**REMEDIAL INVESTIGATION: WAC 173-340-350(6)(c)(vi)**

**(c) Investigations.** Sufficient investigations must be performed to characterize the distribution of hazardous substances present at the site, and the threat they pose to human health and the environment. Ecology makes the final determination as to which investigations are needed at the site and the sufficiency of those investigations. Where applicable to the site, these investigations must include the following:

 **…**

**(vi) Climate.** Sufficient information must be collected on current and projected local and regional climatological characteristics that are likely to affect the migration of hazardous substances or the resilience of the cleanup action. Relevant characteristics can include temperature extremes, rise in sea level, seasonal patterns of rainfall, the magnitude and frequency of extreme storm events, the potential for landslides, prevailing wind direction and velocity, and the potential for wildfires.

**REQUIREMENTS FOR CLEANUP ACTIONS: WAC 173-340-360(3)(a) and (5)(d)(iii)(A)(III)**

**(3) Requirements.** A cleanup action must meet all of the following requirements. When a cleanup action includes more than one cleanup action component, the overall cleanup action must meet these requirements. Ecology recognizes that some of these requirements contain flexibility and require the use of professional judgment in determining how to apply them at a particular site. Ecology makes the final determination as to whether a cleanup action meets these requirements.

**(a) General requirements.** A cleanup action must:

**…**

**(v)** Provide resilience to climate change impacts that have a high likelihood of occurring and severely compromising its long-term effectiveness;

**…**

**(viii)** Use permanent solutions to the maximum extent practicable (see subsection (5) of this section); and

**(5) Determining whether a cleanup action uses permanent solutions to the maximum extent practicable.**

**(a) Purpose.** This subsection specifies the requirements and procedures for determining whether a cleanup action uses permanent solutions to the maximum extent practicable, as required under RCW [70.105D.030](https://app.leg.wa.gov/RCW/default.aspx?cite=70.105D.030)(1) and subsection (3)(a)(viii) of this section. A permanent cleanup action or permanent solution is defined in WAC [173-340-200](https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-200).

 **…**

**(d) Criteria.** When conducting a disproportionate cost analysis under this subsection, use the following criteria to evaluate and compare the costs and benefits of each cleanup action alternative:

 **…**

**(iii) Effectiveness over the long term.** The degree to which the alternative is effective over the long term.

**(A) Factors.** When assessing the long-term effectiveness of the alternative, consider the following at a minimum:

**(I)** The degree of certainty that the alternative will be successful;

**(II)** The reliability of the alternative during the period of time hazardous substances are expected to remain on-site at concentrations that exceed cleanup levels;

**(III)** The resilience of the alternative to climate change impacts;

**(IV)** The magnitude of residual risk with the alternative in place; and

**(V)** The effectiveness of controls required to manage treatment residues or remaining wastes.

**EXPECTATIONS FOR CLEANUP ACTIONS: WAC 173-340-370(10)**

Ecology has the following expectations for cleanup actions. The expectations represent the likely results of the remedy selection process described in WAC [173-340-350](https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-350) through [173-340-390](https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-390). Ecology recognizes that conformance with the expectations may not be appropriate at some sites. Selecting a cleanup action conforming to the expectations is not a substitute for conducting a feasibility study. The expectations must be considered when evaluating cleanup action alternatives in the feasibility study. Any non-conformance of the preferred cleanup action alternative to the expectations must be documented and explained in the feasibility study report.

**…**

**(10)** Ecology expects that cleanup actions conducted under this chapter will be effective over the long-term and resilient to those climate change impacts that are both highly likely to occur and could severely compromise cleanup actions.