

# DRAFT ENVIRONMENTAL ASSESSMENT

## Cedar Rapids Northwest Recreation Center

Cedar Rapids, Iowa

FEMA 1763-DR-IA

*March 24, 2014*



**FEMA**

**Federal Emergency Management Agency**  
**Department of Homeland Security**  
9221 Ward Parkway, Suite 300  
Kansas City, MO 64114

# TABLE OF CONTENTS

1. Introduction.....	4
2. Purpose and Need .....	5
3. Alternatives Analysis.....	6
3.1 Alternative 1 - No Action .....	6
3.2 Alternative 2 - Proposed Action .....	6
3.3 Other Alternatives Considered and Dismissed .....	7
4. Summary of Impacts and Mitigation .....	9
5. Affected Environment and Impacts .....	122
5.1 Physical Resources.....	122
5.1.1 Geology and Soils.....	122
5.1.2 Air Quality.....	133
5.1.3 Climate Change .....	155
5.2 Water Resources .....	166
5.2.1 Water Quality .....	166
5.2.2 Wetlands .....	177
5.2.3 Floodplain.....	188
5.3 Biological Resources .....	188
5.3.1 Protected Species and Habitat .....	189
5.4 Cultural Resources .....	20
5.4.1 Historic Structures .....	20
5.4.2 Archaeological Resources .....	22
5.5 Socioeconomic Considerations.....	24
5.5.1 Environmental Justice.....	244
5.5.2 Noise.....	255
5.5.3 Land Use and Planning.....	277
5.5.4 Transportation.....	277
5.5.5 Public Health and Safety .....	277
5.5.6 Demolition.....	299
5.6 Cumulative Impacts .....	299
5.7 Coordination and Permits .....	30
6. Conclusion .....	31
7. Parties Consulted and References.....	322
7.1 Parties Consulted .....	32
7.2 References.....	326
8. List of Preparers.....	366
8.1 Government Preparers .....	36

## **TABLES**

Table 4-1: Summary of Impacts and Mitigation.....	9
Table 5-1: National Ambient Air Quality Standards .....	13
Table 5-2: Federally Protected Species of Linn County, Iowa.....	19
Table 5-3: Estimated Sound Levels for Construction Equipment and Attenuation at Various Distances .....	26

## **APPENDICES**

### Appendix A

- Figure 1: Aerial Photograph of Cedar Rapids and General Location of Northwest Recreation Center
- Figure 2: Aerial Photograph of previous Time Check Recreation Center and Vicinity
- Figure 3: Aerial Photograph of the Proposed Location for Northwest Recreation Center and Vicinity
- Figure 4: Proposed site plan for the Northwest Recreation Center
- Figure 5: East Elevation of the proposed Northwest Recreation Center with Harrison School
- Figure 6: Site Elevations of the proposed Northwest Recreation Center
- Figure 7: Floor Plan of the proposed Northwest Recreation Center
- Figure 8: National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM)
- Figure 9: Google Earth aerial image with National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) layer
- Figure 10: 2010 Census Tract Boundaries for Cedar Rapids

### Appendix B

SHPO Consultation

### Appendix C

Iowa Site Inventory Form State Inventory No. 57-06418

## Abbreviations and Acronyms

ACM	Asbestos Containing Material
APE	Area of Potential Effects
BMP	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
dB	Decibels
EA	Environmental Assessment
EHP	Environmental Planning and Historic Preservation
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gases
IDNR	Iowa Department of Natural Resources
IHSEMD	Iowa Homeland Security and Emergency Management Division
Ldn	Day-night Average Sound Level
LUST	Leaking Underground Storage Tank
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSA	Office of the State Archaeologist
pCi/L	Pico Curies Per Liter
RCRA	Resource Conservation and Recovery Act
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

# 1. INTRODUCTION

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Cedar Rapids is the second largest city in the State of Iowa (population 126,326) and it is the county seat of Iowa's second largest county, Linn County (population 211,226) (2010 Decennial Census). Cedar Rapids lies on the eastern and western banks of the Cedar River. Excessive rain and snow melt resulted in extensive flooding and flood damage across the state. On May 27, 2008, President George W. Bush declared a major disaster in the State of Iowa (FEMA Disaster 1763-DR-IA) pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. Section 5121-5206. The incident period began on May 25, 2008 and closed August 13, 2008.

The National Environmental Policy Act (NEPA) requires that Federal agencies evaluate the environmental effects of proposed and alternative actions before deciding to fund an action. The President's Council on Environmental Quality (CEQ) has developed a series of regulations for implementing the NEPA. These regulations are included in Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508. They require the preparation of an Environmental Assessment (EA) that includes an evaluation of alternative means of addressing the problem and a discussion of the potential environmental impacts of a proposed Federal action. An EA provides the evidence and analysis to determine whether the proposed Federal action will have a significant adverse effect on human health and the environment. An EA, as it relates to the FEMA program, must be prepared according to the requirements of the Stafford Act and 44 CFR, Part 10. This section of the Federal Code requires that FEMA take environmental considerations into account when authorizing funding or approving actions. This EA was conducted in accordance with both CEQ and FEMA regulations for NEPA and will address the environmental issues associated with the FEMA grant funding applied to an improved project to be used for the construction of a new Recreation Center near the Harrison Elementary School located at 1310 11th Street NW.

A public notice will be published in the Cedar Rapids newspaper, *The Gazette*, before or at the beginning of the 30-day public comment period; such a notice will also be available through Cedar Rapids' *CR Progress* webpage and FEMA Region VII's Environmental Documents and Public Notices webpage. Copies of this EA will be available for the duration of the public comment period at City Hall, Cedar Rapids Public Library at 450 5th Ave SE, and on the FEMA Environmental Documents and Public Notices website.

## 2. PURPOSE AND NEED

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Pursuant to Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (42 U.S.C. 5172), as amended, the City of Cedar Rapids (hereon, “Subgrantee”) has requested funding through the FEMA Public Assistance Program. The Public Assistance Program provides supplemental Federal disaster grant assistance to State, Tribal, and local governments, and certain types of private nonprofit organizations so that communities can respond to and recover from major disasters or emergencies. The Public Assistance Program has additional rules whereby eligible subgrantees may choose to use eligible, though capped, recovery funds for improved projects that may be more beneficial to the Subgrantee than what existed prior to the disaster event.

The Time Check Recreation Center located in the City of Cedar Rapids, Iowa is a public facility eligible for FEMA Public Assistance funding to repair flood damage resulting from FEMA disaster 1763-DR-IA. The Subgrantee requests that the eligible funding for the reconstruction of the original Time Check Recreation Center to be applied toward an improved project. Pursuant to FEMA Policy 9525.13 Improved Projects, July 31, 2001, IV, are allowable “when restoration of the original damaged facility is not in the best interest of the public.”

When the Cedar River crested the Time Check Neighborhood Recreation Center located at 1131 5th Street NW in Cedar Rapids, IA was flooded with approximately 13 foot of contaminated waters. The Time Check Recreation Center was located in a FEMA-designated Special Flood Hazard Area (SFHA), meaning it lay within an area subject to a 1 percent or greater chance of flooding in any given year (100-year flood zone). has a 9000 square foot print. The building is a split level. The split level building has a 9000 square foot footprint with a lower level of 9000 square feet and a second level of 7500 sf. The second level received approximately 3.5 foot of flood waters. The Time Check Recreation Center building contained a gymnasium, mini gym, game room, and several rooms used for crafts, meetings, and other activities such as gathering spaces for family and community events. The building was approximately 30 years old. The flood damaged building was demolished and removed by the Sub-Grantee in 2012. Currently, a baseball diamond with bench shelters and equipment, a 142 square foot gazebo, playground equipment, wading pool, and parking area remain in the Time Check Park.

The Subgrantee requests that, in lieu of replacing the Time Check Recreation Center where it is at risk from future flooding, that the capped eligible funding for the improved project be applied toward a new community recreation facility outside of the risk from future flooding to replace the lost recreational capacity in Cedar Rapids.

This EA is intended to document and evaluate FEMA and Subgrantee defined alternatives in order to satisfy the Subgrantee’ s interest in using eligible recovery funds to replace the destroyed Time Check Recreation Center for a portion of the costs of construction of the Northwest Recreation Center under FEMA’s improved project policies.

### **3. ALTERNATIVES ANALYSIS**

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NEPA requires the investigation and evaluation of reasonable project alternatives as part of the environmental review process for the proposed project. Inclusion of a No Action Alternative in the environmental analysis and documentation is required under NEPA. The No Action Alternative is used to evaluate the effects of not providing eligible assistance for the improved project, thus providing a benchmark against which “action alternatives” may be evaluated. FEMA reviewed all applicable Federal, State, and local laws and Executive Orders for each alternative considered.

The City of Cedar Rapids developed a Site Selection Task Force, which included a majority of the City Council, to determine a new location for the replacement recreation center in the northwest quadrant of Cedar Rapids. After FEMA dismissed the City’s proposal to replace the facility at the original site in the SFHA, the Site Selection Task Force submitted five sites for FEMA to consider.

Site A: Ellis Park Area Tennis Courts and Partial Softball Fields located in Ellis Park at 916 Ellis Ln NW in Cedar Rapids.

Site B: Eighth Street and Ellis Lane NW, Cedar Rapids.

Site C: 1501 Ellis Blvd. NW, Cedar Rapids.

Site D: Harrison Elementary School, 1310 11th St. NW, Cedar Rapids.

Site E: 1131 Fifth St. NW Cedar Rapids.

#### **3.1 ALTERNATIVE 1 - NO ACTION**

The No Action Alternative is defined as maintaining the status quo with no additional FEMA funding provided for the construction of the new Northwest Recreation Center facility. The Results of the No Action Alternative may have a negative impact on affected Cedar Rapids future recreational needs. This may compromise long-term opportunities for community events, businesses, government practices, historical, cultural, and recreation activities due to the limited amount of available recreational facilities.

#### **3.2 ALTERNATIVE 2 - PROPOSED ACTION**

The Proposed Action is for a FEMA-funded improved project to construct a new recreational facility intended to increase affected recreational capacity. The proposed location for the Northwest Recreation Center is adjacent to Harrison Elementary School at 1310 11th Street NW. The proposed location is a grass and paved area along M Avenue NW. The proposed location would require the relocation of playground equipment and parking areas. See Appendix A for additional maps and images.

While detailed construction plans for the proposed Northwest Recreation Center have not been prepared; the Sub-grantee has prepared preliminary schematics that illustrate the proposed site plan, massing, scale, form, exterior cladding, and relocated parking for the 14,295 square foot recreation center addition to the Harrison Elementary School site. The proposed adjacent new construction would be an addition to the Harrison Elementary School. The addition would be located along a secondary elevation where surface parking currently exists. In order to distinguish the addition from the

original school, the recreation center would be setback thirty-three (33) feet from the east-facing façade of the school on 11<sup>th</sup> Street NW. The plan includes a single-story multi-purpose room on the east end of the recreation center building. The simplified design elements depicted in the schematics reference the school's gable ends with stepped-end parapets, and the new building would be clad in brick similar. The proposed recreation center's form respects the architectural style of the existing building, and its restrained design would ensure that it is compatible with, yet differentiated.

The proposed parcel site is less than one (1) acre (Approximately 0.96 acres or 41,992 square feet total) of which the Northwest Recreation Center will occupy approximately 39,000 square feet on an existing paved area. The area of potential effects (APE) for new construction, site work, additional landscaping, resurfacing of existing park would likely not exceed one (1) acre of ground disturbance.

Digital Flood Insurance Rate Map (DFIRM) panel 19113C0405D indicates the Harrison Elementary School site is located in a Zone X Flood Zone, outside of the 100-year and 500-year floodplains of the Cedar River, thereby reducing the potential of future flood losses to the new Northwest Recreation Center.

Overall, the results of the Proposed Action would continue Cedar Rapids and Linn County's 2008 flood recovery effort and would increase the amount of public recreational facilities available for events, residents, workers, and shoppers in affected Cedar Rapids. Based upon the environmental considerations authorized by all applicable Federal laws, regulations, and Executive Orders, FEMA Public Assistance policy, and criteria established by FEMA and the Subgrantee, the Proposed Action Alternative is a practicable alternative for eligible funding.

### **3.3 OTHER ALTERNATIVES CONSIDERED AND DISMISSED**

This Time Check Recreation Center sustained damage from the 2008 flooding event to such an extent that it was unfeasible to repair and the structure determined to be a total loss. A cost/benefit analysis was conducted and determined that the facility was not salvageable. Repair of this structure would essentially mean reconstruction of a majority of the exterior, windows, heating and air units, duct work, lighting, wiring, electrical supply components, contents, wall coverings, flooring, parking areas and structural support components. The financial outlay and other construction concerns associated with repair of an aging structure to such an extent would be cost prohibitive. As a result, repair and restoration of the structure was not a viable option. The flood damaged building was demolished and removed by the Sub-Grantee in 2012.

On August 3, 2012, on an 8-0 vote, the City of Cedar Rapids City Council members selected Site E, 1131 Fifth St. NW Cedar Rapids, for a new facility to replace the flood-ruined Time Check Recreation Center. In November of 2012, FEMA dismissed this requested alternative, Presidential Executive Order (EO) 11988, since the proposed site was in the SFHA and practical alternatives existed outside of the SFHA.

The Site Selection Task Force dismissed Site A: Ellis Park Area Tennis Courts and Partial Softball Fields located in Ellis Park at 916 Ellis Ln NW in Cedar Rapids due to significant public disapproval of additional development in Ellis Park.

FEMA dismissed Site B: Eighth Street and Ellis Lane NW, Cedar Rapids, citing EO 11988, since the proposed site was in the SFHA and practical alternatives existed outside of the SFHA.



FEMA dismissed Site C: 1501 Ellis Blvd. NW, Cedar Rapids, also citing EO 11988, since the proposed site was in the SFHA and practical alternatives existed outside of the SFHA.

## 4. SUMMARY OF IMPACTS AND MITIGATION

The No Action Alternative and the Proposed Action Alternative are evaluated in this EA and their impacts are summarized in this section using the following scale. Impacts are assumed to be negative unless noted otherwise. Chapter 5 further details the anticipated impacts of both alternatives.

- No Impact – no impacts are anticipated
- Negligible Impact – no discernible impacts are anticipated or are minimal and cannot be measured meaningfully
- Minor Impact – anticipated impacts are measurable, but are minor and within or below regulatory standards and/or are confined to the project site(s)
- Moderate Impact – anticipated impacts are measurable and/or have impacts that may extend beyond the project site(s), may require permitting, may require limited mitigation actions or coordination to minimize negative impacts
- Major Impact – anticipated impacts are readily measurable, have a regional impact, require mitigation to reduce impacts, and/or exceed existing regulatory standards; permanent changes to the resources would be expected

Table 4-1: Summary of Impacts and Mitigation

Affected Environment	Impacts	Mitigation Measures / BMPs
Geology and Soils		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Minor Impact	Construction Best Management Practices (BMPs) will be required to control soil erosion and sedimentation.
Air Quality		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Minor Impact (short term), Minor Impact (long term)	Construction BMPs appropriate to site conditions and fugitive dust controls to reduce short term impacts to negligible levels will be required
Climate Change		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Minor Impact	Not Applicable
Water Quality		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	No to Minor Impact	Construction BMPs will be required to control soil erosion and sedimentation. While the proposed project disturbs less than 1 acre, if the construction area would expand to 1 acre or more, a Storm Water Pollution Prevention Plan (SWPPP) and NPDES permit will be required.  Appropriate sediment and erosion control BMPs for ground-disturbing activities will be required.

Wetlands		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	No to Negligible Impact	Appropriate construction BMPs will be required to control sediment and erosion for ground-disturbing activities.
Floodplain		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	No Impact	Not Applicable
Protected Species and Habitat		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	No Impact	Not Applicable
Historic Structures		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Minor Impact	Because detailed construction plans are not available and the schematics provided lack sufficient detail to ensure consistency with the Secretary of the Interior's Standards, consultation with the SHPO resulting in a finding of no adverse effects to historic properties is contingent upon the following conditions: Exterior materials for the recreation center building, particularly the brick-cladding and roofing must closely match those of the Harrison Elementary School in texture, color, and value. Windows and doors would closely match those of the historic school building in color and value. The horizontal trim feature located underneath the first floor windows must continue around the entire building, including the south elevation. Windows in the east and west facing gable ends of the gymnasium roof are required to replicate the patterning of the divided lights as indicated for the first floor windows of similar size. If these design elements change, additional consultation will be required to assess impacts to historic properties.
Archaeology		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	No Impact	In the event of unanticipated archaeological discoveries, work will immediately stop, site shall be secured, and FEMA immediately notified. FEMA will consult with SHPO. Work will not resume on site until FEMA/SHPO consultation is resolved and approval to resume work is given by IHSEMD.
Environmental Justice		
No Action	Minor Impact	Not Applicable
Proposed Northwest Recreation Center	Positive Minor Impact (short-term) Positive Moderate Impact (long-term)	Not Applicable

Noise		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Minor to Moderate Impact	Construction BMPs to reduce impacts of construction noise during work are required. See Noise section.
Land Use and Planning		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	No to Negligible Impact	No rezoning should be necessary under local requirements and standard zoning process.
Transportation		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Moderate Impact	Not Applicable
Public Health, Safety, and Hazardous Materials		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	No to Negligible Impact	Any work requiring disturbance of asbestos containing materials (ACM) must be undertaken by properly licensed contractors; hazardous materials must be properly disposed. If unanticipated contamination is discovered during work, Subgrantee must contact the IDNR and stop work until the IDNR indicates no further assessment is needed of the discovery.
Demolition		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Minor Impact	Subgrantee is required to coordinate with the IDNR on the recommendations of their consultant on clean-up or containment needs and required to properly dispose of any ACM (i.e., concrete) where present in the remaining structure on the site and any other hazardous materials.
Cumulative Impact		
No Action	No Impact	Not Applicable
Proposed Northwest Recreation Center	Minor Impact	While the proposed project is a component of many actions being undertaken as recovery efforts from the 2008 floods, the particular project does not have a significant effect cumulatively because it would replace a demolished facility with one more than 2,000 square feet smaller. Implementation of BMPs for air and water quality will also reduce the potential for the relatively small project to contribute to cumulative impacts.

## 5. AFFECTED ENVIRONMENT AND IMPACTS

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Chapter 5 describes the existing environmental conditions and the potential impacts and effects that may occur due to FEMA funding the Recreation Center improved project. The environmental impacts of the No Action Alternative are also analyzed. In this chapter are descriptions for potential environmental consequences of the proposed alternatives by comparing them with other potentially affected environmental components. The proposed activity is evaluated against existing environmental documentation on present actions and planned actions and information on anticipated future projects to determine the potential for cumulative impacts. The potential for significant environmental consequences is evaluated utilizing the context and intensity considerations as defined in Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 CFR, 1508.27).

### 5.1 PHYSICAL RESOURCES

The physical resources considered in this EA are soils, air quality and climate change, and visual resources. The proposed project does not have the potential to affect geology because construction activities will not be deep enough to affect bedrock; therefore, geological resources are not discussed in this EA.

#### 5.1.1 Geology and Soils

The original and proposed site locations were previously graded and contoured during previous development, it is anticipated that any soil loss would be minimal. Short-term impacts to soils would occur during any additional ground clearing or site preparation. Any soil loss would be directly from ground disturbing activities or indirectly via wind or water. Site preparation for construction of the proposed project would require stripping and grading of existing soils. Best Management Practices (BMP), such as the development and implementation of an erosion and sedimentation control plan, the use of silt fences or hay bales, re-vegetation of disturbed soils, and maintenance of site soil stockpiles, would be utilized to prevent soils from eroding and dispersing off-site.

##### 5.1.1.1 Alternative 1 - No Action

The No Action Alternative would have no effect on geology or soils. There would be no construction or ground disturbing activities associated with this alternative.

##### 5.1.1.2 Alternative 2 - Proposed Action

The construction of the proposed Northwest Recreation Center would result in the permanent disturbance of surface soils. Construction Best Management Practices (BMP), as identified in Storm Water Pollution Prevention Plan (SWPPP), are required by the U.S. Environmental Protection Agency (EPA) through the 1972 Clean Water Act and National Pollution Discharge Elimination System (NPDES) regulations. Implementation of BMPs should minimize soil erosion and loss until construction is complete and the site is permanently stabilized. Therefore, the Proposed Action would likely not have a significant impact to geology or soils. Structural erosion control BMP may include the placement of mulch or grass, covering stockpiles, silt fencing, and sediment traps. The Iowa Department of Natural Resources (IDNR) administers NPDES permits locally for the EPA; the Subgrantee is required to coordinate with IDNR for any NPDES permits if project ground disturbance extends to one (1) acre or greater in size (also see 5.14 Coordination and Permitting). See 5.5.5 Public Health and Safety for additional discussion regarding potential soil contamination.

## 5.1.2 Air Quality

The 1990 Clean Air Act, its amendments, and NEPA require that air quality impacts be addressed in the preparation of environmental documents. The EPA established National Ambient Air Quality Standards (NAAQS) for six (6) “criteria” pollutants (i.e., carbon monoxide, nitrogen dioxide, ozone, particulate matter PM<sub>10</sub> and PM<sub>2.5</sub>, sulfur dioxide, and lead) and defined allowable concentrations not to be exceeded in a given time period to protect human health (primary standard) and welfare (secondary standard) with a reasonable margin of safety.

Primary and secondary standards for NAAQS have been established for most of the criteria pollutants which are detailed below in Table 5-1. The EPA is authorized to designate locations that have not met the NAAQS as non-attainment and to classify non-attainment areas according to their degree of severity. Attainment pertains to the compliance/violation of any of the six (6) NAAQS criteria pollutants mentioned above. Each year, states are required to submit an annual monitoring network plan to the EPA. Network plans provide for the creation and maintenance of monitoring stations, in accordance with EPA monitoring requirements specified in 40 C.F.R. Part 58.. The State of Iowa’s most recent Monitoring Network Plan was approved by EPA Region VII in December 2010.

The Linn County Public Health Department’s Air Quality Division is authorized by the EPA to implement and enforce the Clean Air Act and the county’s code on Air Quality. The Linn County Air Quality Division maintains a network of air monitoring instruments located throughout the Cedar Rapids metropolitan area to measure ambient air quality. As of March 30, 2012, the only area in the State of Iowa considered a non-attainment area for the six (6) criteria pollutants is Pottawattamie County.

Table 5-1: National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m <sup>3</sup> )	8-hour	None	
	35 ppm (40 mg/m <sup>3</sup> )	1-hour		
Lead	0.15 mg/m <sup>3</sup>	Rolling 3-Month Average	Same as Primary	
Nitrogen Dioxide	53 ppb	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour	None	
Particulate Matter (PM <sub>10</sub> )	150 mg/m <sup>3</sup>	24-hour	Same as Primary	
Particulate Matter (PM <sub>2.5</sub> )	15 mg/m <sup>3</sup>	Annual (Arithmetic Average)	Same as Primary	
	35 mg/m <sup>3</sup>	24-hour	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour	Same as Primary	
	0.08 ppm (1997 std)	8-hour	Same as Primary	

	0.12 ppm	1-hour	Same as Primary	
Sulfur Dioxide	0.03 ppm (1971 std)	Annual (Arithmetic Average)	0.5 ppm	3-hour
	0.14 ppm (1971 std)	24-hour		
	75 ppb	1-hour	None	

Source: USEPA 2011a

### 5.1.2.1 Alternative 1 - No Action

No construction activities would occur with the selection of the No Action Alternative. Ambient air quality would not be affected beyond the existing conditions which are presently within regulatory standards.

### 5.1.2.2 Alternative 2 - Proposed Action

The Proposed Action would require soil excavation for construction activities. Short-term emission of criteria pollutants are anticipated during the construction phase. Construction equipment and personal vehicles would generate exhaust emissions; including carbon monoxide and nitrogen dioxide.

The operation of motor vehicles on unpaved surfaces and the use of earthmoving equipment would generate particulate matter. Soil manipulation during construction would increase the potential for emissions of fugitive dust and short-term air quality deterioration. This localized, short-term condition would be discontinued once the project is completed and disturbed soils are stabilized and/or permanently covered. The Proposed Action would require approximately 12 months of construction and heavy equipment including bulldozers, scrapers, and backhoes.

Construction activities will require Best Management Practices (BMP) to minimize fugitive dust emissions. This may be achieved through watering, controlling entrainment of dust by vehicles, and/or other measures to reduce the disturbance of particulate matter. Short-term increases in ambient concentrations of criteria pollutants from heavy equipment would be minor and Federal or Iowa air quality attainment levels would not be exceeded. The Proposed Action is not expected to have long-term adverse impacts on ambient air quality in the area.

#### Mitigation: Requirement to Use Construction Best Management Practices

- Construction activities are required to minimize fugitive dust emissions through watering, controlling entrainment of dust by vehicles, and/or other measures to reduce the disturbance of particulate matter.
- During site preparation and construction, the contractor would:
  - Minimize land disturbance;
  - Suppress dust on traveled paths that are not paved through wetting, use of watering trucks, chemical dust suppressants, or other reasonable precautions to prevent dust from entering ambient air;
  - Cover trucks when hauling soil;
  - Minimize soil track-out by washing or cleaning truck wheels before leaving the construction site;
  - Stabilize the surface of soil piles; and
  - Create wind breaks.

- During site restoration, the contractor would:
  - Remove unused material, and
  - Remove soil piles via covered trucks.

### 5.1.3 Climate Change

According to the EPA, climate change “refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer.” (EPA Statement, <http://www.epa.gov/climatechange/basics/>, accessed March 10, 2014) The five (5) physical components responsible for the climate system and its variations are the atmosphere, hydrosphere, cryosphere, lithosphere, and biosphere (National Aeronautics and Space Administration NASA) Glossary, <http://earthobservatory.nasa.gov/Glossary/?mode=all>, accessed March 10, 2014). However EPA identifies and regulates anthropogenic or human actions that may affect climate change. This is dubbed “abrupt climate change” which occurs over decades and distinguishes it from natural variability that occurs gradually over centuries or millennia. In 2010 the CEQ issued draft guidance for Federal agencies to consider climate change in NEPA documentation. This guidance uses EPA-defined thresholds for mandatory greenhouse gas (GHG) emissions, reporting 25,000 metric tons per year as a threshold level where quantitative analysis is required. This GHG threshold is equivalent to the energy needed to power 2,300 homes for a year or the emissions from 4,600 passenger vehicles per year (EPA, 2009). FEMA has determined that the actions considered in this EA are incremental changes compared to the pre-disaster condition and the overall effects are expected to be significantly below this threshold. The majority of GHG emissions result from industry, heating and cooling of buildings, and automobile non-point sources.

Between 1958 and 2007, heavy precipitation increased by 31 percent in the Upper Midwest (i.e., Iowa, Michigan, Ohio, Missouri, Minnesota, Illinois, Indiana, and Wisconsin). During the same period, the Upper Midwest experienced a 27 percent increase in the average number of days with heavy precipitation. Heavy downpours are projected to increase between 10 percent and 25 percent through the 2090s (U.S. Global Change Research Program (USGCRP), 2009).

Average temperatures in the United States have increased two (2) degrees Fahrenheit over the last 50 years. By the end of the century, average temperatures in Iowa are projected to increase four (4) to six (6) degrees Fahrenheit under low-emission models, or eight (8) to 10 degrees Fahrenheit under high-emission models. Under current modeled projections, Iowa may have increased occurrences of flooding, heat waves, droughts, invasive plant and insect species, and insect-borne diseases (USGCRP, 2009). While climatologists collect and manipulate data to model and predict future impacts of climate change, the available data indicates that the frequency, severity, and magnitude of atmospheric and oceanic storms will likely increase in intensity and will become more unpredictable in decades to come.

Embodied energy measures sustainability to account for the energy used by structures or to create materials. Another measure of sustainability is life-cycle or cradle-to-grave analysis which accounts for the extraction, manufacture, distribution, use, and disposal of materials. While resources exist to quantify embodied energy and life cycle analysis, the calculations were not prepared by the Subgrantee for the options presented in this EA.

Average temperatures in Cedar Rapids range from lows in January between 15 and 20 degrees Fahrenheit to highs in July between 70 and 75 degrees Fahrenheit. Peak precipitation months are June, July, and August which average four (4) to five (5) inches per month. Low precipitation months are January and February and average one (1) inch per month. Peak snowfall months are December and January averaging eight (8) to nine (9) inches per month.



### **5.1.3.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. Embodied energy or energy would not be affected beyond the existing conditions.

### **5.1.3.2 Alternative 2 - Proposed Action**

The Proposed Action would have a minor impact of embodied energy from the use of concrete and metallic materials used to construct the Northwest Recreation Center. Energy use in the new facility would have minor increase from the current land use, but would be similar to the previous Time Check Recreation Center.

## **5.2 WATER RESOURCES**

### **5.2.1 Water Quality**

Congress enacted the Federal Water Pollution Control Act in 1948 which was reorganized and expanded in 1972 and became known as the Clean Water Act (CWA) in 1977, as amended. The CWA regulates discharge of pollutants into water with sections falling under the jurisdiction of the U.S Army Corps of Engineers (USACE) and the EPA. Section 404 of the CWA establishes the USACE permit requirements for discharging dredged or fill materials into Waters of the United States and traditional navigable waterways. The USACE regulates activities within navigable waters is also authorized under the 1899 Rivers and Harbors Act. The USACE's jurisdiction extends to tributaries and wetlands where a "significant nexus" exists between the resources as articulated in two (2) recent Supreme Court decisions, *SWANCC v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) and *Rapanos v. United States*, 547 U.S. 715(2006). Under NPDES, the EPA regulates both point and non-point pollutant sources, including storm water and storm water runoff. Activities that disturb one (1) acre of ground or more are required to apply for an NPDES permit administered in Iowa through the IDNR. Iowa does not have any designated wild or scenic rivers, so the regulatory framework for water resources provided in the Wild and Scenic Rivers Act does not apply.

Cedar Rapids is further regulated by NPDES with a Municipal Separate Storm Sewer System (MS4) individual or general permit. MS4 permits require the Subgrantee to develop and maintain a storm water management program to reduce storm water contamination and limit contamination discharges.

#### **5.2.1.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. Surface and ground water quality for the Cedar River and aquifers would not be affected beyond the existing conditions.

#### **5.2.1.2 Alternative 2 - Proposed Action**

The Proposed Action would disturb less than one (1) acre of ground for the amount of excavation required to ensure stabilized soils, utilities, and associated site work. However, if construction activities are increased and disturb one (1) acre or more, the Subgrantee will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and obtain and comply with a NPDES permit from the IDNR (also see 5.7 Coordination and Permits). All ground disturbing activities would require site and project appropriate sediment and erosion control Best Management Practices (BMP). Implementation of BMP and permit conditions would reduce the potential impact of this project on water quality to minor levels.

## 5.2.2 Wetlands

In addition to the CWA, Executive Order (EO) 11990 Protection of Wetlands requires Federal agencies to avoid to the extent practicable, minimize, and/or mitigate adverse impacts to wetlands. Under the CWA two (2) types of authorizations are available from the USACE for activities regulated under Section 404 of the CWA: general nationwide permits, which are issued for a specific category of similar activities and include nationwide permits defined in 33 C.F.R. §330.2(b) and individual permits issued after review of the project, project alternative, and proposed mitigation.

33 C.F.R. §328.3(b) defines wetlands as:

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Both the USACE and EPA utilize this definitional language.

Wetlands have three (3) diagnostic environmental characteristics (Corps of Engineers Wetlands Delineation Manual, 1987):

1. **Vegetation:** The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described in (a) above. Hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions.
2. **Soil:** Soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions.
3. **Hydrology:** The area is inundated either permanently, or periodically at mean water depths of less than or equal to 6.6 feet (~ 2 meters), or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.

The U.S. Fish and Wildlife Service (USFWS) maintain National Wetlands Inventory maps that include conventional maps, downloadable digital map data, dynamic online maps<sup>1</sup> and geographic information system data. Federal actions within identified wetlands require the Federal agency to conduct an 8-step process, which like NEPA, requires the evaluation of alternatives prior to funding the action. FEMA's regulations on conducting 8-step processes are contained in 44 C.F.R. Parts 9.5 and 9.6.

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<sup>1</sup> The U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory Geospatial Wetlands Digital Data is available at; <http://www.fws.gov/wetlands/data/index.html>

### **5.2.2.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. Wetlands would not be affected beyond the existing conditions.

### **5.2.2.2 Alternative 2 - Proposed Action**

A review of the National Wetlands Inventory wetlands maps for the Proposed Action indicates that there are no wetlands located on or near the proposed site. The Subgrantee will be required to implement construction Best Management Practices to reduce or eliminate any waste runoff into the Cedar River during construction phase.

## **5.2.3 Floodplain**

EO 11988 Floodplain Management requires that Federal agencies avoid funding activities that directly or indirectly support occupancy, modification, or development of the 100-year floodplain whenever there are practicable alternatives. According to 44 C.F.R. Part 9.4, “*Floodplain* means the lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year. Wherever in this regulation the term “floodplain” is used, if a critical action is involved, “floodplain” shall mean the area subject to inundation from a flood having a 0.2 percent chance of occurring in any given year (500-year floodplain).” Further, EO 11988 requires consideration of the 500-year floodplain for critical facilities such as hospitals and fire stations. FEMA uses Flood Insurance Rate Maps (FIRM) to identify floodplains for the National Flood Insurance Program (NFIP). Federal actions within the 100-year floodplain, or 500-year floodplain for critical actions, require the Federal agency to conduct an 8-step process. This process, like the NEPA process, requires the evaluation of alternatives prior to funding the action. FEMA’s regulations for conducting 8-step processes are contained in 44 C.F.R. Part 9.5 and 9.6. The City of Cedar Rapids is a participant in the NFIP.

### **5.2.3.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. The 100-year and 500-year floodplains would not be affected beyond the existing conditions.

### **5.2.3.2 Alternative 2 - Proposed Action**

The Proposed Action would have no to negligible impact on the 100-year floodplain. While the original Time Check Recreation Center facility was in Zone AE in the 100-year floodplain, the proposed location for the improved project is a parking lot adjacent to the Harrison Elementary School. The proposed construction footprint for the Northwest Recreation Center is sited outside the 100-year floodplain in Zone X.

## **5.3 BIOLOGICAL RESOURCES**

### **5.3.1 Protected Species and Habitat**

The Endangered Species Act of 1973 establishes a Federal program to conserve, protect, and restore threatened or endangered plants and animals and their habitats. The Endangered Species Act specifically charges Federal agencies with the responsibility of using their authority to conserve threatened or endangered species.

All Federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species<sup>2</sup>

**Table 5-2: Federally Protected Species of Linn County, Iowa**

<b>Federally Protected Species of Linn County, Iowa Common Name</b>	<b>Scientific Name</b>	<b>Status</b>	<b>Potential Occurrence at Site</b>	<b>Reason</b>
Higgin's-eye Pearly Mussel	<i>Lampsilis higginsii</i>	Endangered	The Higgins eye is a freshwater mussel of larger rivers where it is usually found in deep water with moderate currents.	No habitat
Western and Eastern prairie fringed orchid	<i>Platanthera praeclara</i>	Threatened	Both Prairie Fringed Orchids occur most often in mesic to wet unplowed tall grass prairies and meadows but have been found in old fields and roadside ditches.	No habitat
Prairie bush clover	<i>Lespedeza leptostachya</i>	Threatened	Prairie bush clover occurs in mesic to wet unplowed tall grass prairies and meadows.	No habitat

**5.3.1.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. No Federally-listed (or Iowa protected species) threatened or endangered vegetation and wildlife would be impacted.

**5.3.1.2 Alternative 2 - Proposed Action**

FEMA reviewed lists from both USFWS and the IDNR for threatened and endangered species that have the potential to occur in Linn County. Documentation review and field visits to the project area determined that Federally-listed (and Iowa protected species) threatened or endangered species identified having the potential to occur in Linn County are not present in the area and would not be impacted by the project. FEMA’s determination factored in that the site presents no native habitat, remnant prairie lands and no upland trees, forests, or caves that might serve as endangered bat habitat. Additionally, the site does not contain or adjoin any streams or riparian woods, nor would any construction impact the Wapsipinicon River or its watershed. These are the types of habitats where endangered or threatened species in Linn County may be present. The proposed construction of the Northwest Recreation Center would have no effect upon Federally-listed (or Iowa protected species) threatened and endangered species or critical habitats for threatened and

<sup>2</sup> 16 U.S.C.1536(a)(2); Endangered Species Act of 1973, Section 7(a)(2)

endangered species. The proposed site is a grass park and paved parking lot; also there are no remaining native habitats present in this area.

## **5.4 CULTURAL RESOURCES**

In addition to review under NEPA, consideration of impacts to cultural resources is mandated under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, which is implemented by 36 C.F.R. Part 800. Requirements include the identification of significant cultural resources that may be impacted by the undertaking. Cultural resources are prehistoric and historic sites, structures, districts, buildings, objects, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

Only those cultural resources determined to be potentially significant under NHPA are subject to protection from adverse impacts resulting from an undertaking. To be considered significant, a cultural resource must meet one or more of the criteria established by the National Park Service that would make that resource eligible for inclusion in the National Register of Historic Places (NRHP). The term “eligible for inclusion in the NRHP” includes all properties that meet the NRHP listing criteria, which are specified in the Department of Interior regulations 36 C.F.R. §60.4 and NRHP Bulletin 15. Sites not yet evaluated may be considered potentially eligible for inclusion in the NRHP and, as such, are afforded the same regulatory consideration as nominated properties. Whether prehistoric, historic, or traditional, significant cultural resources are referred to as “historic properties.”

For the purposes of this analysis, the term “Area of Potential Effects” (APE) as defined under cultural resources legislation is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. For the No Action Alternative, no construction activities would occur; therefore Section 106 review is not necessary. For the Proposed Action Alternative evaluated in this EA, the APE for this undertaking for archaeological resources is limited to the ground disturbing activities associated with the construction of the Northwest Recreation Center and necessary utility connections. The APE for this undertaking regarding historic structures includes the Harrison Elementary School and extends to the surrounding, predominately residential neighborhood in which historic structures could potentially be structurally or visually effected, should any historic properties be present.

### **5.4.1 Historic Structures**

FEMA has considered the potential for these two Alternatives to affect historic structures.

#### **5.4.1.1 Alternative 1 - No Action**

For No Action Alternative, no construction activities would occur; therefore Section 106 review would not be necessary.

#### **5.4.1.2 Alternative 2 - Proposed Action**

The Proposed Action Alternative would require removal of the surface parking lot and the construction of the proposed Recreation Center adjacent to the Harrison Elementary School, which was designed by Cedar Rapids architect Harold E.

Hunter in the Tudor Revival style and constructed in 1929-1930, with classroom additions in 1955, and an annex added to the site in 1995.

Various sources were checked to determine if any previously identified historic properties are located within the APE for the Proposed Action Alternative for this undertaking and to determine the potential for the APE to contain previously unidentified historic properties. This review included the Iowa State Historic Preservation Office's (SHPO) Iowa Site Inventory, the NRHP and National Historic Landmarks Databases, and the Office of the State Archaeologist's (OSA) I-Sites GIS and Database, historic maps and aerial photographs available through the Iowa Geographic Map Server at Iowa State University and the University of Iowa Libraries' Iowa Digital Library.

The proposed project is not within the boundaries of a district that is listed in or has been determined eligible for listing in the NRHP. The Harrison Elementary School site is situated at the confluence of Wagner's Addition to the east, Hull's Third Addition to the southeast, and Highland Park Addition to the south. These three residential subdivisions were subject to reconnaissance level architectural and historical surveys conducted in 2009 by the Louis Berger Group, Inc. of Marion, IA. The surveys were undertaken to assist FEMA with NRHP evaluations for properties damaged during the 2008 flooding event. The three referenced reconnaissance surveys identified one property that is listed individually in the NRHP, and resulted in recommendations of NRHP eligibility for a small number of individual resources, none of which are located on blocks facing the Harrison Elementary School. No NRHP listed or eligible districts were identified in the reconnaissance surveys.

The Harrison Elementary School had not been previously evaluated for its potential eligibility for listing in the NRHP. FEMA requested that Marlys Svendsen, IHSEMD Historic Preservation Project Specialist evaluate the Harrison Elementary School to assist FEMA in determining its NRHP eligibility. The results of this evaluation are presented in an Iowa Site Inventory Form (ISIF), State Inventory No. 57-06418 (Appendix C). As described above, the Harrison Elementary School was designed by Cedar Rapids architect Harold E. Hunter in the Tudor Revival style and constructed in 1929-1930, with classroom additions in 1955, and an annex added to the site in 1995. Ms. Svendsen recommended that Harrison Elementary School is eligible for listing in the NRHP under Criteria A and C of the NRHP listing criteria.

Detailed construction plans for the proposed Northwest Recreation Center have not been prepared; however, the Sub-grantee provided FEMA with preliminary schematics that illustrate the proposed site plan, massing, scale, form, exterior cladding, and relocated parking for the 14,295 square foot recreation center addition to the Harrison Elementary School site. The proposed adjacent new construction would not be an attached addition to the Harrison Elementary School, and would therefore not result in the loss or destruction of historic fabric or features that characterize the historic school building. The addition would be located along a secondary elevation where surface parking currently exists, and would not result in the destruction of important landscape features on the site. The recreation center would be setback thirty-three (33) feet from the façade of the school, and would not diminish the historic property's ability to convey its historic significance. The plan includes a single-story multi-purpose room on the east end of the recreation center building; therefore, the large street-facing gable end of the gymnasium roof would be setback to nearly align with the rear elevation of the school. The simplified design elements depicted in the schematics reference the school's gable ends with stepped-end parapets, and the new building would be clad in brick similar to that of the historic school. The proposed recreation center's form respects the architectural style of the historic building, and its restrained design would ensure that it is compatible with, yet differentiated from the historic building.

On the basis of the limited information in the schematics, FEMA made a determination that the historic character of the overall property would not be diminished; therefore, construction of the proposed Northwest Recreation Center and relocation of the parking to the public right-of-way would result in no adverse effects on the Harrison Elementary School. FEMA assessed the effects of the Proposed Action Alternative on historic structures and consulted with the SHPO. The SHPO concurred with FEMA's determination that the Harrison Elementary School meets the criteria to be considered eligible for listing in the NRHP under Criteria A and C, and further concurred with FEMA's finding that the undertaking would result in no adverse effects to historic properties (Appendix B), as the proposed Northwest Recreation Center will not alter any of the characteristics that qualify the school for listing in the NRHP if implemented in accordance with the available schematics, and the following conditions: FEMA would condition this project approval to require that exterior materials for the recreation center building, particularly the brick-cladding and roofing closely match those of the Harrison Elementary School in texture, color, and value, and that the windows and doors would closely match those of the historic school building in color and value to ensure the new building is harmonious with the historic one. Additionally, as a proposed south elevation is not included in the schematics, the conditions will include that the horizontal trim feature located underneath the first floor windows continue around the entire building, including the south elevation. Finally, the windows in the east and west facing gable ends of the gymnasium roof would be required to replicate the patterning of the divided lights as indicated for the first floor windows of similar size. Should any of these design elements depicted in the preliminary schematics change, additional consultation will be required to assess potential impacts to historic properties.

## **5.4.2 Archaeological Resources**

FEMA has considered the potential for the two Alternatives to affect archaeological resources.

### **5.4.2.1 Alternative 1 - No Action**

For No Action Alternative, no construction activities would occur; therefore Section 106 review would not apply.

### **5.4.2.2 Alternative 2 - Proposed Action**

Proposed Action Alternative would require the removal of the surface parking lot and some adjacent turfed areas, the construction of the Recreation Center including underground utility connections, and modifications to the street to accommodate parking.

Various sources were checked to determine if any previously identified historic properties, including archeological sites located within the APE and to determine the potential for the APE to contain previously unidentified historic properties. This review included the NRHP and National Historic Landmarks Databases, and the OSA I-Sites GIS and Database, historic maps and aerial photographs available through the Iowa Geographic Map Server at Iowa State University and the University of Iowa Libraries' Iowa Digital Library. According to the master inventory of archaeological sites in Iowa, no previously recorded archaeological sites are located within the APE. Multiple known archaeological sites are located within one (1) mile of the APE. The site is considered moderately sensitive for the presence of pre-historic (Native American) archaeological deposits.

Historically, the proposed location is in the school yard of Harrison Elementary School since its inception in 1929. Before that, the land was owned by I. C. Emery. There is no evidence of a structure on the land, and Emery was not noted in the available local histories. Recent impacts include the placement of the parking lot about 50 years ago over about half of the APE for ground disturbing activities. It is unclear what the depth of disturbance was by placing this pavement as it can

vary greatly depending on the technique used. Prehistoric-period archaeological sites are fairly dense around the Cedar River, and there are three mound groups located in the bluffs overlooking the river. The closest mound group is reported approximately 750 meters to the northwest. A prehistoric camp is known along the riverfront to the northeast. LANDMASS modeling indicated high archaeological suitability for the bluffs, but does not document the floodplain suitability, where the APE resides. The USDA soil survey indicates the APE is on the border of Fayette Silt Loam and Ackmore-Nodaway-Urban Land Complex. Fayette is an upland and high stream terrace soil that is suitable to prehistoric site location. Ackmore and Nodaway are Camp Creek member soils of the Deforest Formation, meaning they are the result of flooding within the last few hundred years. FEMA determined the APE is close enough to the margin to merit investigation. The LiDAR imagery indicated what looks like a possible prehistoric burial mound at the base of the bluffs just 80 meters (~250 feet) west of the APE. Historical aerial photographs show a tree on the mound even in the 1930s. Due to the proximity to significant archaeological sites, LANDMASS, questions about the level of previous disturbance and actual soil type, and a possible mound in the immediate vicinity, FEMA required the sub-grantee to undertake a Phase I archaeological survey of the project area. FEMA requested that the survey include reference and perhaps even investigation of this possible nearby mound feature, as its nature would have an effect on the sensitivity and level of effort of survey within the APE.

A Phase I archaeological survey was completed by Wapsi Valley Archaeology, Inc. of Anamosa, Iowa in December 2013. The results of the investigation were presented in *Phase I Intensive Archaeological Survey for the Proposed Northwest Recreation Center in Cedar Rapids, Iowa, Wapsi Valley Archaeology Report #758*. To address the issue of the LiDAR anomaly regarding the potential mound feature, Wapsi Valley conferred with the Office of the State Archaeologist of Iowa's Burial Program, and performed a field inspection of this feature, which concluded that the feature is a remnant of previous modern construction activities and not a prehistoric burial mound. Archaeological Site 13LN1110 was identified during the field investigation. This site is a historic scatter adjacent to the Harrison Elementary School, which is comprised of historic debris isolated to a layer of fill. Wapsi Valley's opinion is that this archaeological site is not eligible for listing in the NRHP on its own merit, and is not considered a contributing element to the architectural site's historic importance. Wapsi Valley recommended no further archaeological investigation for the proposed project.

FEMA agreed with the methodology and results of the Phase I archaeological investigation conducted by Wapsi Valley for the proposed Northwest Recreation Center, and based on Wapsi Valley's recommendation, FEMA determined that Site 13LN1110 does not meet the criteria to be considered eligible for listing in the NRHP. FEMA consulted with the SHPO regarding the results of the survey and the effects of the undertaking on archaeological resources. The SHPO agreed with the methodology and results of the survey, and concurred with FEMA's determination that the historic scatter documented as site 13LN1110 does not meet the criteria for listing in the NRHP. The SHPO further concurred with FEMA's finding that the undertaking would result in no adverse effects to historic archeological resources.

Due to the potential for post review archaeological discoveries on the site, FEMA would condition approval of the undertaking with the following discovery clause: In the event that any archaeological deposits (soils, features, or any other remnants of human activity) are uncovered during the undertaking, this project shall be halted, the Subgrantee shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. The Subgrantee will inform IHSEMD immediately, will secure all archaeological findings and restrict access to the area. IHSEMD shall notify FEMA and FEMA will consult with the SHPO and the State Archaeologist of Iowa. Work in sensitive areas may not resume until consultations are completed or until an archaeologist who meets the Secretary of the



Interior’s Professional Qualification Standards determines the extent and historical significance of the discovery. Work may not resume at or around the delineated archaeological deposit until the Subgrantee is notified by IHSEMD.

If archaeological resources are encountered and subsequently recommended eligible for listing in the NRHP by an SOI qualified archaeologist, construction activities on the site shall halt until FEMA has re-opened and concluded consultation with the SHPO. In the event that NRHP eligible archaeological resources may be identified and the project cannot be modified to avoid adverse effects to archaeological resources, FEMA would initiate adverse effects consultation with the SHPO and other consulting parties including Native American Tribes as appropriate, and through the development of a MOA under Section 106, develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic archaeological resources. Through resolution of adverse effects, FEMA would make information regarding the undertaking and effected historic properties available to the public and provide an opportunity for the public to express their views on resolving adverse effects of the undertaking on archaeological resources. The resultant MOA would evidence FEMA’s compliance with its statutory responsibilities under Section 106 of the NHPA.

## 5.5 SOCIOECONOMIC CONSIDERATIONS

### 5.5.1 Environmental Justice

On February 11, 1994, President William J. Clinton signed Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” This EO directs Federal agencies to focus attention on human health and environmental conditions in minority and/or low-income communities. The EO goals are to achieve environmental justice, fostering non-discrimination in Federal programs that substantially affect human health or the environment, and to give minority or low-income communities greater opportunities for public participation in and access to public information on matters relating to human health and the environment. Also identified and addressed, as appropriate are, disproportionately high and adverse human health, or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.

#### Time Check Neighborhood Demographics

Total Population	3362
Black Population	93
Hispanic Population	77
Asian Population	74
% of Reach Population below Poverty Level	11
Children <16 years	776

Source: <http://www.mvr.usace.army.mil/Portals/48/docs/FRM/CedarRapids/CRMMainReport-Jan11.pdf>

### **5.5.1.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. Local demographics and socioeconomics may have minor impact due to lack of available recreational facilities for low income and/or minority populations in the Time Check Neighborhood.

### **5.5.1.2 Alternative 2 - Proposed Action**

The construction of the proposed Northwest Recreation Center under this alternative would have a short-term minor positive impact. Construction personnel would provide economic benefits to the local businesses, which would include the purchase of food, gas, and other services. The long-term effects from the Proposed Action would provide positive impacts on minority and low-income populations due to the provision of improved recreational opportunities for residents, workers, and businesses in the immediate area.

## **5.5.2 Noise**

As a result of the human health and welfare impacts of uncontrolled noise, the Noise Control Act was enacted in 1972 and the Quiet Communities Act of 1978; however EPA does not have regulatory authority to govern noise in local communities. In 1982, the EPA transferred the primary responsibility for regulating Federal noise policy to state and local governments.

“Noise” is considered unwanted or nuisance sounds measured in decibels (dB). The day-night average sound level (Ldn) is the 24-hour average sound level, in dB, obtained after the addition of 10 dB to the sound levels occurring between 10:00 p.m. and 7:00 a.m. The Ldn is used by Federal agencies for estimating sound impacts and establishing guidelines for compatible land uses. The U.S. Department of Housing and Urban Development (HUD) regulations set acceptable noise levels at 65 Ldn or less (24 C.F.R. Part 51). The EPA identifies a 24-hour exposure level of 70 dB as the base level for environmental noise that would not affect measurable hearing loss over a lifetime. Likewise, levels of 55 dB outdoors and 45 dB indoors are identified as preventing activity interference and annoyance (e.g., spoken conversation, sleeping, working, recreation). The levels represent averages of acoustic energy over long time periods such as eight (8) hours or 24 hours rather than discrete events. Table 5-3, presents common construction equipment with their estimated noise levels and levels at various distances. Noise regulations take into account sensitive receptors which are populations or land uses that may be impacted to a greater extent by increases in ambient noise levels. Sensitive receptors generally include museums, libraries, day care centers, schools, hospitals, and places of worship, among others.

Table 5-3: Estimated Sound Levels for Construction Equipment and Attenuation at Various Distances

Equipment	Typical Noise Level (dBA) at 50 ft. from Source <sup>1</sup>	Estimate at 100 ft.	Estimate at 200 ft.	Estimate at 500 ft.	Estimate at 1,000 ft.
Air Compressor	81	75	69	61	55
Backhoe	80	74	68	60	54
Concrete Mixer	85	79	73	65	59
Dozer	85	79	73	65	59
Generator	81	75	69	61	55
Loader	85	79	73	65	59
Paver	89	83	77	69	63
Pneumatic Tool	85	79	73	65	59
Pump	76	70	64	56	50
Saw	76	70	64	56	50
Shovel	82	76	70	62	56
Truck	88	82	76	68	62

Source: FHWA 2006

#### 5.5.2.1 Alternative 1 - No Action

No construction activities would occur with the selection of the No Action Alternative. Local noise levels would not be affected beyond the existing conditions.

#### 5.5.2.2 Alternative 2 - Proposed Action

The Proposed Action would increase noise levels in the vicinity of the project area during the construction phase and upon completion. Construction activities would require approximately twelve (12) months of construction and the use of heavy equipment. Construction Best Management Practices (BMP) to minimize noise impacts is required. According to the Center for Environmental Excellence by the American Association of State Highway and Transportation Officials, BMPs for noise reduction include (AASHTO, 2009);

- Early and frequent communication with the public;
- Planning noisier activities and equipment usage for early-morning and late-afternoon outside of regularly scheduled school hours;
- Planning site access and staging to minimize or eliminate “back-up alarm” noise;
- Limiting equipment on site to only what is necessary;
- Imposing seasonal limitations on construction noise as spring and fall are critical times when windows are left open in residential areas;
- Using newer, “low-noise” models of equipment;

### **5.5.3 Land Use and Planning**

The Cedar Rapids Community Development Department coordinates planning activities and advises the City Council, other departments, other non-City agencies, and private stakeholders on issues of development and planning within Cedar Rapids. The city adopted the current comprehensive plan in 1999 which established the community's priorities including vision, objectives, and goals through 2040. See Section 5.5.4 Transportation for metropolitan transportation planning discussion. Land-use and zoning regulations are administered and enforced by Cedar Rapids.

#### **5.5.3.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. Land use and planning would not be affected beyond the existing conditions.

#### **5.5.3.2 Alternative 2 - Proposed Action**

Construction of the Northwest Recreation Center would be consistent with land use planning goals, conform to existing zoning designations, and would have no adverse impact. The proposed location is currently zoned PUB to designate land owned by governmental entities (i.e., public property) where Cedar Rapids designates permitted land uses.

### **5.5.4 Transportation**

The Corridor Metropolitan Planning Organization is tasked under the 1973 Highway Act to coordinate metropolitan-wide transportation planning and investment. The Corridor Metropolitan Planning Organization's most recent Long Range Transportation Plan (See Appendix A, Figure 15), consistent with SAFETEA-LU (Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users, PL 109-59 (2005)), Clean Air Act (CAA), and Title VI of the 1964 Civil Rights Act, was adopted on July 15, 2010.

#### **5.5.4.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. Transportation would not be affected beyond the existing conditions.

#### **5.5.4.2 Alternative 2 - Proposed Action**

Construction of the Recreation Center is anticipated to have minor impacts to transportation services. Short-term construction affects to traffic on surrounding roads is expected to have major impacts to traffic. Traffic may be marginally impacted by construction equipment entering or leaving the site, however the impacts are expected to be partially mitigated by the urban street grid with the presence of improved routes. Long-term, minor impacts to traffic in the vicinity of the Northwest Recreation Center would be expected due to slightly increased traffic congestion for patrons using the recreational facility.

### **5.5.5 Public Health, Safety, and Hazardous Materials**

The Resource Conservation and Recovery Act (RCRA) defines "hazardous waste" as the following: "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may; (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or; (2) pose a substantial present or potential hazard to human health or the

environment when improperly treated, stored, transported or disposed of or otherwise managed.” Iowa regulates hazardous materials and wastes with a combination of Federal and state laws. In addition to RCRA and the Hazardous and Solid Waste Amendments (PL 98-3221(1984)), Federal regulations that govern the assessment and disposal of hazardous wastes include the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Solid Waste Act, and the Toxic Substances Control Act.

Radon is a naturally occurring radioactive gas that is produced by the decay of uranium found within soil, rocks, and groundwater that accumulates in enclosed spaces including building basements. The EPA currently considers residential radon exposure at or above 4.0 Pico Curies per liter (pCi/L) as a public health risk for the development of lung cancer. The EPA provides maps for all U.S. counties indicating the potential for elevated indoor radon levels: Zone 1 has the highest potential for predicted average indoor screening levels greater than 4.0 pCi/L. According to the EPA’s Map of Radon Zones, Linn County and the entire State of Iowa is mapped within Zone 1 (EPA, 2011b). Actual levels of radon can vary significantly from property to property, even within areas with high potential for elevated radon levels. Radon testing is the only way to determine actual radon levels within enclosed spaces.

#### **5.5.5.1 Alternative 1 - No Action**

No construction activities would occur with the selection of the No Action Alternative. Soil or groundwater contaminations present would not be disturbed or affected beyond the existing conditions.

#### **5.5.5.2 Alternative 2 - Proposed Action**

No leaking underground storage tanks (LUST) have been identified within 1,000 feet of the proposed Northwest Recreation Center site. The proposed action has the potential for Radon due to the proposed action being in a Zone 1. Radon testing is required as part of this federal undertaking. Should radon testing yield higher than acceptable levels, the Subgrantee would be required to take necessary steps to abate radon levels.

Prior to planning a renovation or demolition of a building, an asbestos survey is required. The asbestos survey must be conducted by a State of Iowa licensed asbestos building inspector in accordance with Environmental Protection Agency (EPA) regulations under 40 Code of Federal Regulations (CFR) 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP). NESHAP prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that potentially regulated asbestos-containing building materials (RACM) be identified, classified, and quantified prior to planned disturbances or demolition activities.

Following the survey, all facility demolitions require submission of a two-page demolition notification form to the Iowa Department of Natural Resources’ (IDNR) Air Quality Bureau, regardless of whether regulated asbestos containing materials are identified. A facility renovation requires notification if the combined RACM meets or exceeds any of the following thresholds: x 160 square feet (ft 2) of surfacing RACM, x 260 linear feet of piping or thermal system insulation, or x 35 cubic feet (ft 3) of asbestos-containing debris.

Combined amounts of RACM are cumulative at a facility for a calendar year. IDNR requires that ten working days must pass, following the postmarked submission of the notification, before any disturbance of asbestos-containing materials takes place. Permitted asbestos abatement contractors are required to remove RACM prior to the commencement of renovation or demolition activities. Facilities that are subject to the NESHAP regulations are institutional, commercial,

public, or industrial buildings, and active or inactive waste disposal sites. Residential buildings demolished or renovated as part of a commercial, public, industrial or institutional project or residential buildings with more than four dwelling units are also subject to the regulations.

Links

NESHAP Regulations:

[http://www.iowadnr.gov/air/prof/asbestos/files/asbestos\\_regs.pdf](http://www.iowadnr.gov/air/prof/asbestos/files/asbestos_regs.pdf)

Notification of demolition and renovation document:

<http://www.iowadnr.gov/air/prof/asbestos/files/demo.pdf>

IDNR Asbestos Contacts:

<http://www.iowadnr.gov/air/contact/aqasbros.html>

## **5.5.6 Demolition**

### **5.5.6.1 Alternative 1 - No Action**

No construction or demolition activities would occur with the selection of the No Action Alternative. Ground disturbance would not be affected beyond the existing conditions.

### **5.5.6.2 Alternative 2 - Proposed Action**

The proposed Recreation Center location currently is primarily comprised of a parking lot next to the Harrison Elementary School. Site preparation would not require significant alteration or demolition activities.

Demolition activities for the construction of the Northwest Recreation Center would be a minor impact on the site overall since most of the site is currently a parking lot.

## **5.6 CUMULATIVE IMPACTS**

Cumulative effects are defined by the CEQ as the impact on the environment resulting from the incremental impacts of the evaluated actions when added to other past, present, and reasonably foreseeable future actions, regardless of the source, such as Federal or non-Federal. Cumulative impacts can result from individually minor but collectively significant actions taken over time<sup>3</sup>. Cedar Rapids is currently engaged in numerous flood recovery projects, funded from various Federal and state sources, as well as local and private sources. Activities include private property acquisitions, residential and public building demolitions, relocation of public buildings, restoration of flood-impacted public facilities, and the Subgrantee desired flood protection system for structures on both sides of the river.

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<sup>3</sup> 40 C.F.R. §1508.7

While acknowledging that this project is a component of many actions being undertaken as recovery efforts from the 2008 floods, the particular project does not have a significant effect cumulatively. The proposed action will constitute the construction of one new 14,295 square foot facility where it is replacing a demolished facility that, on two floors, encompassed 16,500 square feet. As the project would provide recreation services to a population that has gone unserved since the Time Check Neighborhood Recreation was damaged, it does not contribute to cumulative impacts.

## **5.7 COORDINATION AND PERMITS**

Construction and demolition activities that cause one (1) acre or greater ground disturbance must have a SWPPP developed and NPDES permit from the IDNR. Sediment and erosion control BMPs must be implemented. Any work located in the floodplain will need to be coordinated with the local floodplain administrator and must comply with local floodplain regulations. Cedar Rapids will issue any required building and demolition permits to its selected contractors who will be required to abide by any associated conditions according to the city's standard processes.

Due to the Proposed Action potential to increase noise levels in the vicinity of the project area during the construction phase and upon completion, coordination with Harrison School administration is required to minimize disturbance during school hours. Construction activities would require approximately twelve (12) months of construction and the use of heavy equipment. Construction Best Management Practices (BMP) to minimize noise impacts is required.

- Early and frequent communication with the public;
- Planning noisier activities and equipment usage for early-morning and late-afternoon outside of regularly schedule school hours;
- Planning site access and staging to minimize or eliminate “back-up alarm” noise;
- Limiting equipment on site to only what is necessary;
- Imposing seasonal limitation on construction noise as spring and fall are critical times when windows are left open in residential areas;
- Using newer, “low-noise” models of equipment

If contamination in excess of reporting requirements is met, work must stop, the site must be stabilized, and the IDNR Field Office must be contacted. Work within the sensitive area cannot resume until IDNR clean-up or containment requirements are met and IDNR personnel indicate that no further assessment is needed at the site of the discovery. Cedar Rapids must ensure compliance with all Federal, State, and local laws regarding proper removal and disposal of asbestos containing materials and lead paint.

In the event that any archaeological deposits (soils, features, or any other remnants of human activity) are uncovered during the undertaking, this project shall be halted, the Subgrantee shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. The Subgrantee will inform IHSEMD immediately, will secure all archaeological findings and restrict access to the area. IHSEMD shall notify FEMA and FEMA will consult with the SHPO and the State Archaeologist of Iowa. Work in sensitive areas may not resume until consultations are completed or until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards determines the extent and historical significance of the discovery. Work may not resume at or around the delineated archaeological deposit until the Subgrantee is notified by IHSEMD.

## 6. CONCLUSION

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The DRAFT EA evaluated potentially significant resources that could be affected by the construction of the proposed Northwest Recreation Center in Cedar Rapids. The evaluation resulted in the identification of no unmitigated significant impacts associated with the resources of climate; historic; cultural; geology and soils; floodplains; wetlands and water resources; biological resources; and environmental justice. Obtaining and implementing permit requirements along with appropriate Best Management Practices and mitigation measures will avoid or minimize any effects associated with the two (2) alternatives considered in this EA to below the level of a significant impact. Should no significant impacts be identified during the public comment period, it is recommended that a Finding of No Significant Impact (FONSI) to the human or natural environment be issued for the Proposed Action Alternative.



## 7. PARTIES CONSULTED AND REFERENCES

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### 7.1 PARTIES CONSULTED

Douglas W. Jones, Review and Compliance Program Manager, State Historical Society of Iowa

### 7.2 REFERENCES

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## **8. LIST OF PREPARERS**

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### **8.1 GOVERNMENT PREPARERS**

Eric Wieland, EHP Advisor, Federal Emergency Management Agency, Region VII

Teri Toye, EHP Manager, Federal Emergency Management Agency, Region VII