



The **Hawai'i Department of Health (HDOH), Hazard Evaluation and Emergency Response Office (HEER Office)** is a state environmental health division whose mission is to protect human health and the environment. The HEER Office provides leadership, support, and partnership in preventing, planning for, responding to, and enforcing environmental laws relating to releases or threats of releases of hazardous substances.

Removal Action Alternative for Redevelopment Fact Sheet

Steps for Completing the Alternative Process:

The HEER Office has prepared this Fact Sheet for property owners and developers who plan to redevelop properties with known environmental contamination (sometimes referred to as Brownfield sites) or properties that may be impacted by environmental contamination that has not yet been identified, and where the contamination has not been adequately characterized in accordance with the Response Action process described in Hawaii Administrative Rule (HAR) 11-451, also known as the State Contingency Plan (SCP), and the HEER Office Technical Guidance Manual (TGM).

This alternative process for completing a Response Action in accordance with HAR 11-451 and the HEER Office TGM has been prepared for sites with planned redevelopment where complete characterization of the nature and extent of contamination from past releases at the site prior to the start of construction activities is impractical or infeasible due to existing facilities or infrastructure. Ordinarily, adequate characterization of identified releases is necessary to properly evaluate the environmental hazards and exposure risks at a site and identify the most appropriate remedy. However, under this alternative process, a sufficiently protective Removal Action remedy may be 'pre-selected' and implemented, with any needed additional site characterization sampling conducted during construction. To ensure protection of the public and site workers from potential environmental hazards that may be present during the redevelopment, the Removal Action will include a Construction Environmental Hazard Management Plan (C-EHMP).

Below are the steps for completing the Removal Action Alternative for Redevelopment process:

Step 1: Review existing environmental data for the site and report any identified contaminant releases or threats of releases which may pose an environmental hazard, and which have not already been reported to the HEER Office, by following the Release Reporting instructions at <https://health.hawaii.gov/heer/reporting/how-to-report-a-release-spill/>.

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A HEER Office Emergency Preparedness and Response (EP&R) Section On-Scene Coordinator (OSC) will review the report to determine if an immediate emergency Response Action is required to address the release(s). If not, then the OSC will refer the incident to the HEER Office Site Discovery, Assessment and Remediation (SDAR) Section for further management.

Step 2: Provide the HEER Office with copies of all relevant environmental reports that are not already in the iHEER site file, for our records. These documents should not require individual review but may be needed by the SDAR Section Remedial Project Manager (RPM) to understand details of the site history.



Step 3: Prepare a preliminary Environmental Hazard Evaluation (EHE) based on a conservative evaluation of the predicted nature and extent of the known and potential contaminant releases at the site. The EHE should consider previously identified contamination at the site and areas of potential contamination identified based on historic activities including use or storage of fuels and other hazardous substances, industrial activities, etc., as well as general commercial/industrial (C/I) site use, lead paint on structures, historic use of fill material, and historic pesticide application. The EHE must include Hazard Maps that depict the conservative extent of both known contamination and areas of suspected or potential contamination and associated potential hazards. These conservative Hazard Maps will be used for identifying areas that may need additional site characterization (sampling) during construction and areas that require management during construction under a C-EHMP.

Step 4: Pre-select an appropriate remedy for the site that will be protective of human health and the environment **post**-construction. DOH recognizes that site conditions or additional data may inform changes to the remedy or C-EHMP. Please refer to Step 6 for further instructions on changes to the selected remedy or C-EHMP.

Protection of human health and the environment **during** construction will be managed under the C-EHMP, in compliance with state and federal environmental regulations including Occupational Safety and Health Administration regulations (29 CFR 1910.120).

Step 5: Prepare a **Removal Action Work Plan (RAWP)** for the implementation of the selected remedy. The RAWP appendices will include the following:

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- A copy of the EHE described above
- A Sampling and Analysis Plan (SAP) for the additional site characterization sampling that will be conducted during the construction to support site closure under the pre-selected remedy. The extent of sampling required will depend upon the selected remedy for the site but should be sufficient to adequately characterize the known and potential release areas identified in the EHE.
- A C-EHMP, prepared using the HEER Office template, which will address protection of the public and site workers from known and potential environmental hazards at the site during construction and describe how known and suspected contaminated media (e.g., soil, groundwater, soil vapor) that may be disturbed during construction will be managed, characterized, and disposed of or reused

The RAWP must describe the implementation of the final remedy that will be conducted concurrently with and/or following the construction project. This may include installation of engineering controls like a vapor barrier, soil cap, monitoring wells, etc., and implementation of institutional controls such as dig restrictions, C/I land use restrictions, annual training and inspection requirements, recordation of site hazards and controls on the property deed, etc.



The RAWP and all appendices must be submitted to the HEER Office for review and approval at least 90 days prior to the start of ground-disturbing activities in areas of known or suspect contamination to allow for adequate review time. DOH will use its best efforts to respond in a timely manner. Voluntary agreements between DOH and the responsible party for review services may be considered on a case-by-case basis.

Step 6: Complete all additional site sampling and remedy implementation during construction activities in accordance with the RAWP.

DOH recognizes that site conditions or additional data may inform changes to the remedy or C-EHMP. If changes to the remedy or C-EHMP will be made based on additional data collected during redevelopment, then those changes must be reviewed and approved in writing by the HEER Office at the time the changes are implemented. The nature of the written change request (e.g., email, Addendum, Amendment, full revision of the document, etc.) and the amount of time required to review it will depend on the level of significance and complexity of the requested change.

Note: Depending on the site conditions and the remedy, the C-EHMP may require that additional documentation be provided during construction, such as weekly status reports and/or regular documentation of the transport and disposal of contaminated media from the site.

Step 7: Following the completion of remedy implementation, a **Removal Action Report (RAR)** must be prepared and submitted to the HEER Office for review and approval. This document should be submitted within 60 calendar days of the completion of remedial site work activities covered by the RAWP to allow for adequate review time. DOH will use its best efforts to respond in a timely manner. Voluntary agreements between DOH and the responsible party for review services may be considered on a case-by-case basis.

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The RAR must confirm that all elements of the remedy have been implemented in accordance with the RAWP and/or describe any changes to the remedy, as well as document that those changes were approved by the HEER Office. The appendices of the RAR should include:

- The results of all additional site characterization sampling that was conducted under the RAWP (i.e., during construction), presented in a summary report that includes laboratory data
- An updated EHE developed based on post-remedy and/or post-construction site conditions
- Documentation of any engineering controls implemented under the RAWP (e.g., vapor barrier diagrams and product documents, detailed schematics of installed caps, etc.)
- Documentation (trucking receipts, manifests, landfill approval documents, tipping tickets, etc.) of all contaminated media that was removed from the



site as part of the Removal Action (note that these records may be separate from media removed under the C-EHMP as part of the construction project)

- Documentation of any changes to the RAWP (e.g., a RAWP Addendum) and approval of the changes by the HEER Office

Step 8:

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Following the completion of all ground-disturbing work conducted under the C-EHMP, a C-EHMP **Completion Report** must be submitted to the HEER Office for review and approval. This completion report must document compliance with, and any variance from, the approved C-EHMP. This document must also include analytical summary reports and lab data for all media sampled for disposal or re-use under the C-EHMP and include documentation of all media that was transported off-site for disposal or re-use under the C-EHMP.

The Completion Report may be included as part of the RAR or submitted as a separate document, but it must be submitted within 30 days of the completion of the ground-disturbing work covered by the C-EHMP, unless approved by the project RPM to be submitted along with the RAR at a later date.

Step 9a:

Once the RAR is reviewed and approved by the HEER Office, if there is no contamination remaining at the site at concentrations exceeding Tier 1 Environmental Action Levels (EALs) that requires long-term management and controls, then the site will be eligible to receive an unrestricted No Further Action (NFA) status.

Step 9b:

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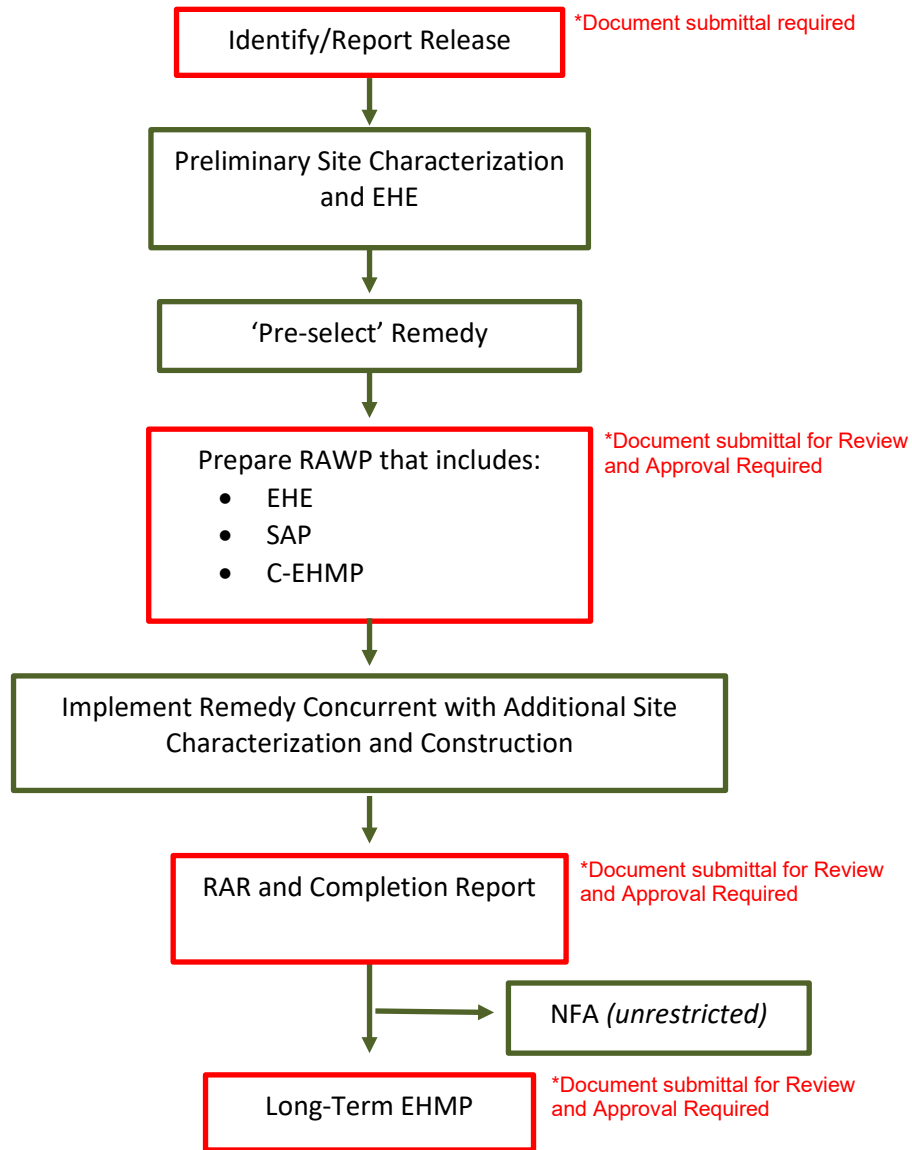
If the remedy will result in contamination remaining at the site at concentrations that require long-term management and controls, then a **Long-Term EHMP** must be prepared for the site based on the revised EHE in the RAR. The Long-term EHMP must describe on-going requirements for the management and maintenance of site engineering and/or institutional controls in perpetuity.

Sites under the Removal Action Alternative for Redevelopment response action that require long-term management and controls will not be eligible for No Further Action status until DOH receives further input to resolve its priority to provide notice to future landowners regarding the status of the property and any required maintenance or monitoring actions to ensure continued protectiveness of the selected remedy.

- See Flow Chart on Following Page -



Removal Action Alternative for Redevelopment



Additional Resources

HEER Office website <https://health.hawaii.gov/heer/>

TGM <https://health.hawaii.gov/heer/tgm/>

E-permitting <https://health.hawaii.gov/heer/submit-documents-to-heer/submit-documents/>

Release reporting <https://health.hawaii.gov/heer/reporting/how-to-report-a-release-spill/>

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