

Calculation: Potential Doses and Margins of Exposure
Scenario: Occupational - Routine Exposure
Pathway: Dermal Contact with Herbicide
Herbicide: Sulfometuron Methyl
Program: Forest, Energy/Mineral, Rights-of-Way, Recreation/Cultural

Scenario	Application Type	Application Vehicle	Application Method	Receptor	Rate (lb a.i./acre)	Dermal Unit Exposure (b) (mg/lb ai)	Acres Treated per Hour	Hours Per Day	Dermal Abs. Factor	Body Weight (kg)	Dermal Dose (mg/kg-day)	Dermal NOAELs (mg/kg-day)			Margin of Exposure Dermal Exposure (unitless)		
												Short	Int	Long	Short	Int	Long
Typical	Aerial	Helicopter (a)	Rotary	P	0.14	0.005	100	4	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Aerial	Helicopter (a)	Rotary	M/L	0.14	2.9	100	4	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Human	Bpack	A/M/L	0.14	2.5	0.2	3	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Human	Hback	A	0.14	1.3	0.75	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Human	Hback	M/L	0.14	2.9	0.75	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Human	Hback	A/M/L	0.14	4.2	0.75	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	ATV	Spot	A	0.14	1.3	0.25	5	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	ATV	Spot	M/L	0.14	2.9	0.25	3	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	ATV	Spot	A/M/L	0.14	4.2	0.25	5	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	ATV	B/B	A	0.14	0.014	0.8	5	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	ATV	B/B	M/L	0.14	2.9	0.8	3	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	ATV	B/B	A/M/L	0.14	2.914	0.8	5	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Truck Mount	Spot	A	0.14	1.3	0.38	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Truck Mount	Spot	M/L	0.14	2.9	0.38	4	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Truck Mount	Spot	A/M/L	0.14	4.2	0.38	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Truck Mount	B/B	A	0.14	0.014	1.5	5	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Truck Mount	B/B	M/L	0.14	2.9	1.5	3	NA	70	NA	NA	NA	NA	NC	NC	NC
Typical	Ground	Truck Mount	B/B	A/M/L	0.14	2.914	1.5	5	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Aerial	Helicopter (a)	Rotary	P	0.38	0.005	200	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Aerial	Helicopter (a)	Rotary	M/L	0.38	2.9	200	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Human	Bpack	A/M/L	0.38	2.5	0.4	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Human	Hback	A	0.38	1.3	1	8	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Human	Hback	M/L	0.38	2.9	1	8	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Human	Hback	A/M/L	0.38	4.2	1	8	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	ATV	Spot	A	0.38	1.3	0.5	9	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	ATV	Spot	M/L	0.38	2.9	0.5	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	ATV	Spot	A/M/L	0.38	4.2	0.5	9	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	ATV	B/B	A	0.38	0.014	1.6	9	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	ATV	B/B	M/L	0.38	2.9	1.6	5	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	ATV	B/B	A/M/L	0.38	2.914	1.6	9	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Truck Mount	Spot	A	0.38	1.3	1	10	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Truck Mount	Spot	M/L	0.38	2.9	1	8	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Truck Mount	Spot	A/M/L	0.38	4.2	1	10	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Truck Mount	B/B	A	0.38	0.014	2.25	8	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Truck Mount	B/B	M/L	0.38	2.9	2.25	6	NA	70	NA	NA	NA	NA	NC	NC	NC
Max	Ground	Truck Mount	B/B	A/M/L	0.38	2.914	2.25	8	NA	70	NA	NA	NA	NA	NC	NC	NC

Notes:

(a) - Helicopter pathway applicable to Public Domain Forest Land, Energy/Mineral and Rights-of-Way sites only. Not used on Recreation and Cultural Sites.

(b) - Unit exposure for workers wearing long-sleeved shirts, pants, and no gloves used.

Calculation: Potential Doses and Margins of Exposure

Scenario: Occupational - Routine Exposure

Pathway: Inhalation of Herbicide

Herbicide: Sulfometuron Methyl

Program: Forest, Energy/Mineral, Right of Way, Recreation/Cultural

Scenario	Applicative Type	Application Vehicle	Application Method	Receptor	Rate (lb a.i./acre)	Inhalation Unit Exposure (mg/lb ai)	Acres Treated per Hour	Hours Per Day	Inhalation Absorption Factor	Body Weight (kg)	Inhalation Dose (mg/kg-day)	Inhalation NOAELs (mg/kg-day)			Margin of Exposure Inhalation Exposure (unitless)		
												Short	Int	Long	Short	Int	Long
Typical	Aerial	Helicopter (a)	Rotary	P	0.14	0.000068	100	4	1	70	5.44E-05	5	5	5	9.19E+04	9.19E+04	9.19E+04
Typical	Aerial	Helicopter (a)	Rotary	M/L	0.14	0.0012	100	4	1	70	9.60E-04	5	5	5	5.21E+03	5.21E+03	5.21E+03
Typical	Ground	Human	Bpack	A/M/L	0.14	0.03	0.2	3	1	70	3.60E-05	5	5	5	1.39E+05	1.39E+05	1.39E+05
Typical	Ground	Human	Hback	A	0.14	0.0039	0.75	6	1	70	3.51E-05	5	5	5	1.42E+05	1.42E+05	1.42E+05
Typical	Ground	Human	Hback	M/L	0.14	0.0012	0.75	6	1	70	1.08E-05	5	5	5	4.63E+05	4.63E+05	4.63E+05
Typical	Ground	Human	Hback	A/M/L	0.14	0.0051	0.75	6	1	70	4.59E-05	5	5	5	1.09E+05	1.09E+05	1.09E+05
Typical	Ground	ATV	Spot	A	0.14	0.0039	0.25	5	1	70	9.75E-06	5	5	5	5.13E+05	5.13E+05	5.13E+05
Typical	Ground	ATV	Spot	M/L	0.14	0.0012	0.25	3	1	70	1.80E-06	5	5	5	2.78E+06	2.78E+06	2.78E+06
Typical	Ground	ATV	Spot	A/M/L	0.14	0.0051	0.25	5	1	70	1.28E-05	5	5	5	3.92E+05	3.92E+05	3.92E+05
Typical	Ground	ATV	B/B	A	0.14	0.00074	0.8	5	1	70	5.92E-06	5	5	5	8.45E+05	8.45E+05	8.45E+05
Typical	Ground	ATV	B/B	M/L	0.14	0.0012	0.8	3	1	70	5.76E-06	5	5	5	8.68E+05	8.68E+05	8.68E+05
Typical	Ground	ATV	B/B	A/M/L	0.14	0.00194	0.8	5	1	70	1.55E-05	5	5	5	3.22E+05	3.22E+05	3.22E+05
Typical	Ground	Truck Mount	Spot	A	0.14	0.0039	0.38	6	1	70	1.78E-05	5	5	5	2.81E+05	2.81E+05	2.81E+05
Typical	Ground	Truck Mount	Spot	M/L	0.14	0.0012	0.38	4	1	70	3.65E-06	5	5	5	1.37E+06	1.37E+06	1.37E+06
Typical	Ground	Truck Mount	Spot	A/M/L	0.14	0.0051	0.38	6	1	70	2.33E-05	5	5	5	2.15E+05	2.15E+05	2.15E+05
Typical	Ground	Truck Mount	B/B	A	0.14	0.00074	1.5	5	1	70	1.11E-05	5	5	5	4.50E+05	4.50E+05	4.50E+05
Typical	Ground	Truck Mount	B/B	M/L	0.14	0.0012	1.5	3	1	70	1.08E-05	5	5	5	4.63E+05	4.63E+05	4.63E+05
Typical	Ground	Truck Mount	B/B	A/M/L	0.14	0.00194	1.5	5	1	70	2.91E-05	5	5	5	1.72E+05	1.72E+05	1.72E+05
Max	Aerial	Helicopter (a)	Rotary	P	0.38	0.000068	200	6	1	70	4.43E-04	5	5	5	1.13E+04	1.13E+04	1.13E+04
Max	Aerial	Helicopter (a)	Rotary	M/L	0.38	0.0012	200	6	1	70	7.82E-03	5	5	5	6.40E+02	6.40E+02	6.40E+02
Max	Ground	Human	Bpack	A/M/L	0.38	0.03	0.4	6	1	70	3.91E-04	5	5	5	1.28E+04	1.28E+04	1.28E+04
Max	Ground	Human	Hback	A	0.38	0.0039	1	8	1	70	1.69E-04	5	5	5	2.95E+04	2.95E+04	2.95E+04
Max	Ground	Human	Hback	M/L	0.38	0.0012	1	8	1	70	5.21E-05	5	5	5	9.59E+04	9.59E+04	9.59E+04
Max	Ground	Human	Hback	A/M/L	0.38	0.0051	1	8	1	70	2.21E-04	5	5	5	2.26E+04	2.26E+04	2.26E+04
Max	Ground	ATV	Spot	A	0.38	0.0039	0.5	9	1	70	9.53E-05	5	5	5	5.25E+04	5.25E+04	5.25E+04
Max	Ground	ATV	Spot	M/L	0.38	0.0012	0.5	6	1	70	1.95E-05	5	5	5	2.56E+05	2.56E+05	2.56E+05
Max	Ground	ATV	Spot	A/M/L	0.38	0.0051	0.5	9	1	70	1.25E-04	5	5	5	4.01E+04	4.01E+04	4.01E+04
Max	Ground	ATV	B/B	A	0.38	0.00074	1.6	9	1	70	5.78E-05	5	5	5	8.64E+04	8.64E+04	8.64E+04
Max	Ground	ATV	B/B	M/L	0.38	0.0012	1.6	5	1	70	5.21E-05	5	5	5	9.59E+04	9.59E+04	9.59E+04
Max	Ground	ATV	B/B	A/M/L	0.38	0.00194	1.6	9	1	70	1.52E-04	5	5	5	3.30E+04	3.30E+04	3.30E+04
Max	Ground	Truck Mount	Spot	A	0.38	0.0039	1	10	1	70	2.12E-04	5	5	5	2.36E+04	2.36E+04	2.36E+04
Max	Ground	Truck Mount	Spot	M/L	0.38	0.0012	1	8	1	70	5.21E-05	5	5	5	9.59E+04	9.59E+04	9.59E+04
Max	Ground	Truck Mount	Spot	A/M/L	0.38	0.0051	1	10	1	70	2.77E-04	5	5	5	1.81E+04	1.81E+04	1.81E+04
Max	Ground	Truck Mount	B/B	A	0.38	0.00074	2.25	8	1	70	7.23E-05	5	5	5	6.91E+04	6.91E+04	6.91E+04
Max	Ground	Truck Mount	B/B	M/L	0.38	0.0012	2.25	6	1	70	8.79E-05	5	5	5	5.69E+04	5.69E+04	5.69E+04
Max	Ground	Truck Mount	B/B	A/M/L	0.38	0.00194	2.25	8	1	70	1.90E-04	5	5	5	2.64E+04	2.64E+04	2.64E+04

Notes:

(a) - Helicopter pathway applicable to Forest, Energy/Mineral and Rights of Way sites only. Not used on Recreation/Cultural Sites.

Calculation: Aggregate Risk Level
Scenario: Occupational - Routine Exposure
Pathway: Dermal Contact with and Inhalation of Herbicide
Herbicide: Sulfometuron Methyl
Program: Forest, Energy/Mineral, Rights-of-Way, Recreation/Cultural

Scenario	Application Type	Application Vehicle	Application Method	Receptor	Margin of Exposure Dermal Exposure (unitless)			Margin of Exposure Inhalation Exposure (unitless)			Target Margin of Exposure		Aggregate Risk Index		
					Short	Int	Long	Short	Int	Long	Dermal	Inhalation	Short	Int	Long
Typical	Aerial	Helicopter (a)	Rotary	P	NC	NC	NC	9.19E+04	9.19E+04	9.19E+04	100	100	9.19E+02	9.19E+02	9.19E+02
Typical	Aerial	Helicopter (a)	Rotary	M/L	NC	NC	NC	5.21E+03	5.21E+03	5.21E+03	100	100	5.21E+01	5.21E+01	5.21E+01
Typical	Ground	Human	Bpack	A/M/L	NC	NC	NC	1.39E+05	1.39E+05	1.39E+05	100	100	1.39E+03	1.39E+03	1.39E+03
Typical	Ground	Human	Hback	A	NC	NC	NC	1.42E+05	1.42E+05	1.42E+05	100	100	1.42E+03	1.42E+03	1.42E+03
Typical	Ground	Human	Hback	M/L	NC	NC	NC	4.63E+05	4.63E+05	4.63E+05	100	100	4.63E+03	4.63E+03	4.63E+03
Typical	Ground	Human	Hback	A/M/L	NC	NC	NC	1.09E+05	1.09E+05	1.09E+05	100	100	1.09E+03	1.09E+03	1.09E+03
Typical	Ground	ATV	Spot	A	NC	NC	NC	5.13E+05	5.13E+05	5.13E+05	100	100	5.13E+03	5.13E+03	5.13E+03
Typical	Ground	ATV	Spot	M/L	NC	NC	NC	2.78E+06	2.78E+06	2.78E+06	100	100	2.78E+04	2.78E+04	2.78E+04
Typical	Ground	ATV	Spot	A/M/L	NC	NC	NC	3.92E+05	3.92E+05	3.92E+05	100	100	3.92E+03	3.92E+03	3.92E+03
Typical	Ground	ATV	B/B	A	NC	NC	NC	8.45E+05	8.45E+05	8.45E+05	100	100	8.45E+03	8.45E+03	8.45E+03
Typical	Ground	ATV	B/B	M/L	NC	NC	NC	8.68E+05	8.68E+05	8.68E+05	100	100	8.68E+03	8.68E+03	8.68E+03
Typical	Ground	ATV	B/B	A/M/L	NC	NC	NC	3.22E+05	3.22E+05	3.22E+05	100	100	3.22E+03	3.22E+03	3.22E+03
Typical	Ground	Truck Mount	Spot	A	NC	NC	NC	2.81E+05	2.81E+05	2.81E+05	100	100	2.81E+03	2.81E+03	2.81E+03
Typical	Ground	Truck Mount	Spot	M/L	NC	NC	NC	1.37E+06	1.37E+06	1.37E+06	100	100	1.37E+04	1.37E+04	1.37E+04
Typical	Ground	Truck Mount	Spot	A/M/L	NC	NC	NC	2.15E+05	2.15E+05	2.15E+05	100	100	2.15E+03	2.15E+03	2.15E+03
Typical	Ground	Truck Mount	B/B	A	NC	NC	NC	4.50E+05	4.50E+05	4.50E+05	100	100	4.50E+03	4.50E+03	4.50E+03
Typical	Ground	Truck Mount	B/B	M/L	NC	NC	NC	4.63E+05	4.63E+05	4.63E+05	100	100	4.63E+03	4.63E+03	4.63E+03
Typical	Ground	Truck Mount	B/B	A/M/L	NC	NC	NC	1.72E+05	1.72E+05	1.72E+05	100	100	1.72E+03	1.72E+03	1.72E+03
Max	Aerial	Helicopter (a)	Rotary	P	NC	NC	NC	1.13E+04	1.13E+04	1.13E+04	100	100	1.13E+02	1.13E+02	1.13E+02
Max	Aerial	Helicopter (a)	Rotary	M/L	NC	NC	NC	6.40E+02	6.40E+02	6.40E+02	100	100	6.40E+00	6.40E+00	6.40E+00
Max	Ground	Human	Bpack	A/M/L	NC	NC	NC	1.28E+04	1.28E+04	1.28E+04	100	100	1.28E+02	1.28E+02	1.28E+02
Max	Ground	Human	Hback	A	NC	NC	NC	2.95E+04	2.95E+04	2.95E+04	100	100	2.95E+02	2.95E+02	2.95E+02
Max	Ground	Human	Hback	M/L	NC	NC	NC	9.59E+04	9.59E+04	9.59E+04	100	100	9.59E+02	9.59E+02	9.59E+02
Max	Ground	Human	Hback	A/M/L	NC	NC	NC	2.26E+04	2.26E+04	2.26E+04	100	100	2.26E+02	2.26E+02	2.26E+02
Max	Ground	ATV	Spot	A	NC	NC	NC	5.25E+04	5.25E+04	5.25E+04	100	100	5.25E+02	5.25E+02	5.25E+02
Max	Ground	ATV	Spot	M/L	NC	NC	NC	2.56E+05	2.56E+05	2.56E+05	100	100	2.56E+03	2.56E+03	2.56E+03
Max	Ground	ATV	Spot	A/M/L	NC	NC	NC	4.01E+04	4.01E+04	4.01E+04	100	100	4.01E+02	4.01E+02	4.01E+02
Max	Ground	ATV	B/B	A	NC	NC	NC	8.64E+04	8.64E+04	8.64E+04	100	100	8.64E+02	8.64E+02	8.64E+02
Max	Ground	ATV	B/B	M/L	NC	NC	NC	9.59E+04	9.59E+04	9.59E+04	100	100	9.59E+02	9.59E+02	9.59E+02
Max	Ground	ATV	B/B	A/M/L	NC	NC	NC	3.30E+04	3.30E+04	3.30E+04	100	100	3.30E+02	3.30E+02	3.30E+02
Max	Ground	Truck Mount	Spot	A	NC	NC	NC	2.36E+04	2.36E+04	2.36E+04	100	100	2.36E+02	2.36E+02	2.36E+02
Max	Ground	Truck Mount	Spot	M/L	NC	NC	NC	9.59E+04	9.59E+04	9.59E+04	100	100	9.59E+02	9.59E+02	9.59E+02
Max	Ground	Truck Mount	Spot	A/M/L	NC	NC	NC	1.81E+04	1.81E+04	1.81E+04	100	100	1.81E+02	1.81E+02	1.81E+02
Max	Ground	Truck Mount	B/B	A	NC	NC	NC	6.91E+04	6.91E+04	6.91E+04	100	100	6.91E+02	6.91E+02	6.91E+02
Max	Ground	Truck Mount	B/B	M/L	NC	NC	NC	5.69E+04	5.69E+04	5.69E+04	100	100	5.69E+02	5.69E+02	5.69E+02
Max	Ground	Truck Mount	B/B	A/M/L	NC	NC	NC	2.64E+04	2.64E+04	2.64E+04	100	100	2.64E+02	2.64E+02	2.64E+02

Notes:

(a) - Helicopter pathway applicable to Public Domain Forest Land, Energy/Mineral and Rights-of-Way sites only. Not used on Recreation and Cultural Sites.