SUPPLEMENTAL MATERIALS

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Beneficial Use Decision Support for Wetlands: Case Study for Harbor in Mobile, Alabama

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Table S1. Inputs to the Marsh Equilibrium Model

Parameter	Value	Unit
Physical Inputs		
Run Time	100	yr
Sea level at start	22.3	cm NAVD88
20th century sea level rise rate	0.3	cm/yr
Mean tidal amplitude	21	cm
Marsh elevation, initial	Variable	cm MSL
SSC (mineral)	Variable	mg/L
SSC (organic)	Variable	mg/L
Initial accretion rate	Model determined	mm/yr
Biological Inputs		
Maximum growth limit	75	cm MSL
Minimum growth limit	-10	cm MSL
Optimal elevation	20	cm MSL
Peak biomass	2500	g/m^2
Maximum root depth	30	Cm
Organic matter decay rate	75%	%
Below-ground biomass to shoot ratio	0.5	Ratio
LOI of above-marsh site	20	% dry weight
Minimum mineral input	1	$mg/cm^2/yr$
Model Coefficients		
Maximum capture efficiency	2.80	
Refractory fraction	0.1	%
Thin-Layer Placement		
Years from start	Variable	yr
Repeat interval	Variable	yr
Recovery time	5	yr
Add elevation	Variable	cm

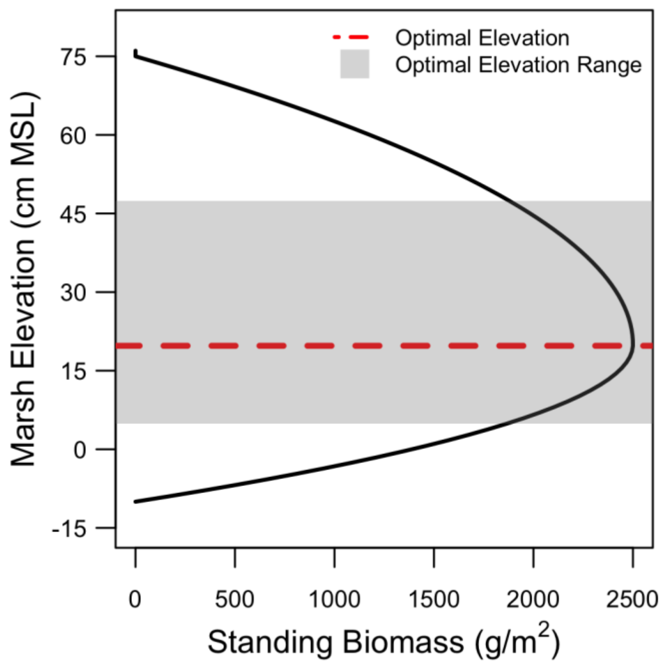

Fig. S1. Standing biomass estimates generated by the Marsh Equilibrium Model by marsh elevation. The optimal elevation, that of the highest standing biomass production, was set at 20 cm MSL. The optimal elevation range is set to include elevations where standing biomass is at 75% or greater that of the optimal elevation.

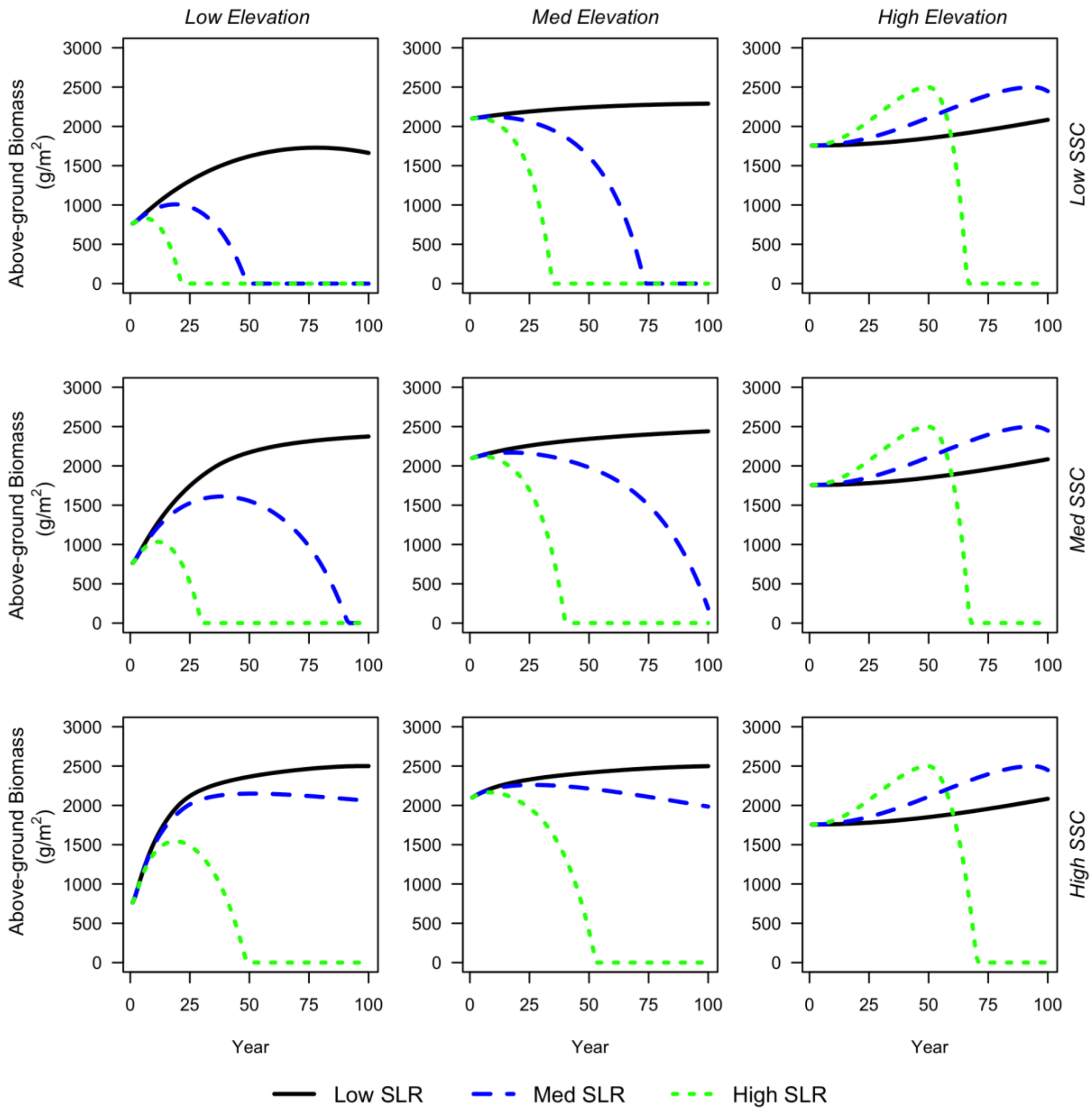

Fig. S2. Modeled above-ground biomass with no beneficial use of dredged material. Each row represents a different suspended sediment concentration (SSC) and each column represents a different initial marsh elevation. Line pattern and color represent different sea-level rise (SLR) projections used in the simulation. Scenarios are defined in Table 1.

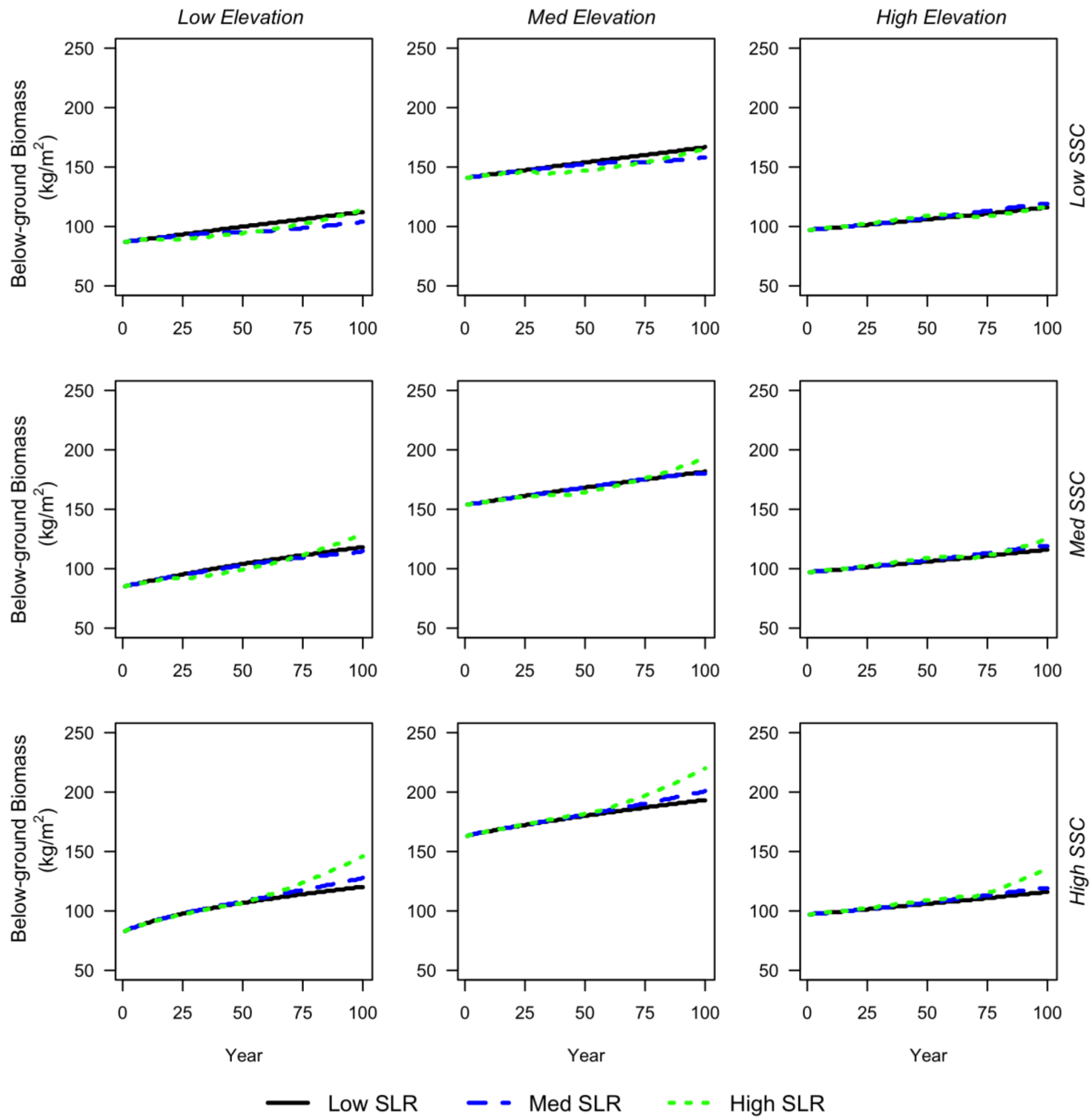

Fig. S3. Modeled below-ground biomass with no beneficial use of dredged material. Each row represents a different suspended sediment concentration (SSC) and each column represents a different initial marsh elevation. Line pattern and color represent different sea-level rise (SLR) projections used in the simulation. Scenarios are defined in Table 1.