

**TABLE 3  
TIER 1 GROUNDWATER RBSLs AND STANDARDS**

This table applies to groundwater and consists of DEQ-7 Human Health Standards (HHSs), where available. For compounds without DEQ-7 HHSs, DEQ has developed RBSLs and included them in the table. For EPH compounds, a total extractable hydrocarbon (TEH) concentration of 1,000 µg/L is used to determine if additional analysis (fractionation) is needed. Surface water impacts require a minimum of a Tier 2 evaluation.

Chemical	Effect	Basis	Groundwater Standard or RBSL (µg/l)
<b>For Gasoline and Light Hydrocarbons measured using the Massachusetts Method for Volatile Petroleum Hydrocarbons (VPH)</b>			
TPH ceiling for gasoline and light hydrocarbons			1,000
C5-C8 Aliphatics	n	rb	700
C9-C12 Aliphatics	n	rb	1,000
C9-C10 Aromatics	n	rb	1,000
MTBE	n	hhs	30
Benzene	c	hhs	5
Toluene	n	hhs	1,000
Ethylbenzene	n	hhs	700
Xylenes	n	hhs	10,000
Naphthalene	n	hhs	100
<b>Lead Scavengers</b>			
Ethylene dibromide (EDB)	c	hhs	0.004
1,2, Dichloroethane (DCA)	c	hhs	4
<b>For Diesel and Heavy Hydrocarbons measured using the Massachusetts Method for Extractable Petroleum Hydrocarbons (EPH)</b>			
EPH / TEH Screen fractionation required			1,000
TEH ceiling for diesel and heavy hydrocarbons			1,000
C9-C18 Aliphatics	n	rb	1,000
C19-C36 Aliphatics	n	bu	1,000
C11-C22 Aromatics	n	rb	1,000
Acenaphthene	n	hhs	670
Anthracene	n	hhs	2,100
Benz(a)anthracene	c	hhs	0.5
Benzo(a)pyrene	c	hhs	0.05*
Benzo(b)fluoranthene	c	hhs	0.5
Benzo(k)fluoranthene	c	hhs	5
Chrysene	c	hhs	50
Dibenzo(a,h)anthracene	c	hhs	0.05*
Fluoranthene	n	hhs	130
Fluorene	n	hhs	1,100
Indeno(1,2,3-cd)pyrene	c	hhs	0.5
Naphthalene	n	hhs	100
Pyrene	n	hhs	830

## Notes:

Effect is either:

n = non-carcinogenic and direct contact RBSLs are based on a hazard quotient of 1, or  
c = carcinogenic and direct contact RBSLs are based on a cancer risk  $1 \times 10^{-5}$ .

Basis is:

rb = risk-based screening level;  
hhs = DEQ-7 Human Health Standard; or  
bu = adversely affects beneficial uses (foul taste or odor).  
\* = The best achievable practical quantitation limit (0.1 µg/L) may be greater than the human health standard; therefore, if the compound is detected, additional evaluation may be necessary.

**DEQ's RBCA policy includes a ceiling concentration of 1,000 µg/l total purgeable hydrocarbons (TPH) for the Gasoline and Light Hydrocarbons and 1,000 µg/l total extractable petroleum hydrocarbons (TEH) for Diesel and Heavy Hydrocarbons .**

**The RBSLs for soil and water are not designed to be protective of the vapor intrusion (VI) pathway. Please refer to the Vapor Intrusion to Indoor Air Section of the Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases.**