

WAC 173-340-7490 Terrestrial ecological evaluation procedures.

(1) Purpose.

(a) WAC 173-340-7490 through 173-340-7494 define the goals and procedures the department will use for:

(i) Determining whether a release of hazardous substances to soil may pose a threat to the terrestrial environment;

(ii) Characterizing existing or potential threats to terrestrial plants or animals exposed to hazardous substances in soil; and

(iii) Establishing site-specific cleanup standards for the protection of terrestrial plants and animals.

(b) Information collected during a terrestrial ecological evaluation shall also be used in developing and evaluating cleanup action alternatives and in selecting a cleanup action under WAC 173-340-350 through 173-340-390. WAC 173-340-7490 through 173-340-7494 do not necessarily require a cleanup action for terrestrial ecological protection separate from a human health-based cleanup action. Where appropriate, a terrestrial ecological evaluation may be conducted so as to avoid duplicative studies of soil contamination that will be remediated to address other concerns, as provided in WAC 173-340-350 (7)(c)(iii)(F)(II).

(c) These procedures are not intended to be used to evaluate potential threats to ecological receptors in sediments, surface water, or wetlands. Procedures for sediment evaluations are described in WAC 173-340-760, and for surface water evaluations in WAC 173-340-730. Procedures for wetland evaluations shall be determined by the department on a case-by-case basis.

(2) **Requirements.** In the event of a release of a hazardous substance to the soil at a site, one of the following actions shall be taken:

(a) Document an exclusion from any further terrestrial ecological evaluation using the criteria in WAC 173-340-7491;

(b) Conduct a simplified terrestrial ecological evaluation as set forth in WAC 173-340-7492; or

(c) Conduct a site-specific terrestrial ecological evaluation as set forth in WAC 173-340-7493.

(3) **Goal.** The goal of the terrestrial ecological evaluation process is the protection of terrestrial ecological receptors from exposure to contaminated soil with the potential to cause significant adverse effects. For species protected under the Endangered Species Act or other applicable laws that extend protection to individuals of a species, a significant adverse effect means an impact that would significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering. For all other species, significant adverse effects are effects that impair reproduction, growth or survival.

(a) The simplified terrestrial ecological evaluation process has been developed to be protective of terrestrial ecological receptors at most qualifying sites, while the site-specific terrestrial ecological evaluation process is intended to be highly likely to be protective at any site.

(b) The following policy on terrestrial ecological receptors to be protected applies to all terrestrial ecological evaluations. For land uses other than industrial or commercial, protectiveness is evaluated relative to terrestrial plants, wildlife, and ecologically important functions of soil biota that affect plants or wildlife.

For industrial or commercial properties, current or future potential for exposure to soil contamination need only be evaluated for

terrestrial wildlife protection. Plants and soil biota need not be considered unless:

(i) The species is protected under the federal Endangered Species Act; or

(ii) The soil contamination is located on an area of an industrial or commercial property where vegetation must be maintained to comply with local government land use regulations.

(c) For the purposes of this section, "industrial property" means properties meeting the definition in WAC 173-340-200. "Commercial property" means properties that are currently zoned for commercial or industrial property use and that are characterized by or are committed to traditional commercial uses such as offices, retail and wholesale sales, professional services, consumer services, and, warehousing.

(d) Any terrestrial remedy, including exclusions, based at least in part on future land use assumptions shall include a completion date for such future development acceptable to the department.

(4) **Point of compliance.**

(a) **Conditional point of compliance.** For sites with institutional controls to prevent excavation of deeper soil, a conditional point of compliance may be set at the biologically active soil zone. This zone is assumed to extend to a depth of six feet. The department may approve a site-specific depth based on a demonstration that an alternative depth is more appropriate for the site. In making this demonstration, the following shall be considered:

(i) Depth to which soil macro-invertebrates are likely to occur;

(ii) Depth to which soil turnover (bioturbation) is likely to occur due to the activities of soil invertebrates;

(iii) Depth to which animals likely to occur at the site are expected to burrow; and

(iv) Depth to which plant roots are likely to extend.

(b) **Standard point of compliance.** An institutional control is not required for soil contamination that is at least fifteen feet below the ground surface. This represents a reasonable estimate of the depth of soil that could be excavated and distributed at the soil surface as a result of site development activities, resulting in exposure by ecological receptors.

(5) **Additional measures.** The department may require additional measures to evaluate potential threats to terrestrial ecological receptors notwithstanding the provisions in this and the following sections, when based upon a site-specific review, the department determines that such measures are necessary to protect the environment.

[Statutory Authority: Chapter 70.105D RCW. WSR 01-05-024 (Order 97-09A), § 173-340-7490, filed 2/12/01, effective 8/15/01.]