

*Fannie Rogarshevsky  
with four of her  
children (identity  
of young girl  
unknown) in front  
of their home at  
97 Orchard Street,  
circa 1915*



# Environmental Impacts

## INTRODUCTION

This chapter analyzes the alternatives presented in Chapter II to determine their anticipated *impacts* on the topics described in Chapter III, organized by the following categories:

- Cultural Resources
- Socioeconomic Environment
- Visitor Experience
- Visitor Use

In addition, the alternatives are analyzed for *effects* on certain cultural resources. Eliminated from analysis are topics for which no impacts or negligible impacts are predicted under NEPA, and no effects or no adverse effects are predicted under NHPA Section 106. Those topics are listed at the beginning of Chapter III with the reasons for their elimination.

## METHODS

### National Environmental Policy Act

Continuing as well as new projects and programs affecting the site's resources are subject to evaluation. Indirect impacts, which are reasonably foreseeable consequences that will not occur in the same place or at the same time as the proposed action, must be included in the analysis. Cumulative impacts, the combined results of past, present and reasonably foreseeable future actions

regardless of who carries them out, must also be considered.

Both adverse and beneficial impacts are to be described in terms of their context, duration and intensity. Adverse impacts are negative changes in the nature or condition of the resource that move it away from its desired condition. Beneficial impacts are positive changes in the nature or condition of the resource that move it toward its desired condition. Context is usually geographic; i.e., impacts may be site-specific, local, regional, or national, and the severity of impacts on a particular resource may vary when viewed from those different perspectives. Duration can be short-term (lasting a year or less) or long-term (lasting more than a year). Intensity is classified as negligible, minor, moderate, or major, as defined below. These definitions are applied to the analysis of all affected resources.

**Negligible**—Impacts are at the lowest levels of detection and have no appreciable consequences for resources, values, or processes.

**Minor**—Impacts are perceptible but slight and localized. If mitigation is needed to offset any adverse impacts, it will be relatively simple to implement and will likely be successful.



**Top to bottom:**  
*Abraham Rogarshevsky, circa 1915*

*Tombstone of Abraham Rogarshevsky in Mount Zion Cemetery in Maspeth, Queens*

*Reproduction of a wallpaper pattern found in the tenement at 97 Orchard Street, manufactured for the Museum by Scalandre and donated for use in restoring the Rogarshevsky apartment*





**Moderate**—Impacts are readily apparent and widespread, and will result in a noticeable change to resources, values, or processes. Mitigation measures will probably be necessary to offset adverse impacts and will likely be successful.

**Major**—Impacts are readily apparent and widespread, will result in a substantial alteration or loss of resources, values, or processes, and will likely be permanent. Mitigation measures to offset adverse impacts will be necessary and extensive, and their success cannot be guaranteed.

Adverse impacts may be avoided, minimized, or offset through mitigation. Adverse impacts may be avoided altogether by not taking a certain action or parts of an action. Impacts may be minimized by limiting the degree of magnitude of the action or through preservation and maintenance operations that reduce or eliminate impacts over time during the life of the action. Finally, mitigation can rectify impacts by repairing, rehabilitating or restoring the impacted environment, or compensate for impacts by replacing or providing substitute resources or environments.

### National Historic Preservation Act

Section 106 requires federal agencies to make a determination of *no effect*, *no adverse effect* or

*adverse effect* for impacts to properties that are listed in or eligible for the National Register of Historic Places. Adverse effects occur when any of the characteristics that qualify a property for listing are altered in a way that diminishes the integrity of the property. If adverse effects are predicted under either of the alternatives, the SHPO will be consulted and a programmatic agreement will be developed that identifies the actions that will require further consultation during implementation, the potential effects of those actions, and the mitigation that will occur.

## CULTURAL RESOURCES

### Historic Structures

#### *Alternative A:*

#### *Continuation of Present Plans and Practices*

Work on the tenement building continues as funding becomes available. Critical repairs are made to the exterior, including repointing the rear façade and the cellar foundation wall, sealing windows, rebuilding three chimneys, and painting the fire escapes and stoops. Apartments on the top two floors and the first floor are preserved or restored. Classrooms and collections are moved out when appropriate facilities have been acquired to house them, and historical businesses are re-established on the first floor and in the basement.



**Left to right:**

*Plate formerly owned by the Rogarshevsky family*

*Fannie Rogarshevsky, Thanksgiving Day 1941*

*Rogarshevsky apartment prior to restoration*

*Rogarshevsky kitchen and parlor with shiva table, restored to their 1918 appearance*

These projects benefit the structure by stabilizing it and preserving its historic character. There is the potential for some damage in the process of doing this work. For example, vibrations may cause the loss of plaster, paint or wallpaper; installation of the sprinkler system requires making openings in ceilings. Impacts are minimized by working with the contractor on such things as the routes for bringing equipment and supplies in and out of the building, and damaged materials are replaced in kind where appropriate. Any adverse impacts are predicted to be minor, and are not expected to diminish the integrity of the property.

Historic structures in the neighborhood may benefit from the efforts of the Community Preservation Program and the Lower East Side Business Improvement District. The Museum works with these organizations to inform property owners of the former uses of their shops and the historic significance of the Lower East Side.

For Section 106 purposes, the tenement building benefits from the exterior repairs, preservation and restoration of its apartments and rehabilitation of its storefronts. The SHPO is consulted as needed to ensure that everything possible is being done to avoid any adverse effects that could be associated with this work. All alterations of the building meet the Secretary's Standards for the Treatment of Historic Properties.

***Alternative B: Expanded Partnerships***

Benefits to the tenement building are the same as in Alternative A but are expected to occur sooner with the increased funding available under this alternative. As above, there is the possibility of minor impacts resulting from maintenance, repair and restoration activities, but none are expected to be significant enough to diminish the integrity of the resource. The Museum continues to work with neighborhood associations and creates additional benefits over those in Alternative A by offering technical assistance to property owners to rehabilitate their storefronts.

For Section 106 purposes, the beneficial effects from exterior repairs and the preservation, restoration and rehabilitation of the interior of the tenement building may be realized sooner than in Alternative A. The SHPO is consulted as needed to ensure that



everything possible is being done to avoid any adverse effects that could be associated with this work. All alterations of the building meet the Secretary's Standards for the Treatment of Historic Properties.

## **Collections**

### ***Alternative A:***

#### ***Continuation of Present Plans and Practices***

The Museum's collections include documents, photographs, objects found on site or donated by former tenants' families, and objects not directly connected with the site but representative of its period of significance. Most had been kept in the cellar of the tenement building. After the Museum acquired the building at 91 Orchard Street most items were moved to its cellar, which they share with the boiler and other utilities.

Collections storage does not meet NPS standards at either location. Temperature fluctuations threaten some of the items, particularly those stored near the boiler at 91 Orchard. In addition, that building has no fire suppression or smoke detection system. The upper floors of 97 have both types of fire protection system, but its cellar does not. The easy accessibility of storage spaces in both 91 and 97 creates security problems. All of these deficiencies in storage conditions put the collections at risk for moderate to major long-term adverse impacts.

The Collections Management Plan recently completed by NPS recommends that the Museum relocate the collections to a secure aboveground location with temperature and humidity controls. Until a building can be acquired the Plan suggests actions to improve the existing situation, such as reorganizing the available space to achieve the best possible environmental conditions for each type of collection, adding fire protection systems, and installing physical barriers and new shelving units for better security. The Museum has obtained new equipment and is also planning to move some collection items to more environmentally compatible rooms. Although implementation of these interim measures benefits

the collections, it does not bring collections storage into compliance with NPS standards or remove the threat of adverse impacts.

### ***Alternative B: Expanded Partnerships***

The Collections Management Plan interim recommendations are implemented as in Alternative A. With the increased funding of Alternative B the Museum is likely to be able to secure a building that provides appropriate storage space within a shorter timeframe. This action will result in major benefits by reducing the time the collections are stored in less-than-optimum conditions, and will remove them from the threat of irreparable damage.

## **Archeological Resources**

### ***Alternative A:***

#### ***Continuation of Present Plans and Practices***

In 1993 the entire back yard of the tenement was excavated, revealing a water-cleansed privy vault. Because the privy was connected to the city sewer system, most discarded household objects that might have shown up later as artifacts were washed away. All artifacts that were found in the investigations were recovered; a few are on display in the tenement and most are in storage. Because the site has already been disturbed, no adverse impacts are expected from further excavation associated with the planned reconstruction of the privy.

**For Section 106 purposes, since the site has already been excavated, reconstruction of the privy will have no adverse effect on archeological resources.**

### ***Alternative B: Expanded Partnerships***

As in Alternative A, reconstruction of the back yard privy is expected to be carried out without impact to archeological resources.

**For Section 106 purposes, since the site has already been excavated, reconstruction of the privy will have no adverse effect on archeological resources.**

## Cumulative Impacts

Heavy demand for tours of the tenement is resulting in a steady stream of visitors year after year that is taking its toll on the interior; for example, the floors are showing signs of wear. A visitor capacity study presently underway will determine whether the current level of visitation is a threat to the building. If visitor numbers exceed carrying capacity, moderate adverse impacts to the historic structure could occur until the numbers are reduced and the damage repaired. Both alternatives call for acquisition of a second tenement, which would take pressure off the 97 Orchard Street building. Alternative B can help the Museum achieve this objective faster.

## Conclusion

Repairs and other stabilizing measures are needed to avoid deterioration of the tenement building. Under Alternative A these measures are planned but funding is not adequate to support them all. Alternative B increases the funding available for corrective actions. Both alternatives support action to counteract possible moderate adverse cumulative impacts that could occur to the historic structure if carrying capacity is exceeded. Again, funding is likely to be available sooner with Alternative B. Portions of the collections are at risk of minor to moderate adverse impacts in their current storage locations. Under Alternative B appropriate storage space is more likely to be acquired in time to avoid those impacts. Beneficial impacts of the Museum's community programs are enhanced under Alternative B with the provision of technical assistance to property owners.

## SOCIOECONOMIC ENVIRONMENT

### Land Use and Economy

#### *Alternative A:*

#### *Continuation of Present Plans and Practices*

The tenement is in a working-class neighborhood that has historically provided jobs for unskilled labor and offered relatively affordable housing. The area is a commercial district zoned for mixed use, including multi-family residential, retail, office, custom manufacturing, and related uses.

No adverse impacts to the neighborhood are expected from Museum activities. Ongoing and planned programs offer economic benefits by attracting visitors to tour the tenement and the neighborhood, opening retail establishments in the tenement and nearby buildings that employ local residents, and teaching English to immigrant adults and children. The Museum's acquisition of a second tenement building, if accomplished, benefits local businesses by bringing more people to the area. According to the 1999 Visitor Survey, visitors to the Museum go to other neighborhood attractions as well. Dining was the most popular activity (44%), followed by shopping (28%) and sightseeing (27%). Boosting the economy of the local neighborhood helps its residents to stay there, retaining its traditional character.

#### *Alternative B: Expanded Partnerships*

No adverse impacts are anticipated. Increased funding under this alternative enhances the economic benefits to the neighborhood that are described above by helping the Museum to expand its programs and to complete projects that attract more visitors and provide some local employment, including preserving and restoring the fourth and fifth floors of the tenement, re-establishing historic businesses in the basement and on the first floor, enlarging the visitor's center and museum shop, opening a second-hand store, and acquiring a second tenement building.

### Traffic, Parking and Transit

#### *Alternative A:*

#### *Continuation of Present Plans and Practices*

Vehicular traffic in the vicinity is substantial, as Orchard Street attracts shoppers as well as visitors to the Tenement Museum. Parking is available in commercial lots and in one free lot. The 1999 Visitor Survey compiled by the Museum showed that 63% of visitors arrived by public transportation or walking. That percentage is expected to stay constant as the number of visitors increases.

In response to its establishment of retail businesses and opening of the fourth and fifth floors of the tenement to the public, the Museum anticipates

an increase in the total annual number of visitors from 123,000 to 250,000. Assuming that 27% of total visitors arrive by car or taxi, the rate of peak visitors stays the same in the future as in the present and the auto occupancy rate is 2.3, the total number of new vehicle trips during times of peak attendance (early afternoon) is estimated to be 12 during the week and 18 on the weekend. Both these numbers are well below the City Environmental Quality Review Technical Manual threshold of 30 new trips that trigger the need for a detailed traffic analysis for this section of Manhattan.

Assuming transit riders to be 60% of all visitors, the number of new transit trips during peak hours is estimated at 92, which is below the threshold of 100 new trips that requires detailed subway or bus analysis. On the basis of these calculations, projected increased visitorship will not have any adverse impact on vehicular traffic or public transportation in the neighborhood, and parking lots will continue to provide adequate space within walking distance of the tenement.

**Alternative B: Expanded Partnerships**

The number of visitors may grow faster with increased funding as projects are implemented sooner and programs expand. However, impacts on traffic, parking and public transit remain as described under Alternative A, with no adverse impacts predicted.

**Cumulative Impacts**

Historically, industrial and manufacturing jobs were key sources of entry-level employment. Loss of many of those jobs and increases in housing costs threaten to displace traditional residents. These changes create major long-term adverse socioeconomic impacts by making it difficult for the Lower East Side to continue its historic role as the first home for new immigrants. Alternatives A and B offer some economic help, mainly by bringing people to the neighborhood. Visitation could grow more rapidly under Alternative B and therefore be more helpful as projects that attract visitors are completed faster.

**Conclusion**

Neither alternative is expected to cause adverse impacts to land use or the economy or to the area’s public transportation system, traffic or parking facilities. Economic benefits to the neighborhood are greater under Alternative B because expanded programs of the Museum attract more visitors. Economic benefits under both alternatives move toward counteracting the major long-term adverse cumulative impacts of job losses and rising housing costs.

The minority and low-income populations of the Lower East Side are not expected to experience adverse or disproportionately high impacts to their health or environment as a result of the implementation of either alternative. To the extent that the neighborhood economy benefits from the presence of the museum and its programs, the health of these populations may also benefit.

**VISITOR EXPERIENCE**

**Alternative A:  
Continuation of Present Plans and Practices**

The primary resource for interpretation continues to be the tenement at 97 Orchard Street, which gives visitors a firsthand appreciation of the typical living conditions of many immigrants following their arrival in the United States. In addition to tenement tours the building hosts art exhibits and performances, classes and dinners that promote understanding of past and present immigrant life and immigrant populations. Walking tours of the neighborhood introduce visitors to the local context for the historic site.

Beneficial impacts result from the restoration of additional apartments, removal of non-historic uses and establishment of historical businesses in the tenement building. These actions bring to light more individual families’ stories and give visitors a more realistic representation of immigrant life in the neighborhood. Benefits are greater if a suitable second tenement is acquired, restored or rehabilitated, and interpreted. Minor short-term adverse impacts to visitor experience could occur during construction

activities within either building from noise, vibration, or rerouting of tours.

Beneficial impacts also result from cooperative interpretive programming with NPS that develops visitor appreciation for the connections among the Lower East Side, the Tenement Museum, Castle Clinton and Ellis Island. Additional benefits occur if reconstruction of the privy in the back yard yields any artifacts or information useful for interpretation of the daily life of the residents, but it is unlikely that new discoveries will be made.

**Alternative B: Expanded Partnerships**

Minor short-term adverse impacts may be associated with construction as in Alternative A. Beneficial impacts are amplified by the increased funding of this alternative. Rooms of the tenement that are presently closed to the public become available more quickly. A second tenement building is ready for interpretation sooner if additional resources facilitate its acquisition and restoration or rehabilitation. More frequent neighborhood tours, expanded educational programs and new interpretive opportunities are made possible.

**Cumulative Impacts**

Changes to the neighborhood have accelerated in recent years as real estate prices have risen. Major long-term adverse impacts to visitor experience may result from the loss of historic context. Both alternatives try to lessen these changes through the Museum’s involvement in preservation-oriented neighborhood associations. Alternative B is more effective because it provides resources that enable the Museum to teach property owners how to preserve their storefronts.

**Conclusion**

Under both alternatives, minor short-term adverse impacts may occur to visitor experience during work to preserve, rehabilitate, restore, and reconstruct the tenement. However, most impacts are beneficial, resulting from tours of the building and the neighborhood and from the Museum’s numerous programs and classes. Benefits are enhanced by expanded programming, restoration and rehabilitation

facilitated by the increased funding of Alternative B. The Museum’s educational programs under both alternatives and its technical assistance under Alternative B help property owners to preserve and restore their storefronts in the face of major adverse cumulative impacts threatening the historic character of the neighborhood.

**VISITOR USE**

**Alternative A:  
Continuation of Present Plans and Practices**

The Museum offers tours of the tenement almost every day of the year but is unable to meet the demand; several thousand individuals as well as tour groups and school classes have to be turned away annually. The building is already showing signs of wear from more than 123,000 visitors per year. Not everyone who comes to the tenement is able to view the upper floors, as they are only accessible via steep, narrow stairs. Classrooms remain in the basement and on the first floor and a portion of the collections is in the cellar, although the Museum intends to remove all non-historic uses when an alternative location for them has been obtained.

Moderate long-term adverse impacts are occurring from the inability of the Museum to meet the demand for its services and from the lack of accessibility of most of the tenement building for visitors who are in wheelchairs or have mobility problems. Impacts may be greater if the carrying capacity study currently underway finds that the present level of visitation is a threat to the building and should be reduced.

Acquisition and restoration of another tenement building will have beneficial impacts by enabling the Museum to serve more visitors. If a building adjacent to 97 Orchard Street becomes available from a willing seller and can be acquired by the Museum, 97 Orchard may be made accessible by installing an elevator in the new building. Beneficial impacts will then result from offering all visitors the opportunity to experience all levels of the historic tenement.



Left page:  
Advertisement for  
the psychic services  
of 97 Orchard  
Street tenant Dora  
Meltzer, circa 1903

Right page:  
Sign advertising  
custom-made  
pants, found in an  
apartment at  
97 Orchard Street

# PRICE, 15c.

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## 97 Orchard Street,

Bet. Delancy & Broome Sts.

1st Fl. Back, Room 4, N. Y.



The presence of classrooms in the basement and on the first floor has a long-term adverse impact on visitor use because they are taking the place of the historic use (retail business). However, the impact is minor since the classrooms are helping to fulfill the Museum’s mission and are not harmful to the building. Beneficial impacts are achieved by relocating them out of 97 Orchard Street, making space for the establishment of historical businesses.



### Alternative B: Expanded Partnerships

This alternative’s opportunities for increased funding eliminate the adverse impacts noted above if they are able to help the Museum obtain additional space in order to serve more visitors, provide accessibility, and relocate non-historic uses.

### Cumulative Impacts

The demand for tours continues to grow, increasing the Museum’s need for another tenement building. However, many of New York City’s surviving tenements have been substantially altered, no longer retaining their historic interior layout. The Museum’s work with the community on neighborhood preservation, which is a part of both alternatives but is stronger in B, may result in the preservation of a building that can help to meet this additional visitor demand.

### Conclusion

Long-term adverse impacts described under Alternative A result from the inability to accommodate all potential visitors and to house non-historic functions outside the tenement building. Alternative B offers the possibility of funding to help eliminate those impacts faster than under Alternative A.

## COST ESTIMATES

Capital and operating costs presented below are associated with 97 Orchard Street and not with the Museum’s other buildings. NPS contributions will be made within the constraints of available funding and ongoing NPS priorities and will be used for the purposes set forth in P.L. 105-378, Section 104(b):

*TECHNICAL AND FINANCIAL ASSISTANCE — The Secretary is authorized to provide technical and financial assistance to the Lower East Side Tenement Museum to mark, interpret, and preserve the historic site, including the making of preservation-related capital improvements and repairs.*

Capital expenses are estimated for the 20-year life of the plan and include, for both alternatives, preservation of the tenement building, restoration of four apartments on the upper two floors of the tenement and one on the first floor, rehabilitation of other first floor space as historical businesses, reconstruction of the privy in the back yard, and payment of the mortgage principal on the building. Operating expenses are annual and cover staff, consultants, travel, routine maintenance, supplies, utilities, insurance, mortgage interest, and more. The cost difference between the alternatives comes from programmatic expansion in Alternative B, plus any additional improvements beyond those currently anticipated.

**TABLE IV-1: ALTERNATIVE A COSTS  
in 2005 dollars**

	Low	High
20-year capital costs	\$4,365,000	\$5,238,000
Annual operating costs	\$2,700,000	\$3,240,000

**TABLE IV-2: ALTERNATIVE B COSTS  
in 2005 dollars**

	Low	High
20-year capital costs	\$4,565,000	\$5,478,000
Annual operating costs	\$2,975,000	\$3,570,000