

## PHA Process Step Checklists

### Initiate Site Scoping

Action Items	Complete	Notes
Perform an initial review of sites files and general site information sources (e.g., summary reports, petition letters, media reports, EPA summaries).		
Identify past activities conducted by ATSDR and/or its partners.		
Contact ATSDR regional staff for site information.		
Identify the type of environmental, exposure, and community health concern information to pursue.		
Identify and communicate with site contacts (e.g., state agencies, tribal governments, facilities representatives) to learn about site environmental conditions, the status of site investigations, and the involvement of other stakeholders.		
Determine when to conduct the site visit.		
Contact community leaders to understand the site-related community concerns and site history.		

Resource: PHAT Module 3, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Define Roles and Responsibilities

Action Items	Complete	Notes
Identify SMEs who will collaborate on the PHA process for the site.		
Establish the SMEs as early as possible to foster better communication throughout the PHA process.		
Assign responsibilities based on site-specific issues.		

Resource: PHAT Module 2, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Establish Communication Mechanisms

Action Items	Complete	Notes
Establish government agency, tribal, site, community, and other stakeholder contacts early on.		
Develop a schedule for internal ATSDR collaborative meetings.		
Define the audience, evaluate the communication needs of the audience, and determine the communication goals.		
Develop health communication strategies (e.g., conduct public meetings, develop a newsletter).		
Start considering how to present your findings.		
Develop a process early on to maintain adequate and effective communication with the community.		

Resource: PHAT Module 2, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Develop a Site Strategy

Action Items	Complete	Notes
Prepare a strategy to complete the various PHA process steps.		
Identify tools and resources that may be needed to evaluate the site, communicate your findings, and implement public health actions.		
Use careful planning to ensure a strong foundation for subsequent activities.		
Use information from the site scoping step to design an approach that focuses on the most pertinent public health issues.		
Develop a conceptual model of the site.		

Identify site priorities in terms of potential exposures and community health concerns.		
Establish aggressive but realistic timelines for the various components of your site-specific evaluation.		
Be mindful of the iterative PHA process, and that your strategy may change over time as you obtain new information.		

### Collect Site Information

Action Items	Complete	Notes
Collect site information throughout the PHA process about community health concerns, exposure pathways, and environmental contamination.		
Look for the following types of site-specific data, including but not limited to: fate and transport, site history, environmental sampling, exposure and demographics, toxicologic, medical/epidemiologic, and health outcome).		
Use common sources of information, such as in-person or telephone interviews, site-specific investigation reports, and site visits.		
Identify means for increasing trust and getting access to community data. Examples of mechanisms to use include developing classroom educational materials, considering opportunities for conducting <a href="#">soilSHOPS</a> , proposing <a href="#">Choose Safe Places for Early Care and Education (CSPECE)</a> programs, coordinating with extension offices (e.g., agricultural offices), and reaching out to universities that might be involved in environmental research.		
Follow a series of steps: gaining basic understanding of the site, identifying data needs and sources, conducting a site visit, speaking with community members and other stakeholders, reviewing site documentation, identifying data gaps, and compiling and organizing relevant data.		

Resource: PHAT Module 3, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Select Sampling Data

Action Items	Complete	Notes
Evaluate environmental and biological sampling data to determine what contaminants people may be exposed to and in what concentrations.		
Assess the quality and representativeness of available sampling data.		
Recommend further environmental sampling data to fill critical data gap(s), if appropriate.		
Use environmental concentrations estimated with mathematical modeling techniques, if suitable for site.		

Resource: PHAT Module 5, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Conduct Exposure Pathways Evaluation

Action Items	Complete	Notes
Evaluate who may be or has been exposed to site contaminants, for how long, and under what conditions.		
Consider past, current, and potential future exposure conditions.		
Identify and examine the five components of a “completed” (all elements present) or “potential” (one or more components are missing or are uncertain) exposure pathway: <ul style="list-style-type: none"> <li>• A <i>source</i> of contamination.</li> <li>• A <i>release mechanism</i> into water, soil, air, food chain (biota), or transfer between media (i.e., fate and transport).</li> <li>• An <i>exposure point</i> or <i>area</i> (e.g., drinking water well, residential yard).</li> <li>• An <i>exposure route</i> (e.g., ingestion, dermal contact, inhalation).</li> <li>• A <i>potentially exposed population</i> (e.g., residents, children).</li> </ul>		

Examine how people might become exposed to site contaminants (e.g., via drinking affected water, coming in contact with contaminated soils).		
Identify and characterize the size and susceptibility of potentially exposed populations.		
Evaluate the magnitude, frequency, and duration of exposures for completed or potential exposure pathways.		
Exclude incomplete pathways—these don't require further scientific evaluation. Document the rationale for excluding each pathway.		
Identify exposure units at this point, if appropriate, and based on site-specific factors and data sets. Could also perform after the screening evaluation, but define them before determining EPCs.		

Resource: PHAT Module 4, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Conduct the Screening Evaluation

Action Items	Complete	Notes
Proceed to screen sampling data for completed and potential exposure pathways.		
Compare media concentrations at points of exposure to health-based screening values (based on protective default exposure assumptions).		
Identify contaminants requiring further evaluation because they meet or exceed a screening level, no screening level is available, or the contaminant is of community concern.		

Resource: PHAT Module 6, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Conduct the Exposure Point Concentrations (EPCs) and Exposure Calculations Evaluation

Action Items	Complete	Notes
Examine potential contaminants of concern for each completed and potential exposure pathway and duration of interest.		
Use site-specific factors to determine whether exposures may potentially cause health problems, and whether public health action is needed.		
Estimate exposure point concentrations (EPCs) for each contaminant and exposure pathway of interest (in each exposure unit, if appropriate). Refer to ATSDR’s EPC Guidance Documents.		
Calculate doses or adjusted air concentrations, hazard quotients (HQs) for noncancer hazards, and cancer risks for carcinogens.		

Resource: PHAT Module 7 (Main Module and EPC Mini-Module), see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

### Perform the In-Depth Toxicological Effects Evaluation

Action Items	Complete	Notes
Consider potential health impacts on general community, as well as site-specific exposures and potential health impacts to any vulnerable groups.		
Perform toxicological evaluation for contaminants needing further examination (those above acceptable levels, contaminants without health guidelines available to enable comparisons, and/or contaminants below health guidelines but of community concern).		
Evaluate health outcome data, if available and appropriate for site.		
Summarize findings to answer the question: <i>“Based on available data, could there be harm to people’s health?”</i>		
Draw conclusions regarding whether each potential site hazard could harm people’s health.		

Resource: PHAT Module 7 (Main Module and EPC Mini-Module), see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>

**Develop Conclusions, Recommendations, and a Public Health Action Plan**

<b>Action Items</b>	<b>Complete</b>	<b>Notes</b>
Draw conclusions regarding whether each potential site hazard could harm people's health.		
Use clear-writing techniques to summarize the findings and communicate them to the public.		
Develop recommendations for actions, if any, to prevent and/or mitigate harmful exposures, obtain more information, or conduct other public health actions.		

Resource: PHAT Module 8, see <https://www.atsdr.cdc.gov/training/pha-training-section1.html>