

## Environmental Action Levels Surfer Hawai'i DOH (Fall 2017)



Worksheet is write protected. Disable protection using  
"Unprotect" under "Review" if you have trouble  
selecting options (password = EAL).  
Steps 1 and 2:

Click in cell and use pull-down boxes to make selection.

**STEP 1: Select <sup>1</sup>Site Scenario:**

<sup>2</sup>Land Use:

<sup>3</sup>Groundwater Utility:

<sup>4</sup>Distance To Nearest Surface Water Body:

**STEP 2: <sup>2</sup>Select Contaminant**

Chemical Name or CAS #:

**STEP 3 (optional): Enter site data.**  
(Potential environmental hazards highlighted in **Red** on Detailed EAL worksheet.)

Soil (mg/kg):

Groundwater (ug/L):

Soil Vapor (ug/m<sup>3</sup>):

TPH (middle distillates)

**Final EALs**

Soil (mg/kg): 2.2E+02

Groundwater (ug/L): 4.0E+02

Soil Vapor (ug/m<sup>3</sup>): 2.6E+05

### Notes

Refer to Vol 1 (Sect 2.6) of EHE guidance for discussion of TPH and target indicator compounds. Analyze soil gas for TPH (or equivalent) for site-specific evaluation of vapor intrusion hazards. Consider natural attenuation over time in final remedial actions.

### Reference:

HDOH 2017, Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017): Hawai'i Department of Health, Hazard Evaluation and Emergency Response, <http://hawaii.gov/health/environmental/hazard/index.html>

### Notes:

1. Site scenario options based on scenarios used to develop EAL lookup tables (HDOH 2017). "Tier 1" EALs presented in summary lookup tables based on unrestricted land use scenario within 150m of a surface water body and over groundwater that is a use of drinking water.
  2. "Unrestricted" land use category suitable for residential housing, schools, day care, medical facilities, parks and similar sensitive uses. Use to evaluate the need for future land use restrictions. Screen using a commercial/industrial land use scenario if site is to be used only for these purposes and contamination will not be cleaned up to meet action levels (or acceptable alternatives) for unrestricted land use. Future land-use restrictions may apply (refer to Chapter 5 of Volume 1).
  3. See Section 2.4 of Volume 1 for determination of groundwater utility.
  4. Used to evaluate potential impacts to aquatic habitats. Chronic aquatic toxicity goals used to
  5. Cyanide EALs based on CN- (57-12-5); mercury EALs based on mercuric salts (7487-94-7), PCB EALs based on Arochlor 1254 (11097-69-1).
  6. Refer to Volume 1, Section 2.11 for guidance on chemicals not listed in Tier 1 EALs or EAL
- See also attached Detailed EALs, Surfer Report, Chemical Summary worksheet, Advanced EHE Options and Glossary.

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Steps 1 and 2:

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**STEP 1: Select <sup>1</sup>Site Scenario:**

<sup>2</sup>Land Use:

<sup>3</sup>Groundwater Utility:

<sup>4</sup>Distance To Nearest Surface Water Body:

**STEP 2: <sup>2</sup>Select Contaminant**

Chemical Name or CAS #:

**STEP 3 (optional): Enter site data.**  
(Potential environmental hazards highlighted in **Red** on Detailed EAL worksheet.)

Soil (mg/kg):

Groundwater (ug/L):

Soil Vapor (ug/m<sup>3</sup>):

TPH (gasolines)

**Final EALs**

Soil (mg/kg): 1.0E+02

Groundwater (ug/L): 3.0E+02

Soil Vapor (ug/m<sup>3</sup>): 5.9E+05

**Notes**

Refer to Vol 1 (Sect 2.6) of EHE guidance for discussion of TPH and target indicator compounds. Analyze soil gas for TPH (or equivalent) for site-specific evaluation of vapor intrusion hazards. Consider natural attenuation over time in final remedial actions.

### Reference:

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