

		OYSTER REEFS		SAND DUNES		MANGROVE FORESTS		SEA GRASS BEDS		SALT MARSHES			
Ecosystem Service	Ecosystem Process/ Function	Quantification Value	Valuation Value	Quantification Value	Valuation Value	Quantification Value	Valuation Value	Quantification Value	Valuation Value	Quantification Value	Valuation Value		
Fisheries Production	Generates biological productivity and diversity	3130 kg per yr of additional finfish and crab catchover 5.8 km of oyster reef	\$38,000-\$46,000 per year from additional finfish and crab catch over 5.8 km of oyster reef				\$708-987 per ha capitalized value of increased offshore fishery production		loss of 12,700 ha of seagrasses in Australia; associated with lost fishery production of \$212,000		\$6471 per acre and \$981 per acre capitalized value for recreational fishing for the east and west coasts of Florida		
		20 oysters per m <sup>2</sup> per yr											
		2600 kg per ha per yr of fish and large crustacean biomass	\$4123 per ha per yr (commercial finfish and mobile crustacean value)				\$7500 – 16,750 per km <sup>2</sup> per year market value in fisheries supported by mangroves		\$3500 per ha per year in commercial landings of species dependent on seagrass		\$0.19–1.89 per acre marginal value product in blue crab fishery		
Carbon Sequestration	Generates biological productivity, biogeochemical activity					2.1 Mg C per ha per yr by global salt marshes	Price of carbon \$5.58 per ton (Aug 2013)	83,000 metric tons C per km <sup>2</sup>	Price of carbon \$5.58 per ton (Aug 2013)	1150 tons of CO <sub>2</sub> equivalents per hectare in storage pools	low marsh \$540 at \$20per ton of C salt flat -\$4 at \$20per ton of C		
						7,144 Mg C per ha <sup>3</sup>							
						1,023 Mg C per ha							
						1400 – 2400 tons of CO <sub>2</sub> equivalents per hectare in storage pools						500 tons of CO <sub>2</sub> equivalents per ha in storage pools	100 g of Carbon per m <sup>2</sup> per yr
Protection Against Coastal Erosion / Shoreline Stabilization	Attenuates and/or dissipates waves; sediment retention; soil retention in vegetation root structure	51-90% reduction in wave height and 76-99% reduction in wave energy at the shore	\$1,074,475 – 1,504,265 value per ha of 5m wide oyster reef (represents the present value of stabilization services over the life of human-made structures)			\$254.00 per 30cm (willingness to pay for home prices)	20% reduction in wave energy per 100 m <sup>2</sup>		\$8966-10,821 per ha capitalized value for storm protection	\$67,400 per ha per year for disturbance regulation		\$8236 per ha per yr in reduced hurricane damages	
						\$4.45 per household for an erosion control program to preserve 8 km of beach						\$3676 per ha per yr annualized replacement cost	low marsh \$5,000 per acre per yr
													high marsh \$500 per acre per yr
													\$693 in cost of damage avoidance
													\$8,980-25,572 per hectare per year in damage costs avoided
Tourism & Recreation	Provides unique landscapes suitable habitat for flora and fauna					\$166 per trip or \$1574 per visiting household per yr		\$498 per hectare per yr		\$64 per ha per year for recreation		\$49.15 per person for otter habitat creation	
						\$3.29 – 6.69 per person per visit						\$1.87 per person for protecting birds	
						\$70.50 per person per day (travel cost estimate)						\$224 per person per yr willingness to pay	
Improve Water Quality	Provides biogeochemical activity, sedimentation, biological productivity; stores and filters water; nutrient and pollution uptake; particle deposition and retention	3.45 mg/L of nitrogen per m <sup>2</sup> per hour during the day for oyster reefs	\$1385-6716 per hectare per year in nitrogen removal (estimated by quantifying the value of enhanced denitrification rates on oysters reefs)						\$5,820 per ha per year of nutrient filtering services by mangrove soils.	\$20,900 per ha per year for replacement cost for nutrient cycling		\$785–15,000 per acre capitalized cost savings over traditional waste treatment	
		0.08-0.8% N in oyster shell	\$28.23 price per kilogram of nitrogen removed for estuary sites in North Carolina Nutrient Offset Program									\$17,353 per ha per year in waste regulation	
		8.6% N in oyster tissue (depends on oyster size and gram dry mass)											
		0.75 gram N per gram oyster dry mass per yr	\$0-2,584 in submerged aquatic vegetation enhancement per hectare per year (assuming that 1% of the linear length of the reef performs this function)										
		0.144-2.182 kg N per hectare per day											
		13-44 % of chlorophyll-a from adjacent water column											
Reduced summer avg. light attenuation by 8013%; increases summer SAV biomass 21-43%													
Increase Landscape Diversity (flora and fauna)	Provides suitable reproductive habitat and nursery ground, sheltered living space	Provided habitat for 24,585 macrobenthics	\$ 4,220 per ha per year for habitat providing (based on estimate for products bought and sold)									\$1350-2280 per ha per year for net primary productivity willingness to pay	
												\$ 2.65 per person per visit (willingness to pay for habitat)	\$83.20 per ha per yr for habitat (if sold in commercial markets)