

Table U-12.  
Exposure Parameters for Aquatic Wildlife

Parameter	Killdeer		Source	Mallard		Source	Raccoon		Source
	Assumed	Actual		Assumed	Actual		Assumed	Actual	
Composition of Diet (percent) <sup>a</sup>									
Sediment	30	NA	USEPA,1993; Beyer et al.,1994	3	NA	Beyer et al., 1994, Cal/EPA, 2007	9	NA	USEPA,1993; Beyer et al.,1994
Invertebrates	100	88	Cal/EPA, 2007	100	35	Cal/EPA, 2007	100	15	USEPA, 1993
Mammals	0	0	Cal/EPA, 2007	0	0	Cal/EPA, 2007	0	14	USEPA, 1993
Other	0	2	Cal/EPA, 2007	0	62	Cal/EPA, 2007	0	62	USEPA, 1993
Body Weight (kg)									
	Juveniles	Adults		Juveniles	Adults		Juveniles	Adults	
	NA	0.0711	Only value; Cal/EPA, 2007	0.490	0.981	5th percentile; Cal/EPA, 2007	2.8	3.3	5th percentile; USEPA, 1993
Food Ingestion Rate - Total									
	Juveniles	Adults		Juveniles	Adults		Juveniles	Adults	
% Moisture in Food	79	79	Based on average aquatic invertebrate diet; USEPA, 1993	79	79	Based on average aquatic invertebrate diet; USEPA, 1993	79	79	Based on average aquatic invertebrate diet; USEPA, 1993
kg/day (dw)	--	0.0139	Allometric equation; Nagy, 2001 (eq. 39)	0.0326	0.0503	Allometric equation; Nagy, 2001 (eq. 61)	0.097	0.112	Allometric equation; Nagy, 2001 (eq. 9)
kg/kg body weight-day (dw)	--	0.195	Calculated	0.0665	0.0513	Calculated	0.035	0.034	Calculated
kg/kg body weight-day (ww)	--	0.7148	Allometric equation; Nagy, 2001 (eq. 40)	0.2077	0.1604	Allometric equation;	0.1136	0.1110	Allometric equation; Nagy, 2001 (eq. 10)
Food Ingestion Rate (kg/kg body weight-day) <sup>a</sup>									
	Juveniles	Adults		Juveniles	Adults		Juveniles	Adults	
Sediment (dw)	--	0.0585	Calculated	0.00199	0.00154	Calculated	0.003	0.003	Calculated
Invertebrates (dw)	--	0.195	Calculated	0.066	0.051	Calculated	0.035	0.034	Calculated
Drinking Water Ingestion									
	Juveniles	Adults		Juveniles	Adults		Juveniles	Adults	
L/day	--	0.0100	Allometric equation; USEPA, 1993	0.04	0.06	Allometric equation; USEPA, 1993	0.25	0.29	Allometric equation; USEPA, 1993
L/kg body weight-day	--	0.141	Calculated	0.0747	0.0594	Calculated	0.089	0.088	Calculated
Home Range (acres) <sup>c</sup>									
Lower bound	NA	NA	--	NA	172	Cal/EPA, 2007	NA	267	USEPA, 1993
					94	USEPA, 1993		13	USEPA, 1993
Upper bound	NA	1,747	Zeiner et al., 1990	NA	1,532	Cal/EPA, 2007	NA	6,325	USEPA, 1993
					6,029	USEPA, 1993		12,222	USEPA, 1993

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kg	Kilograms.
NA	Not available
L	Liters.
dw	Dry weight.
ww	Wet weight.
<sup>a</sup>	Assumed that diet consists of 100% of the most contaminated food item for ingestion calculations. Actual diet composition is shown and further described in the text.
<sup>b</sup>	Based on upper bound value for wading birds.
<sup>c</sup>	Includes home range, foraging range, and territory size.

References

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