

Appendix 1. Summary table of all reference studies (n = 214) evaluating the response of focal or non-focal species to human disturbance and habitat loss and/or degradation. The study location, whether nGoM focal species were impacted, whether the study was only focused on the impact of human disturbance and habitat loss and/or degradation (“Impact Only”), or evaluated management strategies, bird response to threat and directionality if applicable (Positive, Negative, or Neutral), bird group affected and whether they are focal or non-focal (F = Focal, NF = Non-focal), focal species, and other species impacted if reported are included for each citation. Primary human disturbance management categories include fencing, stewards, closures, and signage, public education (grouped). Primary habitat loss and/or degradation management categories include beach nourishment, dredge spoil islands, reduced beach raking, predation management, and vegetation management, wetland creation (grouped). Response categories include abundance, reproductive success, and habitat quality. Bird groups follow GoMAMN guild categories: shorebirds, seabirds, and wading birds.

Citation	Study Location	nGoM Focal Species Impacted	Human Disturbance	Habitat Loss and Degradation	Bird Response to Threat	Bird Group Affected (F = Focal, NF = Non-focal)	Focal Species Impacted	Other Species Impacted
Aharon-Rotman et al. 2016	Australia			Impact Only	Habitat Quality (Positive)	Shore birds (NF)		Ruddy Turnstone
Anderson and Keith 1980	Baja	Yes	Impact Only		Reproductive Success	Seabirds (F)	Brown Pelican	

Anteau et al. 2022	Great Plains	Yes		Predation Management	Reproductive Success (Positive)	Shore birds (F)	Piping Plover
Baudains and Lloyd 2007	South Africa		Impact Only		Reproductive Success	Shore birds (NF)	
Beerens et al. 2015	Everglades	Yes		Impact Only	Habitat Quality (Positive)	Wading Birds (F)	Great Egret, White Ibis, Wood Stork
Billodeaux et al. 2010	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Wading Birds (F)	Sandhill Crane
Bolam et al. 2021	Global		Impact Only		Abundance	Shore birds (NF), Seabirds (NF), Wading Birds (NF)	
Borboroglu and Yorio 2007	South America			Impact Only	Habitat Quality (Positive)	Seabirds (NF)	
Bouton et al. 2005	Brazil	Yes	Impact Only		Reproductive Success	Wading Birds (F)	Wood Stork

Brinker et al. 2007	Atlantic	Yes		Impact Only	Reproductive Success (Positive)	Seabirds (F, NF)	Black Skimmer, Brown Pelican, GullNegatively billed Tern, Least Tern, Royal Tern, Sandwich Tern	
Brubek et al. 1981	nGoM	Yes		Impact Only	Reproductive Success	Seabirds (F)	Least Tern	
Brusati et al. 2001	nGoM	Yes		Vegetation Management or Wetland Creation	Habitat Quality (Positive)	Shorebirds (F, NF)	LongNegatively billed Curlew	
Brush et al. 2019	nGoM	Yes		Impact Only	Abundance, Reproductive Success, Habitat Quality	Shorebirds (F, NF)	Shorebirds (collectively)	Shorebirds (collectively)
Burger 1984	Atlantic	Yes		Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F)	Least Tern	
Burger 1986	Atlantic	Yes		Impact Only	Habitat Quality	Shorebirds (F, NF)	Shorebirds (collectively)	Shorebirds (collectively)
Burger 1987	Atlantic	Yes		Impact Only	Abundance (Positive)	Shorebirds (F)	Piping Plover	

Burger 1989	Atlantic	Yes	Fencing, Stewards	Vegetation Management or Wetland Creation	Abundance (Positive), Reproductive Success (Positive)	Seabirds (F)	Least Tern	
Burger and Gochfeld 1990	Range wide	Yes		Impact Only	Reproductive Success (Positive)	Seabirds (F)	Black Skimmer	
Burger and Lesser 1978	Atlantic			Impact Only	Reproductive Success (Positive)	Seabirds (NF)		Common Tern
Burger and Niles 2013a	Atlantic	Yes	Closures		Habitat Quality (Positive)	Shorebirds (F)	Red Knot	
Burger and Niles 2013b	Atlantic	Yes	Closures		Habitat Quality (Positive)	Shorebirds (F)	Red Knot	

Burger et al. 1995	Atlantic	Yes	Fencing, Stewards, Signage, Public Education, Closures	Reproductive Success (Positive)	Shore birds (F, NF), Seabirds (F, NF), Wading Birds (F, NF)	Black Skimmer, Least Tern, Piping Plover, egrets (collectively), herons (collectively), ibises (collectively), shorebirds (collectively), terns (collectively)
Burger et al. 2010	Atlantic	Yes	Impact Only	Reproductive Success	Seabirds (F)	Black Skimmer
Burger et al. 2021	Atlantic	Yes	Impact Only	Abundance	Shore birds (F)	Red Knot
Burger et al. 2023	Atlantic	Yes	Impact Only	Habitat Quality	Shore birds (F)	Red Knot
Burns et al. 2013	Atlantic			Predation Management	Abundance (Positive), Reproductive Success (Positive)	Shore birds (NF)

Carlson and McLean 1996	Midwest		Fencing		Reproductive Success (Positive), Abundance (Positive), Reproductive Success (Positive),	Wading Birds (NF)		Great Blue Heron
Catlin et al. 2015	Inland	Yes		Dredge Spoil Islands	Habitat Quality (Positive), Abundance (Positive), Reproductive Success (Positive),	Shore birds (F)	Piping Plover	
Catlin et al. 2016	Inland	Yes		Dredge Spoil Islands	Habitat Quality (Positive),	Shore birds (F)	Piping Plover	
Cohen et al. 2008	Atlantic	Yes		Beach Nourishment	Habitat Quality (Positive)	Shore birds (F)	Piping Plover	
Cohen et al. 2009	Atlantic	Yes		Predation Management	Reproductive Success (Positive)	Shore birds (F)	Piping Plover	
Collins et al. 2021	nGoM	Yes		Impact Only	Habitat Quality (Positive)	Wading Birds (F)	Reddish Egret	

Comber and Dayer 2019	Atlantic	Yes	Signage, Public Education	Abundance (Positive)	Shorebirds (F), Seabirds (F)	American Oystercatcher, Black Skimmer, Brown Pelican, Least Tern, Piping Plover, Wilson's Plover	
Comber and Dayer 2024	Atlantic	Yes	Signage, Public Education		Shorebirds (F, NF)	Shorebirds (collectively)	
Comber et al. 2021	Atlantic	Yes	Signage, Public Education	Abundance (Positive)	Shorebirds (F), Seabirds (F)	American Oystercatcher, Black Skimmer, Brown Pelican, Least Tern, Piping Plover, Wilson's Plover	
Convertino et al. 2011	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Shorebirds (F)	Snowy Plover
Cope 2016	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Seabirds (F)	Sooty Tern

Corbat 1990	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Shorebirds (F), Seabirds (F)	American Oystercatcher, Least Tern, Wilson's Plover
Corre et al. 2013	France		Signage, Public Education				
Croxall et al. 2012	Global			Impact Only	Abundance, Reproductive Success, Habitat Quality	Seabirds (NF)	
Darrah 2020	nGoM	Yes	Fencing, Stewards, Signage, Public Education		Reproductive Success (Positive)	Seabirds (F)	Least Tern
Darrah et al. 2021	nGoM	Yes		Reducing Beach Raking	Habitat Quality (Positive)	Shorebirds (F, NF), Seabirds (F, NF)	Piping Plover, Red Knot, seabirds (collectively), shorebirds (collectively)
Davis et al. 2001	Atlantic	Yes		Impact Only	Reproductive Success	Shorebirds (F)	American Oystercatcher

Defeo et al. 2009	Global			Impact Only	Habitat Quality (Positive)	Shore birds (NF), Seabirds (NF), Wading Birds (NF)	
DeRose-Wilson et al. 2013	Atlantic	Yes		Beach Nourishment	Habitat Quality (Positive)	Shore birds (F)	Wilson's Plover
DeRose-Wilson et al. 2018	Atlantic	Yes	Impact Only		Reproductive Success	Shore birds (F)	Piping Plover
Devries and Forsys 2004	nGoM	Yes		Impact Only	Habitat Quality (Positive)	Seabirds (F)	Least Tern
Dinsmore et al. 2014	Oregon	Yes		Vegetation Management or Wetland Creation	Reproductive Success (Positive)	Shore birds (F)	Western Snowy Plover
Dowling and Weston 1999	Australia		Fencing, Stewards, Signage, Public Education, Closures		Reproductive Success (Positive)	Shore birds (NF)	Hooded Plover
Drake et al. 2001	nGoM	Yes		Beach Nourishment	Habitat Quality (Positive)	Shore birds (F)	Piping Plover

Dugan et al. 2003	California	Yes		Reducing Beach Raking	Habitat Quality (Positive)	Shore birds (F)	Western Snowy Plover	BlackNebellied Plover
Dugan et al. 2011	Global			Impact Only	Abundance (Positive)	Shore birds (NF)		
Durkin and Cohen 2021	nGoM	Yes	Impact Only		Reproductive Success	Shore birds (F)	Snowy Plover	
Dwyer and Tanner 1992	Atlantic	Yes	Impact Only		Reproductive Success	Wading Birds (F)	Florida Sandhill Crane	
Eggert 2012	nGoM, Atlantic	Yes	Impact Only		Reproductive Success	Seabirds (F)	Black Skimmer, Brown Pelican	
Ellison and Cleary 1978	Atlantic		Impact Only		Reproductive Success	Seabirds (NF)		DoubleNebellied Cormorant
Emslie et al. 2009	Atlantic	Yes		Impact Only	Habitat Quality (Positive)	Seabirds (F)	Least Tern, Royal Tern	
Engelhardt and Withers 1997	nGoM			Reducing Beach Raking	Habitat Quality (Positive)	Shore birds (NF), Seabirds (NF)		
Engeman et al. 2010	nGoM	Yes		Reducing Beach Raking, Predation Management	Reproductive Success (Positive)	Shore birds (F), Seabirds (F)	Least Tern, Snowy Plover, Wilson's Plover	

Erwin 1977	Atlantic	Yes		Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F)	Black Skimmer
Erwin et al. 2003	Atlantic	Yes		Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F)	Black Skimmer, Least Tern, Royal Tern, Sandwich Tern
Erwin et al. 2007	Atlantic	Yes		Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F), Wading Birds (NF)	Least Tern
Erwin et al. 2011	Atlantic	Yes		Impact Only	Abundance (Positive)	Seabirds (F), Wading Birds (F, NF)	Black Skimmer, Least Tern, egrets (collectively), herons (collectively)
Farrell et al. 2016	nGoM	Yes		Beach Nourishment	Habitat Quality (Positive)	Shorebirds (F)	American Oystercatcher
Feagin et al. 2014	nGoM			Reducing Beach Raking	Habitat Quality (Positive)	Shorebirds (NF), Seabirds (NF)	
Fitzpatrick and Bouchez 1998	Europe		Impact Only		Habitat Quality	Shorebirds (NF)	

Flemming et al. 1988	Atlantic	Yes	Impact Only		Reproductive Success	Shore birds (F)	Piping Plover
Florida Shorebird Alliance 2012	nGoM	Yes		Reducing Beach Raking	Habitat Quality (Positive)	Seabirds (F)	Black Skimmer
Forys and Borboen-Abrams 2006	nGoM	Yes	Impact Only		Habitat Quality	Seabirds (F)	Least Tern
Forys et al. 2022	nGoM	Yes	Impact Only		Reproductive Success	Seabirds (F)	Black Skimmer
Gaines and Ryan 1988	North Dakota	Yes	Impact Only		Reproductive Success	Shore birds (F)	Piping Plover
Galbraith et al. 2002	Pacific, Atlantic	Yes		Impact Only	Abundance (Positive)	Shore birds (F, NF)	Shorebirds (collectively)
Galbraith et al. 2014	North America	Yes		Impact Only	Abundance (Positive)	Shore birds (F, NF)	Shorebirds (collectively)
Gambli n et al. 2022	nGoM	Yes		Vegetation Management or Wetland Creation	Abundance (Positive), Reproductive Success (Positive)	Shore birds (F)	Wilson's Plover

Gibson et al. 2018	Atlantic	Yes	Impact Only		Abundance, Reproductive Success, Habitat Quality	Shore birds (F)	Piping Plover
Gochfeld 1983	Atlantic	Yes		Beach Nourishment	Habitat Quality (Positive), Abundance (Positive), Reproductive Success (Positive), Habitat Quality (Positive)	Seabirds (F)	Least Tern
Goldin 1990	Atlantic	Yes	Closures		Reproductive Success (Positive), Habitat Quality (Positive)	Shore birds (F)	Piping Plover
Goldin and Regosin 1998	Atlantic	Yes	Impact Only		Reproductive Success, Habitat Quality	Shore birds (F)	Piping Plover
Gore 1991	nGoM	Yes		Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F)	Black Skimmer
Goss-Custard et al. 1995	Europe		Impact Only		Abundance (Positive)	Shore birds (NF)	

Guilfoyle et al. 2006	Atlantic	Yes	Beach Nourishment	Abundance (Negative)	Shore birds (F), Seabirds (F)	American Oystercatcher, Black Skimmer, Brown Pelican, Least Tern, Piping Plover, Snowy Plover, Wilson's Plover	
Guilfoyle et al. 2024	nGoM	Yes	Impact Only	Reproductive Success (Positive)	Shore birds (F, NF), Seabirds (F, NF), Wading Birds (F, NF)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)
Hackney et al. 2016	nGoM	Yes	Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F, NF), Wading Birds (F, NF)	Brown Pelican, Roseate Spoonbill, Royal Tern, Sandwich Tern	Forster's Tern, Laughing Gull, Snowy Egret
Hamza 2020	Europe		Impact Only	Habitat Quality	Shore birds (NF)		

Hecker 2008	Atlantic	Yes	Signage, Public Education, Closures	Vegetation Management or Wetland Creation, Beach Nourishment	Abundance (Positive), Reproductive Success (Positive)	Shore birds (F), Seabirds (F)	Piping Plover	
Herring et al. 2010	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Wading Birds (F)	Great Egret, White Ibis	
Hevia and Bala 2018	Patagonia		Fencing, Signage, Public Education		Reproductive Success (Neutral)	Shore birds (NF)		Two Negative banded Plover
Hill and Talent 1990	Inland	Yes		Impact Only	Reproductive Success	Shore birds (F), Seabirds (F)	Least Tern, Snowy Plover	
Hill et al. 1997	United Kingdom			Impact Only	Reproductive Success	Shore birds (NF), Seabirds (NF), Wading Birds (NF)		
Hodgson et al. 2008	nGoM	Yes		Impact Only	Abundance (Positive)	Shore birds (F)	American Oystercatcher	
Hood and Dinsmore 2007	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Shore birds (F)	Snowy Plover, Wilson's Plover	

Hunt et al. 2019	Atlantic	Yes		Predation Management	Reproductive Success (Positive)	Shore birds (F)	Piping Plover, Snowy Plover	
Hunter et al. 2006	nGoM, Atlantic	Yes		Impact Only	Habitat Quality (Positive)	Shore birds (F, NF), Seabirds (F, NF), Wading Birds (F, NF)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)
Ikuta and Blumstein 2003	California	Yes	Fencing		Habitat Quality (Positive)	Shore birds (F, NF), Seabirds (NF), Wading Birds (F, NF)	Great Egret, Western Sandpiper	Black-bellied Plover, Black-necked Stilt, Great Blue Heron, Greater Yellowlegs, Least Sandpiper, Ring-billed Gull, Snowy Egret, Willet

Isaksso n et al. 2007	Europe			Predatio n Manage ment	Abunda nce (Positiv e), Reprod uctive Success (Positiv e)	Shore birds (NF)	
Jackson and Jackson 1985	nGoM	Yes		Dredge Spoil Islands	Habitat Quality (Positiv e)	Seabir ds (F)	Least Tern
Jefferso n et al. 2022	nGoM	Yes	Fencin g		Reprod uctive Success (Neutral)	Seabir ds (F)	Least Tern
Jenks- Jay 1982	Atlanti c	Yes		Predatio n Manage ment	Reprod uctive Success (Positiv e)	Shore birds (F)	Least Tern
Jiménez et al. 2023	nGoM	Yes		Impact Only	Habitat Quality (Positiv e)	Seabir ds (F)	Least Tern
Jodice et al. 2007	Atlanti c	Yes		Impact Only	Abunda nce (Positiv e)	Seabir ds (F, NF)	Seabirds (collectivel y)
Jodice et al. 2014	Atlanti c	Yes		Impact Only	Reprod uctive Success (Positiv e)	Shore birds (F)	American Oystercatch er

Jodice et al. 2019	nGoM	Yes		Impact Only	Abundance (Positive), Reproductive Success (Positive), Habitat Quality (Positive)	Seabirds (F, NF)	Seabirds (collectively)
Johnston et al. 2023	Pacific	Yes		Vegetation Management or Wetland Creation, Reducing Beach Raking	Abundance (Positive), Habitat Quality (Positive)	Shorebirds (F)	Snowy Plover
Kavelaars et al. 2020	Netherlands			Impact Only	Habitat Quality (Positive)	Seabirds (NF)	
Kelly 2014	Atlantic	Yes	Fencing, Closures		Habitat Quality (Positive)	Shorebirds (F, NF)	Shorebirds (collectively)
Klein et al. 1995	nGoM	Yes		Impact Only	Habitat Quality	Seabirds (F), Wading Birds (F, NF)	Brown Pelican, egrets (collectively), herons (collectively)
Koch and Paton 2014	Atlantic	Yes		Impact Only	Habitat Quality	Shorebirds (F)	American Oystercatcher, Red Knot

Kotliar and Burger 1986	Atlantic	Yes		Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F)	Least Tern	
Krainyk et al. 2020	nGoM	Yes		Dredge Spoil Islands	Habitat Quality (Positive)	Wading Birds (F)	Reddish Egret	
Krogh and Schweitzer 1999	nGoM	Yes	Impact Only		Reproductive Success	Seabirds (F)	Least Tern	
Lafferty et al. 2006	Pacific	Yes	Closures		Abundance (Positive), Reproductive Success (Positive)	Shorebirds (F)	Snowy Plover	
Lamb 2015	North Atlantic	Yes		Vegetation Management or Wetland Creation	Habitat Quality (Positive)	Seabirds (F, NF)	Terns (collectively)	Terns (collectively)
Lankford et al. 2018	nGoM	Yes		Predation Management	Reproductive Success (Positive)	Seabirds (F)	Least Tern	
Lauro and Nol 1995	Australia			Impact Only	Reproductive Success (Positive)	Shorebirds (NF)		
Laycock 2023	nGoM	Yes	Impact Only		Habitat Quality	Seabirds (F)	Black Skimmer	

Leja 2015	California	Yes		Vegetation Management or Wetland Creation	Reproductive Success (Positive)	Shore birds (F)	Western Snowy Plover	
Lewis et al. 2022	South Africa		Closures		Abundance (Positive)	Shore birds (NF)		Shorebirds (collectively)
Lleywelyn and Shackley 1996	United Kingdom			Impact Only	Habitat Quality (Positive)	Shore birds (NF)		
Lopes et al. 2015	Portugal			Impact Only	Habitat Quality (Positive)	Seabirds (NF)		
Lorenz et al. 2009	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Wading Birds (F)	Roseate Spoonbill	
Lott 2009	nGoM	Yes		Beach Nourishment	Habitat Quality (Positive)	Shore birds (F)	Piping Plover, Snowy Plover	
Lott et al. 2009	nGoM	Yes		Impact Only	Habitat Quality (Positive)	Shore birds (F, NF), Seabirds (F, NF), Wading Birds (F, NF)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)

MacIvor 1990	Atlantic	Yes	Closures		Abundance (Positive), Reproductive Success (Positive), Habitat Quality (Positive)	Shore birds (F)	Piping Plover	
Mackin 2016	Caribbean	Yes		Impact Only	Abundance (Positive)	Seabirds (F)	Sargasso Shearwater	
Maguire et al. 2011	Europe			Predation Management	Reproductive Success (Positive)	Shore birds (NF)		
Mallach and Leberg 1999	nGoM	Yes		Beach Nourishment	Habitat Quality (Positive)	Seabirds (F)	Least Tern	
Malm et al. 2004	Baltic Sea			Reducing Beach Raking	Habitat Quality (Positive)	Shore birds (NF), Seabirds (NF)		
Maslo and Lockwood 2009	Atlantic	Yes		Impact Only	Reproductive Success	Shore birds (F)	Piping Plover	
Mass Audubon 2023	Atlantic	Yes		Fencing, Stewards, Signage, Public Education	Abundance (Positive), Reproductive Success (Positive)	Shore birds (F), Seabirds (F)	American Oystercatcher, Piping Plover	Roseate Tern

Mazzocchi and Forsys 2005	nGoM	Yes		Beach Nourishment	Habitat Quality (Positive)	Seabirds (F)	Least Tern
McGowan et al. 2005	Atlantic	Yes		Dredge Spoil Islands	Abundance (Positive)	Shorebirds (F)	American Oystercatcher
McIntyre and Heath 2011	Atlantic	Yes		Reducing Beach Raking	Reproductive Success (Positive)	Shorebirds (F)	Piping Plover
McIntyre et al. 2010	Atlantic	Yes	Fencing	Vegetation Management or Wetland Creation, Predation Management	Abundance (Positive), Reproductive Success (Positive)	Shorebirds (F)	Piping Plover
Medeiros et al. 2007	Portugal		Stewards, Signage, Public Education		Reproductive Success (Positive)	Seabirds (NF)	Little Tern
Melvin et al. 1994	Atlantic	Yes	Impact Only		Abundance, Reproductive Success	Shorebirds (F)	Piping Plover
Mengak and Dayer 2020	Atlantic	Yes	Impact Only		Abundance, Reproductive Success, Habitat Quality	Shorebirds (F, NF)	Shorebirds (collectively)

Michel et al. 2021	nGoM, Atlantic	Yes	Fencing, Stewards, Signage, Public Education, Closures	Abundance (Positive)	Shore birds (F), Seabirds (F)	Black Skimmer, Brown Pelican, Least Tern, Piping Plover
Murchison et al. 2016	Pacific	Yes	Impact Only	Habitat Quality	Shore birds (F)	Red Knot
Murphy et al. 2003	Great Plains	Yes	Predation Management	Abundance (Positive)	Shore birds (F)	Piping Plover
Nesbitt and Hatchitt 2008	nGoM, Atlantic	Yes	Impact Only	Abundance (Positive), Habitat Quality (Positive)	Wading Birds (F)	Sandhill Crane
Niehaus et al. 2004	Pacific	Yes	Predation Management	Abundance (Positive), Reproductive Success (Positive)	Shore birds (F)	Western Sandpiper
Nisbet 1981	Atlantic	Yes	Impact Only	Reproductive Success	Seabirds (F, NF)	Common Tern, Roseate Tern
Nisbet 2000	Global		Impact Only	Reproductive Success	Seabirds (NF), Wading Birds	

(NF)

Nordstrom et al. 2000	Atlantic	Yes	Reducing Beach Raking	Habitat Quality (Positive)	Shore birds (F)	Piping Plover	
O'Connell and Nyman 2010	nGoM	Yes	Vegetation Management or Wetland Creation	Abundance (Positive)	Shore birds (F, NF), Seabirds (F, NF), Wading Birds (F, NF)	Roseate Spoonbill, egrets (collectively), herons (collectively), plovers (collectively), terns (collectively)	Egrets (collectively), herons (collectively), plovers (collectively), terns (collectively)
Owen and Pierce 2013	nGoM	Yes	Beach Nourishment, Dredge Spoil Islands	Habitat Quality (Positive)	Seabirds (F)	Black Skimmer	
Page et al. 1985	Pacific	Yes	Impact Only	Reproductive Success (Positive)	Shore birds (F)	Snowy Plover	
Page et al. 2023	Global	Yes	Impact Only	Reproductive Success (Positive)	Shore birds (F)	Snowy Plover	
Patterson et al. 1991	Atlantic	Yes	Impact Only	Reproductive Success (Positive)	Shore birds (F)	Piping Plover	

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Pearson et al. 2016	Pacific	Yes		Predation Management	Reproductive Success (Positive)	Shore birds (F)	Snowy Plover	
Peters and Otis 2005	Atlantic	Yes	Impact Only		Habitat Quality	Shore birds (F)	American Oystercatcher	
Peterson and Bishop 2005	Global			Beach Nourishment	Habitat Quality (Positive)	Shore birds (NF)		
Peterson and Manning 2001	Atlantic	Yes		Beach Nourishment	Abundance (Negative)	Shore birds (F, NF)	Shorebirds (collectively)	Shorebirds (collectively)
Post 1990	Atlantic	Yes		Dredge Spoil Islands	Abundance (Negative), Reproductive Success (Negative)	Wading Birds (F, NF)	Hérons (collectively), ibises (collectively)	Hérons (collectively), ibises (collectively)
Powell and Collier 2000	California	Yes		Vegetation Management or Wetland Creation	Reproductive Success (Positive)	Shore birds (F)	Western Snowy Plover	
Pruner 2010	nGoM	Yes	Fencing		Reproductive Success (Positive)	Shore birds (F)	Snowy Plover	

Raynor et al. 2012	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Seabirds (F)	Sandwich Tern	Roseate Tern
Reynolds et al. 2015	Pacific			Impact Only	Habitat Quality (Positive)	Seabirds (NF)		
Rimmer et al. 2013	Australia		Signage, Public Education			Shorebirds (NF)		Hooded Plover
Robert and Ralph 1975	Pacific			Impact Only	Reproductive Success	Seabirds (NF)		
Rodgers 1987	nGoM	Yes		Impact Only	Reproductive Success (Positive)	Wading Birds (F)	Wood Stork	

Rodgers and Schwickert 2002	nGoM, Atlantic	Yes	Impact Only	Habitat Quality	Shore birds (F, NF), Seabirds (F, NF), Wading Birds (F, NF)	American Oystercatcher, Brown Pelican, Great Egret, Least Tern, Little Blue Heron, Reddish Egret, Roseate Spoonbill, Royal Tern, Tricolored Heron, White Ibis, Wood Stork	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)
Rogers et al. 2006	Australia	Yes	Impact Only	Habitat Quality	Shore birds (F)	Red Knot	
Ruetz et al. 2005	nGoM	Yes	Impact Only	Habitat Quality (Positive)	Seabirds (F, NF), Wading Birds (F, NF)	Seabirds (collectively), wading birds (collectively)	Seabirds (collectively), wading birds (collectively)
Ruhlen et al. 2003	California	Yes	Impact Only	Reproductive Success	Shore birds (F)	Snowy Plover	

Russell et al. 2009	California			Vegetation Management or Wetland Creation	Abundance (Positive)	Shore birds (NF), Seabirds (NF)		
Ruthbert-Campagna 2021	nGoM	Yes		Impact Only	Abundance (Positive)	Shore birds (F, NF)	Shorebirds (collectively)	Shorebirds (collectively)
Sabine et al. 2006	Atlantic	Yes		Impact Only	Reproductive Success (Positive)	Shore birds (F)	American Oystercatcher	
Safina and Burger 1983	Atlantic	Yes	Fencing, Closures		Reproductive Success (Positive)	Seabirds (F)	Black Skimmer	
Saliva and Burger 1989	Caribbean	Yes		Vegetation Management or Wetland Creation	Habitat Quality (Positive)	Seabirds (F)	Sooty Tern	
Samways et al. 2010	Seychelles	Yes		Vegetation Management or Wetland Creation	Abundance (Positive), Reproductive Success (Positive)	Seabirds (F)	Sooty Tern	
Schillerstrom 2021	Atlantic	Yes		Impact Only	Habitat Quality	Shore birds (F)	Red Knot	
Schlacher et al. 2013	Australia			Impact Only	Habitat Quality	Seabirds (NF)		

Schoenl eber et al. 2022	Pacific	Yes	Signag e, Public Educat ion		Habitat Quality (Positiv e)	Shore birds (F)	Snowy Plover	
Schultz Schiro et al. 2017	nGoM	Yes	Stewar ds, Signag e, Public Educat ion	Reducin g Beach Raking	Habitat Quality (Positiv e)	Shore birds (F), Seabir ds (F)	Least Tern, Snowy Plover	BlackNegativ ebellied Plover, Sanderling, Ruddy Turnstone, Willet
Selman and Davis 2015	nGoM	Yes		Dredge Spoil Islands	Habitat Quality (Positiv e)	Shore birds (F)	American Oystercatch er	
Shope 2020	nGoM	Yes	Impact Only		Reprod uctive Success	Seabir ds (F)	Black Skimmer	
Smith 2002	nGoM	Yes		Dredge Spoil Islands	Habitat Quality (Positiv e)	Wadin g Birds (F, NF)	Reddish Egret, Roseate Spoonbill, Tricolored Heron, egrets (collectiv e), herons (collectiv e)	Egrets (collectively), herons (collectively)
Smith et al. 2011	Global			Predatio n Manage ment	Reprod uctive Success (Positiv e)	Shore birds (NF)		
Smith et al. 2020	Atlanti c	Yes		Beach Nourish ment	Habitat Quality (Positiv e)	Shore birds (F)	Red Knot	

Soots and Parnell 1975	Atlantic	Yes		Impact Only	Habitat Quality (Positive)	Seabirds (F)	Least Tern, Royal Tern	
Speybroeck et al. 2006	Global			Beach Nourishment	Habitat Quality (Positive)	Shorebirds (NF)		
St. Clair et al. 2010	Argentina			Impact Only	Reproductive Success	Shorebirds (NF)		
Stantial et al. 2021	Atlantic	Yes		Impact Only	Reproductive Success	Shorebirds (F)	Piping Plover	
Sterling 2017	Atlantic	Yes		Impact Only	Reproductive Success (Positive), Habitat Quality (Positive)	Shorebirds (F)	Wilson's Plover	
Stillman and Goss-Custard 2002	Europe			Impact Only	Habitat Quality	Shorebirds (NF)		
Strauss 1990	Atlantic	Yes		Impact Only	Reproductive Success	Shorebirds (F)	Piping Plover	
Struthers and Ryan 2005	Great Lakes	Yes		Predation Management	Reproductive Success (Positive)	Shorebirds (F)	Piping Plover	
Studds et al. 2017	Asia			Impact Only	Abundance (Positive)	Shorebirds (NF)		
Teal 1965	Atlantic	Yes		Impact Only	Reproductive Success	Wading Birds (F,	Tricolored Heron	Snowy Egret

									NF)
Thomas et al. 2006	North America	Yes		Impact Only	Abundance (Positive)	Shorebirds (F, NF)	Shorebirds (collectively)	Shorebirds (collectively)	
U.S. Fish and Wildlife Service 1996	Atlantic	Yes		Vegetation Management or Wetland Creation, Beach Nourishment	Abundance (Positive)	Shorebirds (F)	Piping Plover		
Virzi 2010	Atlantic	Yes	Impact Only		Habitat Quality	Shorebirds (F)	American Oystercatcher		
Virzi et al. 2016	Atlantic	Yes		Dredge Spoil Islands	Reproductive Success (Positive)	Shorebirds (F)	American Oystercatcher		
Visser et al. 2005	nGoM	Yes		Vegetation Management or Wetland Creation	Habitat Quality (Positive)	Seabirds (F)	Brown Pelican		
Vitale et al. 2021	nGoM	Yes		Dredge Spoil Islands	Habitat Quality (Negative)	Shorebirds (F)	American Oystercatcher		
Von Holle et al. 2019	Atlantic	Yes		Impact Only	Habitat Quality (Positive)	Seabirds (F)	GullNegatively affected Tern, Sandwich Tern		

Walter et al. 2013	nGoM	Yes		Vegetation Management or Wetland Creation	Habitat Quality (Positive)	Seabirds (F)	Brown Pelican	
Watson et al. 2021	Europe		Impact Only		Reproductive Success	Seabirds (NF)		
Weston and Elgar 2007	Australia		Impact Only		Reproductive Success	Shorebirds (NF)	Hooded Plover	
Williams et al. 2008	nGoM	Yes		Reducing Beach Raking	Habitat Quality (Positive)	Shorebirds (NF), Seabirds (F, NF), Wading Birds (F)	Least Tern, Reddish Egret	Caspian Tern, Laughing Gull, Willet
Wilson et al. 2012	nGoM	Yes		Predation Management	Abundance (Positive)	Wading Birds (F)	Reddish Egret	
Wilson et al. 2019	nGoM	Yes	Impact Only		Abundance, Reproductive Success, Habitat Quality	Shorebirds (F, NF), Seabirds (F, NF), Wading Birds (F, NF)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)	Seabirds (collectively), shorebirds (collectively), wading birds (collectively)
Yalden and Yalden 1990	United Kingdom		Impact Only		Reproductive Success	Shorebirds (NF)		

Yasué 2006	British Columbia		Impact Only	Habitat Quality	Shore birds (NF)	
Yasué and Dearde n 2006	Malaysia		Impact Only	Reproductive Success	Shore birds (NF)	
Zambra no et al. 1997	Atlantic	Yes	Impact Only	Abundance (Positive)	Seabirds (F)	Least Tern
Zarnets ke et al. 2010	Pacific	Yes	Vegetation Management or Wetland Creation	Abundance (Positive)	Shore birds (F)	Snowy Plover
Zdravkovic 2013	Atlantic	Yes	Impact Only	Reproductive Success (Positive)	Shore birds (F)	Wilson's Plover
Zdravkovic et al. 2023	Atlantic	Yes	Impact Only	Reproductive Success (Positive)	Shore birds (F)	Wilson's Plover
Zenzal et al. 2023	nGoM	Yes	Beach Nourishment	Habitat Quality (Neutral)	Shore birds (F)	American Oystercatcher, Piping Plover, Red Knot, Snowy Plover, Wilson's Plover
Zinsser et al. 2017	Atlantic	Yes	Beach Nourishment	Habitat Quality (Positive)	Shore birds (F)	Wilson's Plover

Zöckler
et al.
2003

Global

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(NF)
