Preserving Salt Marsh as Sea Level Rises: Sengekontacket Pond Case Study

Data Summary Report June 2022 Submitted by Robert S. Young, PhD, PG and Katie Peek, PG

Wetlands and Rising Sea Level

It is important to understand that coastal salt marshes are dynamic systems. As sea level rises, marshes will erode or drown on the seaward margin, and they will expand landward on the upland margin. The rate at which this happens depends on the rate of sea-level rise and the slope of the adjacent upland. In addition, the marsh must have "room" to move. Wetlands that are backed by roads, bulkheads, seawalls, or other obstructions will not be able to expand landward, and the marsh will simply drown in place as sea level rises. The only way to ensure the longer-term survival of fringing salt marshes in Martha's Vineyard (or any coastal community) is to make room for marsh expansion into existing upland areas.

Benefits of Salt Marshes

There is a rapidly growing, national recognition of the economic and aesthetic value of wetlands at the coast. This recognition is being formalized in many ways including the United States Army Corps of Engineer's recent release of an *Engineering with Nature* manual, where the storm/flood protection benefits of wetlands are discussed and marsh preservation projects are described and encouraged. The benefits that salt marshes provide to society are often referred to as ecosystem services.

The ecosystem services provided by the salt marshes of Martha's Vineyard include the aforementioned storm damage reduction, along with flood buffering, fisheries benefits, habitat, and the filtering of pollutants from runoff while trapping and metabolizing excess nutrients. These services include benefits where the economic value is quantifiable (flood reduction, fisheries, improving water quality) and those where the benefits are aesthetic or more difficult to quantify (recreational use such as kayaking, habitat for birds, the simple beauty the marshes add to your coastal viewshed).

There are currently approximately 160 acres of salt marsh fringing Sengecontacket Pond (the Pond). These are not extensive tidal marshes as we see in some other areas of New England, and they are small compared to the southeastern U.S. However, those marshes provide outsized services to the community. First and foremost, there are many homes in Martha's Vineyard, especially along the Pond, that are on septic. These septic fields ultimately discharge water into the Pond. As sea-level rise continues, the septic fields will become increasingly stressed and compromised. The fringing wetlands are critical for filtering that effluent, trapping nutrients, and maintaining the health of the Pond (and the health of swimmers as well).

On any summer day, one can typically find folks clamming in the pond and others standing with binoculars watching the shorebirds forage. The marshes are critical habitat for commercially and recreationally important fisheries and other non-game species. Losing these fringing wetlands would mean losing so much more than just *Spartina* grass. In light of this, communities nationwide are developing plans to protect and maintain the wetland buffers they have left.

The goal of this project is to examine the likely balance of marsh loss though erosion vs. potential gain through expansion in response to sea-level rise for Sengekontacket Pond. The hope is that this relatively straightforward analysis can provide the starting point for discussions regarding how to manage this dynamic shoreline in a way that benefits both property owners and the community through preservation of the salt marsh and its ecosystem services.

Analysis of Marsh Change Along the Sengekontacket Shore

Prior to the shoreline and marsh change analysis, multiple sets of historic aerial imagery were acquired for the Sengekontacket area. Scanned, hardcopy black and white aerial imagery was provided by Marth's Vineyard Commission (MVC) for the years: 1970, 1978-1979, 1986, and 1999; this imagery was georeferenced in ArcGIS using known control points. Digital aerial imagery from 1994, 1999, 2005, and 2019 was also obtained from MassGIS and ArcGIS online. All aerial imagery sources were inspected for continuity, quality, and resolution in the desired shoreline areas of the Sengekontacket Pond. Three years met the quality standards for further use in the analysis: 1978, 1999, and 2019 (Table 1).

Year	Name (Source)	Obtained From		
Aerial Imagery				
1978	Historic Black & White Aerial Imagery	MVC		
1999	MassGIS Black & White Orthoimagery (Mass GIS)	MassGIS web mapper		
2019	Massachusetts USGS Color Ortho Imagery (USGS, MassGIS)	ArcGIS Online		
Marsh D	ata			
2015	Sea Level Affecting Marshes Model (Woods Hole Group)	Woods Hole Group		
2005	MassDEP Wetlands (MassDEP)	MassGIS web mapper		
2015	National Wetlands Inventory (USFWS)	MassGIS web mapper		
SLR + Elevation Data				
2016	NGS TopoBathy LiDAR (NOAA NGS)	NOAA Data Access Viewer		
2017	NOAA SLR Scenarios (NOAA)	NOAA SLR Viewer		

Table 1. Primary data used in marsh change analysis.

To examine historical shoreline change and marsh loss along the Sengekontacket Pond, the edge of the marsh was digitized in ArcGIS using the 1978 and 1999 aerial imagery (Figure 1AB). These shorelines were then compared to more recent 2019 imagery to look for areas of significant marsh shoreline change (Figure 1C). Overall, imagery analyzed showed a small amount of marsh loss in all areas since 1978. The ability to preciely measure shoreline change was limited by the quality of historical aerial imagery available.

Relevant digital marsh data were also examined for the study area, including currently mapped wetland areas (Figure 1DE) and the commonly used marsh migration model SLAMM (Sea Level Affecting Marshes Model; Table 1). SLAMM results (obtained from the Trustees of Reservations) predict the extent of marsh loss in 2030, marsh expansion in 2050, marsh expansion in 2070, and stable marsh (present through 2050). Although marsh migration data could provide useful information, the SLAMM results in the study area show almost complete marsh collapse by 2030 (Figure 1F), which does not appear realistic based on the changes observed over the past 40 years. Even with increasing rates of sea-level rise, this amount of change seems unrealistic for the Martha's Vineyard area. We have therefore employed a more straightforward approach to projecting potential marsh migration.

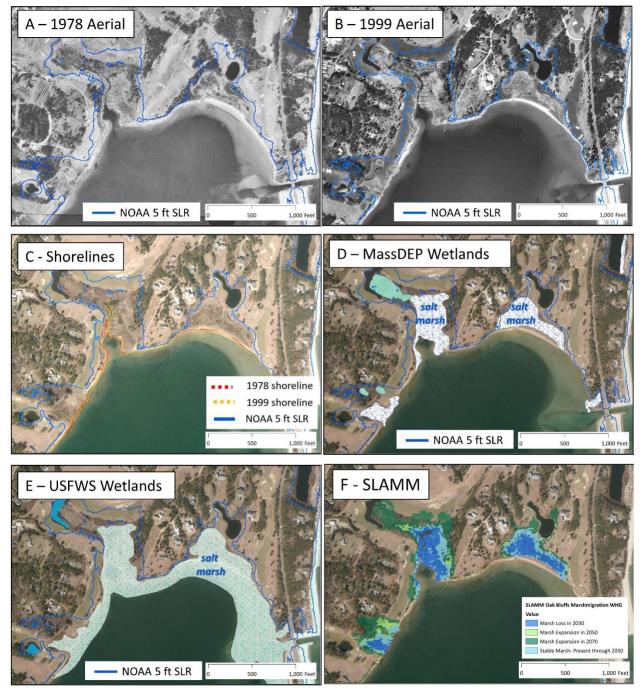


Figure 1. Data and marsh change analysis for the northern portion of the Sengekontacket Shore (site AB). NOAA 5 ft SLR scenario extent is shown for reference on multiple panels (blue line). A/B). Historic aerial imagery used for shoreline analysis. C). Digitized historic shorelines (1978 and 1999) overlain on 2019 aerial imagery. D/E). Existing wetlands data. F) SLAMM results for marsh migration. Note the large dark blue area showing extensive marsh loss/collapse by 2030.

Potential Marsh Migration

Potential areas of marsh migration over the next ~30 years were projected along the Sengekontacket shore based on connectivity and elevation data (2016 LiDAR DEM; Table 1). These marsh migration areas were digitized using elevations between 3 and 6 feet (above the NAVD88 datum), as the current marsh lies mostly below 3 feet in elevation, and SLR projections for this region are between 1 and 2 feet over the next 30 years (NOAA data) (see Figure 2 for example).

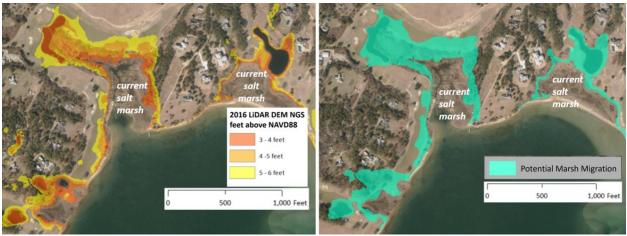


Figure 2. Example of elevation data (left) and digitized marsh migration zone (right) for the northern Sengekontacket Pond area.

These potential marsh migration areas were digitized along the entire developed shoreline of Sengekontacket Pond. Results of this analysis show approximately 170 acres of land that could potentially transition into marsh over the next ~30 years. The pond shoreline was divided in six primary sections to evaluate and clearly display the results over this large area (Figure 3A). The existing salt marsh acreage was also calculated for the study area using the 2005 MassDEP wetlands layer; these data show around 160 acres of land currently mapped as marsh (Figure 3B).

Parcel and building footprint data (obtained from MassGIS) were compared to the extent of the potential marsh migration areas in each of the divided shoreline sections (Figures 4-6). Approximately 165 parcels and only 13 buildings intersect the potential marsh migration area for all Sengekontacket Pond. Site D, near Majors Cove, had the most parcels intersect the marsh migration area (Figure 5). Site E, just south of Major Cove (near Felix Neck) had only 3 parcels impacted; this part of the shoreline is owned almost entirely by Massachusetts Audubon Society (Figure 5).

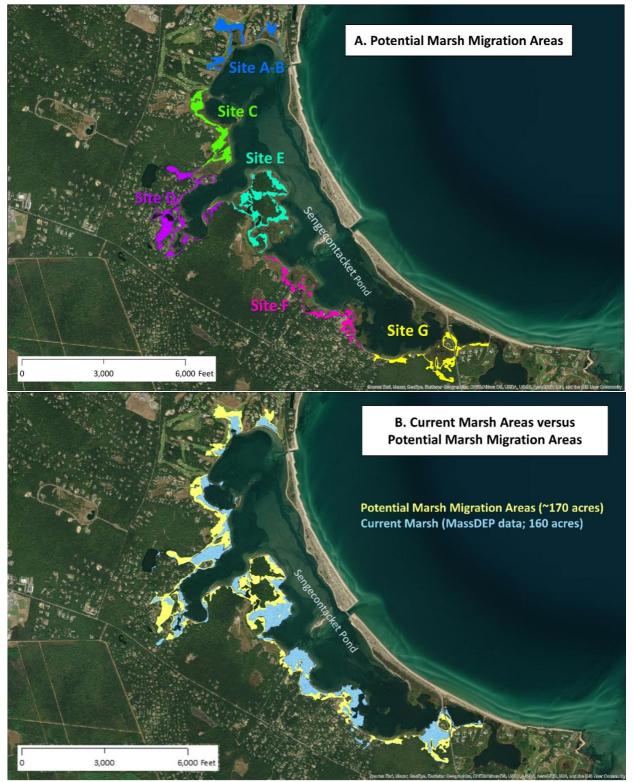


Figure 3. Results for the Sengekontacket Pond. A). Potential marsh migration areas and shoreline sections. B). Comparison of current marsh areas (as desginated by Mass DEP in 2005) and the potential marsh migration areas.

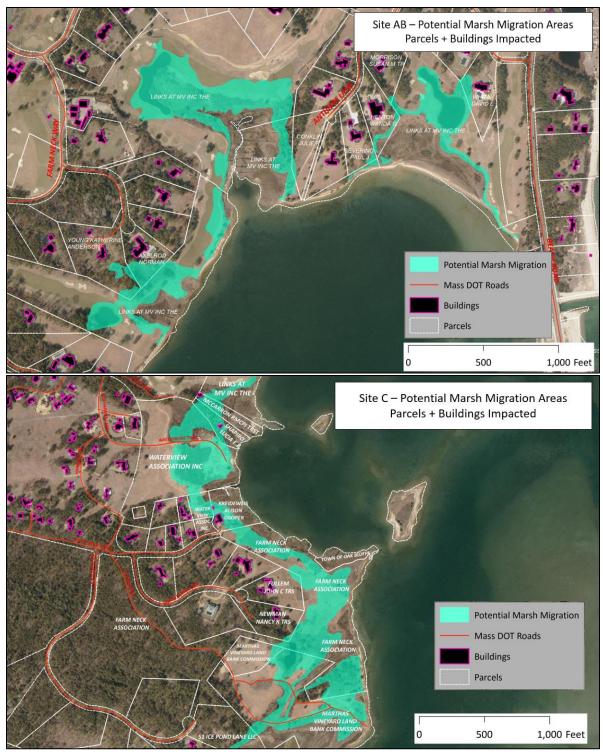


Figure 4. Potential marsh migration areas for Site AB (top) and Site C (bottom) showing parcels and building footprints.

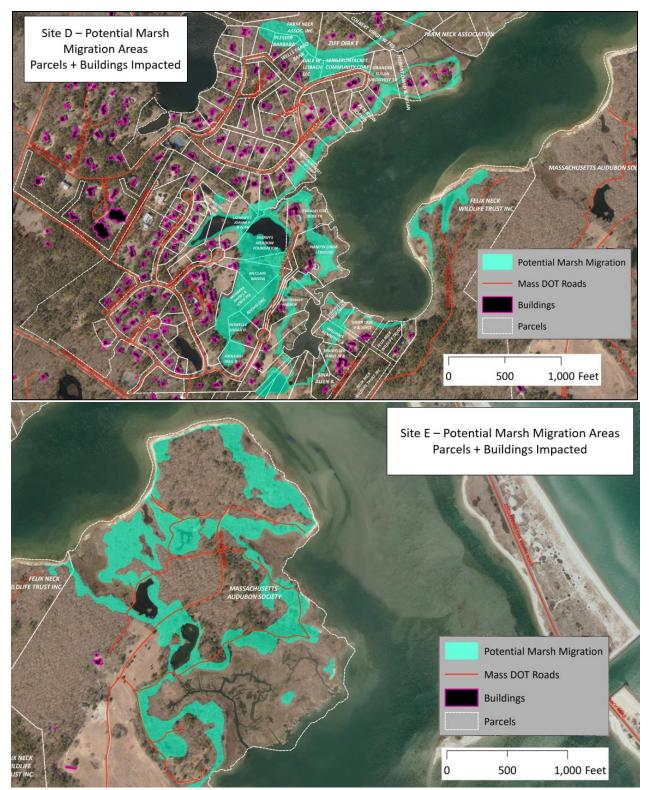


Figure 5. Potential marsh migration areas for Site D (top) and Site E (bottom) showing parcel boundaries and building footprints.



Figure 6. Potential marsh migration areas for Site F (top) and Site G (bottom) showing parcel boundaries and building footprints.

Marsh Migration and Septic Data

Finally, septic permit data was examined for the properties along the Sengekontacket Pond. It quickly became apparent that the data available from the Boards of Health was incomplete. Discussions with local officials make it clear that all improved parcels along the Pond shoreline are on septic systems of various ages and configuration. Permit data was not available for all parcels. In addition, the permit data that is available typically doesn't provide detailed information regarding the location of the chamber or leach field. Fieldwork and further analysis should be conducted to locate all systems adjacent to coastal waters and potentially vulnerable to failure as sea-level rise. It is likely that many systems along the Pond are failing already.

This work is important because, while wetlands are excellent for improving water quality and filtering/trapping nutrients, they could be overwhelmed by a growing flood of septic system failures. Maintaining the salt marsh buffer is critical for the health of the Pond, but the fate of the fringing septic systems must be addressed as well in order to maintain properly functioning ecosystems and public health. We understand that a new effort is being initiated by the United States Geological Survey entitled: *Evaluating the Effects of Sea-Level Rise on the Groundwater Flow System of Martha's Vineyard, Massachusetts.* We are hopeful that this study may inform our understanding of the vulnerability of shorefront septic systems island wide.

Final Analysis

Sengekontacket Pond currently contains roughly 160 acres of *Spartina alterniflora* salt marsh. The good news is that projected wetland expansion over the next three decades could allow the formation of up to 170 acres of additional wetland. Even if we lost all of the existing salt marsh, that loss could be offset by the natural creation of new marsh (provided that movement is not impeded; in most cases around the Pond, the movement would not be impeded). In fact, one could entertain the possibility that marsh acreage might increase a bit— at least over the short term.

Of course, all of this depends on the ability of that marsh to move without restriction— now, and in the future. This requires a plan, the buy-in of local officials; and maybe even more importantly, an understanding by property owners that the conversion of a small portion of their parcel from dry land to tidal marsh is a good thing for them and for the entire community.

Probably the primary benefit of maintaining this marsh buffer through time is in the protection of water quality. As sea level continues to rise, adjacent septic systems will fail. The water table rises underneath the coastal parcels along with sea level. This is not unique to Martha's Vineyard. It has become the defining water quality issue for south Florida. At the moment, the marshes are the primary back up plan for maintaining water quality and public health in Sengekontacket Pond.

Economic Benefits

An entire academic discipline has built up surrounding the field of quantifying the value of ecosystem services provided by wetlands. This means that the numbers quantifying the annual economic benefits of salt marshes are becoming much more refined. We acknowledge that there is an obvious uncertainty in the estimates, but it is still well worth considering these values as one factor when evaluating the benefits of protecting local marshes. For this study, we have chosen numbers that are peer-reviewed and in the middle of the ranges.

Annual Benefit

Storm Damage Reduction: \$2,930/acre/year Fisheries: \$6,471/acre/year Water Quality: \$1,200/acre/year Total Annual Economic Benefits from Salt Marsh Ecosystem Services: \$10,871/acre/year

In our opinion, for Martha's Vineyard, these number probably overestimate the fisheries benefits a bit and underestimate the water quality benefits. However, they are reasonable and conservative for a New England salt marsh (https://www.rimonitoring.org/saltmarshes/).

This results in approximately \$1.74 million a year in benefits to shoreline property owners and the larger community from the existing marsh.

168 parcels around the Pond would be impacted by the allowed expansion of existing salt marsh. Several of these parcels are already conservation land. Only 13 structures exist in the project's marsh formation zone. Table 2 provides a summary of the value and annual tax revenue for all properties within the marsh migration zone. Table 3 provides the same for those parcels with structures that would be intercepted by new marsh formation over the next few decades.

Site	Total Prop. Value (2021)	Potential Annual Prop. Tax*	City
А	\$22,432,620	\$152,317	Oak Bluffs
В	\$11,993,420	\$81,435	Oak Bluffs
С	\$14,820,290	\$80,265	Oak Bluffs
D	\$114,808,698	\$542,165	Edgartown & Oak Bluffs
E	\$49,996,494	\$0	Edgartown
F	\$74,150,798	\$125,403	Edgartown
G	\$102,116,384	\$226,758	Edgartown
Total	\$390,318,704	\$1,208,344	

Table 2. Total potential annual property tax of parcels in each site that intersect the delineated marsh migration areas along Sengekontacket Pond. See Table 4 for full results.

* Estimate of Annual Tax Bill based on FY22 Residential Tax Rates as published on https://www.mvbuyeragents.com/mv-residential-tax-rates. Edgartown Residential Tax Rate FY22 is \$3.03 per \$1,000.00; Oak Bluffs Residential Tax Rate FY22 is \$6.79 per \$1,000.00

Table 3. Total potential annual property tax of parcels with structures / buildings that intersect the
delineated marsh migration areas along Sengekontacket Pond.

Site	Total Prop. Value (2021)	Potential Annual Prop. Tax*	City
С	\$1,855,300	\$12,597	OAK BLUFFS
С	\$559,400	\$3,798	OAK BLUFFS
F	\$2,278,650	\$6,904	EDGARTOWN

Total	\$19,826,730	\$69,154	
G	\$1,819,975	\$5,515	EDGARTOWN
G	\$1,756,755	\$5,323	EDGARTOWN
G	\$2,139,100	\$6,481	EDGARTOWN
F	\$2,231,986	\$6,763	EDGARTOWN
F	\$2,262,550	\$6,856	EDGARTOWN
F	\$1,656,350	\$5,019	EDGARTOWN
F	\$1,282,489	\$3,886	EDGARTOWN
F	\$1,984,175	\$6,012	EDGARTOWN

* Estimate of Annual Tax Bill based on FY22 Residential Tax Rates as published on

https://www.mvbuyeragents.com/mv-residential-tax-rates. Edgartown Residential Tax Rate FY22 is \$3.03 per \$1,000.00; Oak Bluffs Residential Tax Rate FY22 is \$6.79 per \$1,000.00

Conclusions

In Summary, Sengekontacket Pond is currently fringed by approximately 160 acres of salt marsh. This marsh provides numerous benefits for the entire community including storm damage protection for infrastructure, trapping nutrients and pollutants from upland runoff and septic systems, and fisheries production. The benefits are estimated to be valued on the order of \$1.74 million/year. As sea level rises, these wetlands are threatened with erosion and drowning unless they are able to migrate landward with the changing hydrology. The good news is that this study finds that there is room around the Pond for this migration, and our analysis suggests that marsh migration can offset any loss over the next several decades.

Perhaps the greatest threat to the recreational and fisheries use of Sengekontacket Pond are the numerous buried septic tanks and drainage fields around the Pond. As sea level rises, the local water table will also rise causing the failure of the leach fields to work as designed. The marshes fringing the Pond are the primary buffer between those septic fields and the water. They serve a critical function in trapping nutrients and potential pathogens while keeping the water clean. Preserving this buffer should be a high priority for the community. Marsh migration can help do this. There is room on most parcels for this marsh expansion and we estimate that only around 13 structures currently sit in the area that we target for new marsh formation.

One can envision several options for creating a plan to protect this marsh migration route. The approaches range from initiating a simple conservation easement within the designated marsh migration zone, to an outright purchase of the relevant parcels. A hybrid can also be considered where the parcels with structures in the zone are purchased (and the structures removed), while the other parcels have a conservation easement established. Certainly, the structures are the greatest threat to impeding marsh migration, and they are, by far, the most storm vulnerable.

Our analysis makes it clear that the annual benefits from maintaining the wetlands will easily offset any lost revenues through reduction in property taxes received.

*Acknowledgment: This work was funded by the Village and Wilderness Project.

Site	Total Property Potential Annual		Conoral Lico	City
Sile	Value (2021)	Property Tax*	General Use	City
А	\$6,620,400	\$44,953	Residential Developed	Oak Bluffs
А	\$4,155,200	\$28,214	Residential Developed	Oak Bluffs
А	\$2,840,400	\$19,286	Residential Developed	Oak Bluffs
А	\$4,299,200	\$29,192	Residential Developed	Oak Bluffs
А	\$167,560	\$1,138	Recreational	Oak Bluffs
А	\$3,935,700	\$26,723	Residential Developed	Oak Bluffs
А	\$414,160	\$2,812	Recreational	Oak Bluffs
В	\$2,928,600	\$19,885	Residential Developed	Oak Bluffs
В	\$1,790,800	\$12,160	Residential Vacant	Oak Bluffs
В	\$3,548,600	\$24,095	Residential Developed	Oak Bluffs
В	\$167,560	\$1,138	Recreational	Oak Bluffs
В	\$1,976,270	\$13,419	Recreational	Oak Bluffs
В	\$1,581,590	\$10,739	Recreational	Oak Bluffs
С	\$37,700	\$256	Residential Vacant	Oak Bluffs
С	\$2,266,000	\$15,386	Residential Developed	Oak Bluffs
С	\$2,834,600	\$19,247	Exempt	Oak Bluffs
С	\$1,855,300	\$12,597	Residential Developed	Oak Bluffs
С	\$230,100	\$1,562	Residential Vacant	Oak Bluffs
С	\$559,400	\$3,798	Residential Developed	Oak Bluffs
С	\$75,200	\$511	Residential Vacant	Oak Bluffs
С	\$2,897,200	\$19,672	Residential Developed	Oak Bluffs
С	\$36,200	\$246	Residential Vacant	Oak Bluffs
С	\$594,700	\$4,038	Residential Developed	Oak Bluffs
С	\$164,700	\$1,118	Exempt	Oak Bluffs
С	\$1,687,600	\$11,459	Residential Vacant	Oak Bluffs
С	\$1,581,590	\$10,739	Recreational	Oak Bluffs
D	\$1,751,770	\$5,308	Residential Developed	Edgartown
D	\$1,772,300	\$12,034	Residential Developed	Oak Bluffs
D	\$620,000	\$4,210	Residential Developed	Oak Bluffs
D	\$191,100	\$1,298	Residential Developed	Oak Bluffs
D	\$922,700	\$6,265	Residential Developed	Oak Bluffs
D	\$846,300	\$5,746	Residential Developed	Oak Bluffs
D	\$23,800	\$72	Residential Vacant	Edgartown
D	\$3,029,676	\$9,180	Residential Developed	Edgartown
D	\$1,827,500	\$12,409	Residential Developed	Oak Bluffs
D	\$3,942,300	\$26,768	Residential Developed	Oak Bluffs
D	\$1,397,000	\$9,486	Residential Developed	Oak Bluffs
D	\$1,913,300	\$12,991	Residential Developed	Oak Bluffs
D	\$1,608,400	\$10,921	Residential Developed	Oak Bluffs
D	\$1,282,900	\$8,711	Residential Developed	Oak Bluffs

Table 4. Potential annual property tax of each parcel impacted by the delineated marsh migration areasalong Sengekontacket Pond. Each row represents one property. Properties with exempt (general use)are not part of the summary statistics in Table 2.

D	\$1,490,300	\$10,119	Residential Developed	Oak Bluffs
D	\$1,858,470	\$5,631	Residential Developed	Edgartown
D	\$847,700	\$5,756	Residential Developed	Oak Bluffs
D	\$785,200	\$5,332	Residential Developed	Oak Bluffs
D	\$1,930,670	\$5 <i>,</i> 850	Residential Developed	Edgartown
D	\$3,490,070	\$10,575	Residential Developed	Edgartown
D	\$45,000	\$306	Residential Vacant	Oak Bluffs
D	\$1,284,000	\$8,718	Residential Developed	Oak Bluffs
D	\$659,200	\$4,476	Residential Developed	Oak Bluffs
D	\$2,228,210	\$6,751	Residential Developed	Edgartown
D	\$45,800	\$311	Residential Vacant	Oak Bluffs
D	\$1,327,000	\$9,010	Residential Developed	Oak Bluffs
D	\$1,867,500	\$12,680	Residential Developed	Oak Bluffs
D	\$1,828,270	\$5,540	Residential Developed	Edgartown
D	\$2,145,500	\$14,568	Residential Developed	Oak Bluffs
D	\$2,003,200	\$13,602	Residential Developed	Oak Bluffs
D	\$686,000	\$4,658	Exempt	Oak Bluffs
D	\$1,033,700	\$7,019	Residential Developed	Oak Bluffs
D	\$1,607,400	\$10,914	Residential Developed	Oak Bluffs
D	\$23,100	\$70	Residential Vacant	Edgartown
D	\$621,400	\$4,219	Residential Developed	Oak Bluffs
D	\$678,800	\$4,609	Residential Developed	Oak Bluffs
D	\$1,849,700	\$12,559	Residential Developed	Oak Bluffs
D	\$1,549,300	\$10,520	Residential Developed	Oak Bluffs
D	\$1,722,400	\$11,695	Residential Developed	Oak Bluffs
D	\$1,603,500	\$10,888	Residential Developed	Oak Bluffs
D	\$722,000	\$4,902	Residential Developed	Oak Bluffs
D	\$21,331,022	\$64,633	Exempt	Edgartown
D	\$2,820,100	\$19,148	Residential Developed	Oak Bluffs
D	\$678,800	\$4,609	Residential Developed	Oak Bluffs
D	\$116,400	\$790	Residential Vacant	Oak Bluffs
D	\$1,915,370	\$5,804	Residential Developed	Edgartown
D	\$1,988,670	\$6,026	Residential Developed	Edgartown
D	\$1,365,300	\$9,270	Residential Developed	Oak Bluffs
D	\$46,900	\$318	Residential Vacant	Oak Bluffs
D	\$2,090,900	\$14,197	Residential Developed	Oak Bluffs
D	\$40,900	\$278	Residential Vacant	Oak Bluffs
D	\$2,464,200	\$16,732	Residential Developed	Oak Bluffs
D	\$1,372,300	\$9,318	Residential Developed	Oak Bluffs
D	\$29,500	\$200	Exempt	Oak Bluffs
D	\$1,272,200	\$8,638	Residential Developed	Oak Bluffs
D	\$1,417,400	\$9,624	Residential Developed	Oak Bluffs
D	\$2,092,300	\$14,207	Residential Developed	Oak Bluffs
D	\$1,341,000	\$9,105	Residential Developed	Oak Bluffs

D	\$919,500	\$6,243	Residential Developed	Oak Bluffs
D	\$2,497,400	\$16,957	Residential Developed	Oak Bluffs
D	\$1,839,500	\$12,490	Residential Developed	Oak Bluffs
D	\$1,663,100	\$11,292	Residential Developed	Oak Bluffs
D	\$2,323,000	\$15,773	Residential Developed	Oak Bluffs
D	\$711,300	\$4,830	Residential Developed	Oak Bluffs
D	\$620,000	\$4,210	Residential Developed	Oak Bluffs
D	\$920,600	\$6,251	Residential Developed	Oak Bluffs
D	\$1,801,800	\$12,234	Exempt	Oak Bluffs
D	\$620,000	\$4,210	Residential Developed	Oak Bluffs
D	\$642,200	\$4,361	Residential Developed	Oak Bluffs
D	\$45,000	\$306	Residential Vacant	Oak Bluffs
D	\$46,900	\$318	Residential Vacant	Oak Bluffs
D	\$712,700	\$4,839	Residential Developed	Oak Bluffs
E	\$28,665,472	\$86,856	Exempt	Edgartown
Е	\$21,331,022	\$64,633	Exempt	Edgartown
F	\$1,656,350	\$5,019	Residential Developed	Edgartown
F	\$1,282,489	\$3 <i>,</i> 886	Residential Developed	Edgartown
F	\$2,304,120	\$6,981	Residential Developed	Edgartown
F	\$153,175	\$464	Residential Vacant	Edgartown
F	\$2,035,250	\$6,167	Residential Developed	Edgartown
F	\$145,449	\$441	Residential Vacant	Edgartown
F	\$2,315,850	\$7,017	Exempt	Edgartown
F	\$9,800	\$30	Exempt	Edgartown
F	\$1,273,659	\$3,859	Residential Developed	Edgartown
F	\$1,879,114	\$5,694	Residential Developed	Edgartown
F	\$1,595,414	\$4,834	Residential Developed	Edgartown
F	\$1,984,175	\$6,012	Residential Developed	Edgartown
F	\$45,300	\$137	Residential Vacant	Edgartown
F	\$48,400	\$147	Residential Vacant	Edgartown
F	\$156,675	\$475	Exempt	Edgartown
F	\$61,500	\$186	Residential Vacant	Edgartown
F	\$591,839	\$1,793	Residential Developed	Edgartown
F	\$1,405,675	\$4,259	Residential Developed	Edgartown
F	\$2,096,875	\$6,354	Residential Developed	Edgartown
F	\$1,791,375	\$5,428	Residential Developed	Edgartown
F	\$28,665,472	\$86,856	Exempt	Edgartown
F	\$2,262,550	\$6,856	Residential Developed	Edgartown
F	\$50,200	\$152	Residential Vacant	Edgartown
F	\$154,675	\$469	Residential Vacant	Edgartown
F	\$1,414,782	\$4,287	Residential Developed	Edgartown
F	\$152,413	\$462	Residential Vacant	Edgartown
F	\$2,231,986	\$6,763	Mixed Use	Edgartown
F	\$151,175	\$458	Residential Vacant	Edgartown

F	\$946,508	\$2,868	Residential Developed	Edgartown
F	\$1,493,214	\$4,524	Residential Developed	Edgartown
F	\$1,495,700	\$4,532	Residential Developed	Edgartown
F	\$1,557,125	\$4,718	Exempt	Edgartown
F	\$1,147,775	\$3,478	Residential Developed	Edgartown
F	\$27,400	\$83	Residential Vacant	Edgartown
F	\$832,150	\$2,521	Residential Developed	Edgartown
F	\$2,743,864	\$8,314	Residential Developed	Edgartown
F	\$2,656,375	\$8,049	Residential Developed	Edgartown
F	\$997,300	\$3,022	Residential Developed	Edgartown
F	\$58,600	\$178	Exempt	Edgartown
F	\$2,278,650	\$6,904	Residential Developed	Edgartown
F	\$400	\$1	Residential Vacant	Edgartown
G	\$851,400	\$2,580	Exempt	Edgartown
G	\$1,599,952	\$4,848	Residential Developed	Edgartown
G	\$11,932,529	\$36,156	Residential Developed	Edgartown
G	\$1,635,950	\$4,957	Residential Developed	Edgartown
G	\$5,181,629	\$15,700	Residential Vacant	Edgartown
G	\$2,507,522	\$7,598	Exempt	Edgartown
G	\$890,892	\$2,699	Residential Developed	Edgartown
G	\$2,139,100	\$6,481	Residential Developed	Edgartown
G	\$5,500,929	\$16,668	Residential Developed	Edgartown
G	\$5,823,120	\$17,644	Residential Developed	Edgartown
G	\$3,522,772	\$10,674	Residential Developed	Edgartown
G	\$1,819,975	\$5,515	Residential Developed	Edgartown
G	\$10,928,404	\$33,113	Residential Developed	Edgartown
G	\$2,551,587	\$7,731	Residential Developed	Edgartown
G	\$7,293,472	\$22,099	Residential Developed	Edgartown
G	\$0	\$0	NULL	Edgartown
G	\$21,372,027	\$64,757	Exempt	Edgartown
G	\$10,562,029	\$32,003	Residential Developed	Edgartown
G	\$1,691,572	\$5,125	Residential Developed	Edgartown
G	\$2,458,368	\$7,449	Exempt	Edgartown
G	\$8,300	\$25	Exempt	Edgartown
G	\$81,100	\$246	Exempt	Edgartown
G	\$5,100	\$15	Residential Vacant	Edgartown
G	\$1,756,755	\$5,323	Residential Developed	Edgartown
G	\$1,900	\$6	Residential Vacant	Edgartown

* Estimate of Annual Tax Bill based on FY22 Residential Tax Rates as published on https://www.mvbuyeragents.com/mv-residential-tax-rates. Edgartown Residential Tax Rate FY22 is \$3.03 per \$1,000.00; Oak Bluffs Residential Tax Rate FY22 is \$6.79 per \$1,000.00. Recreational values may be less per Chapter 61B Taxation Rules.