

DRAFT ENVIRONMENTAL ASSESSMENT

**SEBEWAING RIVER
EMERGENCY FLOODWAY**

**SEBEWAING RIVER
INTERCOUNTY DRAINAGE
BOARD**

HURON COUNTY, MICHIGAN



FEMA

Prepared for
FEMA Region V
536 South Clark Street
Sixth Floor
Chicago, IL 60605
HMGP Application DR-1346-MI

September 26, 2003



Dewberry-Goodkind, Inc.

A Dewberry Company

Prepared by:
Dewberry-Goodkind, Inc.
299 Webro Road
Parsippany, New Jersey 07054
89-FEMA4138.00-10057

Under Contract to:
URS Group, Inc.
200 Orchard Ridge Drive, Suite 101
Gaithersburg, Maryland 20878
Contract No. EMW-2000-CO-0246,
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**FINDING OF NO SIGNIFICANT IMPACT
Sebewaing River Emergency Floodway
Huron County, Michigan**

FEMA-DR-1346-MI, NEMIS ID #A1346.57

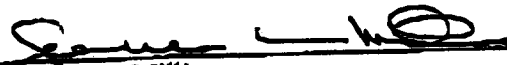
The Sebewaing River Intercounty Drainage Board (SRIDB or Applicant) has applied for funding from the Federal Emergency Management Agency (FEMA) for assistance with flood mitigation measures in the Village of Sebewaing in Huron County, Michigan. The purpose of the proposed project is to prevent damage to properties in Sebewaing caused by the overflow of floodwaters when ice jams form at the mouth of the Sebewaing River, and to reduce the need for financial assistance following flood events. The Proposed Action will reestablish the Old North Floodway Channel located north of the Sebewaing River, approximately 1/2 mile west from the intersection of Center and Main Streets and 1/4 mile west of State Route M-25. The channel will be cleared and widened and a riprap weir will be constructed at the channel entrance along the Sebewaing River. The Proposed Action will also include replacement of the Union Street culvert at the Old North Floodway Channel crossing with a steel truss bridge. FEMA is proposing to provide assistance for this project through the Hazard Mitigation Grant Program (HMGP) under Presidential Disaster Declaration FEMA-DR-1346-MI and the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

In accordance with 44 Code of Federal Regulations (CFR) for FEMA, Subpart B - Agency Implementing Procedures, Part 10.9, an Environmental Assessment (EA) was prepared pursuant to Section 102 of the National Environmental Policy Act of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (40 CFR Parts 1500-1508). The purpose of the EA was to analyze the potential environmental impacts for the Sebewaing River Emergency Floodway project and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

Based upon the conditions and information contained in the EA for the Sebewaing River Emergency Floodway (September 2003) and in accordance with FEMA's regulations in 44 CFR Part 10 (Environmental Considerations) and Executive Orders 11988 (Floodplain Management), 11990 (Protection of Wetlands), and 12898 (Environmental Justice), FEMA the following is concluded:

A Finding of No Significant Impact. The proposed project, as described in the EA, will not result in any significant adverse impacts to existing land use, water resources (surface water, groundwater, wetlands, waters of the United States, and floodplains), air quality, noise, biological resources (vegetation, fish and wildlife, state-and federally listed threatened or endangered species and critical habitats), safety issues, hazardous materials and waste, and cultural resources, or result in disproportionately high or adverse effects on minority or low-income populations. Therefore, an Environmental Impact Statement will not be prepared.

APPROVAL


Ms. Jeanne Millin
Regional Environmental Officer
FEMA, Region V

Date: November 3, 2003

**Federal Emergency Management Agency
PUBLIC NOTICE
Notice of Availability of the Final Environmental Assessment (EA) and
Finding of No Significant Impact (FONSI)
Sebewaing River Emergency Floodway, Sebewaing River Intercounty Drainage
Board, Huron & Tuscola Counties, MI.
FEMA-DR-1346-MI, NEMIS ID #A1346.57**

Interested persons are hereby notified that the Federal Emergency Management Agency (FEMA) is proposing to assist in funding of flood mitigation measures in the Village of Sebewaing, Michigan. In accordance with the National Environmental Policy Act (NEPA) of 1969, National Historic Preservation Act (NHPA), Executive Order 11988, Executive Order 11990, and the implementing regulations of FEMA, an environmental assessment (EA) was prepared to assess the potential impacts of the Proposed Action on the human and natural environment. The EA was released for public comment on October 1, 2003. No comments from the public were received during the 30-day comment period, therefore, the EA has been finalized and a Finding of No Significant Impact (FONSI) has been made. This also provides public notice for work within the regulated floodplain and wetlands, in accordance with Executive Orders 11988 and 11990 and 44 CFR Part 9.12. No practicable alternatives were identified to meet the community's needs that do not involve work in the 100-year floodplain or wetlands.

The reasons for the decision not to prepare an Environmental Impact Statement (EIS) are as follows:

1. No significant adverse environmental impacts have been identified to existing land use, water resources (surface water, groundwater, waters of the United States, wetlands, and floodplains), air quality, noise, biological resources (vegetation, fish and wildlife, State-and Federally-listed threatened or endangered species and critical habitats), safety, hazardous materials and waste, or cultural resources; no disproportionately high or adverse effects on minority or low-income populations would occur, and;
2. The project is necessary to meet the needs of the citizens of the existing local community.

No further environmental review of this project is proposed to be conducted prior to the release of FEMA funds. Copies of the final EA and FONSI can be obtained by contacting: Jeanne Millin, FEMA Regional Environmental Officer, 536 South Clark, 6th Floor, Chicago, IL 60605-1521, or at Jeanne.Millin@dhs.gov. The final EA and FONSI are also available on the World Wide Web on the FEMA website at <http://www.fema.gov/ehp/docs.shtm>.

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LIST OF ACRONYMS

APE	Area of Potential Effect
bgs	below ground surface
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
cfs	cubic feet per second
CO	carbon monoxide
COD	chemical oxygen demand
CWA	Clean Water Act
dB	decibel
DNL	Day-Night Average Sound Level
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
FPPA	Farmland Protection Policy Act
HEC-RAS	Hydrologic Engineering Center – River Analysis System
HMGP	Hazard Mitigation Grant Program
LUST	Leaking Underground Storage Tank
MDEQ	Michigan Department of Environmental Quality
MDNR	Michigan Department of Natural Resources
MSRHP	Michigan State Register of Historic Places
NAAQS	National Ambient Air Quality Standards
NAMS	National Air Monitoring Stations
NCA	Noise Control Act
NEPA	National Environmental Policy Act of 1969



LIST OF ACRONYMS

NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NRCS	Natural Resources Conservation Service
NREPA	Natural Resources Environmental Protection Act
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O ₃	ozone
OAQPS	Office of Air Quality Planning and Standards
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	Polychlorinated biphenyl
PM ₁₀	Particulate Matter with a diameter less than or equal to 10 microns
PNA	Polynuclear aromatic
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-Way
SCS	Soil Conservation Service
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Sites
SO ₂	sulfur dioxide
SPMS	Special Purpose Monitoring Stations
SRIDB	Sebewaing River Intercounty Drainage Board
STP	shovel test pit
SWA	Solid Waste Act
TKH	Total Kjeldahl Nitrogen
TSCA	Toxic Substances Control Act
TVS	total volatile solid
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOJ	U.S. Department of the Interior
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
VOC	volatile organic compound



1.0 INTRODUCTION**1.1 Project Authority**

Severe storms and flooding occurred on September 10 and 11, 2000, in the State of Michigan, leading the Federal Emergency Management Agency (FEMA) to issue a federal disaster declaration, DR-1346-MI, on October 17, 2000. Under this declaration, Oakland and Wayne Counties became eligible for Individual Assistance, and all counties within the state became eligible for funding through the Hazard Mitigation Grant Program (HMGP).

The Sebewaing River Intercounty Drainage Board (SRIDB or Applicant) has applied for HMGP Section 404 funding under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The SRIDB oversees the management of three intercounty drainage basins (State, Columbia and Sebewaing River) located within Huron County, Michigan. The Michigan Department of Agriculture, Environmental Stewardship Division, provides staff assistance to SRIDB.

FEMA provides HMGP funds for disaster-related mitigation projects. In accordance with the National Environmental Policy Act of 1969 (NEPA), the President's Council on Environmental Quality (CEQ) regulations implementing NEPA [Title 40 Code of Federal Regulations (CFR) Parts 1500 through 1508], and FEMA regulations for NEPA compliance (44 CFR Part 10), FEMA must fully consider the environmental consequences of actions proposed for federal funding. The purpose of this Environmental Assessment (EA) is to meet FEMA's responsibilities under NEPA and determine whether to prepare a Finding of No Significant Impact (FONSI) or an Environmental Impact Statement (EIS) for the proposed project. As part of this NEPA review, the requirements of other environmental laws and executive orders are addressed.

1.2 Project Location

The proposed project is located in the Village of Sebewaing (The Village) in Huron County, Michigan, in a region known as the "Thumb" in east-central Michigan (Figure 1). Huron County is bordered by Lake Huron to the north, east, and west, and by Tuscola and Sanilac Counties to the south. The Village, with a population of 1,974, is an industrial and commercial center located in the southwestern corner of Huron County. Located on the shore of Lake Huron's Saginaw Bay, the Village is a major tourist destination in the county during the summer months. The City of Bad Axe, located approximately 90 miles east of the project site, is the next closest population center with a population of 3,462, and is the county seat (U.S. Census Bureau, 2000).

Sebewaing is located at the western end of the Sebewaing River within the 66,000-acre Sebewaing River Watershed, an area that is predominantly agricultural with several small villages, commercial centers, and the county seat (Figures 1 and 2). The Sebewaing River Watershed consists of the Sebewaing River and a network of over 150 miles of agricultural drains including the State and Columbia Intercounty Drains. The proposed project is located north of the Sebewaing River, approximately ½ mile west from the intersection of Center and



Main Streets and $\frac{3}{4}$ mile west of State Route M-25. Representative photographs of the project area are provided in Appendix A.

1.3 Purpose and Need

The purpose of the proposed project is to prevent damage to properties in Sebewaing caused by the overflow of floodwaters when ice jams form at the mouth of the Sebewaing River, and to reduce the need for financial assistance following flood events.

The Sebewaing River was deepened and straightened by the U.S. Army Corps of Engineers (USACE) sometime prior to the 1930s. At that time, the USACE created the State and Columbia Intercounty Drains as part of a larger project within the watershed. Within the project vicinity, a new, straighter river channel was created for outflow of floodwaters from within the project site. As a result, floodwaters bypassed the original north channel that flowed to the north toward Union Street, then west into Saginaw Bay.

While the improvements increased the flow and capacity of the river to carry stormwater into the bay, they are also believed to have contributed to ice jams forming at or near the mouth of the lower Sebewaing River, approximately 1,000 feet downstream from the project area (SRIDB, 2001). The potential for severe ice jam flooding in the Village occurs when low water levels in Saginaw Bay occur during a cold winter period that is followed by a quick thaw and heavy precipitation. Ice jams have historically occurred at the mouth of the Sebewaing River and upstream of the Sebewaing River near the confluence of the State and Columbia Drains.

Severe floods resulting from ice jams occurred in the Village in 1934, 1935, 1938, 1947, and 1948. Based on historical records, flooding has occurred approximately every 10 years thereafter. The most recent flood event occurred in 1997. Flooding occurred on several Village streets including Sebewaing Street, a main east-west access route between Saginaw Bay and the center of the Village. Flooding also occurred in the northwest area of the Village that affected residences, a power plant, and a campground (Figure 2b). Of the 13 residences affected by the 1997 flooding, two required temporary evacuation. Six residential insurance claims were filed. The total quantifiable damage was estimated at \$144,832 (in 1997 dollars). Unquantified damage costs included loss of revenue for businesses and wages for employees. To prevent more extensive damage to properties in the Village, the USACE used dynamite to break the ice jams at the mouth of Sebewaing River.

The project Applicant seeks to address the following needs:

- Reduce the potential for flooding of the Sebewaing River resulting from ice jams;
- Minimize potential damage to properties adjacent to the river and in the Village during future flooding events; and,
- Reduce the need for financial assistance for post-disaster recovery.

The CEQ has developed regulations for implementing NEPA. These federal regulations, set forth in Title 40 CFR Parts 1500-1508, require an evaluation of alternatives and discussion of the potential environmental impacts of a proposed Federal action as part of the EA process. The



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FEMA regulations, which establish FEMA's process for implementing NEPA, are set forth in 44 CFR, Subpart 10. This EA was prepared in accordance with FEMA's regulations as required under NEPA.



2.0 ALTERNATIVES ANALYSIS

This EA provides an analysis of three alternatives developed to meet the Applicant’s purpose and need: Alternative 1 – No Action; Alternative 2 – Old North Floodway Channel Improvements (Proposed Action); and Alternative 3 – Floodway Channel Construction. A discussion of alternatives that were considered and dismissed is provided in Section 2.4.

2.1 Alternative 1 – No Action

Under the No Action Alternative, no improvements would be made. The existing watercourse and floodway would remain as it currently exists in the lower Sebewaing River. Past actions such as dynamiting ice jams on the lower Sebewaing River would likely continue to help alleviate potentially severe flooding.

2.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

The Proposed Action would re-establish the Old North Floodway Channel as an emergency overflow channel to divert excess floodwater when ice jams form in the lower Sebewaing River. The existing Old North Floodway Channel has an inconsistent bottom width of up to 70 feet and is 750 linear feet in length. The Old North Floodway Channel branches northward from the Sebewaing River approximately 1,000 feet upstream from the river’s confluence with Saginaw Bay. The channel would be cleared of brush and widened by 20 feet along approximately 600 feet of its existing alignment. The final dimensions of the channel would be approximately 70 feet wide by 800 feet long by 5 feet deep, with side slopes of 1:2 (Schwartz, pers. comm.). Approximately 3,200 cubic yards of soil would be excavated and disposed of outside of the 100-year floodplain, wetlands, and other environmentally sensitive areas. The existing 2-lane Union Street Bridge over the channel and a 24-inch channel culvert would be replaced with a 70-foot long, 35-foot wide, and 6-foot high single-span steel truss bridge to accommodate anticipated flow through the channel into the Saginaw Bay. The Proposed Action would include construction of an 86-foot by 27-foot riprap weir with a crest elevation of 582.59 feet at the mouth of the Old North Floodway Channel entrance to regulate flow into the channel (Figures 3a and 3b). To accommodate a 5-foot underclearance for the new bridge, the County Park access road would be elevated an additional 3 feet in the vicinity of the bridge. The road elevation would require realignment of the road to the north side of the office building located at the entrance to the park. The road realignment would require the placement of approximately 150 cubic yards of fill in a 1,025-square foot wetland area.

Access to the proposed project is provided by Union Street, a main east-west access road connected to Sebewaing County Park (County Park). The Union Street Bridge is approximately 30 feet wide over the Sebewaing River. Union Street is a 2-lane street without shoulders, curbs or gutters, and terminates immediately east of the bridge at the County Park. To maintain access along Union Street during construction, a temporary access roadway would be constructed across the Old North Floodway Channel approximately 50 feet north of the existing bridge. The



temporary access roadway would require the placement of approximately 750 cubic yards of fill with a temporary 24-inch culvert to convey accumulated stormwater during construction of the new bridge. At the conclusion of bridge construction, the fill would be removed for offsite disposal or use by the Huron County Parks Department for grading and shaping upland areas of the County Park.

Restoration of disturbed vegetation, erosion control measures, and grading and paving of areas adjacent to the bridge would be completed as part of the Proposed Action. Grading and paving would be limited to the area surrounding the County Park entrance located to the west of the Union Street Bridge. Construction equipment would include typical machinery such as backhoes, excavators, and bulldozers. The construction is estimated to take two to three months (Schwartz, pers. comm.).

2.3 Alternative 3 – Floodway Channel Construction

Under this alternative, a new floodway channel would be excavated approximately 500 feet east of the existing Old North Floodway Channel. The proposed channel would be excavated on currently vacant property located between existing residential areas. The new channel would extend north from the Sebewaing River, cross under Union Street, and turn west under Atkins Road, and connect with the existing channel north of Union Street (Figure 3a). The dimensions of the channel would be approximately 70 feet wide by 1,050 feet long by 5 feet deep, with side slopes of 1:2 (Schwartz, pers. comm.). Approximately 122,500 cubic yards of soil would be excavated. Approximately 3,200 cubic yards of soil would be deposited in the proposed disposal area located approximately 100 feet west of Old North Floodway Channel. The remaining 119,300 cubic yards would be disposed of offsite at Michigan Department of Environmental Quality (MDEQ) approved locations.

This alternative would require either a bridge or a large culvert to convey the channel under Union Street. Relocation of existing underground water and sewer lines and, possibly overhead electric and telephone poles and lines, would be required to accommodate the new channel. Alternative 3 would require right-of-way (ROW) easements or acquisitions for approximately 2 acres of land.

Erosion control measures would likely include placement of 130 cubic yards of heavy rip-rap immediately north of the weir at the southern end of the channel where it meets the Sebewaing River. Construction equipment would include typical machinery such as backhoes, excavators, and bulldozers. The construction is estimated to take two to three months (Schwartz, pers. comm.).

2.4 Alternatives Considered and Dismissed

Approximately 100 homes and 20 businesses in the Village of Sebewaing are located within the 100-year floodplain. Purchase and relocation of downtown businesses and residences (some homes are of historic significance, being built as early as 1900) would impact approximately a quarter of the Village of Sebewaing. This would have major repercussions on the Village master



plan and traffic patterns for remaining businesses, and would contribute to sprawl and negative economic impacts for the Village due to the relocation of industries outside of the Village proper (Schwartz, pers. comm.). Relocating the Sebewaing Light and Power plant would be impractical due to the logistical difficulties associated with moving power lines and equipment, temporary disruptions to service, and the length of time required to accomplish the relocation.

For these reasons, this alternative was considered to be infeasible and was dismissed from further consideration.



SECTION THREE Affected Environment and Environmental Consequences

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Physical Setting

3.1.1 Geology and Seismology

The project area lies within the Michigan Basin, a large regional structure composed of a variety of sedimentary rocks that were deposited during the Cambrian through Pennsylvanian Periods of the Paleozoic Era. Bedrock underlying the project area belongs to the Pottsville Series of the Saginaw Formation, and consists of sandstone, siltstone, shale, and limestone (MDEQ, 2002).

Following an extensive period of erosion during the Mesozoic and most of the Cenozoic, ice sheets advanced during the Pleistocene Epoch. Glacial lakes that formed as the glaciers receded inundated much of the Michigan Basin. In the project area, up to 30 meters of pale brown to pale reddish-brown lacustrine sand with lenses of gravel were deposited. These coarse sediments likely indicate former beaches and littoral deposits of glacial lakes (Farrand and Bell, 1982).

Huron County lies in an area of low seismic activity. According to the U.S. Geological Survey (USGS) National Earthquake Information Center, no significant (Modified Mercalli Intensity VII or more) earthquakes have occurred in Michigan in the last 50 years. The last significant earthquake was a magnitude 4.4 in 1947 (USGS, 2002a). The USGS National Seismic Hazard Mapping Project indicates that Huron County has a low probability of seismic activity.

3.1.1.1 Alternative 1 – No Action

No changes to existing conditions would occur under the No Action Alternative. Therefore, there would be no geological or seismological impacts.

3.1.1.2 Alternative 2 – Old North Floodway Channel Improvements (Proposed Action)

Under the Proposed Action, 3,200 cubic yards of soil would be excavated from the Old North Floodway Channel, resulting in minor topographical changes. The local geology would not be affected. Construction activities related to the bridge at Union Street and the installation of the weir at the Sebewaing River would disturb only surficial sediments and would have no effect on local geology.

The proposed project does not involve construction of a human-occupied building and therefore is not subject to Executive Order (EO) 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction. The Proposed Action is not anticipated to result in impacts to geological or seismological conditions.

3.1.1.3 Alternative 3 – New Floodway Channel Construction

Excavating a new channel and relocating utilities would disturb a large volume of surficial sediments, resulting in minor topographical changes, but no impacts to geology and seismology would occur.



SECTION THREE **Affected Environment and Environmental Consequences**

Alternative 3 does not involve construction of a human-occupied building and therefore is not subject to EO 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction.

3.1.2 Soils and Prime Farmland

According to the soil survey created by the U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS), now the Natural Resources Conservation Service (NRCS), the soils of the region range from medium-light sand loam to medium-heavy clay loams (USDA, 1972). The medium-light sand loam soils extend along the lake shoreline and inland approximately two miles where they transition to medium-heavy clay loams. Four soil types were identified within the project area: Tappan loam; Aquents and Histosols, ponded; Essexville loamy sand; and Udipsammets, nearly level (Figure 4). These soils are identified as hydric soils by the NRCS.

Tappan loam is characterized by poorly drained soils subject to frequent flooding. This soil has high available water capacity with slow runoff. In undrained areas, the water table is perched within 1 foot below ground surface (bgs).

Aquents and Histosols, ponded, are very poorly drained soils, located in marshy areas subject to continual flooding. Aquents are typically gray sandy loams, while Histosols are comprised of a black muck surface layer to a depth of about 20 inches.

Essexville loamy is poorly drained and subject to frequent flooding. Permeability within this soil type ranges from rapid in the upper levels to moderately slow in the lower parts. In undrained areas, the water table is within 1 foot bgs.

Udipsammets, nearly level, are present in areas where the original soil material has been removed or where the original soil has been covered with fill material. These areas historically existed as sandy deposits that formed knolls or ridges. Most of this soil unit has been removed for fill material in low-lying areas and marshes. The main component of this soil is sand that is found to a depth of up to 60 inches bgs.

The Farmland Protection Policy Act (FPPA) (P.L. 97-98, Sec. 1539-1549; 7 U.S.C. 4201, et seq.), which states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses," was considered in this EA. On May 15, 2002, the NRCS was contacted to determine if any prime or unique soils exist in the project area. In a response dated August 5, 2002, the NRCS indicated that the four soils identified in the project area are not classified as unique or prime farmland soils. Therefore, the FPPA is not applicable (Appendix C).

3.1.2.1 Alternative 1 – No Action

Under the No Action Alternative, the effects of flooding caused by ice jams would not be mitigated. Continued siltation of the existing channel and damage to the river channel during high stormwater events may occur.



SECTION THREE Affected Environment and Environmental Consequences

3.1.2.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

No unique soil features exist within the area of impact for the Proposed Action. The area was previously disturbed during excavation to create the Old North Floodway Channel. Soil dredged from the channel has historically been discarded on the western bank of the channel.

Approximately 3,200 cubic yards of soil would be excavated from the bottom of the Old North Floodway Channel. A proposed soil disposal area is located approximately 100 feet west of the channel, within County Park property. Although FIRM Community Panel Number 260572 0001A, effective December 3, 1987, indicates that the soil disposal area is within the area of the 100-year floodplain, a more detailed topographic map shows that the natural grade at the proposed soil disposal area is higher than the 584-foot contour used to demarcate the 100-year floodplain (Schwartz, pers. comm.). Therefore, the soil disposal area is not in the floodplain and is not a sensitive area. Best management practices (BMPs), such as silt fences, hay bales, and revegetation would be used to minimize sedimentation and erosion in all areas of disturbance. The elevated area proposed for soil disposal will be revegetated with native grasses, shrubs, and trees to prevent the soil from eroding into the new channel. Additionally, soil compaction effects in floodplain areas resulting from the movement of heavy equipment will be minimized by limiting the use of construction equipment to periods when the soil is dry or frozen.

3.1.2.3 Alternative 3 – New Floodway Channel Construction

Alternative 3 would require excavation and relocation of soil from a vacant lot along Union Street and construction of road crossings at Union Street and Atkins Road. BMPs, such as silt fences and hay bales, would be used to minimize sedimentation and erosion during construction. Additionally, soil compaction effects in floodplain areas resulting from the movement of heavy equipment will be minimized by limiting the use of construction equipment to periods when the soil is dry or frozen.

3.1.3 Water Resources and Water Quality

The project area is located in the Sebewaing Watershed, a subwatershed of the Pigeon-Wiscoggin Watershed, which is one of 50 major watersheds in Michigan that drain into the Great Lakes (EPA, 2002). The Village is located at the outlet of the State Intercounty and Columbia Intercounty Drains, which convey agricultural runoff from a 66,000 acre area (SRIDB, 2001). These drains discharge into the Sebewaing River channel which flows west past the project site and into the Saginaw Bay of Lake Huron. The USACE reports that water levels in Lake Huron are on the low end of a 30-year cycle (USACE, 2003). Records show that water levels in Lake Huron were approximately 14 inches below normal for the month of March 2002.

Huron County relies on groundwater for most of its domestic water supply. Private and municipal wells tap groundwater from glacial drift and bedrock aquifers. While groundwater tends to be more prevalent in bedrock in Huron County, the bedrock groundwater quality in the Village and along the Lake Huron shoreline is generally poor. Few bedrock wells are found in the project area (Huron County Planning Commission, 1993).

The Michigan Department of Natural Resources (MDNR) conducted several water quality studies of the Sebewaing River between 1970 and 1992. A qualitative benthic macro-



SECTION THREE Affected Environment and Environmental Consequences

invertebrate and water quality study concluded that an excellent fish community and fair stream habitat exist for this region of the Sebewaing River. Nitrate and nitrite levels, indicators of nutrient pollution, were reported as being higher than other Michigan streams of similar type (MDNR, 1994).

In Michigan, any work conducted below the ordinary high-water mark must be reviewed by MDEQ under Part 301, Inland Lakes and Streams, of the Natural Resources and Environmental Policy Act (NREPA) of 1994. Proposed projects may also be reviewed by the USACE under Michigan's joint permitting program for waterway impacts.

3.1.3.1 Alternative 1- No Action

Under the No Action Alternative, ice jams periodically would continue to occur at the mouth of the Sebewaing River. The resultant flooding would continue to erode sediments and carry them into Saginaw Bay. It is likely that adverse impacts to water quality would continue.

3.1.3.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

The Proposed Action is not expected to adversely affect water quality within the project area. To protect water quality from the effects of sedimentation during construction, BMPs such as silt fences would be used to minimize soil runoff and erosion. The existing condition of the Sebewaing River channel to Saginaw Bay would not change. Floodwaters caused by ice jams at the mouth of the Sebewaing River would be conveyed to Saginaw Bay by the Old North Floodway Channel.

According to MDEQ correspondence dated September 26, 2001, the culvert replacement at Union Street, the sheet pile weir, the extension of the gravel shoulders, and any work below the ordinary high-water mark would require a permit under Part 301, Inland Lakes and Streams, of the NREPA. Permit No. 01-32-0007P was issued by MDEQ for the Proposed Action along with the joint USACE permit No. 02-019-000-0. The permit is valid until December 31, 2004, and contains conditions for the protection of Waters of the U.S. The Applicant must comply with all conditions of the joint permit.

3.1.3.3 Alternative 3 – New Floodway Channel Construction

No changes to water quality are expected under Alternative 3. To protect water quality from the effects of sedimentation during construction, BMPs such as silt fences and hay bales would be used to minimize soil runoff and erosion. The existing condition of the Sebewaing River channel to Saginaw Bay would not change. Floodwaters caused by ice jams at the mouth of the Sebewaing River would be conveyed to Saginaw Bay by a new floodway channel that would connect with an existing floodway channel, north of Union Street.

According to MDEQ correspondence dated September 26, 2001, any work below the ordinary high-water mark, such as the bridge construction at Union Street, would require a permit under Part 301, Inland Lakes and Streams, of the NREPA.



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3.1.4 Floodplain Management (Executive Order 11988)

EO 11988 directs federal agencies to take actions to minimize occupancy of and modifications to floodplains. FEMA's regulations for complying with EO 11988 are promulgated in 44 CFR Part 9. Specifically, 44 CFR Part 9.6 prohibits FEMA from taking or approving any action within a floodplain unless no practical alternatives can be identified or if the proposed action clearly outweighs the requirement of EO 11988. FEMA applies the Eight-Step Planning Process as required by regulation to meet the requirements of EO 11988. This step-by-step analysis is included in Appendix B of this document.

Floodplains refer to the 100-year floodplains set by FEMA, and are shown on Flood Insurance Rate Maps (FIRMs) for all communities participating in the National Flood Insurance Program (NFIP). The 100-year floodplain designates the area inundated during a storm having a 1 percent chance of occurring in any given year. FEMA also identifies the 500-year floodplain. The 500-year floodplain designates the area inundated during a storm having a 0.2 percent chance of occurring in any given year.

The Village participates in the NFIP and has been mapped by FEMA. According to FIRM Community Panel Number 260572 0001A, effective December 3, 1987, the project area is located entirely within the 100-year floodplain but is outside of the regulatory floodway (Figure 5). The floodway boundary is coincident with the seawall.

3.1.4.1 Alternative 1- No Action

The No Action Alternative would result in continued flooding in the Village and areas along the Sebewaing River channel from ice jams occurring in the Sebewaing River. It is anticipated that continued flooding would result in substantial damage to adjacent and nearby properties, and would require the need for significant financial assistance, as in the past.

3.1.4.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

The Proposed Action would divert flood waters resulting from ice jams to an existing channel, thereby decreasing the impact of flooding on Union Street and the Village. As shown on the FIRM, the 100-year flood elevation in the project area is 584.0 feet (Figure 5). According to an engineering report prepared for the SRIDB, the 100-year flood discharge is 6,200 cubic feet per second (cfs) from the Sebewaing River (Fishbeck, et al., 2002). The design discharge for the improved Old North Floodway Channel is 500 cfs. Therefore, the project would not alter 100-year flood hazards upstream or downstream of the project area, but would alleviate flooding from lesser events.

A Hydrologic Engineering Center – River Analysis System (HEC-RAS) model was prepared to evaluate the effects of the proposed channel improvement and new bridge. Based on the preliminary modeling, the project is expected to alleviate riverine flooding for events less than the 100-year flood. The proposed project would increase the capacity of another flow path for floodwaters originating from the Sebewaing River into Saginaw Bay. The existing channel downstream of the proposed Old North Floodway Channel is of sufficient capacity to accommodate reestablished flows.



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The Proposed Action is located within a federally identified flood hazard area and is subject to the State of Michigan's Floodplain Regulatory Authority. In a letter dated September 6, 2001, MDEQ identified that the project is located in an identified flood hazard area and would be reviewed under Part 31, Floodplains/Water Resources Protection of the NREPA. Permit No. 01-32-0007-P was issued by MDEQ for the proposed project in accordance with Part 31 of the NREPA. The Applicant must comply with all conditions of the MDEQ permit regarding work within floodplains. No disposal of materials within the 100-year floodplain would be permitted.

3.1.4.3 Alternative 3 – New Floodway Channel Construction

Impacts to the floodplain under Alternative 3 are expected to be similar to the impacts described for Alternative 2, the Proposed Action. Although a design for the channel has not been completed for this alternative, it is anticipated that it would be similar in size and scale to the existing North Floodway Channel in Alternative 2. Therefore, flow would be diverted through the channel, easing seasonal flooding in the floodplain. To accurately assess the effectiveness of the channel in diverting flow during periods of ice jamming, a hydrologic and hydraulic analysis would be conducted if this alternative were chosen.

Alternative 3 is located within a federally identified flood hazard area and would require a permit from MDEQ under Part 31, Water Resources Protection, of the NREPA. Under Alternative 3, no disposal of materials in the 100-year floodplain would be permitted.

3.1.5 **Air Quality**

The Clean Air Act (CAA) of 1970, as amended, requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, visibility, and damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six principal pollutants, which are called "criteria" pollutants. They include: sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), lead (Pb), particulate matter (10 microns or less—PM₁₀), and ozone (O₃).

The EPA has designated specific areas throughout Michigan as NAAQS attainment or non-attainment areas. Non-attainment areas are those that either do not meet, or contribute to ambient air quality in a nearby area that does not meet, the national primary or secondary air quality standards for a pollutant. Attainment areas are those that meet the primary or secondary ambient air quality standards for the pollutant. According to the EPA, Huron County is currently in attainment for all six criteria pollutants (EPA, 2002b).

There are no hospitals, schools or other sensitive receptors in the vicinity of the project site. The project site is located in a commercial area with several vacant lots and a park nearby. The



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closest residential area is low density seasonal homes, the nearest of which is approximately 200 feet from the project site.

3.1.5.1 Alternative 1- No Action

The existing use does not generate pollutants that would significantly contribute to the degradation of the quality of air. As a result, no impacts are anticipated to air quality from the No Action Alternative.

3.1.5.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

Implementation of the Proposed Action would involve limited use of heavy construction equipment such as backhoes, excavators, and bulldozers.

Heavy construction equipment is a source of fugitive dust emissions that may have a temporary effect on local air quality. Emissions during construction can be associated with ground excavation, earth moving, and construction. Dust emissions can vary substantially from day to day depending on the level of activity, the specific operations, and weather. A large portion of the emissions results from equipment traffic during construction.

The quantity of dust emissions from construction operations is directly proportional to the area of land being worked, the level of construction activity, the silt content of the soil, and the speed and weight of the average vehicle. The quantity of dust emissions is inversely proportional to the soil moisture. Higher soil moisture results in lower dust emissions. Emissions from fuel-burning internal combustion engines (heavy equipment and earthmoving machinery), could temporarily increase the levels of volatile organic compounds (VOCs) and some of the priority pollutants, including CO, NO₂, O₃, and PM₁₀.

Potential impacts to air quality would be short-term and temporary in nature. To mitigate for fugitive dust and equipment emissions, running times of fuel-burning equipment would be minimized, engines would be properly maintained, and construction roads would be watered when dusty conditions exist. Local residents would be advised to close windows during periods of heavy construction activity to prevent dust from infiltrating their homes.

3.1.5.3 Alternative 3 – New Floodway Channel Construction

Potential impacts to air quality would be short-term and temporary in nature. To mitigate for fugitive dust and equipment emissions, running times of fuel-burning equipment would be minimized, engines would be properly maintained, and construction roads would be watered when dusty conditions exist. Local residents would be advised to close windows during periods of heavy construction activity to prevent dust from infiltrating their homes.

3.2 Biological Environment

3.2.1 Wetlands (Executive Order 11990)

The term wetland refers to areas that are inundated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include



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swamps, marshes, bogs, interstate lakes, rivers, streams (including intermittent streams), mudflats, sloughs, and similar areas.

Under EO 11990, federal agencies are required to minimize the destruction, loss, or degradation of wetlands and preserve and enhance their natural and beneficial values. If a federal action has the potential to impact jurisdictional waters of the United States as defined by Section 404 of the federal Clean Water Act (CWA), the USACE would be contacted for appropriate permitting requirements. Section 404 of the CWA authorizes the USACE to issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into waters of the United States at specified disposal sites. FEMA applies the Eight-Step Planning Process, required by 44 CFR, Part 9, to meet the requirements of EO 11990. As with Floodplain Management, FEMA's Eight-Step Planning Process was conducted to comply with EO 11990, Wetland Protection (see Appendix B).

Michigan has received authorization from the federal government to administer Section 404 of the Clean Water Act in most areas of the State. Wetlands in the State of Michigan are regulated in accordance with Part 303, Wetlands Protection, of the NREPA.

The U.S. Department of Interior (USDO), National Wetland Inventory (NWI), Sebewaing Michigan Quadrangle map was reviewed to identify known wetlands in the vicinity of the project site. The wetland area located closest to the project site is classified as a palustrine, emergent, intermittently flooded wetland and is located immediately north and west of the project area (Figure 6). Palustrine, emergent, semi-permanently flooded wetlands are located to the west of the project area, between the Old North Floodway Channel and Saginaw Bay. Lacustrine, littoral, emergent/aquatic bed, permanently flooded wetlands are located adjacent to Saginaw Bay, further west of the project area. The wetland areas associated with the Sebewaing River, south of the project area, are classified as riverine, lower perennial, open water/unknown bottom, permanent, excavated. Palustrine, emergent, saturated/semipermanent/seasonal wetlands are located more than 1,500 feet north and south of the Old North Floodway Channel.

In early March 2002, a site investigation was conducted to determine if jurisdictional wetlands were located at the project site. Typical emergent vegetation including green ash (*Fraxinus pennsylvanica*), willow (*Salix* spp.), red osier dogwood (*Cornus stolonifera*), silky dogwood (*Cornus amomum*), high-bush cranberry (*Vaccinium* sp.), common reed (*Phragmites australis*), cattails (*Typha* spp.), and purple loosestrife (*Lythrum salicaria*) were identified within the confines of the Old North Floodway Channel. Areas adjacent to the Old North Floodway Channel were observed to have forested and/or scrub-shrub wetland characteristics. Upland areas are present along the access roadway to the County Park as well as in the open areas beyond the limits of the forested area surrounding the park's access roadway.

The site investigation identified ponding within the Old North Floodway Channel on both sides of the current crossing at Union Street, due to restricted flow through the existing 24-inch culvert. Other signs of wetland hydrology, including water-stained leaves and buttressed tree trunks, exist within the forested areas along the eastern and western banks of the floodway in the immediate vicinity of the existing bridge and study area.



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A limited number of hand-augered soil borings were taken to a minimum depth of 12 inches bgs in the forested area to the west of the Old North Floodway Channel. Dark silt loam was observed within the top 2 inches of the borings. Brown to gray-brown sandy clay loam with mottles was present within the remainder of the borings. Soil within the Old North Floodway Channel was a light grayish-brown to gray silty loam. Mottling and grayish soil color are indicative of gleyed soils, which are commonly found in wetlands.

Observations of vegetation, hydrology, and soil during the field investigation are indicative of the presence of jurisdictional wetlands within the Old North Floodway Channel and west of the Union Street Bridge. However, due to snow cover during the site investigation, it was not possible to delineate the wetland boundary.

3.2.1.1 Alternative 1- No Action

Wetlands within the Old North Floodway Channel would remain undisturbed. The wetlands may continue to be adversely affected due to siltation of the channel during periodic flood events. This periodic siltation may encourage non-native, invasive species to out-compete native species in wetland areas.

3.2.1.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

Under the Proposed Action, realignment of an existing County Park access road would require the placement of about 130 cubic yards of fill in 1,025 square feet (0.02 acre) of wetlands located approximately 150 feet west of the Union Street Bridge and existing Old North Floodway Channel (Figure 3a). To compensate for this loss, 5,963 square feet (0.13 acre) of wetlands would be created in the Old North Floodway Channel on County Park property as a result of the proposed project (Schwartz, pers. comm.). This amount of new wetlands more than satisfies the requirements for wetland mitigation by the MDEQ. The Applicant would be required to prepare and submit a detailed wetland mitigation plan to the USACE prior to construction. Periodic inundation during ice jams is expected to help sustain the new wetlands.

Approximately 0.15 acre of scrub/shrub wetland vegetation in the Old North Floodway Channel would be temporarily impacted by construction equipment during channel widening and wetland mitigation construction activities. These areas would be restored and revegetated with wetland species at the completion of construction activities. Wetland soils compacted by construction equipment would be loosened by disking, raking, or other methods prior to replanting wetland vegetation.

The Applicant applied for and received permits from MDEQ and USACE for work within wetlands. These permits were issued in accordance with Parts 401 and 404 of the CWA, Section 10 of the Rivers and Harbor Act, and Part 303 of the Michigan NREPA. The Applicant must comply with all conditions of these permits regarding work within wetlands. Disposal of materials within wetlands, except as identified in the MDEQ and USACE permits, would be prohibited.



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3.2.1.3 Alternative 3 – New Floodway Channel Construction

No wetland areas were observed during the site visit in the vicinity of this alternative location. This alternative would create a new channel that would discharge into the Old North Floodway Channel and into Saginaw Bay. Creating a new channel would create new bottomlands and has the potential to increase wetland acreage.

3.2.2 Vegetation

The dominant trees observed within the project area for the Proposed Action were: cottonwood (*Populus deltoides*), American elm (*Ulmus americana*), green ash, willow, and box elder (*Acer negundo*). The dominant shrubs observed include: honeysuckle (*Lonicera* spp.), red osier and silky dogwood, and high-bush cranberry. Common reed, cattails, purple loosestrife, goldenrod (*Solidago* spp.), and various herbaceous plant species typical of this region of Michigan were observed.

Vegetation within the vicinity of new floodway channel (under Alternative 3) consists of herbaceous cover, primarily various grass species, with no shrubs or trees present.

3.2.2.1 Alternative 1- No Action

Under the No Action Alternative, existing vegetation in the project area would remain undisturbed.

3.2.2.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

Construction under the Proposed Action would require the removal of several trees, shrubs, and herbaceous plant species, mostly along the park entrance road relocation area and within the existing Old North Floodway Channel. The area of disturbance is approximately 0.8 acre (Schwartz, pers. comm.). It is anticipated that native plant species would re-establish after completion of the work; therefore, no long-term adverse impacts to the vegetative cover are expected. In addition, where possible and prudent, replanting with native grasses and shrubs would occur. In areas of tree removal, if appropriate, trees would be replaced. Maintenance of channel vegetation would be limited to what occurs now, including seasonal pruning and leaf cleanup. No permanent adverse impacts to the terrestrial environment are anticipated.

3.2.2.3 Alternative 3 – New Floodway Channel Construction

Construction activities under Alternative 3 would include excavation and grading, which would remove the vegetative cover that currently exists at this location. Disturbed areas and the new channel would be replanted with native grasses. No permanent adverse impacts to the terrestrial environment are anticipated.

3.2.3 Fish and Wildlife

Limited animal species were observed during a site visit conducted in March 2002. Species typical for the project area are described below.



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Fish, Reptiles and Amphibians

Shallow and intermittent flows in the restored Old North Floodway Channel are not likely to support any fish species. Several amphibian species have the potential to occur in the project area including northern leopard frog (*Rana pipiens*), green frog (*Rana clamitans*), blue-spotted salamander (*Ambystoma laterale*), red-spotted newt (*Notophthalmus viridescens*), northern water snake (*Nerodia sipedon*), eastern garter snake (*Thamnophis sirtalis*), and snapping turtle (*Chelydra serpentina*).

Birds and Mammals

The project area lies within the migration corridors for species such as diving ducks (Aythyinae), dabbling ducks (Anatinae), snow geese (*Chen caerulescens*) and Canada geese (*Branta canadensis*). This area is home to wood ducks (*Aix sponsa*), mallards (*Anas platyrhynchos*), and blue-winged teal (*Anas discors*). Fish Point and Wild Fowl Bay Wildlife Refuges border the Village and offer suitable habitat for a variety of species.

Bird species observed during the site visit include: American kestrel (*Falco sparverius*), red-winged blackbird (*Agelaius phoeniceus*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaidura macroura*), brown-headed cowbird (*Molothrus ater*), junco (*Junco hyemalis*), ring-billed gull (*Larus delawarensis*), ring-necked pheasants (*Phasianus colchicus*), and wild turkey (*Meleagris gallopavo*). Mammals that have the potential to occur in the project area include raccoon (*Procyon lotor*), eastern cottontail (*Sylvilagus floridanus*), muskrat (*Ondatra zibethica*), striped skunk (*Mephitis mephitis*) and deer mouse (*Peromyscus leucopus* spp).

Macroinvertebrates

In a Biological Survey of the State and Columbia Drains, MDNR classified the fish communities as “good” (slightly impaired) to “excellent” (non-impaired) and the macroinvertebrate communities as “fair” (moderately impaired) within the project area. The physical habitat conditions were considered the primary detriment to the macroinvertebrate communities. Adverse macroinvertebrate conditions are attributed to the existing drainage channel design.

3.2.3.1 Alternative 1- No Action

Under the No Action Alternative, the lack of improvement to the Old North Floodway Channel would result in continued siltation of the channel. Continued siltation would adversely impact water quality. This could adversely affect macroinvertebrate populations and other wildlife populations.

3.2.3.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

Under the Proposed Action, construction activities may temporarily affect wildlife usage of this area. However, wildlife would return to the project area after construction is complete. The removal of silt and sediments, particularly within the base of the channel, would result in the increase of seasonal macroinvertebrate populations.



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3.2.3.3 Alternative 3 – New Floodway Channel Construction

Under Alternative 3, no adverse impacts to fish and wildlife are anticipated. Temporary habitat may be created for aquatic species in the new floodway channel during the periods when flood flows are diverted into the channel.

3.2.4 **Threatened and Endangered Species**

The Endangered Species Act (ESA) of 1973 requires federal agencies to determine the effects of their actions on threatened and endangered species of fish, wildlife, and plants, and their habitats, and to take steps to conserve and protect these species. Letter requests for a records review for the known occurrences of special status species and critical habitat within the vicinity of the proposed project site and the Alternative 3 site were submitted to the U.S. Fish and Wildlife Service (USFWS), East Lansing Field Office, and the MDNR, Wildlife Division, on August 22, 2001, and March 21, 2002. The USFWS concluded in a letter dated April 18, 2002, that no federally listed endangered, threatened, proposed, and/or candidate species, and/or critical habitat presently occur within the proposed project areas (Appendix C). In letters, dated September 28, 2001 and April 17, 2002, MDNR responded that the project should have no impact on rare or unique natural features at the project site (Appendix C).

Based on these consultations, none of the alternatives is anticipated to affect threatened or endangered species. No further action is required under Section 7 of the Endangered Species Act.

3.3 **Hazardous Materials**

Hazardous wastes, as defined by the Resource Conservation and Recovery Act (RCRA), are defined as “a solid waste, or combinations 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.” While the definition refers to “solids,” it has been interpreted to include semisolids, liquids, and contained gases, as well (Wentz, 1989).

Hazardous materials and wastes are regulated in Michigan via a combination of federally mandated laws and state laws developed by the MDEQ. The hazardous waste statutes are contained as Sections 324.11101 through 324.11153 of the NREPA. Federal regulations governing the assessment and disposal of hazardous wastes include RCRA, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Solid Waste Act (SWA), and Toxic Substances Control Act (TSCA).

To determine the presence and approximate location of known hazardous materials in the vicinity of the proposed project, Vista Information Solutions, Inc. (Vista), an independent information service, conducted a database search (Vista, 2002). The database search queries multiple federal, State, and local hazardous materials and underground storage tank (UST) databases.



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No subsurface hazardous materials testing was conducted in the project area as a part of this EA. Conclusions are based on the database search, available data, and additional inquiries made with State and local agencies.

3.3.1 Vista Report

The Vista report dated March 11, 2002, included a review of a project corridor extending eastward from the mouth of the Sebewaing River, for approximately 4 miles. The report identified 19 facilities located within a ½-mile radius from the Sebewaing River project corridor with environmental classifications. Of these 19 sites, the following 4 sites are located within a ¼-mile radius of the project limits:

- *Sebewaing Airport, West Sebewaing Street.* This site is identified on the State UST database. The site is reportedly located 0.04 mile south of the Sebewaing River on West Sebewaing Street near the rail lines. Two underground storage tanks (USTs) that contained aviation fuel were removed from the facility. The tanks were not reported as leaking USTs (LUSTs).
- *418 Union Street.* This site is listed on the State-equivalent Comprehensive Environmental Response and Liability Information System (CERCLIS) database. The site is reportedly located 0.1 mile north of the Sebewaing River near the intersection of Union Street and the rail lines. A telephone conversation with the Village of Sebewaing Clerk's Office revealed that the property is located approximately midway between Miller Street and Prairie Street (Smith, pers. comm.). An inquiry with MDEQ indicated that limited information is available regarding this property (Klann, pers. comm.). This facility was once used as a milk production building. Reportedly, the facility was vacant for many years after the milk producing business left and a bean processing plant, Bayside Best Beans, now occupies the property. An environmental investigation was conducted in 1996. The results of a Phase II investigation indicated that phenanthrene was detected in site soils at 2,200 mg/kg (which is above the MDEQ Soil Criteria). According to the MDEQ, the liable party is responsible for remediating this site and the current operator (if not the liable party) is responsible for exercising due care so as to not exacerbate the contamination. (Klann, pers. comm.). Since the contaminated soils appear to be confined to the property on the opposite side of the rail line from the Proposed Action and Alternative 2 locations, the contaminated soils are not expected to be encountered during construction of the Proposed Action or Alternative 3.
- *Sebewaing Tool and Engineering, 418 Union Street.* This site is listed as a RCRA Small Quantity Generator with no violations noted. The site is reportedly located 0.1 mile north of the Sebewaing River near the intersection of Union Street and the rail lines.
- *Engelhardt Petroleum, 260 N. Center Street.* This facility is listed on the LUST and UST databases. The site is reportedly located 0.1 mile north of the Sebewaing River, approximately 1,600 feet east of the railroad tracks and approximately 2,400 feet east of the project area. According to the MDEQ Case Manager, this facility was a former filling station with known soil and groundwater contamination from former oil and



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gasoline USTs (Roth and Englehardt, pers. comm.). Although no contamination was detected in the river, the plume appears to be heading toward the river. The final report has not yet been submitted to MDEQ. A telephone conversation with the Village of Sebewaing Clerk's Office confirmed the address of this property (Manary, pers. comm.).

3.3.2 Sediment Sampling Program

A Sebewaing River sediment sampling program was conducted by McDowell & Associates in 1999 to evaluate the physical and chemical composition of sediments within the river. (McDowell & Associates, 1999). Six soil borings were performed at various locations within the Sebewaing River in the spring of 1999. The chemical analyses of the sediments included volatile organic compounds (VOCs), polynuclear aromatics (PNAs), polychlorinated biphenyls (PCBs), organochlorine pesticides, and specific metals.

The closest sampling point to the project area was located near the C&O Railroad right-of-way, approximately 800 feet east of the project area. Chemical laboratory results for a sample collected at this location from a depth of 7.5 feet were reported as "not detected" for all VOCs, PNAs, PCBs, and organochlorine pesticides that were analyzed. Aluminum, arsenic, barium, cadmium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc were reported below the Part 201 Residential Cleanup Criteria (revised May 28, 1999).

3.3.2.1 Alternative 1- No Action

Under the No Action Alternative, construction would not occur and no soils would be disturbed. Hazardous wastes and materials likely to occur in the project area would not be altered from their present conditions.

3.3.2.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

Although there are no contamination sites within 500 feet of the Proposed Action, there are two sites within a 1/4-mile radius of the project area with known contamination. Both of these sites are east of the rail line (the project site is west of the rail line) and existing studies indicate that neither site poses a contamination concern for the proposed project site. However, the Applicant would be required to conduct a sediment analysis in areas of proposed disturbance to determine if any contamination hazards exist and to identify any necessary remedial actions, including disposal requirements for excavated materials. Any hazardous materials discovered, generated, or used during implementation of the Proposed Action must be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations.

3.3.2.3 Alternative 3 – New Floodway Channel Construction

The location of the new floodway channel for Alternative 3 would require excavation to within approximately 500 feet of the contaminated property at 418 Union Street. However, the contaminated soils appear to be confined to the 418 Union Street property, which is on the opposite side of the rail line from the location of the new floodway channel. Therefore, the contaminated soils are not expected to be encountered during construction of Alternative 3. The Applicant would be required to conduct a sediment analysis in areas proposed for disturbance to determine if any contamination hazards exist at the project site and to identify any necessary



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remedial action, including disposal of excavated materials. Any hazardous materials discovered, generated, or used during implementation of the Alternative 3 must be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations.

3.4 Socioeconomics

3.4.1 Zoning and Land Use

Zoning

The project area is located in the northwest portion of the Village in Huron County. Sebewaing has a zoning ordinance in effect. The Village's long-range planning services and mapping of zoning districts are provided by Huron County.

The majority of the project area is located within an area zoned as C – Commercial District. The portion of the project area north of Union Street is located within the RA2 – Family Residential District zoning classification (Huron County, 2002). The C – Commercial District includes most of the area west of the C&O Railroad track toward Saginaw Bay (see Figure 2a). The remaining properties that are not zoned for commercial use are designated as RA2 – Family Residential.

Permitted uses within the C – Commercial District include: retail businesses; municipal recreation facilities and playgrounds; schools; churches; libraries; and utilities. The RA2 – Family Residential District zoning permits: single-family detached homes; farming; libraries; parks; parkways and recreational facilities; parking lots; churches; schools; municipal buildings; utility buildings; professional offices; bed and breakfast homes; keeping of livestock; and dog kennels.

Land Use

The project area includes a channelized segment of the Sebewaing River and the publicly-owned Union and Davis Streets. The area north of Union Street contains older, low density single-family detached homes, some of which are believed to be used as seasonal second homes. To the immediate east of the existing Old North Floodway Channel are single-family residences and vacant parcels. The project area is owned entirely by the County, although residential properties abut the Old North Floodway Channel on the eastern side. A spur line of the C&O Railroad runs in a north-south direction approximately 500 feet to the east of the Old North Floodway Channel. Further to the east, land uses include industrial and manufacturing and the Village center consisting of retail, office and municipal uses. The County Park is located to the immediate west of the project area. The Sebewaing Marina and several single-family residences are located to the south of the project area (see Figure 3a).

3.4.1.1 Alternative 1- No Action

The No Action Alternative would have no impact upon the existing zoning and current land uses in the area.



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3.4.1.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

The Proposed Action would be considered a principal permitted use under the existing C - Commercial and RA2 - Family Residential zoning classifications. The Proposed Action would require no amendments or variances from existing lot and block regulations. The SRIDB will administer the required ROW easement through the Old North Floodway Channel. There are underground utility lines running under the bridge that would have to be temporarily disturbed and reconnected within the existing Union Street ROW. The sanitary sewer and water main will be relocated slightly, but will remain within the Union Street ROW as well.

The Proposed Action would not change the project area's current use and would be consistent and compatible with adjacent and surrounding land uses.

3.4.1.3 Alternative 3 – New Floodway Channel Construction

Under Alternative 3, a new channel would be constructed primarily within the C-2 zoning district. The segment of the channel located north of Union Street and west toward Saginaw Bay would be located within the RA2 – Family Residential District. Easements or land acquisition would be required for the segment of channel located south of Union Street. Land in this area is owned by multiple residential property owners. It is unknown whether there will be land owner issues under this alternative since the residential property owners have not been approached. The new channel would be consistent with the existing zoning classifications and would have no significant impact upon adjacent land uses and surrounding land uses.

3.4.2 Visual Quality

The project area includes the Old North Floodway Channel, an open channel that is dry most of the year, low density single-family residences, a county park and vacant parcels. Topography is almost completely flat with mature vegetation, including shrubs and deciduous trees. The immediate vicinity around the project area is dominated by open space and single-family homes, one and two stories tall. Representative photographs of the project area are provided in Appendix A.

3.4.2.1 Alternative 1- No Action

Under the No Action Alternative, no changes to the project area would occur and there would be no impact to the visual quality of the project site and surrounding area.

3.4.2.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

The Proposed Action would result in the replacement of the existing Union Street Bridge and culvert with a steel truss clear-span bridge. Both the existing and replacement bridges are designed for two lane traffic. The replacement bridge would be designed to maintain the character of the existing bridge and area. The realignment of the County Park access road would be slight and would not change the character of the roadway. Therefore, no significant impacts to visual quality are anticipated with respect to the bridge and roadway construction activities. The elevated area of soil disposal west of the Old North Floodway Channel would be revegetated with native vegetation and would act as a visual screen between park activities and the nearby



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residential houses. No negative long term impacts to visual quality are expected as a result of clearing and enlarging the Old North Floodway Channel.

3.4.2.3 Alternative 3 – New Floodway Channel Construction

Under Alternative 3, a new channel would be excavated on currently vacant properties. No significant adverse impacts would occur from this alternative. No structures would be constructed under this alternative. Although a design for the channel has not been completed for this alternative, it is anticipated that it would be similar in size and scale to the existing north channel in Alternative 2, and therefore would not result in long-term impacts to the visual quality of the area.

3.4.3 Noise

Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds that the human ear can hear. The Day-Night Average Sound Level (DNL) is an average measure of sound. The DNL takes into account the volume of each sound incident, the number of times each incident occurs, and the time of day each incident occurs (nighttime sound being weighted more heavily because it is assumed to be more annoying to the community). The DNL descriptor is accepted by federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses.

Noise, defined herein as unwanted or unwelcome sound, is regulated by the federal Noise Control Act of 1972 (NCA). Although the NCA gives the EPA authority to prepare guidelines for acceptable ambient noise levels, it only charges those federal agencies that operate noise-producing facilities or equipment to implement noise standards. The EPA's guidelines (and those of many federal agencies) state that outdoor sound levels in excess of 55 dB DNL are "normally unacceptable" for noise-sensitive land uses such as residences, schools, and hospitals.

Noise typically associated with construction equipment can measure as much as 80 dB within 50 feet from the source, attenuating at a rate of 6 dB per doubling of distance away from the source. Historically, noise above the standard DNL in the project area has been generated by the use of dynamite to break up ice jams in the lower Sebewaing River. The channel is located in a commercial area with several vacant lots and a park nearby. The closest residential area consists of low density seasonal homes, the nearest of which is approximately 200 feet from the project site. While ambient noise levels were not measured as part of this task, the noise levels observed during the site reconnaissance were consistent with those found in residential areas.

3.4.3.1 Alternative 1 – No Action

Under the No Action Alternative, no construction would occur and no additional noise would be generated. Noise levels would be expected to remain at current levels, including those associated with dynamiting ice jams on the lower Sebewaing River each winter.

3.4.3.2 Alternative 2 – Old North Floodway Channel Improvements (Proposed Action)

Noise associated with the Proposed Action would be emitted by mechanical equipment used during construction. Equipment associated with the Proposed Action includes backhoes, excavators, and bulldozers. Construction noise is not anticipated to adversely impact the



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community due to the commercial and seasonal residential land use in the area. Additionally, the noise would not be constant and would be temporary, occurring during daylight hours only during the two to three months of proposed construction. Local residents would be advised to close windows during periods of heavy construction to limit noise disturbance.

3.4.3.3 Alternative 3 – New Floodway Channel Construction

Noise impacts associated with Alternative 3 would be emitted by mechanical equipment used during construction. Equipment associated with this Alternative includes backhoes, excavators, and bulldozers. Construction noise is not anticipated to adversely impact the community due to the commercial and seasonal residential land use in the area. Additionally, the noise would not be constant and would be temporary, occurring during daylight hours only during the two to three months of proposed construction. Local residents would be advised to close windows during periods of heavy construction to limit noise disturbance.

3.4.4 Public Services and Utilities

The Village operates autonomously from the Township of Sebewaing, with the exception of the Fire Department and ambulance service. A Village Council, consisting of six trustees, a president and a clerk, oversees the Sewer Commission, Sebewaing Light and Water, Department of Public Works, and the Police Department (Manary, pers. comm.).

The Village provides police protection to the project site. The Police Department consists of three full-time officers and two patrol cars, operating out of one station.

Fire protection services are provided to the project site by the Township of Sebewaing Volunteer Fire Department. The Fire Department consists of 20 firefighters, five trucks, and one station. Sebewaing Light and Water maintains the fire hydrants in the Village (Manary, pers. comm.).

Existing uses of the project area do not require the provision of water, sanitary sewer, telephone, electric and gas, or solid waste disposal services. However, there are underground utility lines including sanitary sewer, water, telephone and electric running under the bridge within the existing Union Street ROW. The Village receives water and electric service from Sebewaing Light and Water (Manary, pers. comm.).

3.4.4.1 Alternative 1 – No Action

Under the No Action Alternative, no changes to existing public services would occur. Flooding resulting from ice jams would likely continue to occur. Union Street and other streets would be impassable at times, impeding the provision of services required for emergency response and repair, during and after storm events. Public services provided for the general population could be hindered while municipal employees are responding to flooding impacts. Flooding from ice jams would result in the loss of road access to the County Park due to road closures.

3.4.4.2 Alternative 2 – Old North Floodway Channel Improvements (Proposed Action)

The Proposed Action is anticipated to have positive impacts on public services and utilities. The risk of public services and utilities being affected by flooding would be reduced. Underground utility lines running under the bridge would have to be temporarily disturbed and reconnected



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within the existing Union Street ROW. The sanitary sewer and water main would be relocated slightly within the ROW. Any and all disruptions would be kept to a minimum.

3.4.4.3 Alternative 3 – New Floodway Channel Construction

Under this alternative, a new channel would be excavated. It is anticipated that there would be significant relocating and replacing of utilities to accommodate the new channel. Water, electric, sanitary sewer, and telephone service would likely be temporarily disrupted during construction. All disruptions would be kept to a minimum.

3.4.5 Traffic and Circulation

The center of the project area is located at the junction of Union Street and the Sebewaing River, at the entrance to the County Park. Union Street is a two-lane road that terminates 1,200 feet west of the Old North Floodway Channel and serves as the only access route to the park. Route 25, the major north-south area roadway, is located less than $\frac{3}{4}$ of a mile east of the site. Traffic in the project area reflects the seasonal use of the area as a summer vacation destination.

3.4.5.1 Alternative 1- No Action

Under the No Action Alternative, traffic would continue to be impacted by flooding resulting from ice jams. At times, there would be no access between the center of the Village and areas west of the existing Old North Floodway Channel, including the County Park. However, since ice jam flooding typically occurs prior to the summer vacation season, these impacts may be minimal.

3.4.5.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

The Proposed Action is anticipated to have positive long-term impacts on area traffic by maintaining access to western areas of the Village. Access to the County Park would not be impacted due to flooding from ice jams.

During project construction, temporary traffic delays would likely occur during replacement of the Union Street Bridge at the Old North Floodway Channel and the realignment of the County Park access road. To minimize disruptions to residents and visitors, these activities would occur before or after the summer vacation season, when the County Park receives the most visitors. Traffic control measures would be implemented to permit the ingress and egress of traffic into the park and over the channel during construction.

3.4.5.3 Alternative 3 – New Floodway Channel Construction

Impacts to traffic under Alternative 3 would be similar to those described for Alternative 2, the Proposed Action.

During project construction, temporary traffic delays would likely result from excavation of the new channel and the installation of a new bridge or culvert at Union Street. To minimize disruptions to residents and visitors, installation of the bridge or culvert would occur before or after the summer vacation season. Traffic control measures would be implemented to permit the ingress and egress of traffic over the channel during construction.



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3.4.6 Environmental Justice

EO 12898, entitled, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” directs federal agencies to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, 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” (FEMA, 1996).

Socioeconomic data obtained for the project area includes two adjacent block groups identified in 1990 and 2000 U.S. Census Bureau data as Block Groups 1 and 2 of Census Tract 9508 in Huron County, Michigan. In 1990, Block Groups 1 and 2 had a combined population of 1,632 (U.S. Census Bureau, 1990). The combined population reported in the 2000 U.S. Census Data was 1,719. According to the 1990 U.S. Census Bureau data for Block Group 1, the population is 98.8 percent white, 0% African-American, and less than 1% Hispanic. The population for Block Group 2 was reported as 99.8 percent white and 0% African-American, with 3.2 percent of the population responding as Hispanic (which can include individuals identified with multiple racial groups).

When compared to 2000 U.S. Census Bureau data, the white population percentage remained fairly constant, changing by less than 1 percent for both block groups. The Hispanic population increased in both block groups, but only by a small percentage. There remains no African American population for Block Group 1 and a slight increase to less than 1 percent for Block Group 2.

In 1989, the latest date for which income data is available, the median income per household for Block Group 1 and Block Group 2 was \$26,927 and \$21,429, respectively. The national median income for the same period was \$38,837. For Block Group 1 and Block Group 2, approximately 4.3 and 15.5 percent of the population, respectively, were reported to be below the poverty level.

Based on U.S. Census Bureau information, none of the project alternatives would have a disproportionately high and adverse impact on minority or low-income populations. The Proposed Action and Alternative 3 would benefit all populations by reducing flooding impacts resulting from ice jams.

3.4.7 Safety and Security

Safety and security issues that have been considered in this analysis include the health and safety of the area residents, the public at-large, and the protection of personnel involved in activities related to the implementation of the proposed project.

3.4.7.1 Alternative 1 – No Action Alternative

Under the No Action Alternative, the potential for flooding resulting from ice jams would remain. Without mitigating the flooding risk, the potential for adverse impacts to public safety would continue.



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3.4.7.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

Under the Proposed Action, excavation activities could present safety risks to persons performing the activities. To minimize risks to safety and human health, all project activities would be performed using qualified personnel trained in the proper use of the appropriate equipment, including all appropriate safety precautions. Additionally, all activities would be conducted in a safe manner in accordance with the standards specified in Occupational Safety and Health Administration (OSHA) regulations.

Once completed, the Proposed Action would decrease risks to human health and safety associated with flood events resulting from ices jams at the mouth of the Sebewaing River.

3.4.7.3 Alternative 3 – New Floodway Channel Construction

Impacts of Alternative 3 would be similar to those described for the Proposed Action and result in a decreased risk to human health and safety associated with flood events resulting from ices jams at the mouth of the Sebewaing River.

3.5 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), as amended, and implemented by 36 CFR Part 800. Requirements include identification of significant historic properties that may be impacted by the Proposed Action. Historic properties are defined as archaeological sites, standing structures, or other historic resources listed in or eligible for listing in the National Register of Historic Places (NRHP) (36 CFR 60.4).

As defined in 36 CFR Part 800.16(d), the Area of Potential Effect (APE) “is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist.”

In addition to identifying historic properties that may exist in the proposed project’s APE, FEMA must also determine, in consultation with the appropriate State Historic Preservation Officer (SHPO), what effect, if any, the action would have on historic properties. Moreover, if the project would have an adverse effect on these properties, FEMA must consult with SHPO on ways to avoid, minimize, or mitigate the adverse effect.

3.5.1 Historic Architecture

An on-line review of the Michigan State Register of Historic Places (MSRHP) and the NRHP was conducted (NRHP, 2002). This assessment identified the presence of two historic places within Sebewaing Township. These sites are the Indian Mission located at 590 East Bay Street and the Woldt Brothers General Store located at 9503 Bach Road, neither of which is located within a 1-mile radius of the project site. Additionally, no historic properties were noted in the immediate vicinity of the project site during the site reconnaissance on March 7, 2002.

A FEMA letter dated July 12, 2002, concluded that no historic resources are present at the project site. Correspondence regarding standing structures, received from SHPO on November



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30, 2001, concurred with FEMA's determination that the proposed project would have no effect on aboveground cultural resources (Appendix C).

3.5.1.1 Alternative 1- No Action

The No Action Alternative would have no effect on historic resources because no disturbance to the proposed project site would occur.

3.5.1.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

Since there are no historic structures or buildings within the area of potential effect, the Proposed Action would not impact historic structures or buildings.

Should any potentially historic significant materials be discovered during project construction or staging of equipment, all activities on the site would be halted immediately and the Applicant would consult with FEMA, the State Department of Emergency Management, and SHPO or other appropriate agency for further guidance.

3.5.1.3 Alternative 3 – New Floodway Channel Construction

Under Alternative 3, since there are no historic structures or buildings within the area of potential effect, there would be no impact to historic structures or buildings.

Should any potentially historic significant materials be discovered during project construction or staging of equipment, all activities on the site would be halted immediately and the Applicant would consult with FEMA, the State Department of Emergency Management, and SHPO or other appropriate agency for further guidance.

3.5.2 **Archaeological Resources**

A request for an evaluation of the presence or absence of known archaeological sites within the proposed subject area was submitted to the Michigan Historical Center on March 21, 2002 (Appendix C). According to the response from the Michigan Historical Center, there are no known archaeological sites located in the immediate vicinity of the project area (Appendix C). There are, however, four known archaeological sites within a one-half mile radius (See Table 1).

Table 1 – Known Archaeological Resources

Location	Michigan Historical Center Identification Number	Historical Period
Sebewaing Township	20HU16	Woodland Period
Sebewaing Township	20HU157	Woodland Period
Sebewaing Township	20HU89	Prehistoric Period
Sebewaing Township	20HU159	Prehistoric Period



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Additionally, correspondence from SHPO dated September 28, 2001, requested that a Phase I archaeological survey be completed for the proposed undertaking. In response to the SHPO's request for archaeological testing and on behalf of FEMA Region V, a senior archaeologist with URS Group, Inc. met with representatives from SHPO on April 15, 2002, for concurrence on the proposed Phase I survey work scope. The survey of the proposed APE was completed during the week of April 15-19, 2002. The goals of the Phase I survey were to identify any prehistoric or historic archaeological sites that may be affected by the proposed undertaking, and to make an initial determination about the cultural affiliation, date, and potential significance of any sites identified.

A mix of prehistoric and modern (late-twentieth century) artifacts was recovered from the Shovel Test Pit (STP) survey, suggesting that the APE was disturbed at least to a depth of 1 meter (the limit of hand excavation). A backhoe was then used to excavate two test trenches, each 2 meters wide and 5 meters long, to a depth of 2 to 3 meters below the surface, where water began seeping into the trench. The test trenches showed that the APE was covered with an average of 1.5 meters of dredge fill; the fill extended to a depth of nearly 3 meters in some areas. Archaeologists screened a sample of the natural soil present below the fill, which was exposed in the test trenches. A small amount of lithic debitage (unused chips of stone that are the result of stone tool making) was recovered from the natural soils. Shell fragments and numerous pebbles found in the sandy soils suggested that the soils might be alluvial deposits, or represent original fast land surfaces. No diagnostic (datable) prehistoric artifacts were recovered (URS, 2002).

The survey resulted in the identification of one low-density prehistoric archaeological site, which was registered as site 22HU202 with the Office of the State Archaeologist. This small site, consisting of a light scatter of lithic flakes, has been negatively affected by previous flooding and filling activities. Based on these observations, the Phase I archaeology survey recommended that site 22HU202 should not be eligible for listing in the NRHP (URS, 2002).

FEMA has concluded, and SHPO concurs, that no archaeological or historic resources are present at the project site. The FEMA determination letter dated July 12, 2002 and the SHPO review letter dated October 17, 2002 can be found in Appendix C.

3.5.2.1 Alternative 1- No Action

The No Action Alternative would have no effect on archaeological resources because no ground disturbance would occur.

3.5.2.2 Alternative 2 - Old North Floodway Channel Improvements (Proposed Action)

It is not anticipated that any archeological resources exist at the site.

Should any potentially historic significant materials be discovered during project construction or staging of equipment, all activities on the site would be halted immediately and the Applicant would consult with FEMA, the State Department of Emergency Management, and SHPO or other appropriate agency for further guidance.

3.5.2.3 Alternative 3 – New Floodway Channel Construction

It is not anticipated that any archeological resources exist at the site.



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Should any potentially historic significant materials be discovered during project construction or staging of equipment, all activities on the site would be halted immediately and the Applicant would consult with FEMA, the State Department of Emergency Management, and SHPO or other appropriate agency for further guidance.

3.5.3 Indian Religious Sites

Requests for evaluation of the presence or absence of Indian Religious Sites within the proposed subject area were submitted to the Hannahville Indian Community, the Lac Vieux Desert Band of Lake Superior Chippewa Indians, the Saginaw Chippewa Tribe, the Keweenaw Bay Indian Community, the Sault Ste. Marie Tribe of Chippewa Indians, and the Pokagon Band of the Potawatomi Indian Nation. Only one response was received to these requests. The Sault Ste. Marie Tribe of Chippewa Indians responded to one request, stating that they do not currently have any available information concerning the presence of any Native American Traditional Cultural Properties, Native American Sacred Sites, or other Significant Properties in the vicinity of the project area. The letter also stated that they do not claim cultural affiliation in this geographic area. The response was accompanied by a site reference form, which should be completed if there is an inadvertent discovery of Native American human remains during site construction.

On June 16, 2003 URS contacted Mr. Dean Anderson of the Michigan Historical Center, who stated that the Saginaw Chippewa were the only tribe in Huron County that would need to be contacted. FEMA submitted a consultation letter to the tribe on June 18, 2003. A response letter was received from the Saginaw Chippewa dated July 7, 2003, indicating that the tribe does not have any information concerning the presence of tribal resources in the project area. Copies of the tribal correspondence are included in Appendix C.

Based on the responses received, no impacts to Indian Religious Sites are anticipated as a result of the three alternatives evaluated. If potential impacts to Indian Religious Sites are identified during construction of Alternative 2 or 3, work in the vicinity would be discontinued, and the Applicant would immediately notify FEMA, SHPO, and an appropriate Tribal contact.



4.0 CUMULATIVE IMPACTS

Cumulative impacts are those effects on the environment that result from the incremental effect of the action when added to past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time.

There are no known large-scale projects currently on-going or scheduled to begin in the area (Dutcher, pers. comm.). However, there are two single-family residences planned within the SRIDB and the Village jurisdiction. A second planned development involves the conversion of 10 acres of farmland to residential development on large lots. According to the County Engineer, stormwater runoff from the development will drain into Saginaw Bay through another outlet rather than by way of the Sebewaing River. In addition, a local development regulation requires any new development maintain the same level of stormwater runoff as exists before the project. The projects described above may result in minor impacts to the following areas: soils and farmland; water quality; floodplain; hydrology; surface water; groundwater; and cultural resources.

Any potential impacts to such resources from the Proposed Action will be limited to the project site itself. As a result, it is concluded that the Proposed Action would not result in cumulative impacts in conjunction with the other developments proposed in the area.



5.0 PUBLIC PARTICIPATION

A public notice advertising the availability of the draft EA for public review was published in the Huron County Press and the Tuscola Count Advertiser on October 1, 2003. The EA was available for review at the Huron County Road Commission, Village of Sebewaing, and Tuscola County Drain Commissioner's offices and online at the FEMA website: <http://www.fema.gov/ehp/docs.shtm> (Appendix D). The public was provided the opportunity to review the EA from October 1 through October 31, 2003 and comment on the Proposed Action. No public comments were received during the review period.



6.0 MITIGATION MEASURES AND PERMITS

This table provides a brief summary of the anticipated permitting and mitigation requirements for the proposed project alternatives.

Alternatives	Permit/Mitigation Requirements
Alternative 1 – No Action Alternative	<ul style="list-style-type: none"> • No permits are required
Alternative 2 – Old North Floodway Channel Improvements (Proposed Action)	<ul style="list-style-type: none"> • The Applicant must follow all applicable local, state, and federal laws, regulations, and requirements. They must comply with all conditions of the joint USACE/MDEQ permit issued for this project. • No staging of equipment or construction activities shall begin until all permits are obtained. • The Applicant must apply best management practices for soil erosion, prevention, and containment during staging of equipment and construction activities. • To minimize soil compaction effects in floodplain areas resulting from the movement of heavy equipment, the use of construction equipment shall be limited to periods when the soil is dry or frozen. • The Applicant shall not dispose of soils or debris within the floodplain. • The Applicant shall not dispose of soils or debris within any wetlands, except as specified in USACE and MDEQ permits. • The Applicant shall be required to water down construction areas to reduce dust, when necessary. • Running time of fuel-burning equipment shall be minimized and engines would be properly maintained to reduce emission of criteria pollutants. • The Applicant would be required to create 5,963 square feet of new wetland adjacent to the west side of the Old North Floodway Channel in accordance with the USACE permit issued for the project. • Scrub-shrub wetlands temporarily impacted by construction equipment will be replanted with wetland species. Soils compacted by construction equipment shall be loosened prior to replanting.



Alternatives	Permit/Mitigation Requirements
	<ul style="list-style-type: none"> • In areas of tree removal, if appropriate, trees would be replaced. • Bare soils shall be revegetated with native seed after construction to prevent future soil erosion. It is recommended that the Applicant monitor the site to ensure vegetation establishment. • The Applicant shall conduct sediment analyses in areas proposed for disturbance to determine if any contamination hazards exist and to identify necessary remedial actions, including disposal requirements for excavated materials. Any hazardous materials discovered, generated, or used during implementation of the proposed project must be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations. • Construction activities would occur during normal business hours. • To minimize disruptions to resident and visitors, replacement of the bridge would occur before or after the summer peak season, when the County Park receives the most visitors. • Traffic control measures would be implemented to permit the ingress and egress of traffic over the channel during bridge construction. • All construction activities must be conducted by trained personnel in compliance with OSHA standards and regulations to protect worker safety. • Should any potentially historic significant materials be discovered during project construction or staging of equipment, all activities on the site would be halted immediately and the Applicant would consult with FEMA, the State Department of Emergency Management, and SHPO or other appropriate agency for further guidance. • If potential impacts to Indian Religious Sites are identified during construction of the Proposed Action, work in the vicinity would be discontinued, and the Applicant would immediately notify FEMA, SHPO, and an appropriate Tribal contact.



Alternatives	Permit/Mitigation Requirements
<p>Alternative 3 – New Floodway Channel Construction</p>	<ul style="list-style-type: none"> • The Applicant must follow all applicable local, state, and federal laws, regulations, and requirements. They must obtain and comply with all required permits required from MDEQ prior to initiating work on the project. The Applicant has agreed to obtain the following permits from MDEQ: Part 301, Inlands Lakes and Streams, for any work below the ordinary high-water mark; Part 31, Water Resources Protection, for potential hazardous waste contamination; of the NREPA, 1994 PA 451, as amended. No staging of equipment or construction activities shall begin until all permits are obtained. • The Applicant must apply best management practices for soil erosion, prevention, and containment during staging of equipment and construction activities. • Bare soils shall be revegetated with native seed after construction to prevent future soil erosion. It is recommended that the Applicant monitor the site to ensure vegetation establishment. • The Applicant shall be required to complete a final H&H analysis to demonstrate no downstream impacts. • The Applicant shall be required to obtain a permit under Part 301, Inlands Lakes and Streams, of the NREPA, 1994 PA 451, as amended, for any work below the ordinary high-water mark • The proposed action is located within a federally identified flood hazard area and is subject to the State of Michigan’s Floodplain Regulatory Authority. A permit for Alternative would be obtained from MDEQ under Part 31, Water Resources Protection, the NREPA, Act 451 of 1994. • The Applicant shall not dispose of soils or debris within the floodplain. • The Applicant shall not dispose of soils or debris within any wetlands. • Running time of fuel-burning equipment shall be minimized and engines would be properly maintained to reduce emission of criteria pollutants. • The Applicant shall be required to water down



Alternatives	Permit/Mitigation Requirements
	<p>construction areas to reduce dust, when necessary.</p> <ul style="list-style-type: none"> • In areas of tree removal, if appropriate, trees would be replaced. • To minimize soil compaction effects in floodplain areas resulting from the movement of heavy equipment, the use of construction equipment shall be limited to periods when the soil is dry or frozen. • Any hazardous materials discovered, generated, or used during implementation of project activities must be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations. • If needed, the Applicant shall obtain all land easements or leases from property owners and utilities. • Construction activities would occur during normal business hours. • Traffic control measures would be implemented to permit the ingress and egress of traffic over the channel during bridge construction. • All construction activities must be conducted by trained personnel in compliance with OSHA standards and regulations to protect worker safety. • Should any potentially historic or archeological significant materials be discovered during project construction or staging of equipment, all activities on the site shall be halted immediately and the Applicant shall consult with FEMA and the SHPO or other appropriate agency for further guidance. • If potential impacts to Indian Religious Sites are identified during construction of the Proposed Action, work in the vicinity would be discontinued, and the Applicant would immediately notify FEMA, SHPO, and an appropriate Tribal contact.



7.0 CONSULTATION AND REFERENCES

The following agencies were consulted during the preparation of this Environmental Assessment and the results are presented in Appendix C.

Federal Agencies Consulted

U.S. Department of the Interior, Fish and Wildlife Service

U.S. Department of Agriculture, Natural Resources Conservation Service

State, City and Local Agencies Consulted

Michigan Department of Environmental Quality

Michigan Department of Natural Resources

Michigan Historical Center

Natural Resources Conservation Service

Hannahville Indian Community

Keweenaw Bay Indian Community

Lac Vieux Desert Band of Lake Superior Chippewa

Saginaw-Chippewa Indian Tribe of Michigan

Sault Ste. Marie Tribe of Chippewa Indians

Pokagon Band, Potawatomi Indian Nation, Inc.

Village of Sebewaing Clerk's Office

Distribution

Jeanne Millin, FEMA Environmental Officer, Region V

Brent Paul, FEMA Environmental Officer

Bruce Menerey, Michigan Department of Environmental Quality

Matt Schnepf, Michigan Assistant State Hazard Mitigation Officer



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8.0 LIST OF PREPARERS

Ileana Ivanciu, P.G., Environmental Planner (Master). Dewberry-Goodkind, Inc.

Anthony Lee, Environmental Planner (Master). Dewberry-Goodkind, Inc.

Robert W. Rooks, P.E., Civil Engineer (Master). Dewberry-Goodkind, Inc.

Steven Wheeler, Wetlands Specialist. Dewberry-Goodkind, Inc.

William Marsh, Senior Hydrologist. Dewberry & Davis, LLC

Damiano Albanese, Environmental Planner (Master). Dewberry-Goodkind, Inc.

Jessica Prockup, Environmental Planner (First). Dewberry-Goodkind, Inc.

Sara N. Doane, Environmental Planner (First). Dewberry-Goodkind, Inc.

Angela M. Chaisson, NEPA Group Leader, Independent Technical Reviewer. URS Group, Inc.

Jonathan Randall, Project Environmental Planner, Independent Technical Reviewer, URS Group, Inc.

Janet E. Frey, P.G., Task Order Manager, URS Group, Inc.

