

## **Appendix B**

### **Wetland and Floodplain Eight Step**

### **Planning Process and Wetland Assessments**

**EXECUTIVE ORDER 11990**  
**FLOODPLAIN MANAGEMENT – CHECKLIST (44 CFR Part 9)**

**TITLE: Village of Bartlett Flood Mitigation Project**

**PROPOSED ACTION: Construction of a Flood Mitigation Project**

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**APPLICABILITY: Actions which have the potential to affect wetlands or their occupants, or which are subject to potential harm by location in wetlands.**

**YES**  **NO**

The proposed action could potentially adversely affect the wetland.

Remarks:

**IF ANSWER IS NO, REVIEW IS COMPLETED, OTHERWISE CONTINUE WITH REVIEW.**

Mark the review steps required per applicability:  1  2  3  4  5  6  7  8

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**STEP NO. 1 Determine whether the proposed action is located in a wetland**

**Flood Hazard data available (check the box that applies)**

**YES**  **NO**

The project is located in a wetland as mapped by a National Wetland Inventory.

**YES**  **NO**

The project is located in a wetland as mapped by the local community.

**YES**  **NO**

The project area has wetland indicators as identified in a wetland assessment.

**Flood Hazard data not available**

**IF ANY OF THE ANSWERS ARE YES, CONTINUE WITH THE FOLLOWING STEPS, OTHERWISE REVIEW IS COMPLETE.**

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**STEP NO. 2 Notify the public at the earliest possible time of the intent to carry out an action in a wetland, and involve the affected and interested public in the decision-making process.**

Notice was provided as part of a disaster cumulative notice.

Project Specific Notice was provided by: FEMA

Type of Public Notice:

Newspaper, (name:)

Post Site, (location: )

Broadcast, (station: )

- Direct Mailing, (area:        )
- Public Meeting, (dates:        )
- Other:

**Date of Public Notice:**

**STEP NO. 3**

**Identify and evaluate practicable alternatives to locating the proposed action in a wetland (including alternatives sites, actions and the "no action" option). If a practicable alternative exists outside the wetland, FEMA must locate the action at the alternative site.**

**Alternative Options**

YES  NO

Is there a practicable alternative site location outside of the wetland?

Site location:

YES  NO

Is the NO Action alternative the most practicable alternative?

**IF ANY ANSWER IS YES, THEN FEMA SHALL TAKE THAT ACTION AND THE REVIEW IS CONCLUDED.**

**STEP NO. 4**

**Identify the potential direct and indirect impacts associated with the occupancy or modification of wetlands and the potential direct and indirect support of wetland development that could result from the proposed action. 44CFR Part 9.10**

YES  NO

Is the Proposed Action based on incomplete information?

YES  NO

Is the proposed action in compliance with the NFIP?

YES  NO

Does the proposed action increase the risk of flood loss?

YES  NO

Will the proposed action result in an increased base discharge or increase the flood hazard potential to other properties or structures?

YES  NO

Does the proposed action minimize the impact of floods on human health, safety and welfare?

YES  NO

Will the proposed action induce future growth and development, which will potentially adversely affect the wetland?

YES  NO

Does the proposed action involve dredging and/or filling of a wetland?

YES  NO

Will the proposed action result in the discharge of pollutants into the wetland?

YES  NO

Does the proposed action avoid long and short-term adverse impacts associated with the occupancy and modification of wetland?

YES  NO

Will the proposed action result in any indirect impacts that will affect the natural values and functions of wetland?

YES  NO

Will the proposed action forego an opportunity to restore the natural and beneficial values served by wetlands?

YES  NO

Does the proposed action restore and/or preserve the natural and beneficial values served by wetlands?

YES  NO

Will the proposed action result in an increase to the useful life of a structure or facility?

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**STEP NO. 5**

**Minimize the potential adverse impacts and support to or within wetlands to be identified under Step 4, restore and preserve the natural and beneficial values served by wetlands.**

YES  NO

Were techniques applied to the proposed action to minimize the impacts if site location is in the wetland?

YES  NO

Were avoidance and minimization measures applied to the proposed action to minimize the short and long term impacts on the wetland?

If no, identify measures required as a condition of the grant:

YES  NO

Were measures implemented to restore and preserve the natural and beneficial values of the wetland.

If no, identify measures required as a condition of the grant:

**If any answer is no, explain why:**

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**STEP NO. 6**

**Reevaluate the proposed action to determine first, if it is still practicable in light of its extent to which it will aggravate the hazards to others, and its potential to disrupt wetland values and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a wetland unless it is the only practicable location.**

YES  NO

The action is still practicable at a wetland site in light of the disruption of natural values;

YES  NO

The wetland site is the only practicable alternative.

YES  NO

There is no potential for limiting the action to increase the practicability of previously rejected non wetland sites and alternative actions.

YES  NO

Minimization of harm to or within the wetland can be achieved using all practicable means.

YES  NO

The action in a wetland clearly outweighs the requirement of E.O. 11990.

**STEP NO. 7**

**Prepare and provide the public with a finding and public explanation of any final decision that the wetland is the only practicable alternative.**

- Final Notice was provided as part of the wetland notice. See EO 11990 checklist.
- Notice was provided as part of a disaster cumulative notice.
- Project Specific Notice was provided by: FEMA

Type of Public Notice:

- Newspaper, (name:        )
- Post Site, (location:     )
- Broadcast, (station:     )
- Direct Mailing, (area:    )
- Public Meeting, (dates:   )
- Other:

**Date of Public Notice:**

**After providing the final notice, FEMA shall, without good cause shown, wait at least 15 days before carrying out the proposed action.**

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**STEP NO. 8**

**Review the implementation and post - implementation phases of the proposed action to ensure that the requirements stated in Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes.**

YES  NO

Was Grant conditioned on review of implementation and post-implementation phases to insure compliance of EO 11990?

## MEMORANDUM

DATE: March 20, 2013

TO: Project File

FROM: Thomas Kehoe, Christopher B. Burke Engineering, Ltd.

SUBJECT: Wetland/Waters Assessment Report – Bartlett Flood Mitigation Project Properties in the Village of Bartlett, Cook County, Illinois (CBBEL Project No. 080558)

On March 13, 2013, Christopher B. Burke Engineering, Ltd. (CBBEL) completed a wetland/waters assessment of the Village of Bartlett Stormwater Retention Project Property in the Village of Bartlett, Cook County, Illinois. A total of 5 project locations comprise the entire Village of Bartlett Stormwater Retention Project:

1. The Streamwood Parcel, at the southeast corner of North Avenue and Prospect Avenue (See previous wetland assessment report enclosed).
2. The Prospect Commercial Parcel, at the northeast corner of Wilmington Drive and Prospect Avenue, is primarily mowed turf grass and a dry detention basin.
3. The Crest Avenue and Taylor Avenue Flood Control parcel, on the north side of Taylor Avenue, between Marion Avenue and Berteau Avenue, is primarily mowed turf grass.
4. A storm sewer improvement area on Morse Avenue
5. A storm sewer improvement area on Newport Lane

This report documents the findings of the wetland/waters assessment for project locations 2 through 5 only. Project location 1, the Streamwood Parcel, was assessed previously in 2009 by CBBEL. The remaining project areas are generally located north of Devon Avenue, south of Lake Street and can geographically be found in Section 35, Township 41North, Range 9, East of the Third Principal Meridian (Exhibit 1). One wetland area was identified on the Prospect Commercial Parcel at the time of the field visit.

The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill material into jurisdictional wetlands and waters of the U.S. under Section 404 of the Clean Water Act. In our opinion, the identified wetland appears to be isolated and associated with a man-made, constructed stormwater detention facility and likely would not be subject to federal regulation by the Corps. Our opinion is based on a review of the National Wetlands



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## MEMORANDUM

Inventory Map, the Soil Survey of Cook County, the United States Geologic Survey Topographic Map, and observations from the February 12, 2013 field visit.

The following presents the methodology and reference material used to assist in the assessment. This assessment is based on field conditions at the time of the CBBEL site visit and our understanding of current federal, state and local regulations. An evaluation of historic site conditions was not performed.

### METHODOLOGY

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010), identifies technical criteria required for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils and wetland hydrology as described below:

**Hydrophytic Vegetation:** The hydrophytic vegetation criterion is based on a separation of plants into five basic groups:

- (1) Obligate wetland plants (OBL) almost always occur (estimated probability >99%) in wetlands under natural conditions;
- (2) Facultative wetland plants (FACW) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in non-wetlands;
- (3) Facultative plants (FAC) are equally likely to occur in wetlands or non-wetlands (estimated probability 34-66%);
- (4) Facultative upland plants (FACU) usually occur in non-wetlands (estimated probability 67-99%), but occasionally are found in wetlands; and
- (5) Obligate upland plants (UPL) almost always occur (estimated probability >99%) in non-wetlands under natural conditions.

Three procedures completed in the following order are used to determine if hydrophytic vegetation is present:

- 1) Dominance Test: Using the 50/20 Rule, if greater than 50% of the plants present are FAC, FACW, or OBL, the subject area meets the hydrophytic vegetation criterion.
- 2) Prevalence Index: Each plant species in a sampling plot is assigned a numeric value (OBL=1; FACW=2; FAC=3; FACU=4; UPL=5). Based on the sampling data, the absolute cover is calculated for each species in each stratum and using the specified formula, if the Prevalence Index is 3 or less, hydrophytic vegetation is present.



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- 3) Morphological Adaptations: Various species may develop physical characteristics after growing in wetland areas such as multi-stemmed trunks, shallow roots and buttressed stems. Hydrophytic vegetation is present if an adaptation is observed in more than 50% of FACU species growing in an area that contains hydric soil and wetland hydrology.

**Hydric Soils**: Hydric soils are defined in the manual as "soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part." Field indicators of hydric soil are found in the NTCHS Field Indicators of Hydric Soils in the United States (USDA Natural Resources Conservation Service 2006b or current version).

**Wetland Hydrology**: The wetland hydrology criterion is often the most difficult to determine. Typically, the presence of water for a portion of the growing season creates anaerobic conditions. Anaerobic conditions lead to the prevalence of wetland plants. Morphological adaptations of plants, driftlines and watermarks are examples of wetland hydrology field indicators.

### **RESULTS AND DISCUSSION**

#### **STUDY AREA**

The study areas are located in 4 areas within the northeastern portion of the Village of Bartlett. Three of the 4 areas did not have wetlands or waters identified during the time of the field investigation. The storm sewer improvement project areas on Morse Avenue and Newport Lane are Village streets of bituminous pavement. The Crest Avenue and Taylor Avenue Flood Control Parcel is primarily mowed and maintained turf grass. The majority of the Prospect Commercial Parcel consisted of mowed and maintained turf grass; however, one wetland was identified and delineated within a constructed detention basin on the property.

### **REFERENCE MATERIALS**

The following reference materials were reviewed and used to assist in the field reconnaissance. They are included as Exhibits 2-5.

#### **NATIONAL WETLAND INVENTORY**

The National Wetland Inventory map (NWI), Streamwood and West Chicago Quadrangles (1981), indicates no wetlands are mapped on the subject property (Exhibit 2). The NWI serves only as a large-scale guide and actual wetland locations and types often vary from that mapped.



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# MEMORANDUM

## SOIL SURVEY

The Soil Survey of Cook County, Illinois (2001) was reviewed to determine the location of hydric soils within the study area (Exhibit 3). Mapped hydric soil can be indicative of wetland conditions.

The following soils are mapped within the study area:

69	-	Milford silty clay loam - hydric
152	-	Drummer silty clay loam - hydric
223B	-	Varna silt loam
232	-	Ashkum silty clay loam - hydric
294B	-	Symerton silt loam
531B	-	Markham silt loam
533	-	Urban land
534	-	Urban land – Orthents complex, clayey
1903	-	Muskego and Houghton mucks, wet, hydric

## USGS TOPOGRAPHIC SURVEY

The USGS Topographic Survey map, Streamwood and West Chicago Quadrangles (1993), was reviewed to determine watersheds and local drainage patterns (Exhibit 4). The survey indicates the study area is tributary to the West Branch DuPage River.

## FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map for Cook County and Incorporated Areas, Illinois, Map Number 17031C0168 J, effective August 19, 2008, was reviewed to determine the location of regulatory floodplain on the site (Exhibit 5). The presence of floodplain can be indicative of wetland hydrology. The FIRM indicates there is no regulatory 100-year floodplain mapped within the study area.



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FROM: Thomas Kehoe, Christopher B. Burke Engineering, Ltd.

SUBJECT: Wetland/Waters Assessment Report – Church Property in the Village of Bartlett, Cook County, Illinois  
(CBBEL Project No. 080558)

On March 13, 2013, Christopher B. Burke Engineering, Ltd. (CBBEL) completed a wetland/waters assessment of the Church Property in the Village of Bartlett, Cook County, Illinois. The project area is located south of Lake Street, north of Taylor Avenue and can geographically be found in Section 35, Township 41 North, Range 9, East of the Third Principal Meridian (Exhibit 1). No wetlands were identified at the time of our site visit.

The study area consisted of mowed turf grasses and volunteer weeds with scattered areas of scrub trees and shrubs along the northern and eastern property limits. Although the eastern portion of the study area contained vegetation that is associated with wetlands, primarily reed canary grass (*Phalaris arundinacea*), silver maple (*Acer saccharinum*) and Eastern cottonwood (*Populus deltoides*), the area did not have evidence of wetland hydrology. In our opinion, the study area contained no areas that would meet the criteria for wetlands according to the methodology established in the 1987 Corps of Engineers Wetland Delineation Manual. Our opinion is based on a review of the National Wetland Inventory Map, the Soil Survey of Cook County, Flood Insurance Rate Map, and observations from the March 13, 2013 field visit.

This assessment is based on field conditions at the time of the CBBEL site visit and our understanding of current federal, state and local regulations. An evaluation of historic site conditions was not performed. The methodology for performing the assessment and the reference materials reviewed to support our opinion is described below.

### METHODOLOGY

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010), identifies technical criteria required for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils and wetland hydrology as described below:

**Hydrophytic Vegetation:** The hydrophytic vegetation criterion is based on a separation of plants into five basic groups:



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