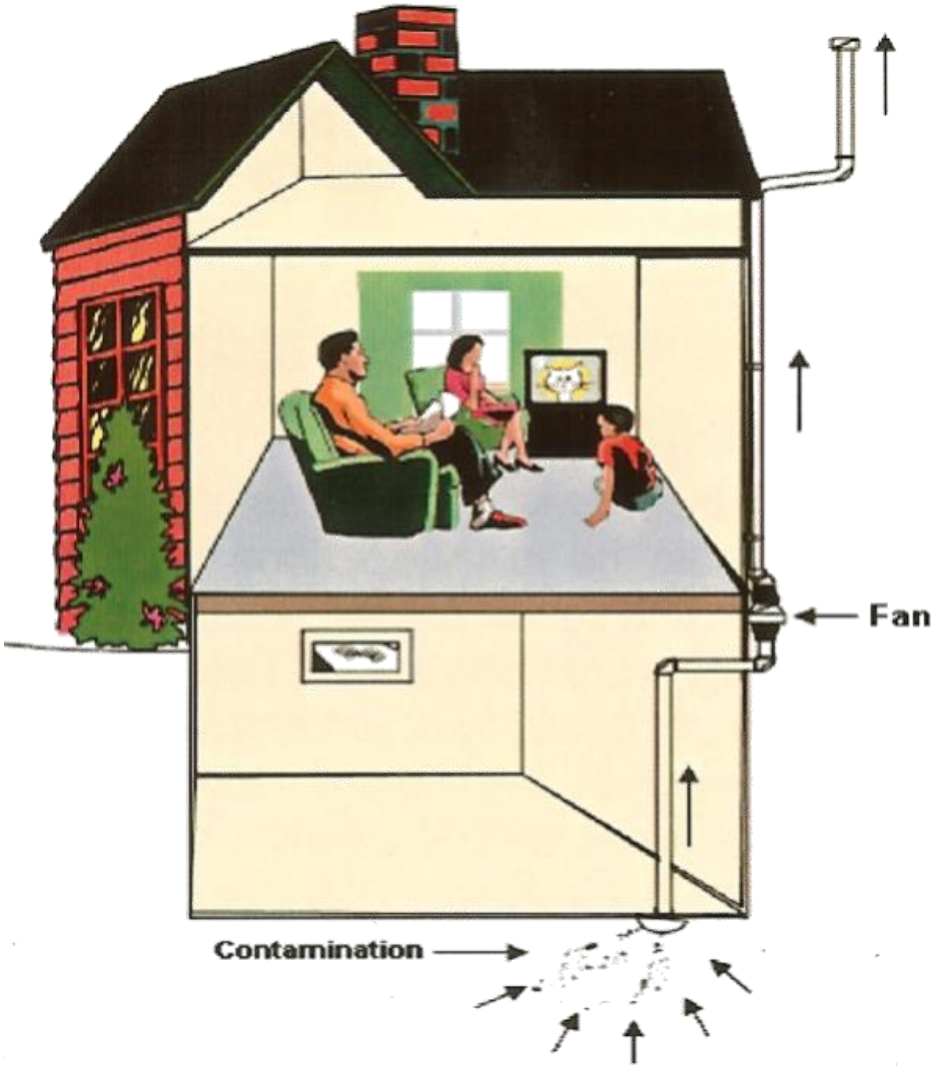
- Vapor mitigation systems recommended: 6

(any home with sub-slab exceedance regardless of indoor air result)

- Installed: 5 (one homeowner declined)

EPA will go door-to-door to try to get access for testing in the remaining 12 homes.

Five Homes
Vapor Intrusion Mitigation System
(Groundwater Migration Pathway)



- Sub-Slab Depressurization System
- Similar to radon gas mitigation system
- Suction ”negative pressure” used under building
- Prevents vapors from entering structure

Response Actions

Sewer Line Home Plumbing System Repairs

detected and repaired: 9 homes

- Plumbing exhaust that vented inside attics were rerouted to out the roof
- Vapor leaks observed around toilet flanges were replaced and toilets reset.
- Leaking sanitary lines were sealed at the slab entry point and other joints.
- Plumbing vents beneath sinks were sealed.

Remedial Sequence

1) **Make homes safe - mitigate indoor air impacts in homes**
   - Vapor mitigation systems installed – 5 homes
   - Sewer system repairs – 9 homes
2) **Current: Sewer line remedy**
   - Draft pre-design being revised based on EPA review
   - Next design document mid-June
3) **On-site source area remedy**
   - Soil sampling begun Feb-March, continuing this summer, evaluating injections to enhance VOC destruction
4) **Groundwater Pump and Treat System Optimization**
5) **Off-site Groundwater remedy**
   - Investigate options

Preliminary Remedy Overview

Amphenol – City of Franklin cooperation under EPA oversight and requirements

- Forsythe and Hamilton Streets
- North to south progress
- Excavation of soil and placement on roll-off boxes
- Temporary storage of dug up material on site
- IDEM disposal determination

Sewer Remedy

Several steps to completion

Approximate timeline 6 months, 90-day construction period

- Engineering design work plan approval
- Engineering design and bid specifications
- Contract bidding and award
- Remediation waste determination
- Permits: Sanitary sewer construction
  - Sanitary Sewer Discharge
  - Stormwater Pollution Prevention Plan
- Excavation, sewer installation and re-lining, backfill, street repaving

Remedial Goals

Prevent vapor intrusion into buildings via sewers

Sewer replacement and lining to:

- Prevent and/or minimize impacted groundwater infiltration into the sanitary sewer main and residential laterals

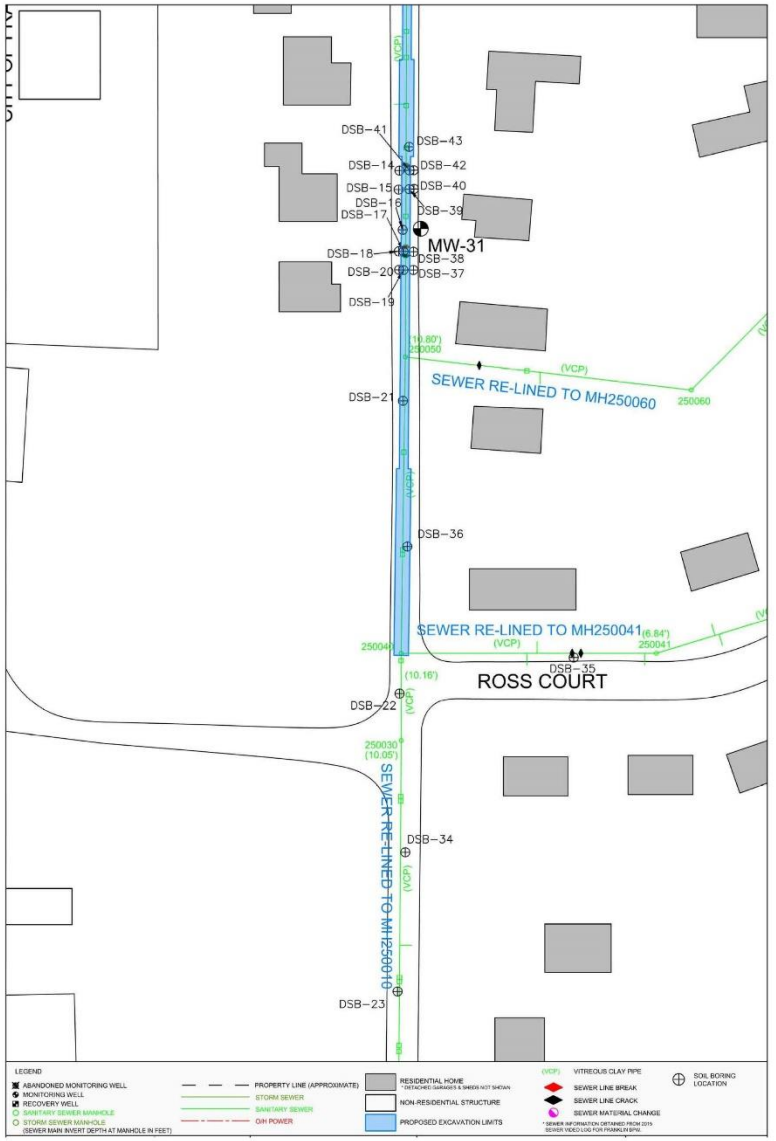
- Remove impacted soil around the sanitary sewer main to prevent vapor infiltration

EPA United States Environmental Protection Agency

PRELIMINARY SANITARY SEWER DESIGN PLAN
FORSYTHE STREET

FORMER AMPHENOL RFI/CMS; 980 HURRICANE ROAD, FRANKLIN, INDIANA

Rev. 5/6/19



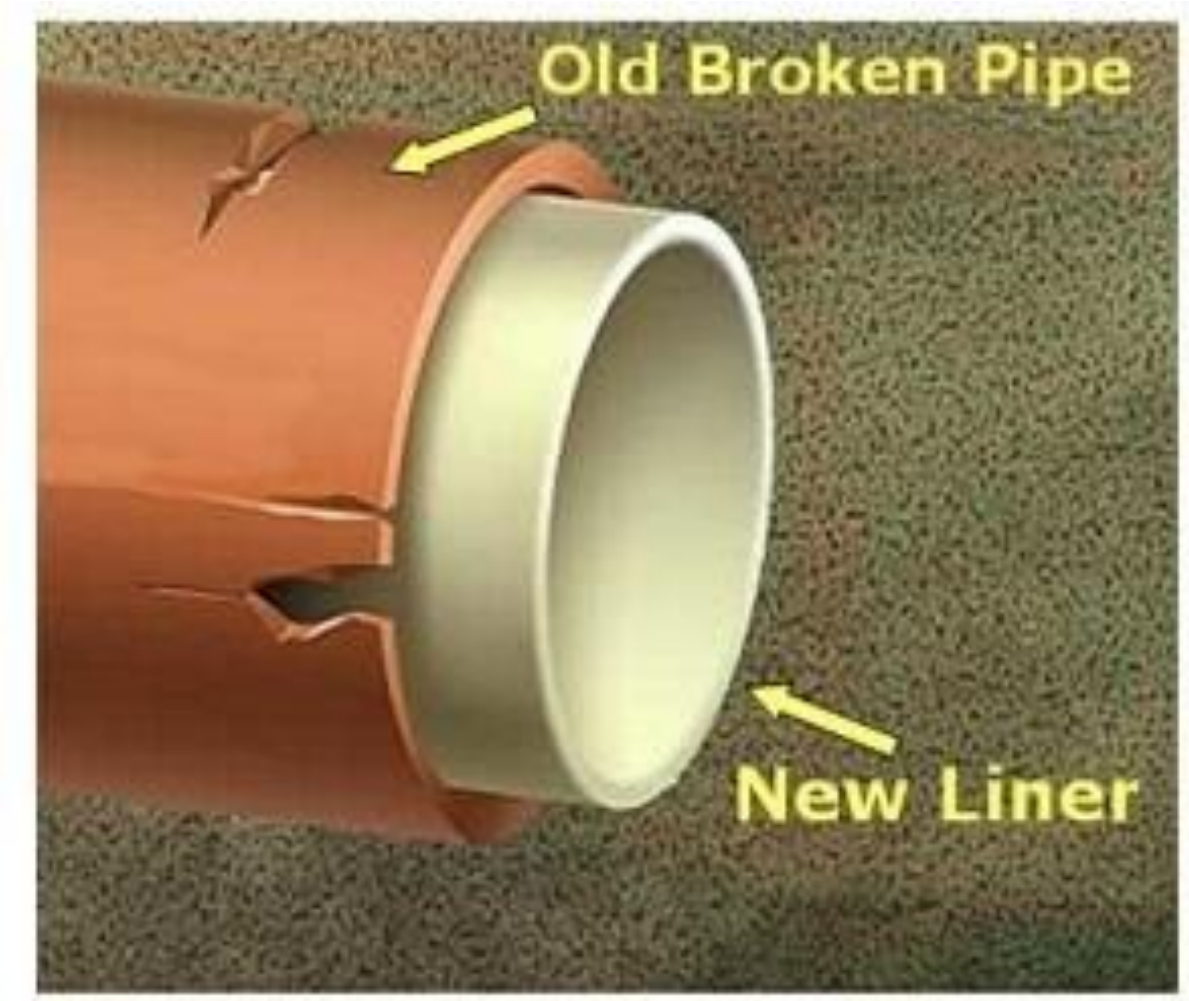
UPPER FORSYTHE STREET

LOWER FORSYTHE STREET

Excavation of soil – Amphenol

Placement of clean fill and street restoration – Franklin

Replacement or relining of sewer line segments based on condition of segment



Remedy Overview, cont'd
EPA Requirements to contain contamination and keep workers safe

- Health and Safety Plans
- Materials Management Plan
- Stormwater Pollution Prevention Plan
- EPA requirements include VOC and particulate air monitoring at perimeter
- Construction shut down requirement if criteria are exceeded until conditions change
- Design to minimize inconvenience to residents
- Where needed, groundwater will be pumped to mobile tanks for treatment
- Confirmatory sampling
- Treated water sent to POTW

Note on
Indoor air sampling in homes

- Access Please grant access

  EPA will be going door-to-door
- Privacy Act You don't have to share results
- All homes will have a minimum of two sampling events

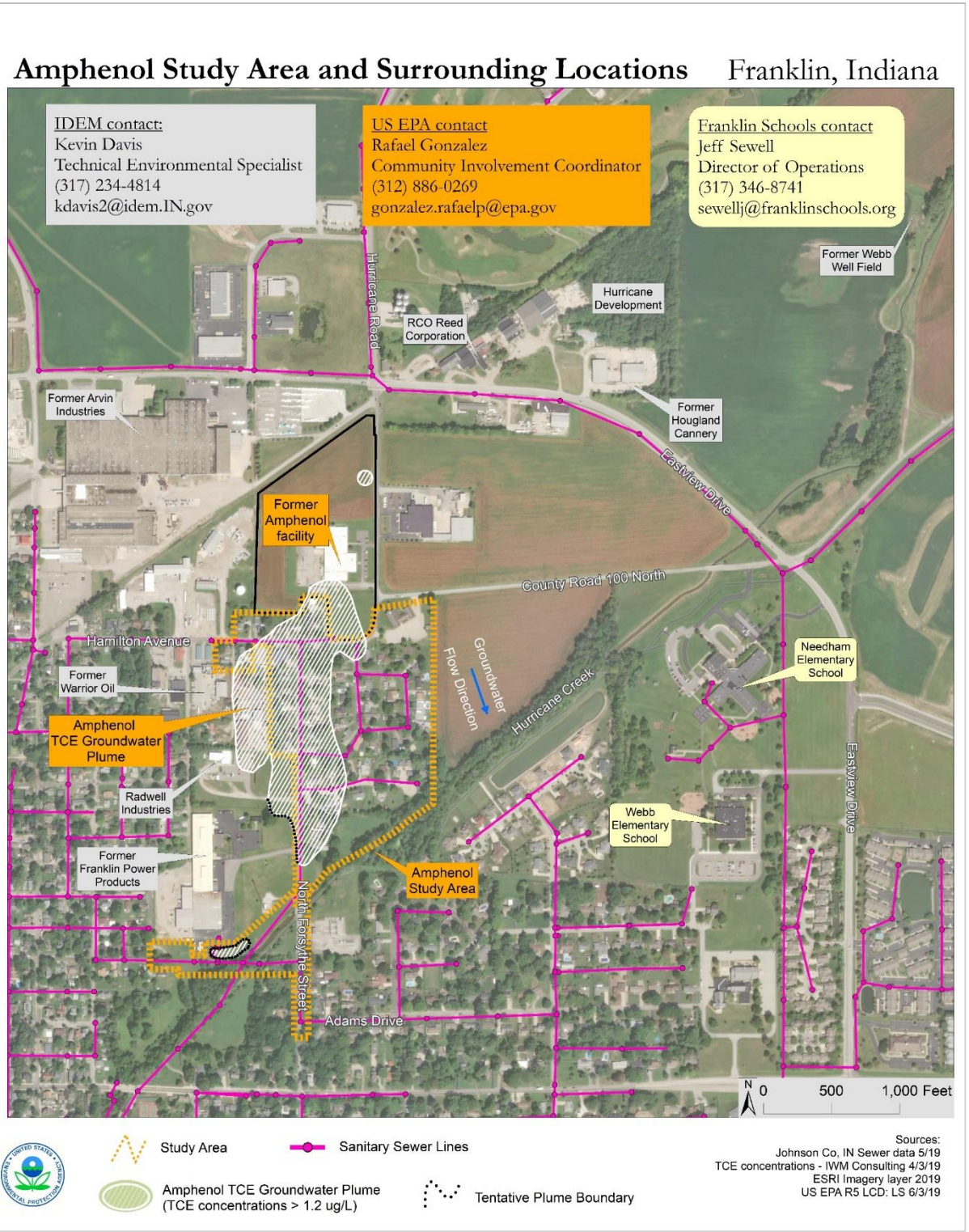
Strategy – Former Amphenol Site
Next Steps

1. Investigate and remediate source-areas on-site

2. Evaluate old and new remedies

3. Remedy selection

4. Monitor and re-evaluate the vapor intrusion pathway



Bigger picture around the Amphenol Site

Who is responsible and Who to contact

Handout near poster in Lobby

Thank you!

Questions after presentations

Next presenter,

Trent Newport

CrossRoad Engineers

FORSYTHE STREET
SEWER RECONSTRUCTION

PROPOSED

- (A) New Sign and Post
- (B) Relocate Existing Sign(s) on New Post
- (J) Full Depth Sawcut
- (16) Curb & Gutter Roll Curb
- (36) Line, Thermoplastic, Solid Yellow, 4 Inches
- (37) Transverse Marking, Thermo., Stop Bar, 24 Inches
- (E) Full Depth Asphalt Pavement
- (R) Mill and Overlay
- (D) HMA for Approaches (Drives)
- (G) Compacted Aggr. #53 for Approaches (Drives)
- Trench Bottom Limits

(See Typical Sheet for Additional Details)

North

80 0 80 120

SCALE: 1" = 80'

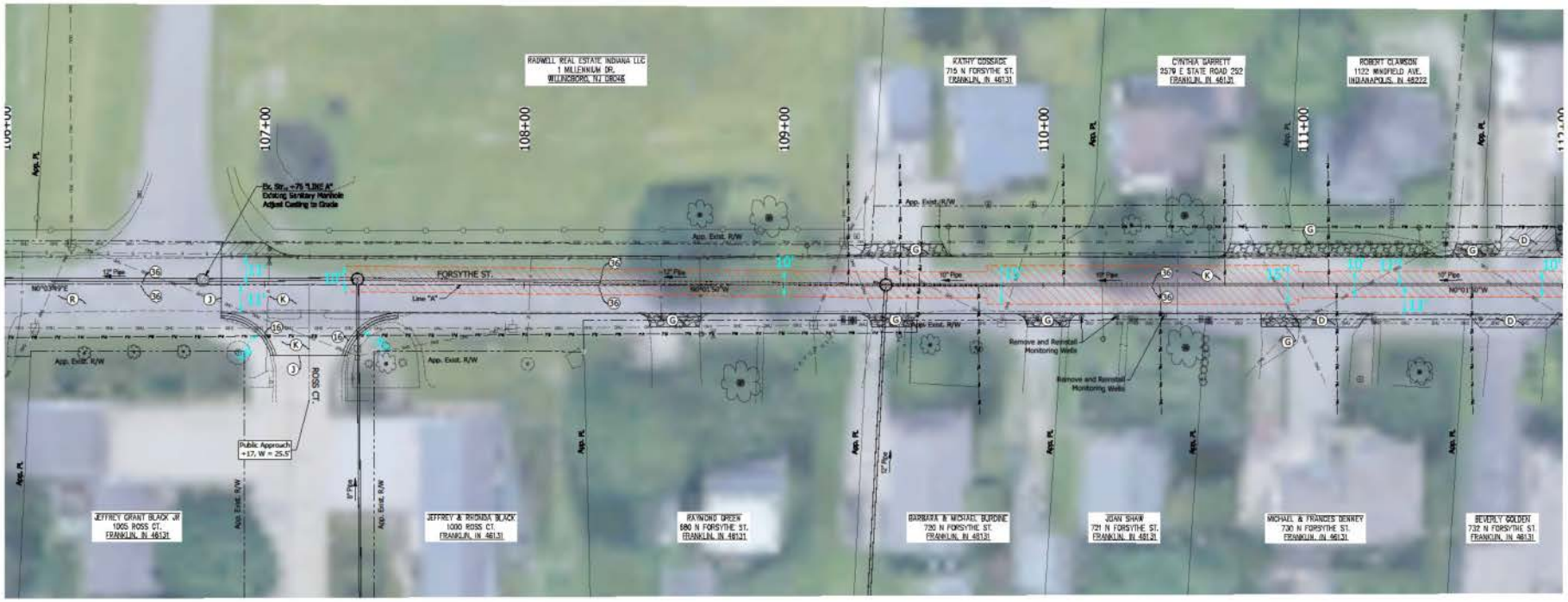
PREPARED BY:

CROSSROAD ENGINEERS, PC

Transportation & Development Consultants

JUNE 4, 2019

FORSYTHE STREET
SEWER RECONSTRUCTION



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- (K) Full Depth Asphalt Pavement
- (R) Mill and Overlay
- (D) HMA for Approaches (Drives)
- (G) Compacted Aggr. #53 for Approaches (Drives)
- Trench Bottom Limits

North

20 0 20 40

SCALE: 1" = 20'

PREPARED BY:

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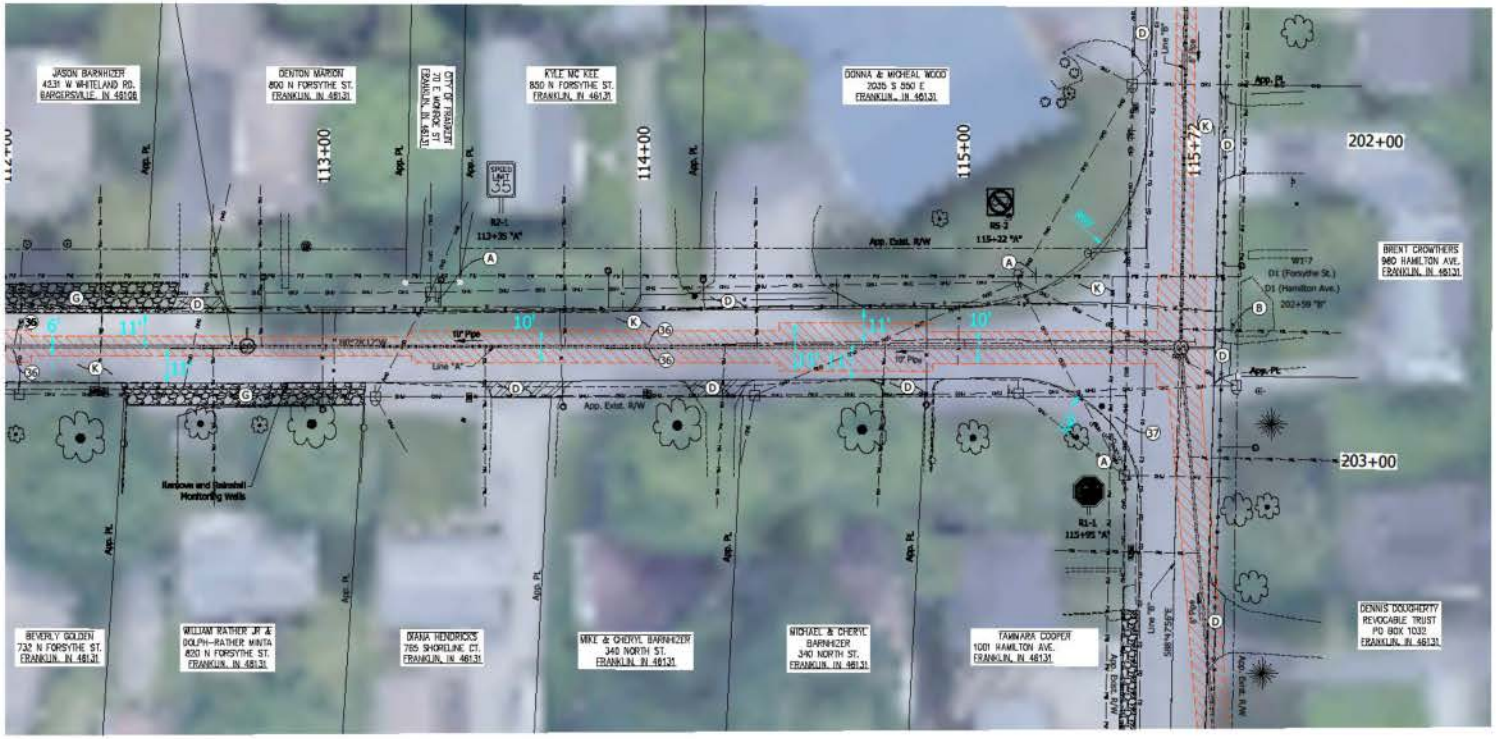
FORSYTHE STREET
SEWER RECONSTRUCTION



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- (D) HMA for Approaches (Drives)
- (G) Compacted Aggr. #53 for Approaches (Drives)

North

20 0 20 40

SCALE: 1" = 20'

PREPAR

CROSS ENGINE

Transpo

FORSYTHE STREET
WATER MAIN RELOCATION

0 25 50

SCALE: 1" = 25'

LEGEND
PROPOSED WATER MAIN
EXISTING WATER MAIN

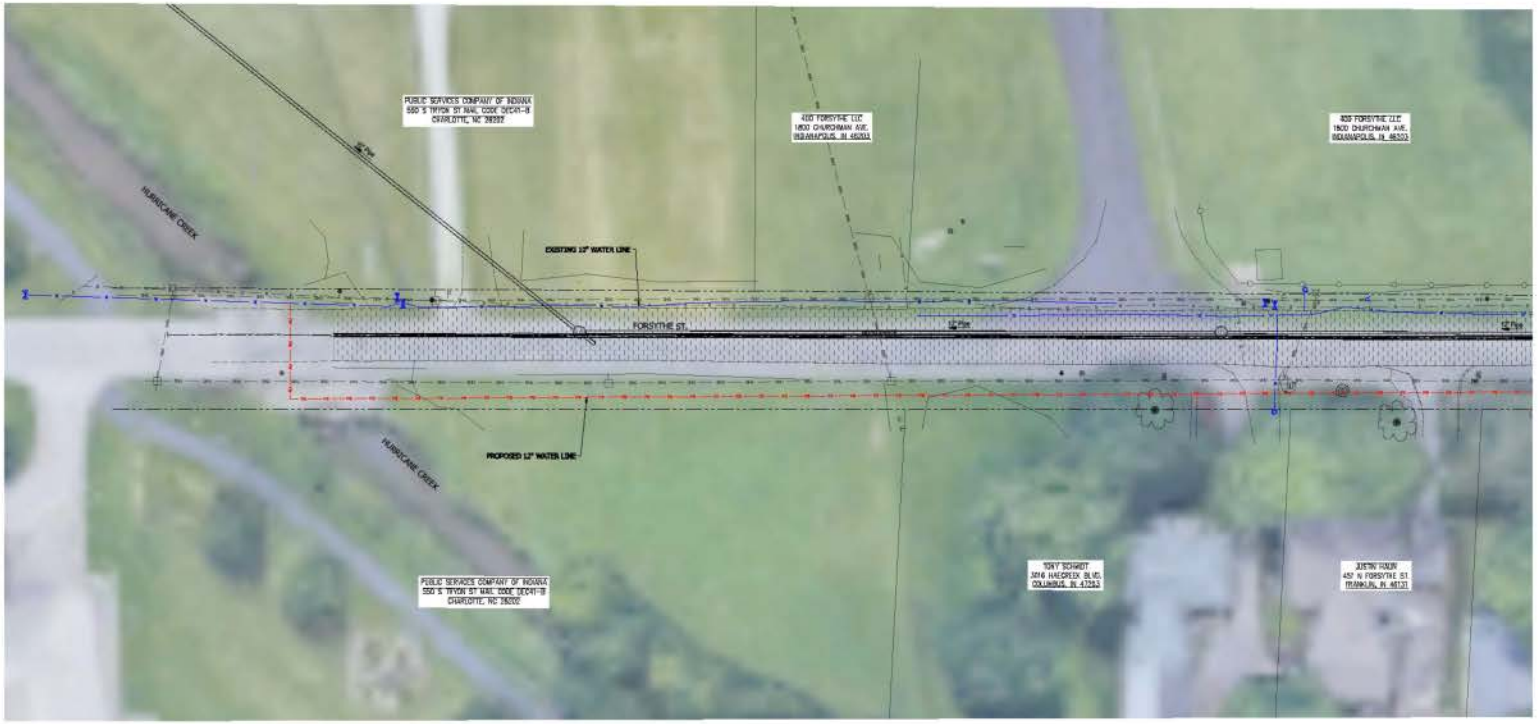
PREPARED BY:

CROSSROAD ENGINEERS, PC

Transportation & Development Consultants

JUNE 4, 2019

FORSYTHE STREET
WATER MAIN RELOCATION



SCALE: 1" = 20'

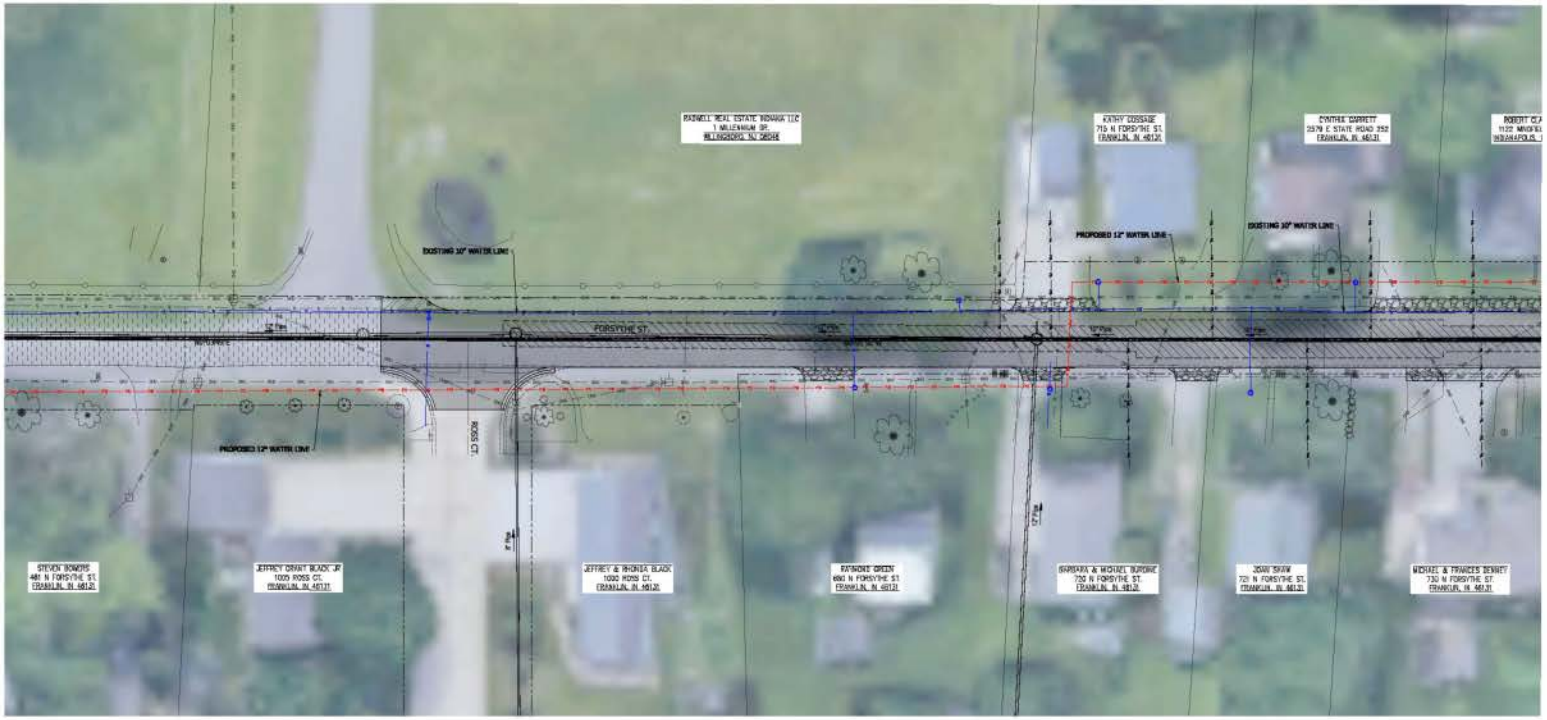
LEGEND
PROPOSED WATER MAIN
EXISTING WATER MAIN

PREPARED BY:

CROSSROAD ENGINEERS, PC
Transportation & Development Consultants

JUNE 4, 2019

FORSYTHE STREET
WATER MAIN RELOCATION



SCALE: 1" = 20'

LEGEND
PROPOSED WATER MAIN
EXISTING WATER MAIN

PREPARED BY:

CROSSROAD ENGINEERS, PC
Transportation & Development Consultants

JUNE 4, 2019

FORSYTHE STREET
WATER MAIN RELOCATION

LEGEND
PROPOSED WATER MAIN
EXISTING WATER MAIN

PREPARED BY:

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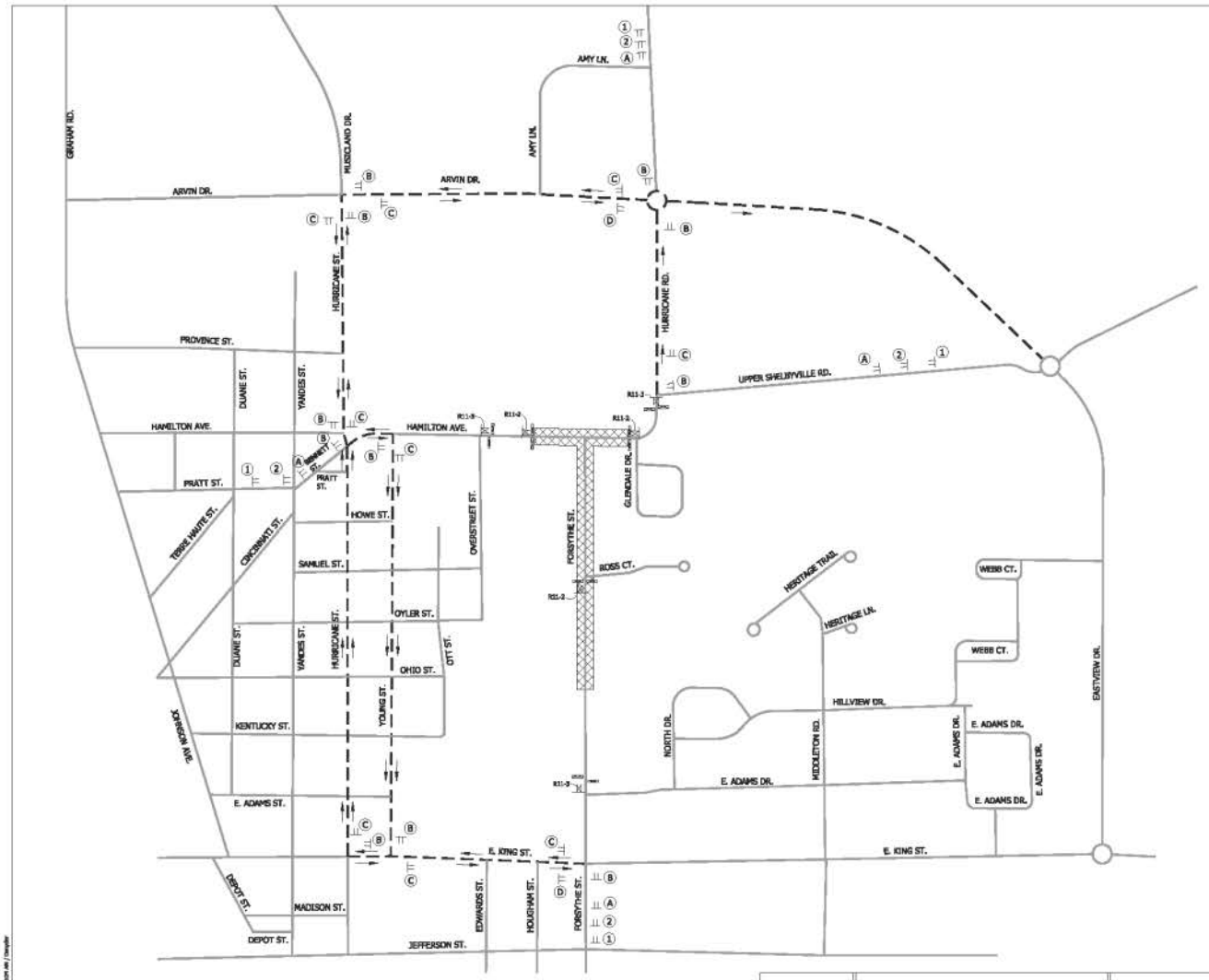


LEGEND

- CONSTRUCTION AREA
- ALTERNATE/DETOUR ROUTE
- TYPICAL CONSTRUCTION SIGN STANDARD
- ROAD CLOSURE SIGN ASSEMBLY
- BARRICADE, TYPE III-B

DETOUR ROUTE MARKER ASSEMBLY DETAILS

A	B	C	D
DETOUR M4-8	DETOUR M4-8	DETOUR M4-8	END M 4-8
FORSYTHE ST.	FORSYTHE ST.	FORSYTHE ST.	DETOUR M 4-8
OR	OR	OR	FORSYTHE ST.
HAMILTON AVE.	HAMILTON AVE.	HAMILTON AVE.	OR
M5-1(R)S	M6-1S	M6-3	HAMILTON AVE.
OR	OR		M5-1(R)S
M5-1(L)S	M6-1S		OR
			M5-1(L)S

CONSTRUCTION SIGNS, TYPE "A"

1	2
XW20-3 36" X 36"	XW20-2 36" X 36"
ROAD CLOSED AHEAD	DETOUR AHEAD

ROAD CLOSURE SIGN ASSEMBLIES

ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY	ROAD CLOSED
R11-3 5' X 2'-6"	R11-2 4' X 2'-6"

NOTE: FOR SPACING OF DETOUR ROUTE MARKER ASSEMBLIES AND CONSTRUCTION SIGNING, SEE INDOT STANDARD DRAWING E 801-TCDT-01

PRELIMINARY NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 5/01/19 DATE

DESIGNED: D.S. DRAWN: K.F.

CHECKED: T.H. CHECKED: D.S.

CITY OF FRANKLIN

MAINTAINENCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
Not to Scale	
VERTICAL SCALE	DESIGNATION
-	-
SURVEY BOOK	SHEETS
	4 of 17
CONTRACT	PROJECT
-	-

Project Information

- All project work to be in existing Right of Way except sanitary lateral work. Individual right of entries will be obtained for this work.
- Individual meetings will be held to discuss any interruptions to driveway access within project limits. Otherwise, access will be maintained to all drives within the project limits from at least one direction (north or south).
- We will communicate with all emergency services to ensure access to all homes during construction.
- We will coordinate with school for bus pick up location and communicate to all residents.
- Contact information for all questions/concerns regarding construction project:

Brad Stahley
bstahley@crossroadengineers.com
(317) 417-4126

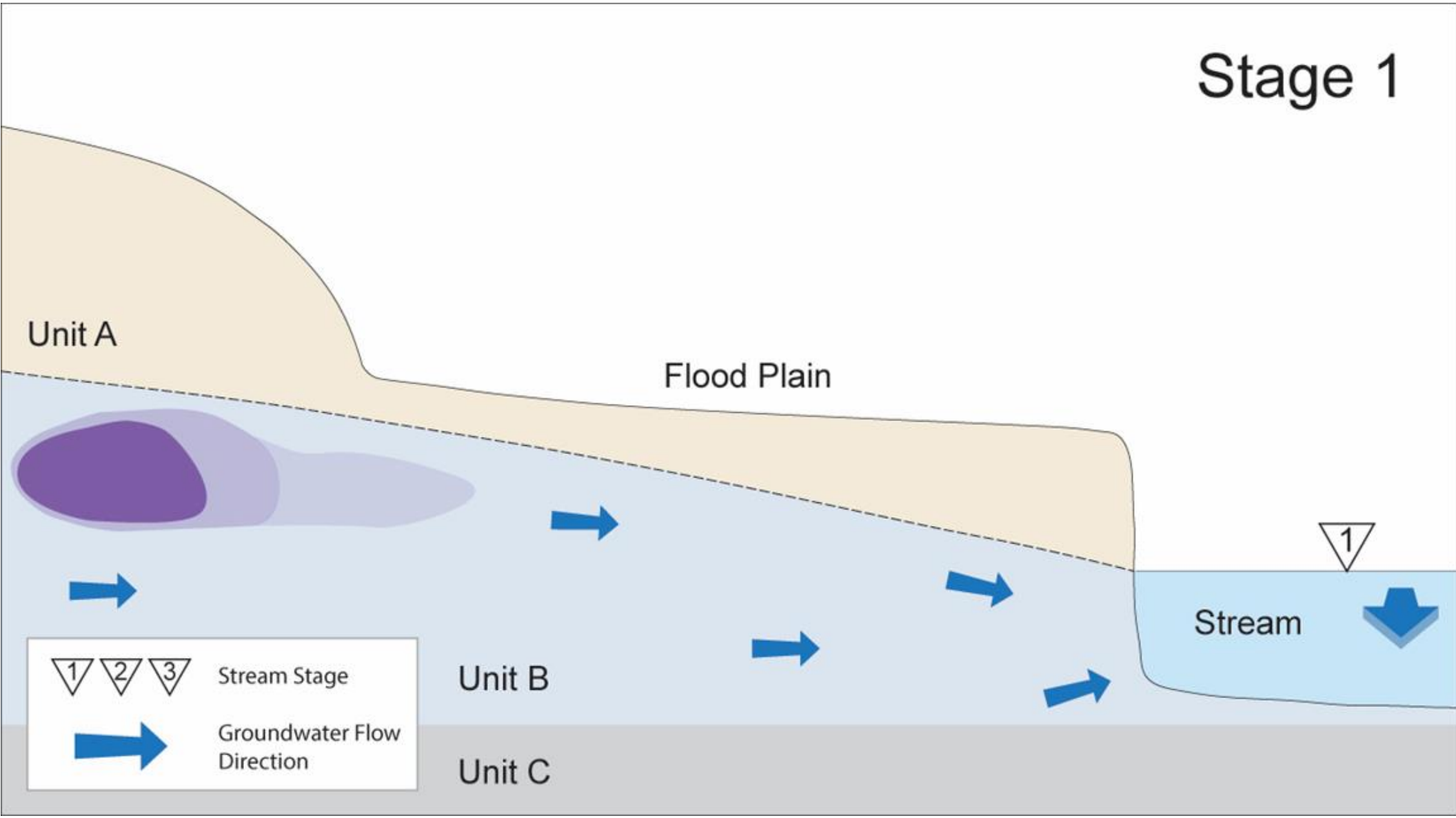
Trent Newport
tnewport@crossroadengineers.com
(317) 502-2760

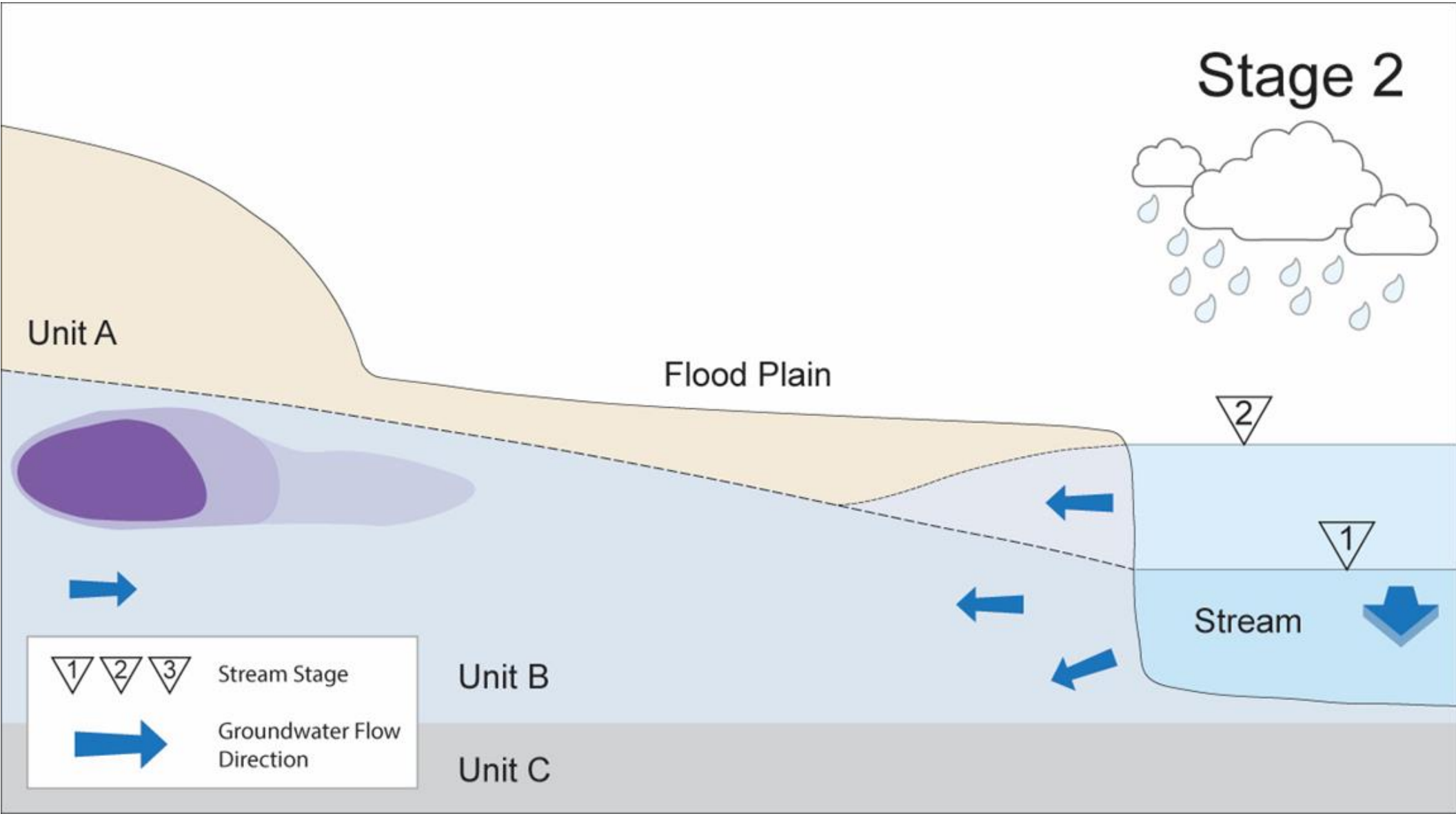
Project Schedule

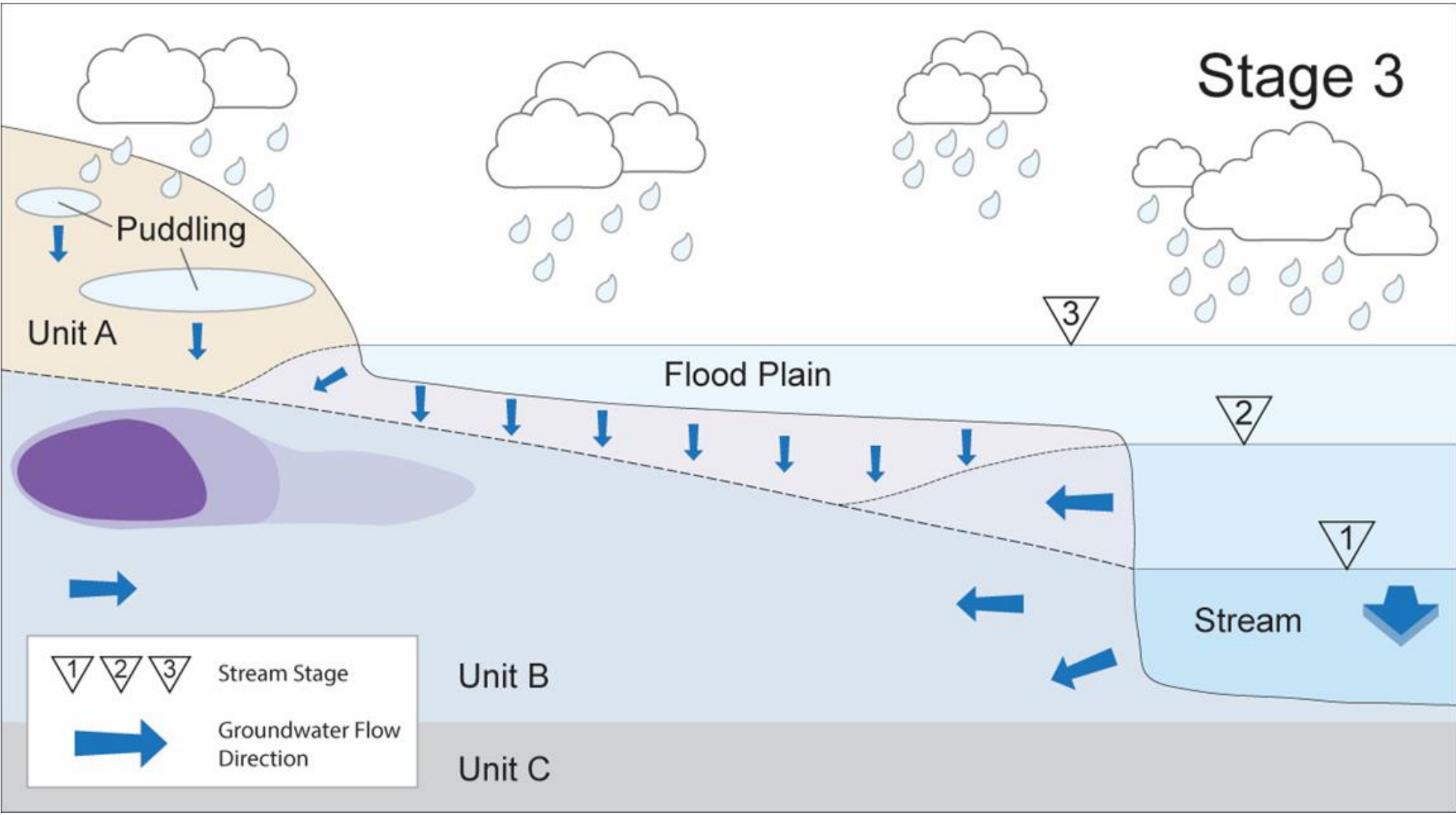
- Project to bid in July
- New water main installation – approximately 45 days / start in July
- Soil removal, sanitary sewer replacement, and road reconstruction – approximately 3 months
- Project expected to be completed by end of 2019 construction season. At a minimum it would be open to traffic by end of 2019 construction season and then asphalt surface installed in spring of 2020.
- Final yard restoration will be in late 2019 with any re-work necessary to be completed in spring of 2020.
- Project Newsletters will be distributed to update on schedule throughout life of the project.

Questions?

SLIDES USED DURING Q&A


Stage 1
Unit A
Flood Plain
1
Stream
1 2 3
Stream Stage
Groundwater Flow Direction
Unit B
Unit C


Stage 2
Unit A
Flood Plain
2
1
Stream
1 2 3
Stream Stage
Groundwater Flow Direction
Unit B
Unit C


Stage 3
Puddling
Unit A
Flood Plain
3
2
1
Stream
Unit B
Unit C
1 2 3
Stream Stage
Groundwater Flow Direction