



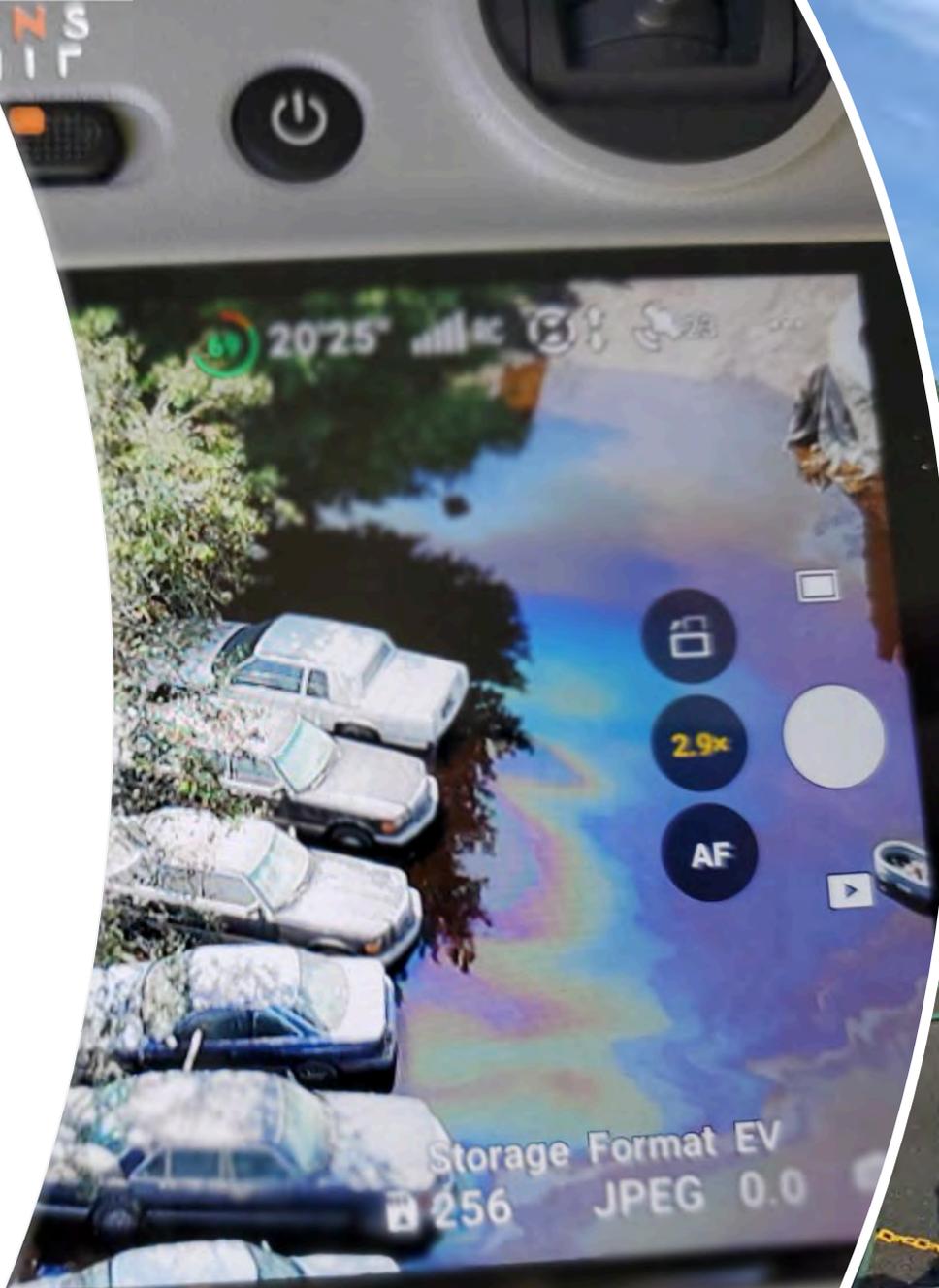
RELEASE-BASED CLEANUP REGULATIONS

WORKSHOP 3 – NEW RELEASES, IAS, & TRANSITION POINTS

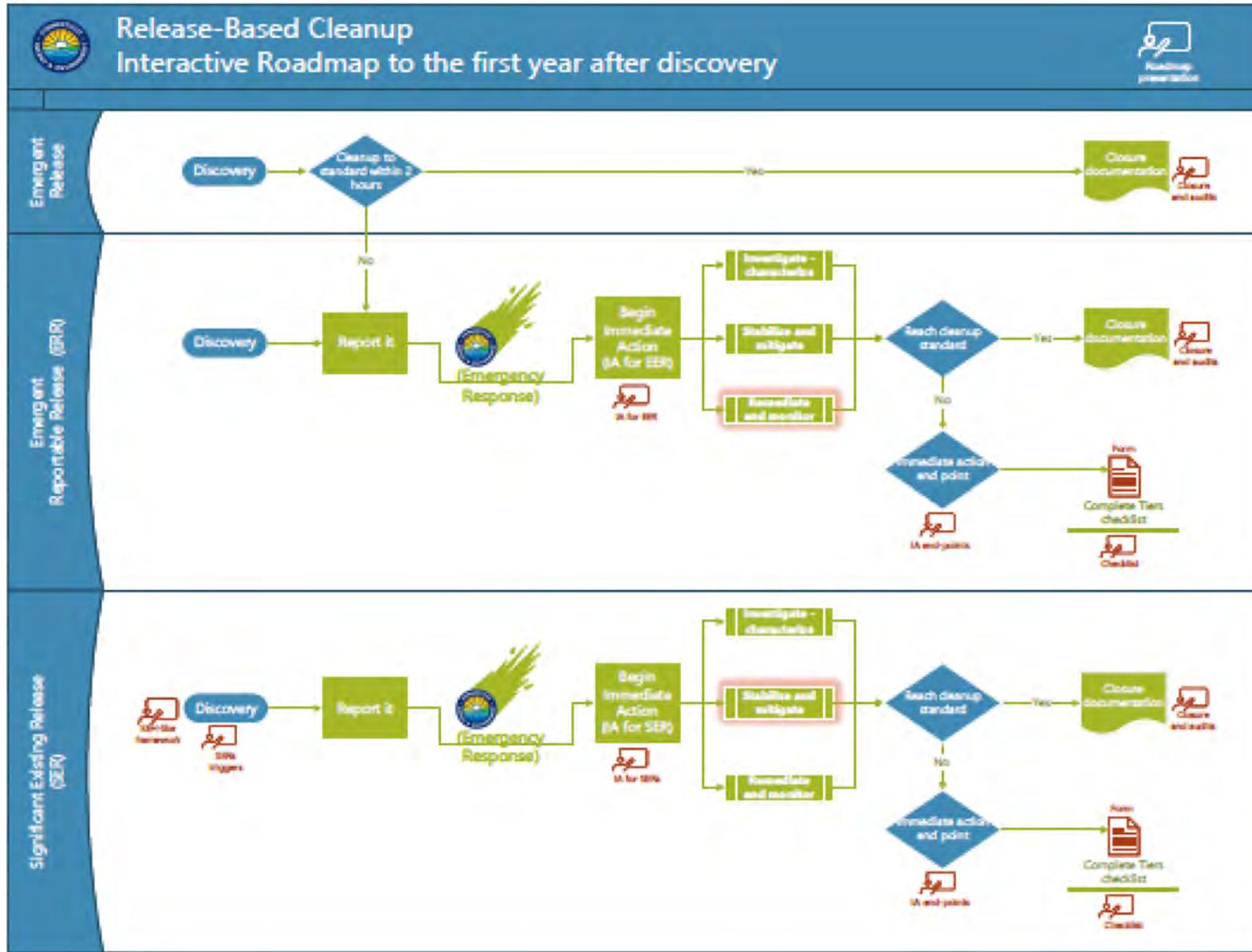
Presented by: Graham Stevens, Chief of Bureau of Water Protection and Land Reuse
Brendan Schain, Legal Director for Environmental Quality Branch
Lori Saliby, Division Director – Emergency Response & Spill Prevention Division

PRESENTATION OVERVIEW

- Discovery and Reporting of Releases that require Immediate Action
- ERR Immediate Action
- SER Immediate Action
- Transition Points & End Points
- Scenarios:



ROADMAP



KEY TERMS – IMMEDIATE ACTIONS

Immediate Action (IA) - the immediate response upon discovery of a release is:

1. Removing the release from the land and waters of the state
2. Implementing measures to prevent migration of the release, such as active remediation techniques, the use of physical barriers, or appropriate treatment systems
3. Identifying the source of the release and eliminating it (with some exceptions)

Immediate means starting removal no later than 2 hours after such release is reported.

TYPES OF RELEASES THAT REQUIRE IMMEDIATE ACTION

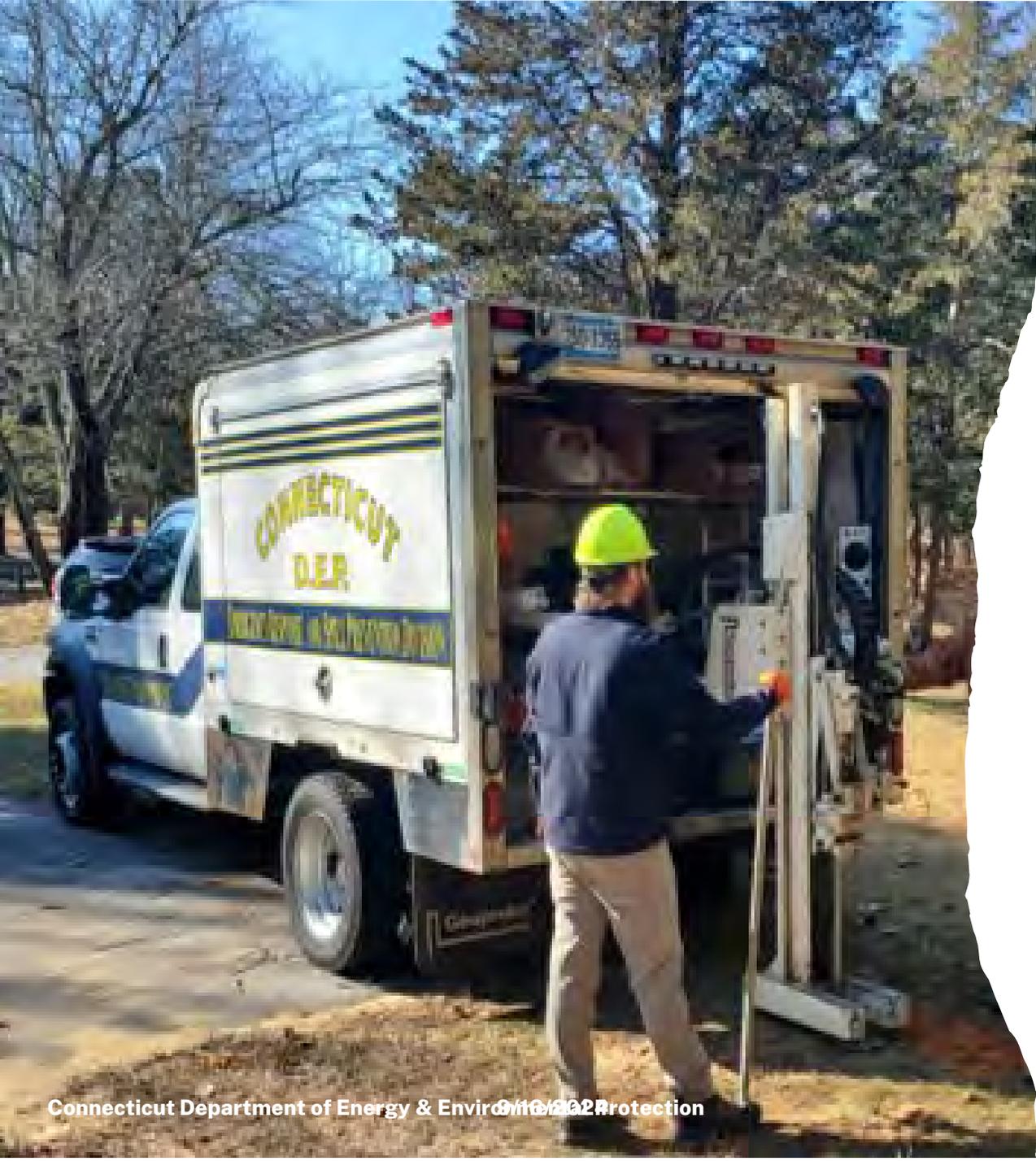
Emergent Reportable Release (ERR) -

means a release to the land and waters of the state discovered by an observed change in conditions that is required to be reported by regulations adopted pursuant to section 22a-450 of the Connecticut General Statutes.

9/16/2024



Connecticut Department of Energy & Environmental Protection



Significant Existing Release (SER) -

means a release that has been present at the time of discovery that is especially dangerous to human health or the environment because it:

- is contaminating a drinking water well;
- is contaminating groundwater near a drinking water well;
- is in soil within 2 feet of the surface at 15x the direct exposure criteria;
- is a VOC or VPS in groundwater causing:
 - -a groundwater plume near the lowest portion of a building
 - -soil vapor beneath a building
 - -toxic air contaminants; OR
- is a substance at concentrations greater than 10x the SWPC or NAPL to groundwater within 500 feet of surface water

EMERGENCIES AND EXIGENT CONDITIONS

- Commissioner has sole discretion to:
 - consider ERR or SER an emergency or exigent circumstance; and
 - direct the response to said release.
- Commissioner can direct a creator or maintainer to perform actions necessary to protect human health and the environment.



EMERGENCIES AND EXIGENT CONDITIONS – CONT.

- If the actions required by the Commissioner are not performed, DEEP may perform the response and seek to recover costs from the RP.
- The Commissioner makes the determination of when an emergency or exigent condition from a release has been abated.
- For actions taken by the Commissioner, those actions may end at a point prior to achieving an IA transition point or cleanup standard



9/16/2024



REVIEW - DISCOVERY OF RELEASES THAT REQUIRE IMMEDIATE ACTION

For Immediate Actions, discovery of a release occurs when:

- It is an SER and any person obtains knowledge of the release and notifies the creator or maintainer, or
- It is an ERR reported pursuant to the Release Reporting Regulations (Section 22a-450-1 et seq.)



REVIEW - REPORTING OF RELEASES THAT REQUIRE IAS

Reporting:

ERRs- Report under CGS 22a-450 - Reporting under 450 involves responsible party contacting 24-hour dispatch center by phone within 1 hour.

SERs- Not more than 72 hours after discovery, not more than 24 hours if impacting drinking water well

A report is a notification to the Department pursuant to:

- RRRs (Section 22a-450), or
- RBCRs (Section 22a-134tt-3)



KEY TERMS - DOCUMENTATION

Immediate Action Plan - a detailed schedule of actions that will be completed to meet the requirements of the IA

- Required for all SER Conditions
- Required for ERRs with release to groundwater of VOS within 30 ft or VPS within 10 ft of a building, or if requested

Immediate Action Report - a summary of actions taken pursuant to the requirements of the IA, submitted to the Commissioner



IMMEDIATE ACTION PLAN

ERRs

- Required for a release to groundwater of VOS within 30' or VPS within 10', within 7 days
- Or
- Commissioner will notify creator/maintainer that such plan is needed
- Commissioner will specify deadline

SERS

- Submit plan to **Commissioner. Timelines:**
 - ✓ 15 days impacts to **DWSW**
 - ✓ 15 days impacts to GW near **DWSW**
 - ✓ 90 days impacts soil 2ft
 - ✓ 30 days **VOS/VPS** near building
 - ✓ 30 days impacts to SW
- If no time described in regs. – submit plan within 90 days of discovery

Include:

- Actions underway
- Actions and schedule proposed to achieve transition-point or cleanup standard
- Use Form by Commissioner
- Identify creator/maintainer
- Identify **consultant** (required to have one)
- Reference **initial release** report
- **Propose a schedule for achieving IA transition point or cleanup standards**
- Additional info always welcome

Review by Commissioner:

- May review, **and approve or reject.**
- ▼ If rejection, Commissioner will:
 - ✓ Explain why the actions/schedule proposed are incomplete or inappropriate
 - ✓ Require PEP or LEP if none are mentioned
 - ✓ Request new plan to be submitted within 7 days
- If 21 days after submission and Commissioner did not reject:
 - ▲ IA Plan Automatically approved.

IMMEDIATE ACTION REPORT

- Commissioner to specify deadline,
- OR**
- 60 days after IA transition point or cleanup standard achieved,
- OR**
- Submit with Tier assignment

Deadlines For ERRs

45 days where:

- drinking water is impacted/threatened
- OR**
- visible impact to SW
- OR**
- **With** Closure **Report,**
 - **or**
 - **With** Tier assignment

Prescribed Form

- **Identify:**
 - LEP or PEP
- **Describe:**
 - Any remaining characterization/remediation to be done

Commissioner may audit and require:

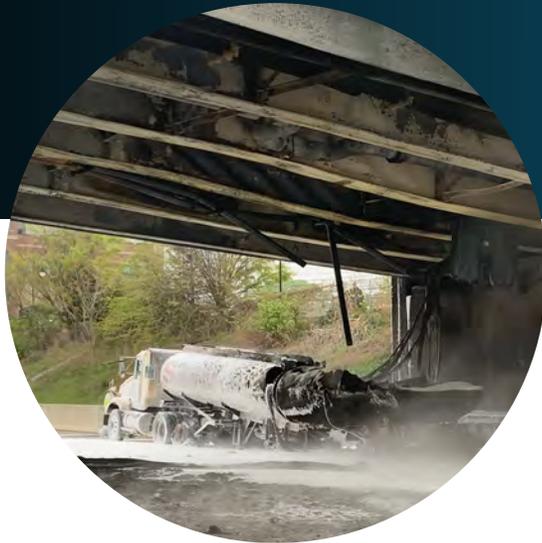
- Additional info
- New schedule for investigation/remediation
- Additional actions

Note: Unless otherwise specified, submit IA Report with Tier Checklist or Closure Report



**EMERGENT REPORTABLE RELEASE (ERR)
IMMEDIATE ACTIONS**

KEY TERMS – EMERGENT REPORTABLE RELEASE (ERR)



Emergent Reportable Release (ERR) - means a release to the land and waters of the state discovered by an observed change in conditions that is required to be reported by regulations adopted pursuant to section 22a-450 of the Connecticut General Statutes.

ERR IMPACTING A DRINKING WATER WELL:

- (A) Install/deploy physical measures to contain release
- (B) Identify and sample drinking supply wells on adjacent parcels within 36 hours
- (C) Identify and sample drinking supply wells within to 200' (500' downgradient) of impacted wells, within 36 hours of discovering the well was impacted
- (D) Provide potable water for any wells impacted by release
- (E) Repeat drinking water supply sampling within 7 days of original sampling
- (F) Install appropriate water treatment to impacted wells within 15 days, or connect to public water supply within 30 days
- (G) Submit IA Report within 45 days
- (H) Provide additional follow up report if required by The Commissioner



ERR IMPACTING GROUNDWATER WITHIN 500 FEET OF A DRINKING WATER WELL:

- Install/deploy physical measures to contain release
- Identify and sample drinking supply wells on adjacent parcels within 36 hours
- Resample all supply wells within 7 days of original sampling
- Submit IA Report to Commissioner within 45 days

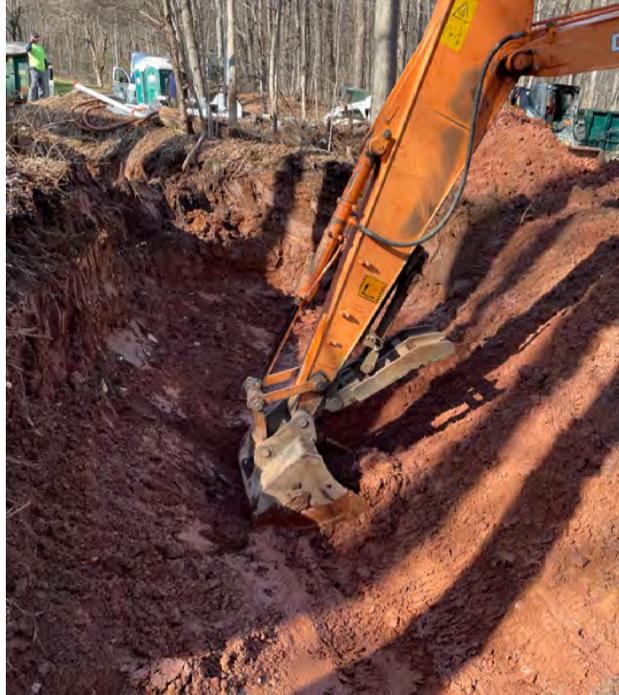


ERR IMPACTING SOIL

Initiate remediation no more than 2 hours from discovery, and continue until:

- The direct exposure criteria is met, or
- Requirements for the special pathway for home heating fuel releases are met

If containing PCBs, remediate according to 40 CFR 761 or as directed by the Commissioner.



ERR INVOLVING VOS OR VPS

Applicable if:

- VOS in groundwater within 30 ft of ground surface/lowest portion of building
- VPS in groundwater within 10 ft of ground surface/lowest portion of building

IAs required:

- If the building is in use, ventilate immediately
- Mitigate vapor intrusion
- Prepare and submit immediate action plan within 7 days





ERR TO SURFACE WATERS

- Within 2 hours:
 - Utilize physical measures to restrict/contain impacts
 - Remove release to the extent recoverable
- If it sinks in water, sample sediments within 48 hours
- Submit IA Report within 45 days



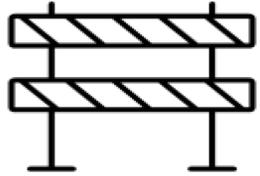
**SIGNIFICANT EXISTING RELEASE (SER)
IMMEDIATE ACTIONS**

KEY TERMS – SIGNIFICANT EXISTING RELEASE

Significant Existing Release (SER) - means a release that has been present at the time of discovery that is especially dangerous to human health or the environment



SER HAS IMPACTED A DRINKING SUPPLY WELL



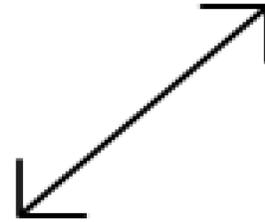
Install physical barriers to mitigate/stop migration, attempt to contain as soon as possible



Conduct receptor survey of adjacent properties, sample within 2 days



Provide potable water to all persons whose water supply is impacted

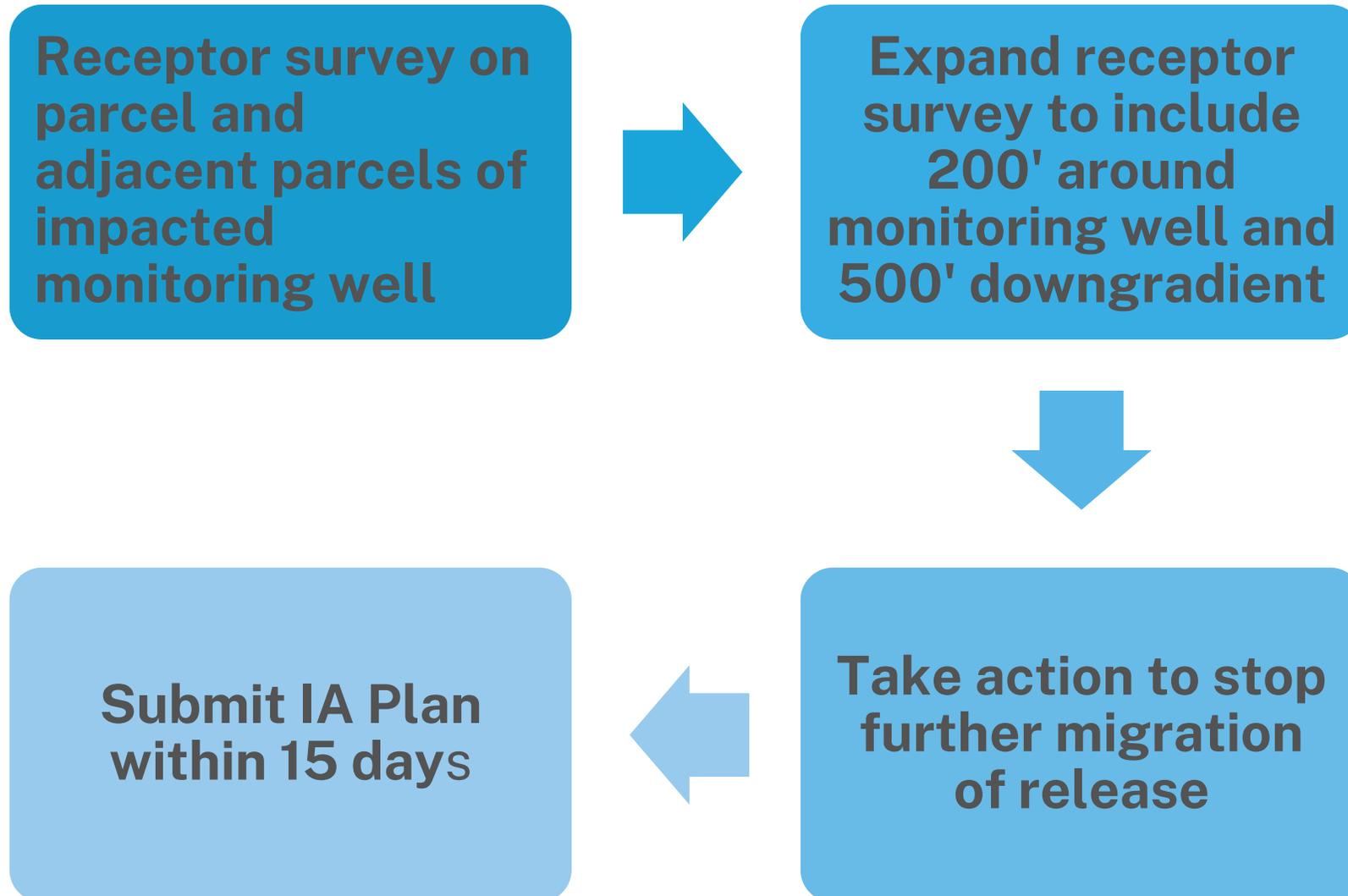


Expand receptor survey to all supply wells within 200' (500' downgradient) within 15 days



Submit IA plan within 15 days

SER HAS IMPACTED GROUNDWATER NEAR A SUPPLY WELL



SER IN SOIL

Applicable if: within 2' of grade $\geq 15x$'s criteria

- Determine extent of impacts within 45 days
- Within 90 days:
 - Remove/mitigate soil
 - Render inaccessible
 - Remediate to criteria, OR
 - If impacted by PCBs remediate per federal (40 CFR 761) and state (RBCRs) requirements
- Submit IA plan within 90 days



SER INVOLVING VOS OR VPS

Applicable if:

- VOS in groundwater within 30 ft of ground surface/lowest portion of building
- VPS in groundwater within 10 ft of ground surface/lowest portion of building
- Soil Vapor under a building \geq volatilization criteria
- Toxic air contaminants not due to current processes/materials in use

IAs required:

- If the building is in use, ventilate immediately
- Prepare and submit immediate action plan within 30 days



SER TO SURFACE WATER

Applicable if:

Applicable when GW w/in 500' of surface water is impacted

-and-

-≥ 10x's SWPC, OR

-NAPL

-IAS REQUIRED:

Submit IA Report within 30 days of discovery, including schedule for tier characterization

9/16/2024



A stylized, colorful landscape illustration. The top right corner features a bright yellow sun. Below it is a large, vibrant green hill. The bottom portion of the image is a light blue area representing water, with a dark blue wavy line separating the land from the water. The text "Transition Points" is centered on the green hill.

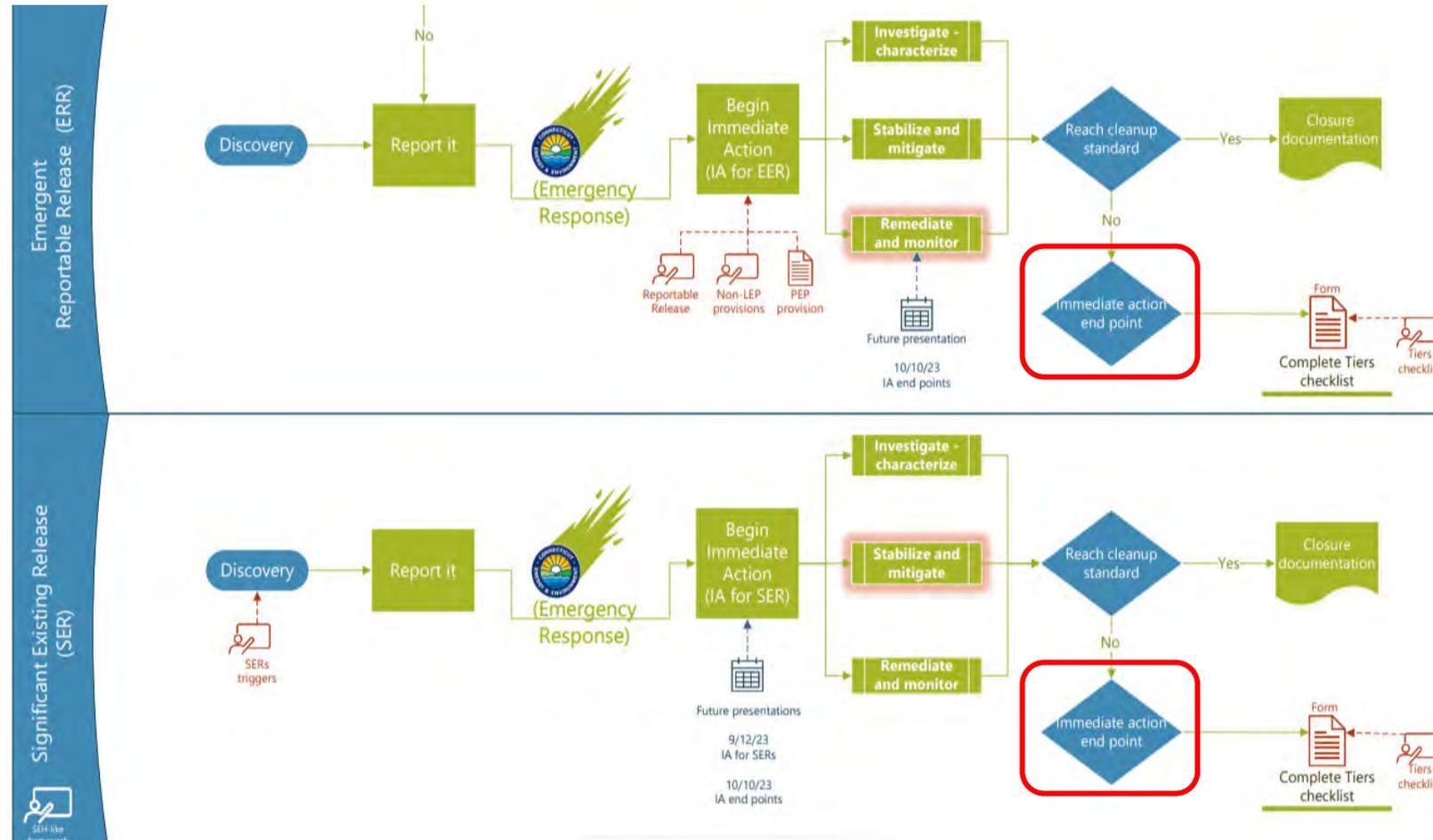
Transition Points

KEY TERM – IMMEDIATE ACTION TRANSITION POINT

A required **compliance point** if the release is not able to meet cleanup standards within **1 year** of discovery

IA Transition-Points are

- Specified in the regulation
- Dependent on release type
- Included in the IA report



Immediate Action Transition-Points Supply Well Impacts



Public & Private Drinking Water

Both ERR & SER

- **No treatment system** – four quarters monitoring in compliance.
- ▲ **Yes, treatment system** - transition point achieved if 4 quarters effluent ND, maintenance and monitoring plan, and IA report submitted.
- **Connected to public water:** transition point achieved if IA report submitted.



Immediate Action Transition-Points Groundwater Impacts



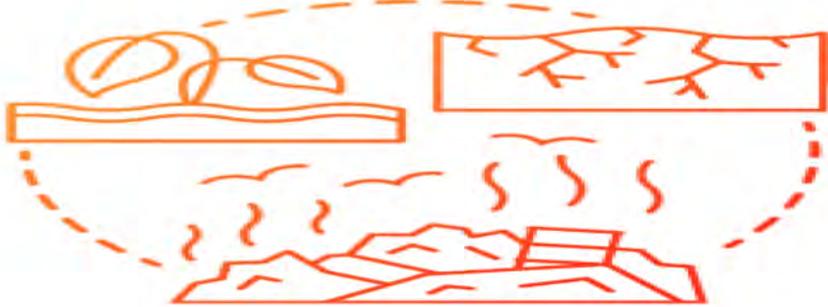
**Release in GW
within 500 ft
of a DWWS**

**Both ERR &
SER**

**1 year after
discovery, if
not closed:**

- Enter Tier with DEEP oversight, **AND**
- Submitted IA report.

Immediate Action Transition-Points Soil Impacts



Release Impacting Soil

For ERRS

- Removal to maximum extent practicable
- Mitigation of exposure risk to any remaining impacted soil
- IA Report Submitted

For SERs (2ft from ground surface)

- Direct exposure to such soil is mitigated.
- IA Report Submitted



Immediate Action Transition-Points VOS or VPS Impacts



Release of VOCs/VPS For ERR and SER

- Mitigation measures installed and operating, but an EUR has not yet been recorded
- Analysis of 9 indoor air samples, consecutive months, and concentration <10 times TAC, and
- IA report submitted.

Immediate Action Transition-Points Surface Water Impacts



Release impacting surface water

For ERRS:

- Release removed or mitigated maximum extent practicable, and
- Visible sheen eliminated, and
- IA report submitted.

For SERs:

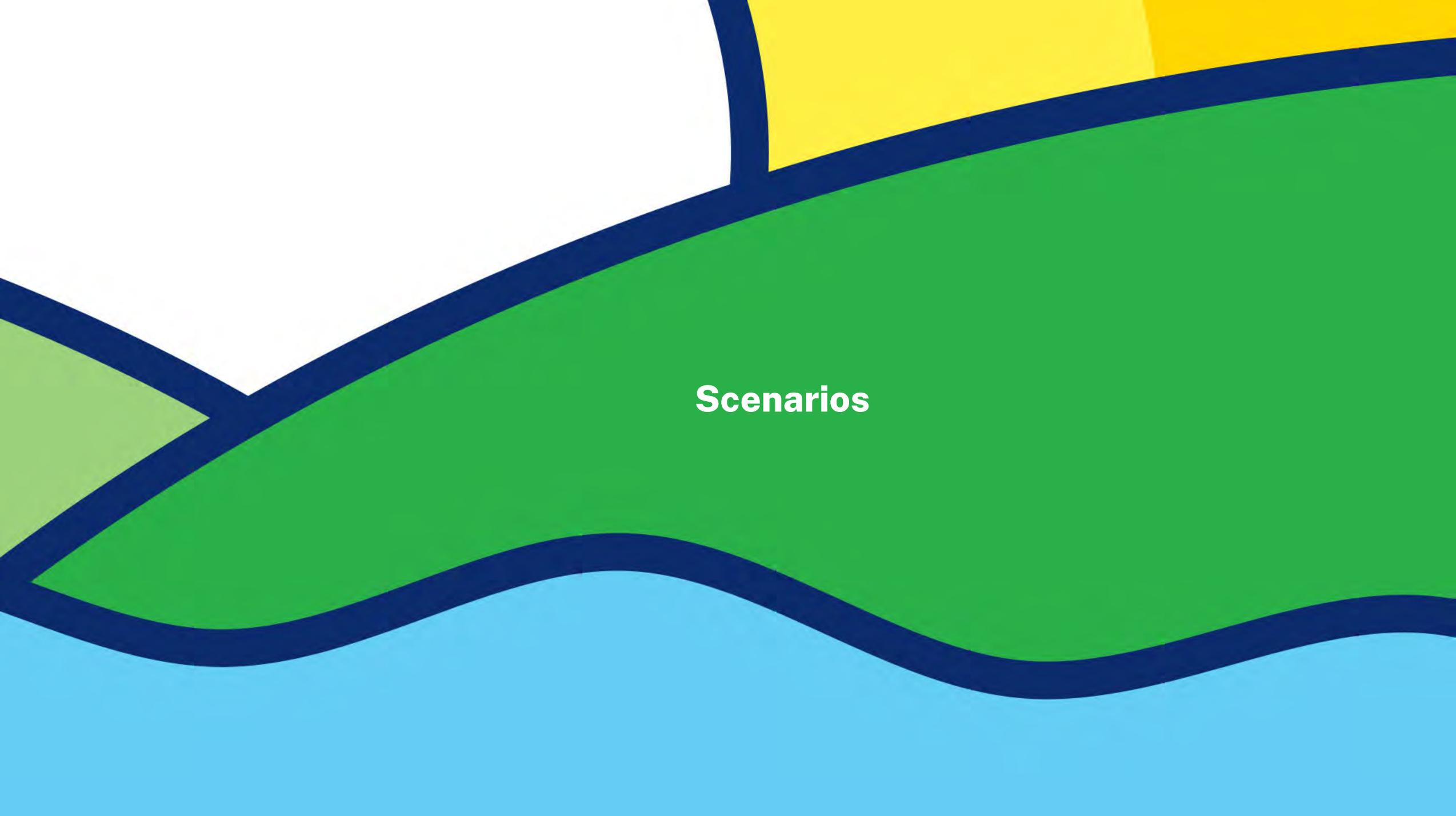
- Enter Tier with Tier characterization complete.



REMEDIATION OF REMAINING SUBSTANCES RELEASED

- ❖ If IA achieves cleanup standards, tiering not required if an acceptable closure report has been submitted
- ❖ If IA does not achieve cleanup standards:
 - Release remains subject to the requirement to remediate to cleanup standards.
 - Tier characterization and checklist not later than 1 year after discovery.
- ❖ If IA requirements have not been achieved 1 year after discovery, the release is defaulted (automatically assigned) to Tier 1A



A stylized, colorful landscape illustration. The top right corner features a bright yellow sun. Below it is a large green hill with a dark blue outline. The bottom of the image shows a light blue body of water, also outlined in dark blue. The word "Scenarios" is written in white, bold, sans-serif font in the center of the green hill.

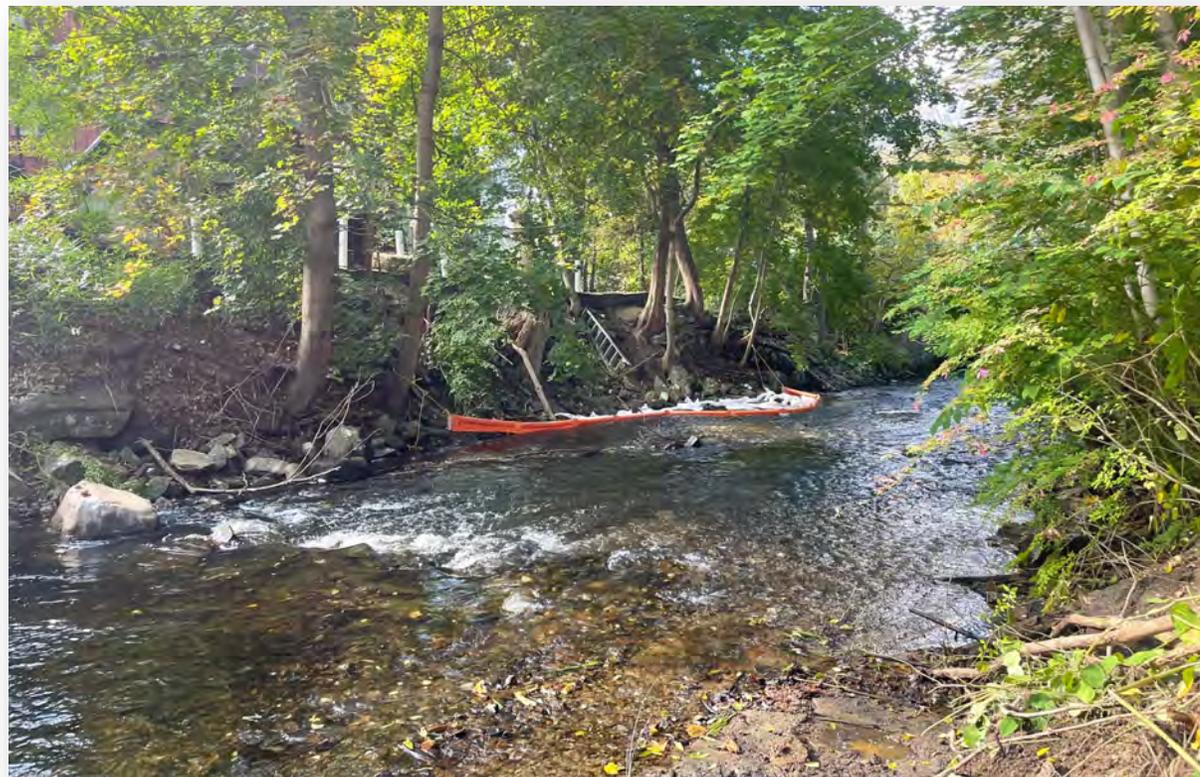
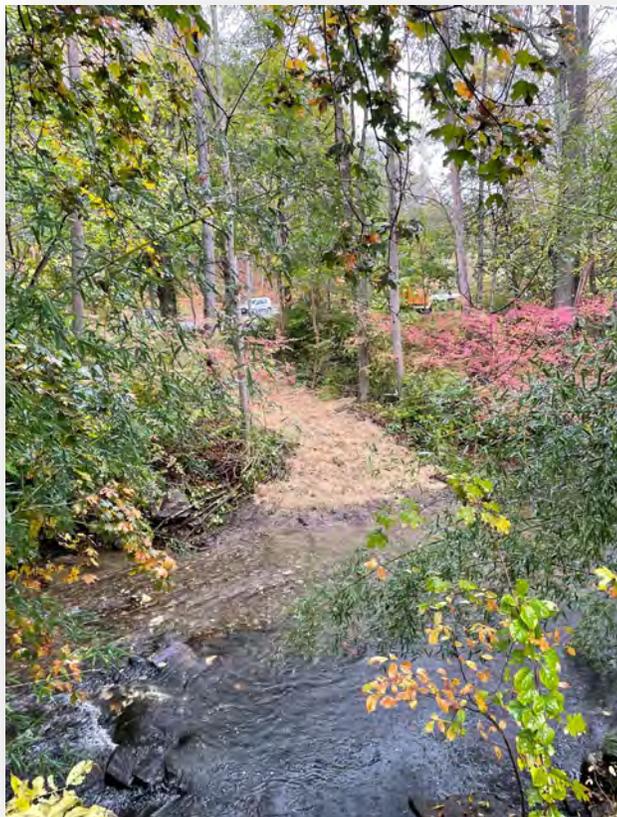
Scenarios

Scenario #1

WHAT HAPPENED?

- 500 gallon #2 heating oil release from an AST in a dirt floor basement at a 2-family residence
- Tank location <15 ft. from Aspetuck River
- Moved through soil and groundwater to breakout in the river
- Area entirely on private potable wells





- ERR or SER?
- What IAs are needed?
- What are the possible end-points?
- Will Tiering be required?

Scenario #2

WHAT HAPPENED?

- Old abandoned natural gas pipe began to leak PCB-contaminated condensate under a stream bed
- Stream ran through a residential property with mature trees on stream bank
- Impacts to sediments, surface water, and soil
- Area on public water



- ERR or SER?
- What IAs are needed?
- What are the possible end-points?
- Will Tiering be required?

Scenario #3

WHAT HAPPENED?

- Zinc is discovered in a groundwater monitoring well 95' from a drinking water supply well at a concentration 2x the GWPC
- The substance is from an industrial operation that stopped operating in the mid-1990's
- The drinking water supply well on an adjacent parcel is sampled and determined to be impacted. No other drinking water supply wells are impacted
- The area is served by public water. A public water supply is available in the street near the impacted well



- ERR or SER?
- What IAs are needed?
- What are the possible end-points?
- Will Tiering be required?

A stylized landscape illustration. The top right corner features a bright yellow sun. Below it is a large green hill with a dark blue outline. To the left, a smaller, lighter green hill is visible. The bottom of the image shows a blue body of water, also outlined in dark blue. The text "THANK YOU!" is centered on the green hill.

THANK YOU!