

CHAPTER 4.I

SOCIOECONOMIC CONDITIONS

A. INTRODUCTION

As described in Chapter 4.A, “Framework of the Analysis,” the proposed *Mosquito Population Control Program in the Rockaways* is intended to improve the well being of residents in the Rockaways by reducing the mosquito population to a reasonable level. Compared to other parts of the City, the Rockaway Peninsula is home to a much larger mosquito population due to the strong tidal influence on mosquito breeding. Mosquitoes are a nuisance when they become overpopulated in an area inhabited by human beings. However, the particular mosquito species of concern in the Rockaways does not carry diseases like the West Nile virus. Therefore, the following analysis of potential economic costs and benefits does not address medical costs, personal income, or the horse industry. Program costs, tourism, and outdoor recreation are analyzed using a framework and methodology similar to that presented in Chapter 3.I, “Socioeconomic Conditions.”

B. EXISTING CONDITIONS

PROGRAM COSTS

The City’s *Routine Program* includes comprehensive surveillance, education and research, and mosquito breeding prevention and larvae control activities. Based on the proportion of catch basins located in the Rockaway Peninsula, it is estimated that approximately \$151,390 or 2.7 percent of the annual Citywide costs for the *Routine Program* are attributed to the routine activities conducted on the Rockaways. Following the Citywide distribution, about 38 percent of the cost would be allocated to larviciding, 25 percent to mosquito surveillance, 19 percent to health education, and 18 percent to human, mammal, and bird surveillance.

TOURISM

The Rockaway Peninsula used to be a major tourist destination with a seasonal community of beachfront bungalows. Although the peninsula is still a prime summertime destination, it is now a full-time community of year-round residents. Rockaway Beach, the Boardwalk, and Jacob Riis Park continue to draw a substantial number of visitors each year, most of whom are residents of New York City as opposed to tourists from beyond the City limits.

With a supply of approximately 5,100 hotel rooms, the borough of Queens offers the largest number of lodging opportunities after Manhattan, as reported by Smith Travel Research. There are no hotel properties in the Rockaways, however. Lodging is concentrated around the borough’s two airports: John F. Kennedy International Airport, north of the Rockaways across Jamaica Bay, and LaGuardia Airport in northern Queens. Most of the hotel demand in Queens is generated by business travelers, as opposed to leisure travelers or tourists who would potentially visit the recreational resources on Rockaway Peninsula. Hotel performance, including occupancy, has risen over the last 7 years,

following Citywide and national trends in the lodging industry (see Table 4.I-1). The average annual occupancy rate was 83.9 percent in 2000, just below the Manhattan rate of 84.1 percent. The average room rate of \$136.16 was well below the Manhattan rate of \$219.71. These performance indicators do not show any discernable economic effects from the excessive mosquito population in the Rockaways. Hotel operations near the JFK International Airport, given their proximity to the Rockaways and Jamaica Bay, may have taken precautionary measures to keep mosquitoes away from their outdoor facilities (e.g., swimming pools) and hotel patrons, but overall operations were probably the same as any other year.

Year	1994	1995	1996	1997	1998	1999	2000
Manhattan							
Average Occupancy Rate (%)	75.5	78.7	80.7	81.9	82.5	82.0	84.1
Average Room Rate	\$133.60	\$143.59	\$160.04	\$175.74	\$192.19	\$202.92	\$219.71
Queens							
Average Occupancy Rate (%)	78.3	78.9	80.3	75.5	77.2	79.7	83.9
Average Room Rate	\$93.23	\$99.53	\$110.95	\$118.80	\$123.53	\$127.9	\$136.16
Source: Smith Travel Research							

OUTDOOR RECREATION

The Rockaway Peninsula contains a number of outdoor recreational resources, most notably Rockaway Beach, which runs the entire length of the peninsula along the Atlantic Ocean from Beach 3rd Street, just west of the Queens/Nassau border, to Jacob Riis Park. From Beach 3rd Street to Beach 126th Street, the Rockaway Boardwalk lines the beach. While not heavily used during fall, winter, and spring, the boardwalk and beach attract between 3.5 to 4.5 million visitors during the summer months, as shown in Table 4.I-2. Compared to other beaches in New York City, Rockaway Beach draws the greatest number of visitors, almost 4 times as many visitors as Orchard Beach in the Bronx and Coney Island in Brooklyn.

Number of Visitors		
1998	1999	2000
4,434,450	4,508,649	3,530,236
Source: New York City Department of Parks and Recreation		

Following Citywide trends in beach attendance, attendance at Rockaway Beach rose between 1998 and 1999, and declined substantially between 1999 and 2000. Citywide beach attendance reached its highest level ever in 1999, when the West Nile virus was first discovered at the end of the summer (August). The New York City Department of Parks and Recreation (NYCDPR) attributes the decline in beach attendance in the summer of 2000 to poor weather conditions, including rain and cool temperatures that occurred on major holiday weekends. Potential economic effects in the Rockaways

from the large numbers of biting mosquitoes cannot be discerned using the attendance data since beach-going is influenced by a variety of factors. In addition to weather, these factors can include sea conditions (water quality, red tide, wave height, etc.), surface conditions of the beach itself (litter and other debris), as well as economic conditions. As noted in Chapter 3.I, “Socioeconomic Conditions,” the wealth effect experienced during a robust economy encourages people to travel outside the City to attend other beaches or resorts.

There are three food service concessions that operate on the Rockaway Boardwalk at 17th, 86th, and 97th Streets. Revenues generated by these concessions typically follow patterns in beach and boardwalk attendance.

Other outdoor recreational resources located in the Rockaways include Fort Tilden and Jacob Riis Park in the Western Rockaways, Bayswater Point State Park, Dubois Point Wildlife Sanctuary (which has been identified as a prime mosquito breeding ground), several neighborhood parks and playgrounds, and athletic facilities associated with the Beach Channel High School Campus and Far Rockaway High School. These resources do not generate direct revenue for the City, although food service establishments nearby (delis, ice cream shops) may benefit from the recreational activity.

Although the available data do not indicate any adverse economic effects from large mosquito populations in the Rockaways, there is some qualitative evidence that they prevent the full use and enjoyment of outdoor recreational resources during much of the summer, especially at dawn and dusk, when biting mosquitoes are most active.

C. FUTURE WITHOUT THE PROPOSED ACTION

PROGRAM COSTS

In the future without the *Mosquito Population Control Program in the Rockaways*, the New York City Department of Health (NYCDOH) would continue its *Routine Program* to control mosquito breeding while enhancing existing disease surveillance, and health education activities. While this *Routine Program* would continue regardless of the Proposed Action, the populations of aggressive biting mosquitoes are likely to be the same as that experienced during recent summers, or they may grow even larger in the future without the Proposed Action. However, programs like the United States Army Corps of Engineers’ proposed habitat restoration in Bayswater State Park, Dubois Point, and Brant Point may help to significantly reduce mosquito generation in these areas. As described above, the total annual cost of the *Routine Program* in the Rockaways is approximately \$151,390.

TOURISM AND OUTDOOR RECREATION

As noted above, the presence of aggressive biting mosquitoes in the Rockaways is likely to be either the same or much greater in the future without the Proposed Action, regardless of the City’s *Routine Program* for surveillance, education and research, and mosquito breeding prevention and larvae control activities. Without adult mosquito control measures in place, residents, tourists and other visitors may alter their recreational activity to some degree in order to avoid the risk of being bitten by mosquitoes. This could mean either spending more time indoors, or staying indoors at dawn and dusk, when biting mosquitoes are most active.

It is possible that a sufficient number of people would change their patterns of activity, thereby making the Rockaways’ food service concessions along the Boardwalk and any local outdoor events less profitable. In turn, demand for indoor recreational activity (e.g., movies) may rise. However, overall economic conditions would not necessarily be affected because there would be a shift in the *types* of spending as opposed to a *decline* in spending. As long as the average personal budget for

leisure/recreation remains the same, overall spending and economic activity in New York City would remain unchanged.

If future mosquito populations remain the same as those experienced during the last few summers, outdoor recreation on the Rockaway Peninsula may not be affected because no noticeable effects were observed during that period. However, there is some qualitative evidence that mosquito populations during those years prevented the full use and enjoyment of outdoor recreational resources during the summer, especially at dawn and dusk, when biting mosquitoes are most active.

The closest hotel properties, located around the JFK International Airport across Jamaica Bay, may continue to take precautionary measures as mosquito populations in the Rockaways either stay the same or grow larger in the future without the Proposed Action. In either case, such measures are not expected to affect hotel performance or overall economic conditions in the local hotel industry.

D. PROBABLE IMPACTS OF THE PROPOSED ACTION

PROGRAM COSTS

The proposed *Mosquito Population Control Program for the Rockaways* would cost approximately \$69,000 annually based on 6 applications per year (twice a month for up to three months per year). This estimate does not include additional costs such as the neighborhood warnings/announcements made by the Police Department before the spraying is conducted, coordination and supervision efforts of NYCDOH staff, etc.

TOURISM AND OUTDOOR RECREATION

By controlling the population of mosquitoes in the Rockaways, the Proposed Action will reduce the presence of mosquitoes to reasonable (and bearable) levels, levels at which they would create less of a nuisance. A reduction in the mosquito population in the Rockaways could benefit the hotels located near JFK International Airport, just across Jamaica Bay, by reducing the need for precautionary measures. Patrons of the hotels may be able to more fully enjoy outdoor hotel facilities such as pools, tennis courts, etc. On the Rockaway Peninsula, conditions for outdoor recreation may be improved, although no noticeable effects of the existing mosquito population were observed in beach attendance trends over the last few years. Compared to the future without the Proposed Action, tourism near the Rockaways and outdoor recreation on the peninsula itself would benefit from a reduced mosquito population. 

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