

# Cal/Ecotox Exposure Factors for Western Grebe (*Aechmophorus occidentalis*)\*

Page 1

Endpoint Type	Endpoint Value	Error	Range	Units	Sex	Life Stage	Location	Note	Reference
Body Weight - Mean			1108-1406	g	F	Both Adult and Juv.	WA	a	1
Body Weight - Mean			1530-1583	g	M	Both Adult and Juv.	WA	b	1
Body Weight - Mean			1065.4-1120.9	g	B	Juvenile	Lab	c	2
Body Weight - Mean			27.524-30.510	g	B	Juvenile	Lab	d	2
Clutch or Litter Size	2.6		1-4	eggs	F	Adult	UT	e	3
Dietary Composition	Ascaradina (3), Gastropoda (10, Orthoptera (2), Hemiptera (2), Diptera (1), Coleoptera (4), Siluridae (4), Centrarchidae (77), plant (4)			%	NR	Adult	Lake; CA	f	4
Duration of Incubation or Gestation	24		21-28	d	B	Embryo	UT	g	3
Food Ingestion Rate	22.4			g	NR	Adult	Lake; CA	h	4
Growth Rate	-0.1321				B	Juvenile	Lab	i	2
Hatching Success	21%				B	Hatchling	UT	j	3
Population Density	2400			birds/lake	B	NR	Lassen; CA	k	5
Time of Mating/ Laying	early July				F	Adult	UT	l	3

## Notes

- a range of mean body weights; N=22 birds; October, February; Commencement Bay; see paper for tissue residue data (organochlorines, PCBs, metals)
- b range of mean body weights; N=18 birds; October, February; Commencement Bay; see paper for tissue residue data (organochlorines, PCBs, metals)
- c estimates of asymptotic weights; N=4 birds; Bear River Migratory Bird Refuge (collection site)
- d estimated initial weights; N=4 birds; Bear River Migratory Bird Refuge (collection site)
- e mean clutch size; N=70 nests; Bear River Migratory Bird Refuge
- f % of total stomach content volume; N=27 birds; April-September; Clear Lake; see figure for seasonal changes in dietary composition
- g incubation period; N=14 clutches; Bear River Migratory Bird Refuge
- h estimated mass of fish consumed daily, based on stomach contents; N=1 bird; Clear Lake; primary species consumed was Bluegill
- i growth rate coefficient estimate based on Richard's growth model; N=4 birds; Bear River Migratory Bird Refuge (collection site)
- j percent of nests located in emergent vegetation in which at least one chick hatched; N=221 nests; Bear River Migratory Bird Refuge
- k annual number of individuals censused; N=1 lake; March-August; Eagle Lake, 42 km NW of Susanville
- l peak of laying period; N=386 nests; Bear River Migratory Bird Refuge

## References

- 1 Henny, Charles J., Lawrence J. Blus and Robert A. Grove. 1990. Western grebe, *Aechmophorus occidentalis*, wintering biology and contaminant accumulation in Commencement Bay, Puget Sound, Washington. *Can. Field Nat.* 104(3):460-472.
- 2 White, Gary C. and John T. Ratti. 1977. Estimation and testing of parameters in Richard's growth model for western grebes. *Growth*. 41:315-323.
- 3 Lindvall, Mark L. and Jessop B. Low. 1982. Nesting ecology and production of western grebes at Bear River Migratory Bird Refuge, Utah. *Condor*. 84(1):66-70.
- 4 Lawrence, George E. 1950. The diving and feeding activity of the western grebe on the breeding grounds. *Condor*. 52(1):3-16.
- 5 Lederer, Roger J. 1976. The breeding populations of piscivorous birds of Eagle Lake. *Am. Birds*. 30(3):771-772.

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