

Cleaning Up Former Orchards using Model Remedies



More information

Maps:

<https://apps.ecology.wa.gov/dirtalert/orchard>

Dirt Alert:

<https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Dirt-Alert-program>

Former Orchards:

<https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites/Former-orchard-lands>

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Accessibility

To request an ADA accommodation, contact Ecology by phone at 509-454-7838, email Rhonda.Luke@ecy.wa.gov or visit

<https://ecology.wa.gov/accessibility>. For Relay Service or TTY, call 711 or 877-833-6341.

When is Cleanup Required?

Many new homes are being built on historical orchards. Unfortunately, past pesticide use led to high levels of lead and arsenic in the soil. Sampling is required for new residential housing that is being built on historical orchard land. If sampling shows that lead is present at concentrations above 250 parts per million (ppm) or that arsenic is present at concentrations above 20 ppm, cleanup is required before a new home can be occupied.

What's a Model Remedy?

Ecology's cleanup law, the Model Toxics Control Act, allows model remedies to be used for routine cleanups at lower risk sites. A model remedy is a cleanup method that has been pre-approved by Ecology. Using a model remedy eliminates the uncertainty of whether the remedy that you select will be successful and meet State cleanup requirements.

In this case, the legacy pesticide model remedy contains four remedial options, and is applicable for historical orchard properties impacted by lead and arsenic (though these options will likely be successful in addressing impacts from other pesticides, as well). The four remedial options are listed below.

Excavate and Remove

Excavation and removal is the most straightforward option. Contaminated soils are excavated and disposed of properly, usually at a landfill. All contaminated soil must be removed from the property, but no additional actions are required. This is the most permanent option, but generally the most expensive due to the large quantity of soil that must be removed.

Examples of Capping Options



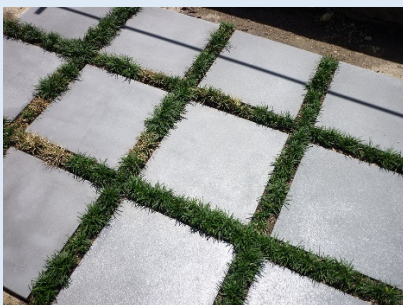
Landscaping Cap



Grass Cap



Clean Soil Cap



Concrete Pavers and Grass Cap

Hard Cap or Soft Cap

Capping involves placing a barrier over contaminated soil to prevent exposure. This barrier can be something hard, like asphalt, or it can be soil or other landscaping materials. Capping is generally the most simple and cost effective remedy. However, the cap does need to be maintained over time. And future property owners must be notified about the capping that was done prior to purchase of property.

Consolidate and Cap

This remedy involves excavating contaminated soil from portions of a property and consolidating them on the same property below a protective cap. Contaminated soils may be consolidated under permanent surfaces such as asphalt or buildings, or they may be placed in excavated holes or above ground mounds. Contaminated soils that are not consolidated under permanent surfaces must be capped with an engineered clean soil cap. This remedy is an excellent option for larger residential developments with room to create a consolidation area, or at an apartment building with a parking lot, as an example, where contaminated soil from the entire site could be placed under the parking lot.

Mixing

In this remedy, contaminated soil is mixed with deeper, clean soil or imported soil. This remedy option is not for high levels of contamination. The remedy can easily fail if areas of elevated concentrations are missed, so proper sampling upfront is important. Mixing requires availability of enough clean soil, on site or imported, to successfully mix contaminated soil to concentrations below State cleanup levels. Any soil used must be sampled to ensure that it is not contaminated.

Notification

Any remedy that contains contaminated soil on the property requires a process to notify future property owners. This can be accomplished in several ways. An appropriate notification method must be agreed upon with Ecology prior to residential occupancy of a property.

Using Model Remedies

Ecology has resources to help you if you want to use a model remedy for cleanup. Sampling results and cleanup planning should take place prior to SEPA.