

Environmental Assessment

# **ECOS Environmental Center**

Forest Park, Springfield, MA

DR 1994 MA

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**FEMA**

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**ENVIRONMENTAL ASSESSMENT  
ECOS ENVIRONMENTAL CENTER**

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## ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
ADA	Americans with Disabilities Act
APCD	Air Pollution Control Division
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R.	Code of Federal Regulations
CMS	Centers for Medicare and Medicaid Reimbursement
CWA	Federal Water Pollution Control Act (Clean Water Act)
DEP	Massachusetts Department of Environmental Protection
DMH	Massachusetts Department of Mental Health
DPS	Massachusetts Department of Public Safety
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
JCAHO	Joint Committee on Accreditation of Health Care Organizations
LEED	Leadership in Energy and Environmental Design
MHC	Massachusetts Historic Commission
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NESHAPS	National Emission Standards for Hazardous Air Pollution
NFIP	National Flood Insurance Program
NHESP	Massachusetts Natural Heritage & Endangered Species Program
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRCS	Natural Resources Conservation Service
PA	Public Assistance
RCRA	Resource Conservation and Recovery Act
SCC	Springfield Conservation Commission
SHPO	State Historic Preservation Officer
SOW	Scope of work
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USEPA	U. S. Environmental Protection Agency
USGBC	U.S. Green Building Council
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

# 1 INTRODUCTION

As a result of damages sustained on June 1, 2011, the President declared a major disaster for the Commonwealth of Massachusetts under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. This major disaster declaration, referenced as FEMA-1994-DR-MA, authorizes the Federal Emergency Management Agency (FEMA) to provide Public Assistance (PA) grant funding to local governments, state agencies and eligible private non-profit organizations in Massachusetts. The City of Springfield, Massachusetts has applied through the Massachusetts Emergency Management Agency (MEMA) to FEMA for funding assistance under the PA program.

In accordance with 44 Code of Federal Regulations (CFR) for FEMA, Subpart B, Agency Implementing Procedures, Part 10.9, this Environmental Assessment (EA) is being prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ); 40 CFR Parts 1500-1508. The purpose of an environmental assessment (EA) is to determine whether the potential impacts of a federally proposed action could have significant environmental impacts. If the EA concludes that the impacts of the proposal could be significant, then the agency is required by the National Environmental Policy Act (NEPA) to prepare an Environmental Impact Statement (EIS). If, however, the agency concludes on the basis of the EA that the impacts would not be significant, then the agency may issue a Finding of No Significant Impact (FONSI) and proceed with the action.

## 1.1 DISASTER BACKGROUND AND OVERVIEW

The City of Springfield, Massachusetts (the City) is located in western Massachusetts, in Hampden County, near the Massachusetts/Connecticut border. Springfield is the third largest city in Massachusetts with an estimated population of 153,000 per the 2010 Census.

On June 1, 2011, tornadoes struck portions of Western Massachusetts, including the City of Springfield, causing extensive and widespread property damage. The former Zanetti School at 59 Howard St., in the City's South End sustained significant damage from the tornado, rendering it unusable for its intended purpose. The building was used at the time of the event as a storage warehouse and no longer functioned as a school. After the tornado, the City assessed the extent of the damage and secured the building.

The City determined that the public welfare would not be best served by restoring the damaged facility or by restoring the function of the damaged facility at another location. In accordance with FEMA PA Alternate Projects policy, the City has applied to FEMA to redirect eligible funds toward two alternative projects to better serve the population of that area. For the two Alternate Projects, the City proposes to; 1) refurbish the police facility located at 50 East Street, and 2) renovations and expansion to the Clifford A. Phaneuf Environmental Center, commonly referred to as the "ECOS" center as the facility is associated with the Environmental Center of Our Schools or ECOS program located in Forest Park. The police facility is not subject to review in this EA as that project is categorically excluded from the requirements of an EA. The review for that project has already been completed and will not be referenced in this document hereafter. This EA focuses on the project to expand and enhance the Clifford A. Phaneuf Environmental Center, which was historically referred to as the Porter Lake Skate House and will be referred to in this EA as the ECOS Center.

The ECOS Center structure is a wood-framed building that abuts Porter Lake. It is the former skate house at the lake, and has been home for the ECOS program since 1970. The programs are experienced by thousands of science students, teachers and parents annually. This area of Forest Park is home to many species of birds and wildlife. This program provides hands on experience for students of natural history including the study of organisms: plants or animals. The facility is currently in need of repairs and enhancement. The renovations to the existing facility plus the expansion by approximately thirty-three percent (33%) from approximately five thousand two-hundred and forty-eight square feet (5,248 SF) to approximately seven thousand thirty two square feet (7,032 SF), will be examined by identifying the impacts the project will have on the local resources.

## **1.2 PURPOSE AND NEED**

The purpose of the *Proposed Alternative* is enhancing the welfare of the community by providing additional curriculum to the educational system of the City for grades Kindergarten through eighth (8<sup>th</sup>) grade.

The need is to have enough space and functionality of a facility to fulfill this purpose.

## **2 ALTERNATIVES CONSIDERED**

### **2.1 NO ACTION ALTERNATIVE**

Under the *No Action Alternative* the ECOS Center would remain in its existing condition in need of repair and renovation. If this alternative is selected, there would be no change in this facility.

### **2.2 PROPOSED ALTERNATIVE**

Under the *Proposed Alternative* there are two proposed additions to the building, and the main focus is providing an updated educational center and enhancing usage of the building during after-school hours, weekends and summer.

The building is a two story wood frame with a slab on grade foundation and a log façade. The building's footprint currently is approximately 2,900 square feet (SF) with a second floor of approximately 2,000 SF. The ground floor footprint will increase by about 2,100 SF, with the western addition extending two stories over an area of about 1,000 SF and a ground-level porch of about 650 SF. The eastern kitchen addition will be a single level only and comprise an area of about 500 SF. Hence, the total enclosed area (both levels) will be about 7,400 SF. (See Appendices A, B, and C)

The renovation will include upgrades of mechanical, electrical and plumbing (MEP) systems, including possible installation of a hydro-geothermal heat pump system to heat and cool the building. Geothermal systems or ground source heat pump systems are an energy efficiency strategy that can contribute to Leadership in Energy and Environmental Design (LEED) points. These systems employ subsurface soil and/or groundwater as a heat source to provide seasonal heating or cooling needs.

A hydro-geothermal pond loop system uses a similar concept, but uses the water in the pond as the heat source or heat sink to respond to heating and cooling needs. Although near-surface water temperatures fluctuate with the seasons, water at the pond bottom has a more limited temperature fluctuation. Geothermal or hydro-geothermal systems utilizing geothermal water-source heat pumps can achieve about 25 percent energy savings over conventional new HVAC systems.

### **2.3 OTHER ALTERNATIVES CONSIDERED AND ELIMINATED**

The alternative of repairing the former Zanetti School to pre-disaster condition for continued use as a storage facility was also considered, but it was eliminated because the City determined that the public welfare would not be best served by either restoring the damaged facility or by restoring the function of the damaged facility. In lieu of repairing the school, the City determined to utilize FEMA's Alternate Project Policy to renovate the ECOS Center.

### 3 AFFECTED ENVIRONMENTS AND POTENTIAL IMPACTS CONSIDERED

The *No Action Alternative* consists of the continued use of the facility as it presently exists. The No Action Alternative is not evaluated in the following section since there is no added adverse effect to the affected environments described below.

The *Proposed Alternative* will have direct effect on the existing building.

**Table 3.1** summarizes the effects described and analyzed in this section. Levels of potential impacts are defined as follows:

- \* 1 - Negligible: The resource area would not be affected. Changes would be non-detectable or if detected, effects would be slight and local. Impacts would be well below regulatory limits.
- \* 2 - Minor: Changes to the resource would be measurable, but the changes would be small and localized. Impacts would be within or below regulatory limits. Mitigation measures may be necessary to reduce potential effects.
- \* 3 - Moderate: Changes to the resource would be measurable and have localized and potentially regional scale impacts. Impacts would be within or below regulatory limits, but historical conditions would be altered on a short-term basis. Mitigation measures may be necessary to reduce potential effects.
- \* 4 - Major: Changes would be readily measurable and would have substantial consequences on a local and potentially regional level. Impacts would exceed regulatory limits. Mitigation measures to offset the effects would be required to reduce impacts, although long-term changes to the resource would be possible.

**TABLE 3-1  
PROJECT ALTERNATIVES: SUMMARY OF POTENTIAL EFFECT,  
COORDINATION AND MITIGATION APPLIED**

**Affected Environment/Resource Area**

**Alternatives - IMPACT - Agency Coordination/Permits - Mitigation/BMPs – Comments**

**Geology**

<b>No Action Alternative</b>	<b>1</b>	No Impacts Identified.
<b>Proposed Alternative</b>	<b>1</b>	No Impacts Identified.

**Soils**

<b>No Action Alternative</b>	<b>1</b>	No Impacts Identified.
<b>Proposed Alternative</b>	<b>1</b>	No Impacts Identified.

**Air Quality**

<b>No Action Alternative</b>	<b>1</b>	No Impacts Identified.
<b>Proposed Alternative</b>	<b>2</b>	No Permanent Impact. All asbestos abatement and disposal

procedures shall be performed in compliance EPA's with NESHAP regulations, MADEP asbestos regulations, and City of Springfield environmental and building codes.

Water, hygroscopic materials, or non-toxic chemical stabilizers will be used as treatment to reduce fugitive dust emissions during demolition as required under Clean Air Act.

**Climate Change**

- No Action**                    1    No Impacts Identified.
- Proposed Alternative**    1    No Impacts Identified.

**Water Quality**

- No Action**                    1    No Impacts Identified.
- Proposed Alternative**    1    During renovation of the building Best Management Practices to control the release of sediment shall be used.  
  
Porter Lake is a TMDL site, but Proposed Alternative SOW does not trigger a permit. No impact identified.

**EO11988 Floodplains**

- No Action**                    1    No Impacts Identified.
- Proposed Alternative**    1    Project is not located within a floodplain - No impacts identified.

**EO11990 Wetlands**

- No Action**                    1    No Impacts Identified.
- Proposed Alternative**    1    No impacts identified.

**Threatened and Endangered Species**

- No Action**                    1    No Impacts Identified.
- Proposed Alternative**    1    No federally listed threatened or endangered species in or near project area.

**Ecosystems, Fish and Wildlife**

- No Action**                    1    No Impacts Identified.
- Proposed Alternative**    1    No impacts identified.

**Historic Properties**

- No Action**                    1    No Impacts Identified.
- Proposed Alternative**    1    An archaeological monitor shall be present on site during construction activities to identify if any cultural resources are uncovered during construction.  
  
If human remains are discovered during the course of project implementation, the City shall immediately stop construction activities in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm until FEMA concludes consultation with the City, the State Historic Preservation Office, and applicable Tribal Historic Preservation Officer.

**EO 12898 Environmental Justice**

- No Action**                    **1**    No Impacts Identified.
- Proposed Alternative**    **1**    No disproportionate impacts to minority or low income populations.

**Hazardous and Solid Waste**

- No Action**                    **1**    No Impacts Identified.
- Proposed Alternative**    **2**    Hazardous materials and special wastes will be segregated and disposed of in accordance with all applicable local, state, and federal laws, regulations, and requirements  
  
The City shall manage and dispose of excavated soils and waste materials in accordance with applicable local, state, and federal regulations. If hazardous/contaminated materials are discovered during construction, the work shall cease until the City can implement appropriate procedures and secure additional permits if needed.

**Noise**

- No Action**                    **1**    No Impacts Identified.
- Proposed Alternative**    **2**    Construction will take place only during normal business hours and all equipment will meet local, state, and federal noise regulations. Idling time shall be limited onsite.  
  
There may be a temporary increase in noise during construction, otherwise noise levels will remain as under current uses.

**Traffic Impacts**

- No Action**                    **1**    No Impacts Identified.
- Proposed Alternative**    **1**    No Impacts Identified.

**Public Services and Utilities**

- No Action**                    **1**    No Impacts Identified.
- Proposed Alternative**    **1**    Construction vehicles and equipment will be stored on site during the project. All construction activities will be performed using qualified personnel and in accordance with the standards specified in Occupational Safety and Health Administration (OSHA) regulations.  
  
Appropriate signage will be posted onsite and in the vicinity.  
  
No Impacts Identified.

**Public Health and Safety**

- No Action**                    **1**    No Impacts Identified.
- Proposed Alternative**    **2**    No impacts identified.

**Cumulative Impacts**

- No Action**                    **1**    No Impacts Identified.
- Proposed Alternative**    **1**    De-minimis Impact

### ***Location***

The site is located in Forest Park, in Springfield, Massachusetts. It is one of the largest municipal parks in the United States, lying on 735 acres. The ECOS program is based in Forest Park in Springfield, Massachusetts, at Latitude: N42.07446 Longitude: W-72.56839. It hosts an educational program run by the City of Springfield. Since 1970, ECOS takes all Springfield public school students in grades 4 through 7 on a two-day environmental learning outing in Forest Park.

Porter Lake was created approximately 100 years ago by damming Pecousic Brook at Porter Lake Dam Road with a masonry structure spillway which was constructed in a semi-circular shape. The lake is 31 acres in area, including Porter and Lower Porter Lake (more commonly referred to as Fountain Lake). The lake has a drainage basin of 5,160 acres (approximately 8 square miles) with areas of the watershed in the communities of Springfield, East Longmeadow, and Longmeadow.

### ***Topography***

Springfield's greatest topographical feature is the Connecticut River. The City sits near confluence of two major tributary rivers: the western Westfield River, which flows into the Connecticut across from Springfield's South End Bridge; and the eastern Chicopee River, which flows into the Connecticut less than 0.5 miles north of Springfield. The City's second most prominent topographic feature is the city's 735 acre Forest Park.

The portion of Forest Park where the subject site is located is in the ruggedly contoured valley of Pecousic Brook which occupies more than half of the south side of the Forest Park. This features many walking trails. Factors related to geology, soils, vegetation and wildlife are considered during project development to determine if one or more actions could adversely affect one or multiple resources or upset the balance among them.

## **IN THE FOLLOWING SECTION:**

The *No Action Alternative* (the continued use of the facility as it presently exists) is not evaluated. Since there is no added adverse effect to the affected environment and the consequences are only addressed in Table 3-1 in this EA.

The *Proposed Alternative* will have direct effect on the existing building and is discussed further.

### **3.1 GEOLOGY**

The building location sits on the Portland Formation (Jp), which is reddish-brown to pale arkose (also known as New Haven Traprock and Brownstone) and siltstone, and gray sandstone, gray siltstone and black shale interpreted as lakebeds. There are no unique or protected geologic resources or geologic hazards in the project vicinity.

The *Proposed Alternative* will have direct effect on the existing building.

#### **3.1.1 Potential Impacts**

No impact to the geology or the Proposed Alternative since proposed addition to building is on land that has already been developed.

#### **3.1.2 Need for Mitigation**

None identified.

### **3.2 SOILS**

Terrace escarpments consist of long, narrow, rocky areas that rise abruptly from the mean tide line to the coastal plain terraces or plateaus. This land type consists of steep faces that separate the terraces from the lower lying land. The faces are composed of soft coastal sandstone, hard shale, or hard, weather-resistant, fine-grained sandstone.

The *Proposed Alternative* will have direct effect on the existing building.

#### **3.2.1 Potential Impacts**

No impact to the soils for the Proposed Alternative since proposed addition to building is on land that has already been developed.

#### **3.2.2 Need for Mitigation**

None identified.

### **3.2 AIR QUALITY**

The *Proposed Alternative* will have direct effect on the existing building.

#### **3.2.1 Potential Impacts**

The Proposed Alternative will not impact the air quality at the project site, in the nearby area, or in the

region.

### **3.2.2 Need for Mitigation**

Asbestos may be present in the building. If asbestos abatement is found to be required, all asbestos abatement and disposal procedures shall be performed in compliance with the Environmental Protection Agency's (EPA's) National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations, the Massachusetts Department of Environmental Protection (MADEP) asbestos regulations, and City of Springfield environmental and building codes. Reasonable available control measures and best available control measures can be found in the Clean Air Act, Section 107(d), as amended in 1990. Water, hygroscopic materials, or non-toxic chemical stabilizers will be used as treatment to reduce fugitive dust emissions during demolition as required under Clean Air Act. With proper mitigation measures, fugitive dust emissions will not have temporary or long term effects.

## **3.4 CLIMATE CHANGE**

The CEQ has issued a draft NEPA guidance document encouraging federal agencies to include the consideration of the effects on greenhouse gas emissions and climate change in their evaluations of proposals subject to NEPA documentation (CEQ, 2010).

The *Proposed Alternative* will have direct effect on the existing building.

### **3.4.1 Potential Impacts**

The use of the building and the activities within will not cause additional volume or intensity of emissions of greenhouse gases or be affected by climate change by the *Proposed Alternative*. The new building will have solar panels for electricity and will gather thermal heat from the pond, both of which should decrease air emissions of greenhouse gases.

### **3.4.1 Need for Mitigation**

There may be a temporary rise in the volume of greenhouse gas due to the running of construction equipment. This volume will be temporary and low. The use of building after construction will have no additional permanent effect on the volume or intensity of greenhouse gas emissions than the No Action Alternative.

## **3.5 WATER QUALITY**

The Clean Water Act (CWA) is the primary Federal law in the United States governing water pollution. Passed in 1972, the objective of the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

Water bodies that do not meet applicable water quality standards with technology-based controls alone are placed on the section 303(d) list of water bodies not meeting standards. Water bodies on the 303(d) list require development of a Total Maximum Daily Load (TMDL). A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet WQS. The TMDL is determined after study of the specific properties of the water body and the pollutant sources that

contribute to the non-compliant status. Generally, the TMDL determines load based on a Waste Load Allocation (WLA), Load Allocation (LA), and Margin of Safety (MOS). Once the TMDL assessment is completed and the maximum pollutant loading capacity defined, an implementation plan is developed that outlines the measures needed to reduce pollutant loading to the non-compliant water body, and bring it into compliance. Over 60,000 TMDLs are proposed or in development for U.S. waters in the next decade and a half.

The main strategy employed by MassDEP to protect and maintain water quality is the implementation of the Watershed Management Approach. A phased holistic program for watershed-based assessment, Total Maximum Daily Load evaluation, permitting, and implementation has been adopted by MassDEP's Bureau of Resource Protection to address its Watershed Management goals. The Massachusetts Estuaries Project (MEP) determines which estuaries are being impacted by excessive nitrogen and identifies the sources of nitrogen pollution, so that communities have the scientific basis for common sense, cost-effective decisions on how to protect and restore their estuaries.

Porter Lake is listed by the MassDEP as a water resource requiring a TMDL which is a calculation of the maximum amount of a pollutant that a waterbody can accept and still meet the state's Water Quality Standards for public health and healthy ecosystems.

A report “*Massachusetts Year 2012 Integrated List of Waters*” by the - Massachusetts Department of Environmental Protection, Bureau of Resource Protection describes Porter Lake, as 27.931 acres and Porter Lake West, as 5.036 acres both with (Non-Native Aquatic Plants), Aquatic Plants (Macrophytes), Excess Algal Growth.

The ***Proposed Alternative*** will have direct effect on the existing building.

### ***3.5.1 Potential Impacts***

The Proposed Alternative is not the type of activity that triggers a permit. The renovation of building will have no permanent effect on the TMDL since it does not involve working within the lake or releasing effluents into the lake.

### ***3.5.2 Need for Mitigation***

During renovation of the building Best Management Practices to control the release of sediment shall be used.

## **3.6 FLOODPLAINS**

A floodplain is an area of land adjacent to a stream or river that stretches from the banks of its channel to the base of the enclosing valley walls and experiences flooding during periods of high discharge. Executive Order 11988 directs federal agencies to assume leadership in avoiding direct or indirect support of development in the 100 year floodplain.

The ***Proposed Alternative*** will have direct effect on the existing building and is discussed further.

### ***3.6.1 Potential Impacts***

Per Flood Insurance Rate Map (FIRM) number 25013C 0404E, effective July 16, 2013, the site is located outside the floodplain and the activity does not affect floodplain values. (See Appendix A-3)

### ***3.6.2 Need for Mitigation***

None identified.

## **3.7 WETLANDS**

A wetland is a land area that is saturated with water, either permanently or seasonally, such that it takes on the characteristics of a distinct ecosystem. Executive Order 11990 requires federal agencies to avoid adverse impacts to wetlands to the extent possible. Section 404 of the Clean Water Act (CWA) establishes a wetland permit program administered by the U.S. Army Corps of Engineers (USACE).

The *Proposed Alternative* will have direct effect on the existing building.

### ***3.7.1 Potential Impacts***

A water retention pond exists on the eastern border of the site. This pond is used by the town to retain water from the local street catch basins and the Cathedral High School has permits for the release of storm water from its parking lot to this retention pond. The construction does not modify this pond and best management practices will be observed to prevent sediment and run-off to this pond. There will be no long term impacts to the wetlands.

### ***3.7.2 Need for Mitigation***

During renovation of the building Best Management Practices to control the release of sediment must be used.

## **3.8 THREATENED AND ENDANGERED SPECIES**

The Natural Heritage & Endangered Species Program (NHESP), part of the Massachusetts Division of Fisheries and Wildlife, is one of the programs forming the Natural Heritage network. NHESP is responsible for the conservation and protection of hundreds of species that are not hunted, fished, trapped, or commercially harvested in the state. The Program's highest priority is protecting the vertebrate and invertebrate animals and native plants that are officially listed as Endangered, Threatened or of Special Concern in Massachusetts.

The site was plotted on the US FWS critical habitat mapper and did not fall within a designated habitat. NHESP maintains the BioMap2. The BioMap2 is a statewide plan for conserving the most important habitats and ecosystems in Massachusetts. It incorporates the latest concepts of ecological resilience in the context of a changing climate. This comprehensive, multi-scale conservation plan will protect not only current biodiversity, but also ensure healthy ecosystems for the future. The BioMap2 program maintains maps of Critical Natural Landscapes. The site was plotted on the BioMap2 and does not fall within a designated area. (See Appendix A-2)

The *Proposed Alternative* will have direct effect on the existing building.

### ***3.8.1 Potential Impacts***

There are no identified impacts to Endangered or Threatened Species or their habitats.

### ***3.8.2 Need for Mitigation***

None identified.

### **3.9 ECOSYSTEMS, FISH AND WILDLIFE**

The biological make up of Forest Park includes a great diversity in plant and animal makeup and their supporting habitats and natural communities. The ponds are especially rich in plant and animal species including insects, frogs and snapping turtles.

The *Proposed Alternative* will have direct effect on the existing building.

#### ***3.9.1 Potential Impacts***

Short-term phases of construction and long-term re-development will have no significant effect on wildlife habitat. The natural functions of the site will not be significantly altered as a result of the *Proposed Alternative*.

#### ***3.9.2 Need for Mitigation***

None identified.

### **3.10 HISTORIC AND CULTURAL RESOURCES**

#### ***3.10.1 Historic Resources***

In 1884, Springfield resident O.H. Greenleaf offered 65 acres for the establishment of a park to be named Forest Park. Shortly after, approximately 178 acres were donated by wealthy philanthropist Everett Hosmer Barney. The park was designed by renowned architect Frederick Law Olmstead. Initially, Barney made his fortune as a Civil War arms producer and later as a businessman, developing clamp-on ice skates and roller skates. In 1890 Barney built an elaborate, turreted 2 ½-story Victorian mansion on a hill at the west end of his estate, which is now Forest Park. The Barney Mansion featured a spectacular view of the Connecticut River and Metro Center Springfield. Greenleaf and Barney convinced several of their wealthy friends and neighbors to donate much of the remaining land that would become the 735-acre Forest Park. The bulk of this land was, at the time, in the town of Longmeadow, Massachusetts. Ultimately, Longmeadow ceded control of the park to the City of Springfield.

The Barney Mansion was used for park events until the early 1950s, by which time it was considered a fire hazard due to its lack of sprinklers. In the 1950s about fifty (50) acres of the park, including fifteen (15) acres of the former Barney estate, were taken to construct the Springfield/Longmeadow sections of Interstate 91, which severed the places' connections to the Connecticut River. Barney's house stood atop the hill at the northwest corner of the park, and the highway construction may have threatened its foundations, so assuming it was razed. The mausoleum of Barney's son and a carriage house still survive from the estate, along with many remnants of an extensive arboretum and water gardens planted by Barney around 1900. The developer of the Forest Park neighborhood continued this theme by planting many interesting specimen trees, especially around Magnolia Terrace. This historic neighborhood with many fine examples of Victorian houses abuts the park on the north, while a small enclave of Springfield's stately brick colonial homes and the town of Longmeadow, Massachusetts borders the park

to the south.

The EOCS Center was built in 1936 by the Works Progress Administration (WPA) as the “Warming House”. The “Warming House” was built to replace the original skate house which was located near the same location to the southwest. Until 1970, the building served as the skate house for Porter Lake, a man-made lake located directly south of the structure. The building underwent a series of updates and changes around 1970, included installation of a concrete foundation. Currently the center exists as steel frame with wood stud walls and log cabin style siding. In 1971 the building began serving as the headquarters for the ECOS Center with Clifford A. Phaneuf serving as the first coordinator. In 2008 the Warming House became officially referred to as the Clifford A. Phaneuf Environmental Center.

### **3.10.2 Archaeological Resources**

In 1986 an archaeological survey was conducted within Forest Park. Based on the report for this survey (MHC Report # 25-676): *Archaeological Study of Forest Park*, four (4) Native American sites were identified. These sites have been recorded as; 19-HD-292, 19-HD-293, 19-HD-294, and 19-HD-295. A map has been provided showing each sites location within Forest Park. On this map; 19-HD-292 is identified as “Unit A”, 19-HD-293 is identified as “Unit C”, 19-HD-294 is identified as “Unit H”, and 19-HD-295 is identified as “Unit I”. According to the site forms the following information has been obtained for each site;

#### 19-HD-292 – Beach Spring Site

- Site located 22-65 cm below surface
- Site roughly bounded by 30 x 20 m<sup>2</sup>
- Soil type: Fine Sandy Loam (undisturbed)
- Nearest water source: Unnamed Brook 200 ft. away
- 7 STPs yielded 166 artifacts, including; 2 quartz biface fragments, 1 quartz biface fragment, 1 quartz utilized flake, 1 rhyolite groundstone tool, and several antler fragments

#### 19-HD-293 – Washington Road Site

- Site classified as a workshop
- Site located 18-65 cm below surface
- Site consist of several small 3 x 5 m<sup>2</sup> areas
- Area disturbed from plowing
- Nearest water source: Unnamed Brook 700 ft. away
- 9 STPs yielded flake scatter and fire-cracked rock

#### 19-HD-294 – Pecousic Brook Site

- Site classified as a workshop
- Site located 4-80 cm below surface
- Soil type: Fine Sandy Loam
- Nearest water source: Pecousic Brook 150 ft. away
- 7 STPs yielded 78 argillaceous mudstone flakes and 1 quartz flake

#### 19-HD-295 – Trout Pond Site

- Site classified as a workshop
- Site located 1-85 cm below surface
- Area disturbed by fill and road construction
- Nearest water source: Trout Brook 150 ft. away
- 12 STPs yielded flake scatter and associated fire-cracked rock

A fifth archaeological site, 19-HD-83, has been identified within Forest Park but it seems as though it was recorded prior to the 1986 survey. Though the 1986 project area survey unit map indicates there was a survey unit (“B”) located where 19-HD-83 has been identified, the number issued to the site indicates the site was inventoried at an earlier date. As the inventoried numbers are sequential by county, it is reasonable to believe that sites 19-HD-292, 293, 294, and 295 were all discovered during the same survey in which distance warranted separate site numbers. If site 19-HD-83 was identified during the 1986 survey it would be numbered in the same sequence as the other sites found within Forest Park. Therefore, it can be concluded that even if there was testing performed at the area identified as “Unit B” the site 19-HD-83 was already known to exist at this location. According to the site form, the following information has been obtained for site 19-HD-83 (the site report was not accessible, a copy of the report is located at the Bronson Museum of Attleboro-MAS # M29-SE-33);

- King Phillip’s Stockade Site
- Located via Cultural Resource Management survey
- Site boundary: 100 x 250 m<sup>2</sup>
- Soil type: Windsor Loamy Sand
- 63 artifacts were identified, including; 1 chert edge tool fragment, 1 core, and thinning and shaping flakes

The site records indicate that even in disturbed areas sites can still remain intact if natural soils are reached. However, the location of the ECOS Center is has been heavily disturbed over the years and the likelihood for natural soils is very low. A majority of the recorded sites appear to be located in Windsor loamy sand and it can be inferred that if such soils are intact within the project area in level, well-drained locations, than those areas would contain archaeological sensitivity.

The *Proposed Alternative* will have direct effect on the existing building.

### **3.10.3 Potential Impacts**

To address the archaeological sensitivity, FEMA consulted with Massachusetts Historic Commission (MHC) on June 11, 2014 with condition that an archaeological monitor be present on site during construction activities to identify if any cultural resources are uncovered during construction. FEMA received a concurrence on June 13, 2014 from MHC. If any cultural resources are uncovered, then work will cease immediately and FEMA, MHC and MEMA will be contacted in order to properly address the steps needed to move forward.

### **3.10.4 Need for Mitigation**

FEMA has consulted with MHC to fulfill Section 106 of the NHPA responsibilities. The end result is a determination that the ECOS Center at Forest Park, or the former Porter Lake Skate House is not eligible for inclusion on the National Register and therefore this undertaking results in a determination of No

Adverse Effect to historic resources. This determination was made with the condition, identified previously, that the City hire a qualified archaeological monitor to be present during construction. (See Appendix D)

If human remains are discovered during the course of project implementation, the City shall immediately stop construction activities in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm until FEMA concludes consultation with the City, the State Historic Preservation Office, and applicable Tribal Historic Preservation Officer. These parties shall consult to determine the appropriate course of action and disposition of remains in accordance with applicable local, state, federal and tribal regulations.

### **3.11 EXECUTIVE ORDER (EO) 12898 ENVIRONMENTAL JUSTICE**

EO 12898 requires that federal agencies identify and address disproportionately high and adverse human health or environmental effects on minority or low income populations posed by their activities, policies, or programs.

The *Proposed Alternative* will have direct effect on the existing building.

#### ***3.11.1 Potential Impacts***

The ECOS program is already in operation and the renovation of the facility will improve educational opportunities for the communities in the City any will have no disproportionate human health or environmental risks to minority or low income populations posed by their activities, policies, or programs.

#### ***3.11.2 Need for Mitigation***

None identified.

### **3.12 HAZARDOUS AND SOLID WASTE**

Hazardous waste is unwanted materials that pose substantial or potential threats to public health or the environment. In the United States, the treatment, storage and disposal of hazardous waste is regulated under the Resource Conservation and Recovery Act (RCRA). RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments (HWSA).

The *Proposed Alternative* will have direct effect on the existing building.

#### ***3.12.1 Potential Impacts***

Prior to selective demolition associated with expansion, the City shall follow all applicable local, state, and federal laws, regulations, and requirements for the abatement and disposal of lead, asbestos, and other routinely encountered hazardous substances. If there is an unusual material encountered or there is an extraordinary amount of lead, asbestos, or other routinely encountered material, the City will contact the Massachusetts Emergency Management Agency (MEMA) and FEMA. The City will also contact the relevant agency with authority for regulation of the material.

Hazardous substances may include, but are not limited to propane cylinders, paints and solvents, coolants containing chlorofluorocarbons (CFCs), used oil, other petroleum products, used oil filters, fuel

filters, cleaning chemicals, laboratory reagents, pesticides, batteries, and unlabeled tanks and containers. Equipment that may include these materials are ice machines, refrigerators, generators, computers, televisions, mercury switches, fluorescent lights, fluorescent light ballasts, sandblast units, paint sprayers, etc.

### **3.12.2 Need for Mitigation**

Prior to selective demolition associated with expansion, hazardous materials and special wastes will be segregated and disposed of in accordance with all applicable local, state, and federal laws, regulations, and requirements. Construction and demolition debris will be segregated and disposed of in accordance with all applicable local, state, and federal laws, regulations, and requirements.

The City shall manage and dispose of excavated soils and waste materials in accordance with applicable local, state, and federal regulations. If hazardous/contaminated materials are discovered during construction, the work shall cease until the City can implement appropriate procedures and secure additional permits if needed.

## **3.13 NOISE**

The *Proposed Alternative* will have direct effect on the existing building.

### **3.13.1 Potential Impacts**

There may be a temporary increase in noise during construction. No permanent increase in ambient noise will occur since use will remain about the same as under current uses.

### **3.13.2 Need for Mitigation**

Construction will take place only during normal business hours and all equipment will meet local, state, and federal noise regulations. Idling time shall be limited onsite.

## **3.14 TRAFFIC IMPACTS**

The *Proposed Alternative* will have direct effect on the existing building.

### **3.14.1 Potential Impacts**

There will be a temporary increase in construction vehicles during the renovation. After the construction is completed traffic will remain about the same as under current uses.

### **3.14.2 Need for Mitigation**

None identified.

## **3.15 PUBLIC SERVICES AND UTILITIES**

The *Proposed Alternative* will have direct effect on the existing building and is discussed further.

### **3.15.1 Potential Impacts**

None identified. The facility will supplement electrical and heating needs with solar panels on the roof of the building.

### ***3.15.2 Need for Mitigation***

None identified.

## **3.16 PUBLIC HEALTH AND SAFETY**

The *Proposed Alternative* will have direct effect on the existing building.

### ***3.16.1 Potential Impacts***

None identified

### ***3.16.2 Need for Mitigation***

Construction vehicles and equipment will be stored on site during the project. All construction activities will be performed using qualified personnel and in accordance with the standards specified in Occupational Safety and Health Administration (OSHA) regulations. Appropriate signage will be posted onsite and in the vicinity.

## **3.17 CUMULATIVE EFFECTS**

Cumulative effects are those that result from the incremental effect of the Proposed Alternative when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other action (40 C.F.R. 1508.7).

The *Proposed Alternative* will have direct effect on the existing building and is discussed further.

### ***3.17.1 Potential Impacts***

Most of the changed conditions at the site are from the damming of the Pecousic Brook which created the Porter Lake. The current building was built as a skating cabin for the lake. Over time the lake has become naturalized and now supports many animal, fish and amphibian species. The Proposed Alternative will serve the community in substantially the same capacity that it is already serving so no additional cumulative effects are anticipated.

### ***3.17.2 Need for Mitigation***

None identified.

## **4. PUBLIC INVOLVEMENT**

### **4.1 PUBLIC MEETINGS**

As the lead Federal agency for the NEPA compliance process for the proposed ECOS Center renovations in Springfield, Massachusetts, FEMA's goal is to expedite the preparation and review of NEPA documentation and to be responsive to the community and the purpose and need of the Proposed Action, while meeting the intent of NEPA and complying with all relevant provisions thereof.

The concept and design development process of the ECOS project has been made public for years. Multiple meetings were held, including agency and board/commission meetings, programmatic meetings with stakeholders, and public community workshops dedicated to discussing the improvements to the ECOS Center.

The City of Springfield will notify the public of the availability of the Draft EA and a Draft Finding of No Significant Impact (FONSI) through publication of a notice in the local newspaper, as required. A public comment period will commence on the initial date of the public notice.

After the public review and comment period is completed and substantive comments have been addressed, the Regional Environmental Officer will sign the FONSI of the selected alternative and proceed with the action. The EA and FONSI will then be archived on FEMA's website.

### **4.2 FEMA PUBLICATION OF DRAFT ENVIRONMENTAL ASSESSMENT NOTICE AND REQUEST FOR COMMENT**

Please see Appendix E for a copy of this notice.

## 5 LIST OF PREPARERS

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## 6 REFERENCES

- CEQ, 2010. Memorandum for Heads of Federal Departments and Agencies. Subject: Draft NEPA guidance on consideration of the effects of climate change and greenhouse gas emissions. Authored by: Nancy H. Sutley, Chair, Council on Environmental Quality, February 18, 2010.
- EO 11988. Executive Order No. 11988. Floodplain Management, May 24, 1977. 42 C.F.R. 26951.
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- FEMA, 2010. Federal Emergency Management Agency Flood Insurance Maps, available online at: [https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=firnetteHelp\\_A&title=FIRMettes](https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=firnetteHelp_A&title=FIRMettes)

## **7 APPENDICES**

### Appendix A Maps and Figures

Figure A-1 Site Location Map

Figure A-2 BioMap2

Figure A-3 Floodplain Insurance Rate Map

Figure A-4 Wetlands Map

### Appendix B Site Photographs

### Appendix C Plans and Drawings

### Appendix D State Historic Preservation Officer letter of concurrence

### Appendix E Public involvement information