

Table 2. Summary of status, extant sites, direct and indirect threats and conservation priority ranks for aquatic species at risk in the Thames River watershed.

Species	Global (Gx), COSEWIC and Subnational (Sx) Ranks*	Status within Thames River Watershed	Occurrence Sites within Thames River Watershed	Current/Ongoing Threats in the Thames River Watershed	Conservation Priority Ranks
Freshwater Mussels:					
snuffbox	G3, Endangered, S1	possibly extirpated	lower reaches of Thames	habitat degradation, poor water quality, siltation (agricultural)	Possibly Extirpated
wavyrayed lampmussel	G4, Endangered, S1	persists	North, Middle and South Thames	habitat loss, sedimentation (urban), pollution, exotic species (?), predation, recreational activities (?)	High
round hickorynut	G4, Endangered, S1	possibly extirpated	possibly middle reaches of Thames, upstream and downstream of Glencoe	impoundments, channelization, siltation, runoff, pollution, exotic species (?)	Possibly Extirpated
round pigtoe	G4, Endangered, S2	extant; no evidence of recruitment	lower reaches of Middle Thames near Thamesford, also lower of South Thames near	pollution, siltation, habitat perturbation, inundation, exotic species (?)	High

			Dorchester		
kidneyshell	G4G5, Endangered, S1	extant	possibly Lower Thames between London and Chatham	habitat loss, siltation, exotic species (?), predation, decline of glochidial host	High
mudpuppy mussel	G3, Endangered, S1	unknown (only half, weathered shell found)	London area	if population exists, possibly siltation, pollution, impoundments, exotic species, decline of glochidial host	Possibly Extirpated
rayed bean	G1G2, Endangered, S1	small population	South Thames, North Thames, Middle Thames, Lower Thames	siltation (agricultural), pollution (agricultural and urban), habitat loss	High
Reptiles:					
spotted turtle	G5, Endangered, S3	decline	unknown; few records indicate northern part of Lower Thames and a Middle Thames tributary	habitat loss/alteration (especially wetland drainage), barriers, predation, recreational activities, exotic species, pet trade	High
spiny softshell	G5, Threatened,	severe decline	southern part of Upper	habitat alteration/degradation, dams, recreational activities,	High

	S3		Thames, Lower Thames	predation, exotic species impacts on prey items (?)	
stinkpot turtle	G5, Threatened, S4	extirpated	unknown; historical record in southern part of Lower Thames	habitat alteration (especially wetland drainage), barriers, recreational activities	Possibly Extirpated
queen snake	G5, Threatened, S2	unknown (presume low abundance)	southern part of Upper Thames	dams, habitat alterations (agricultural and urban), toxics, exotic species impacts on prey items (?)	High
northern map turtle	G5, Special Concern, S3	common	southern part of Upper Thames and Lower Thames	barriers, habitat alteration, human activities, dams, predation, road mortality, flooding, predation, recreational activities, loss of prey items	Low
northern ribbonsnake	T5, Special Concern, S3	unknown (presume low abundance)	unknown; historical records in mid-Lower Thames	habitat loss/degradation, decline in food items, human persecution, road mortality, predation	Medium
Fishes:					
gravel chub	G4, Extirpated, SX	extirpated	mid-Lower Thames (1958)**	habitat loss, siltation (agricultural and urban)	Possibly Extirpated
northern madtom	G3, Endangered, S1S2	sustainable, reproducing population	mid-Lower Thames near Wardsville	poor water quality, sediment and nutrient loading, exotic species (?)	High

eastern sand darter	G3, Threatened, S2	decline in abundance	Lower Thames from downstream of London to upstream of Thamesville	habitat loss/alteration (dams, impoundments, land-use practices), siltation, pollution (?), exotic species (?)	High
black redhorse	G5, Threatened, S2	possibly more widespread than previously thought	Upper Thames	turbidity, impoundments, recreational activities (?)	High
northern brook lamprey	G4, Special Concern, S3	established population presumed	few records in Upper Thames	low water levels, siltation, pollution, habitat degradation	Medium
greenside darter	G4, Special Concern, S4	abundant throughout watershed	throughout the Thames River watershed, mainly Upper Thames	habitat degradation, turbidity (?), loss of prey items	Low
bigmouth buffalo	G5, Special Concern, SU	unknown	Lower Thames (downstream of Chatham) tributaries	habitat alteration (channelization, removal of meander loops, setting water levels)	Medium
silver shiner	G5, Special Concern, S2S3	decline in range and abundance/fairly common??	North Thames to downstream of London	habitat loss (?), pollution (?), channelization (?), turbidity (?), impoundments (?)	Medium
pugnose minnow	G5, Special Concern, S2	never abundant; not found recently	previously Komoka and downstream of Chatham	turbidity (erosion), habitat loss (specifically wetland loss)	Medium

river redhorse	G4, Special Concern, S2	unknown	mid-Lower Thames	dams, impoundments, habitat degradation, recreational activities (?), loss of prey items	Medium
spotted sucker	G5, Special Concern, S2	unknown	Lower Thames	dams, impoundments	Medium

* see Appendix A for rank definitions

** dates in brackets indicate last known record