

Supplementary material from:

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Supplementary Material 2. Ethogram of behavioral responses of the American manatee (*Trichechus manatus*) to anthropogenic disturbances identified in the documents included in the integrative systematic and bibliometric review.

Category	Behavior	Definition
<u>Movement/locomotor responses</u> (Immediate modifications in body movement, orientation, and locomotor patterns in response to anthropogenic stimuli, including directed movements away from disturbance sources).	Changes in orientation	Change in body orientation in response to an anthropogenic stimulus, including alterations in heading, roll, or pitch.
	Depth-related displacement	Movement of an individual toward deeper water in response to anthropogenic stimulus.
	Changes in swimming speed	Increase in locomotor speed in response to anthropogenic stimulus.
	Changes in fluking behavior	Alterations in tail beat patterns in response to anthropogenic stimulus, including changes in frequency, amplitude, or regularity of fluke movements.
	Diving behavior (collision risk context)	Diving patterns and response timing in relation to approaching vessels, influencing collision risk.
	Avoidance	Directed movement away from an anthropogenic stimulus after its detection, resulting in increased distance from the disturbance source. This response may involve changes in orientation, swimming speed, or diving behavior.
<u>Activity/behavioral state changes</u> (Changes in activity patterns and behavioral states, including modifications within ongoing behaviors and transitions between behavioral states in response to anthropogenic stimuli).	Changes in feeding behavior	Variation in feeding activity in response to anthropogenic disturbance, including changes in chewing rate or duration, and alterations associated with human-managed conditions.
	Changes in activity patterns	Modifications in the overall level or temporal distribution of behaviors in response to an anthropogenic stimulus.
	Behavioral state transitions	Shifts from one behavioral state to another in response to an anthropogenic stimulus.
<u>Disturbance-related behavior responses</u> (Behavioral displays observed in response to anthropogenic stimuli, including abrupt body movements, agitation, and other context-specific responses).	Tail-kicking	Rapid or forceful movements of the caudal fluke, typically involving abrupt or repeated strokes in response to an anthropogenic stimulus.
	Stereotypic behavior	Repetitive, invariant behavior patterns with no apparent immediate function, potentially associated with chronic exposure to disturbance or human-managed conditions.
	Rolling	Rotation of the body along its longitudinal axis in response to an anthropogenic stimulus.
	Flipping the caudal fluke	Upward or lateral flipping movements of the caudal fluke in response to an anthropogenic stimulus.

	Rubbing against substrate	Contact of the body with the substrate through rubbing movements in response to an anthropogenic stimulus.
	Agitation	Increased frequency or intensity of body movements in response to an anthropogenic stimulus.
	Grouping	Reduction in the distance between individuals, resulting in closer spatial aggregation in response to an anthropogenic stimulus.
<u>Spatial displacement/habitat use</u> (Changes in the spatial distribution and habitat use of individuals in response to anthropogenic stimuli).	Use of refuge (protected or restricted access) area	Increased use of protected or restricted-access areas (<i>e.g.</i> , sanctuaries or temporally closed areas) in response to anthropogenic disturbance, indicating spatial displacement or habitat shift.
	Changes in habitat use	Changes in habitat use in response to anthropogenic disturbance, including displacement to different areas or shifts in spatial distribution.
	Distribution correlated with the anthropogenic activities	Presence recorded in proximity to anthropogenic activities (<i>e.g.</i> , boats, coastal development).
Neutral	-	Absence of observable behavioral changes in response to an anthropogenic stimulus, with individuals continuing to engage in ongoing behaviors.