



## **Environmental Assessment for HUD-funded Proposals**

Recommended format per 24 CFR 58.36, revised March 2005  
[Previously recommended EA formats are obsolete].

### **Illinois “IKE” Disaster Recovery Program**

Project Identification: Farm Trace Bypass Storm Sewer and Detention Basin  
Application # 37561, Grant # 08-354071

Preparer: Patrick Dunn, Planner, CDM Smith

Responsible Entity: Village of Richton Park, Illinois

Month/Year: August 2012

# Environmental Assessment

**Responsible Entity:** Village of Richton Park, Illinois

[24 CFR 58.2(a)(7)]

**Certifying Officer:** Richard Reinbold, Village President

[24 CFR 58.2(a)(2)]

**Project Name:** Farm Trace Bypass Storm Sewer and Detention Basin

**Project Location:** Steger Road from Farm Trace Drive to Central Park Avenue,  
Village of Richton Park, Cook County, Illinois

**Estimated total project cost:** \$1,100,000

**Grant Recipient:** Village of Richton Park, Illinois

[24 CFR 58.2(a)(5)]

**Recipient Address:** 4455 West Sauk Trail, Richton Park, IL 60471

**Project Representative:** De'Carlton Seewood, Village Manager

**Telephone Number:** 708-481-8950

**Conditions for Approval:** (List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts and other relevant documents as requirements). [24 CFR 58.40(d), 40 CFR 1505.2(c)]

- Acquire all required federal, state and local permits before beginning construction
- Implement and maintain the applicable best management practices for erosion and sedimentation control and storm water management in the *Illinois Urban Manual* of the Association of Illinois Soil and Water Conservation Districts, available online at <http://aiswcd.org/IUM/>
- Do not remove or damage vegetation growing in the adjacent wetland
- Do not operate heavy equipment in the adjacent wetland
- Do not introduce invasive plants to the site
- Revegetate disturbed unpaved areas as soon as possible
- Implement appropriate traffic control and access maintenance measures
- Implement appropriate measures to remove water from pipe trenches to facilitate proper pipe bedding
- Manage any water removed from pipe trenches and other excavations in accordance with applicable laws and regulations
- Outfit all internal combustion equipment with effective mufflers

- Limit construction to hours allowed by local ordinance or Monday through Saturday from 7 a.m. to 6 p.m., whichever is more restrictive
- Use water or chemical dust suppressant in exposed areas to control dust
- Cover the load compartments of trucks hauling dust-generating materials
- Wash heavy trucks and construction vehicles before they leave the site
- Minimize engine idling
- Reduce vehicle speed on non-paved areas and keep paved areas clean
- Establish and follow specified procedures for managing contaminated materials discovered or generated during construction
- Employ spill mitigation measures immediately upon a spill of fuel or other hazardous material

**FINDING:** [58.40(g)]

**Finding of No Significant Impact**  
(The project will not result in a significant impact on the quality of the human environment.)

**Finding of Significant Impact**  
(The project may significantly affect the quality of the human environment.)

**Preparer Signature:** Patrick Dunn **Date:** August 15, 2012

**Name/Title/Agency:** Patrick Dunn, Planner, CDM Smith

**Reviewer Signature:** F. Mack Rugg **Date:** August 15, 2012

**Name/Title/Agency:** F. Mack Rugg, Senior Environmental Scientist, CDM Smith

**RE Approving Official Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Name/Title/Agency:** Richard Reinbold, Village President, Village of Richton Park

**Statement of Purpose and Need for the Proposal:** [40 CFR 1508.9(b)]

The purpose of the proposed project is to improve storm water management and reduce flooding in the Farm Trace Subdivision. The proposed project is needed because the Farm Trace Subdivision experiences recurrent flooding from storm events. Significant flooding occurred as a result of storms in 2008. Storm water runoff from offsite drainage basins flow into the Farm Trace Subdivision and this overwhelms the existing storm water management system in the subdivision.

**Description of the Proposal:** Include all contemplated actions, which logically are either geographically, or functionally a composite part of the project, regardless of the source of funding. [24 CFR 58.32, 40 CFR 1508.25]

**Project name:** Farm Trace Bypass Storm Sewer and Detention Basin

**Project type:** Construction of storm sewer and a storm water detention basin

**Project description:** The proposed project would make storm water drainage improvements to address flooding in the Farm Trace Subdivision. The proposed improvements would include

installing a 60-inch bypass storm sewer and constructing a detention basin. The bypass storm sewer would consist of approximately 2,000 feet of reinforced concrete pipe (RCP) installed along Steger Road from east of Farm Trace Drive to Central Park Avenue. The storm sewer would function to direct runoff from surrounding areas away from the Farm Trace Subdivision. Runoff that drains into the Farm Trace Subdivision includes an approximately 130 acre farm to the south and a multi-acre wetland to the west.

The bypass storm sewer would outfall to the proposed detention basin, which would be constructed at the northwest corner of Steger Road and Center Park Avenue. The detention basin would be designed to avoid impacting the wetland adjacent to the west. Approximately 150 feet of storm sewer would also be installed to drain storm water from the detention basin to the existing Village of Park Forest storm sewer system. As part of the proposed project, a drainage swale would be constructed beginning at the southern terminus of Farm Trace Drive to direct storm water into the bypass storm sewer. The proposed project is shown on Figures 1, 2, and 3 in Appendix A.

The estimated total project cost is \$1,100,000. The Village of Richton Park seeks a grant for \$750,000 from the Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) and the remaining \$350,000 would come from local funds.

**Existing Conditions and Trends:** Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)]

The project area is developed with residential properties to the north from Farm Trace Drive to Ridgeway Avenue. There are scattered trees within an existing easement area behind the homes on Marilyn Drive and an actively farmed field is located west of the intersection of Steger Road and Crawford Avenue. The area of the proposed detention basin is an open, grassy field. A forested wetland area is adjacent to the west of the open, grassy field. The properties south of Steger Road between Crawford Avenue and Central Park Avenue are forested areas and several residential properties.

Storm water runoff from offsite drainage basins flows into the Farm Trace Subdivision and during storm events the subdivision's storm sewers and existing detention basins become overwhelmed with storm water, causing streets and the basements of homes to flood. In the absence of the proposed project, the flooding will continue to occur during storm events.

## Statutory Checklist

[24CFR §58.5]

Record the determinations made regarding each listed statute, executive order or regulation. Provide appropriate source documentation. [Note reviews or consultations completed as well as any applicable permits or approvals obtained or required. Note dates of contact or page references]. Provide compliance or consistency documentation. Attach additional material as appropriate. Note conditions, attenuation or mitigation measures required.

### Factors

### Determination and Compliance Documentation

<p><b>Historic Preservation</b> [36 CFR 800]</p>	<p>The proposed project is in compliance. A request for an assessment was sent to the Illinois Historic Preservation Agency (IHPA), and in an e-mail dated July 11, 2012, Anne Haaker, the Deputy State Historic Preservation Officer, stated that the proposed project may proceed without further review by her office. A copy of the e-mail is included in Appendix B.</p> <p>The U.S. Department of Housing and Urban Development (HUD) Tribal Directory Assessment Tool (TDAT) was accessed to identify the Indian tribes having an interest in Cook County. A letter inviting the Indian tribe to be a consulting party on the proposed project was e-mailed to each identified tribal contact (see documentation included in Appendix B). No responses to the letters were received within 30 days.</p> <p>Source: HUD, TDAT Version 2.0, <a href="http://egis.hud.gov/tdat/Tribal.aspx">http://egis.hud.gov/tdat/Tribal.aspx</a></p>
<p><b>Floodplain Management</b> [24 CFR 55, Executive Order 11988]</p>	<p>The proposed project is in compliance. The proposed project would occur outside the 100-year floodplain, as shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 17031C0802J dated August 19, 2008. A FIRMette showing the proposed project area is provided as Figure 4 in Appendix A.</p> <p>Source: FEMA, Map Service Center, <a href="http://www.msc.fema.gov">www.msc.fema.gov</a></p>
<p><b>Wetlands Protection</b> [Executive Order 11990]</p> <p>Illinois Interagency Wetland Policy Act of 1989 [20 ILCS 830]</p>	<p>The proposed project is in compliance. Updated National Wetlands Inventory (NWI) mapping prepared by Ducks Unlimited shows the following wetlands near the proposed project: a freshwater forested/shrub wetland shown within part of the proposed detention basin, and an unclassified wetland southwest of the proposed drainage swale (see Figure 5 in Appendix A).</p> <p>A Wetland Investigation report was prepared by Huff &amp; Huff, Inc. in August 2010 (see Appendix C). This report was based on the initially proposed location for the detention basin, the adjacent village owned parcel west of the currently proposed location. As a result of the impact on a wetland, several alternatives were analyzed and considered. The currently proposed detention basin was designed to avoid construction in the adjacent wetland. Figure 6 in Appendix A shows the layout of the proposed detention basin in relation to the wetland delineation that was prepared as part of the Wetland Investigation report.</p> <p>Although the proposed detention basin would be constructed outside the wetland, best management practices must be implemented to avoid disturbance to the wetland (see Conditions for Approval above or Mitigation Measures Recommended below).</p> <p>The Illinois Department of Natural Resources (IDNR) Ecological Compliance Assessment Tool (EcoCAT) identified wetlands within 250 feet of the proposed project, prompting further review by IDNR (see IDNR EcoCAT printout in Appendix D). IDNR evaluated the proposed project, and after confirmation that</p>

	<p>the delineated wetland would be avoided, concluded adverse effects are unlikely and terminated consultation under Ill. Adm. Code Part 1090 (Illinois Interagency Wetland Policy Act regulations) (see letter from Tracy Evans, IDNR Division of Ecosystems and Environment, in Appendix D).</p> <p>Sources: Ducks Unlimited, Illinois Draft NWI Update, <a href="http://www.ducks.org/conservation/glaro/glaro-gis-nwi-update-data">http://www.ducks.org/conservation/glaro/glaro-gis-nwi-update-data</a>; IDNR, EcoCAT, <a href="http://dnrecocat.state.il.us/ecopublic/">http://dnrecocat.state.il.us/ecopublic/</a></p>
<p><b>Coastal Zone Management Act</b> [Sections 307(c),(d)]</p>	<p>The proposed project is in compliance. The proposed project area is outside the coastal zone designated in the Illinois Coastal Management Program and the proposed project would have no effect on the coastal zone.</p> <p>Sources: IDNR Illinois Coastal Program Document, 2011, Chapter 3, Defining the Illinois Coastal Zone Boundary, <a href="http://www.dnr.illinois.gov/cmp/Documents/3_Boundary.pdf">http://www.dnr.illinois.gov/cmp/Documents/3_Boundary.pdf</a>, and Appendix B, Coastal Management Program Boundaries, <a href="http://www.dnr.illinois.gov/cmp/Documents/Appendix%20B.pdf">http://www.dnr.illinois.gov/cmp/Documents/Appendix%20B.pdf</a></p>
<p><b>Sole Source Aquifers</b> [40 CFR 149]</p>	<p>The proposed project is in compliance. There are no designated sole source aquifers in Illinois. The closest designated sole source aquifer within U.S. Environmental Protection Agency (USEPA) Region V is the St. Joseph Aquifer System in Indiana, more than 50 miles from the Illinois border (see Figure 7 in Appendix A). The Ohio River separates Illinois from sole source aquifers in Region IV and the Mississippi River separates Illinois from aquifers in Region VII. Therefore, projects in Illinois have no potential to affect sole source aquifers.</p> <p>Source: Sole Source Aquifers in EPA Region V, <a href="http://www.epa.gov/safewater/sourcewater/pubs/grg_ssamap_reg5.pdf">http://www.epa.gov/safewater/sourcewater/pubs/grg_ssamap_reg5.pdf</a></p>
<p><b>Endangered Species Act</b> [50 CFR 402]</p> <p>Illinois Endangered Species Protection Act [520 ILCS 10]</p>	<p>The proposed project is in compliance. The project site is not appropriate habitat for any threatened, endangered, proposed, or candidate species listed by the U.S. Fish and Wildlife Service (USFWS) as occurring in Cook County. A list of protected species in Cook County is provided in Appendix E, and each listed species is addressed below.</p> <p>The piping plover requires beach habitat. Leafy-prairie clover and prairie bush clover require prairie habitat. The eastern massasauga is found in fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands. Mead's milkweed requires prairie, prairie converted to hay meadow, or glades or barrens with thin soil. Hine's emerald dragonfly is found in spring-fed wetlands, wet meadows, or marshes and their critical habitat is located along the Des Plaines River. Eastern prairie fringed orchid requires wet-to-mesic prairie and/or specific kinds of wetland habitat: sedge meadow, fen, marsh, marsh edge, and lake plain. None of the habitats these species require are found at the proposed project site.</p> <p>The Illinois Natural Heritage Database shows that the following protected resources may be in the vicinity of the proposed project area: Thorn Creek Woods Illinois Natural Areas Inventory (INAI) site and Thorn Creek Woods Nature Preserve (see IDNR EcoCAT printout in Appendix D). IDNR evaluated the proposed project, concluded that adverse effects are unlikely, and terminated consultation under Ill. Adm. Code Part 1075 (see letter from Tracy Evans, IDNR Division of Ecosystems and Environment, in Appendix D).</p> <p>Sources:</p>

	<p>Online consultation with USFWS pursuant to Section 7 of the Endangered Species Act, <a href="http://www.fws.gov/midwest/endangered/section7/s7process/index.html">http://www.fws.gov/midwest/endangered/section7/s7process/index.html</a>; online consultation with IDNR through EcoCAT, <a href="http://dnrecocat.state.il.us/ecopublic/">http://dnrecocat.state.il.us/ecopublic/</a></p>
<p><b>Wild and Scenic Rivers Act</b> [Sections 7 (b), (c)]</p>	<p>The proposed project is in compliance. The designated wild and scenic river closest to the proposed project area is the Middle Fork of the Vermilion River in Vermilion and Champaign counties. This river segment is the only designated wild and scenic river in Illinois (National Wild &amp; Scenic Rivers System, Designated Wild &amp; Scenic Rivers, <a href="http://www.rivers.gov/wildriverslist.html">http://www.rivers.gov/wildriverslist.html</a>). The proposed project area is more than 75 miles from the designated segment of the Vermilion River (see Figure 8 in Appendix A) and is in a different watershed (Illinois State Water Survey, Major Watersheds of Illinois, <a href="http://www.isws.illinois.edu/iswsdocs/maps/ISWSMS2000-01.pdf">http://www.isws.illinois.edu/iswsdocs/maps/ISWSMS2000-01.pdf</a>).</p>
<p><b>Air Quality</b> [Clean Air Act, Sections 176 (c) and (d), and 40 CFR 6, 51, 93]</p>	<p>The proposed project is in compliance. The proposed project area is in Cook County, which is in moderate nonattainment of the 8-hour ozone standard. The project would conform to the State Implementation Plan (SIP) because the project would not be a significant source of pollutants that contribute to ozone formation.</p> <p>Sources: USEPA, The Green Book Nonattainment Areas for Criteria Pollutants, Currently Designated Nonattainment Areas for All Criteria Pollutants, Illinois, <a href="http://www.epa.gov/oar/oaqps/greenbk/ancl.html#illinois">http://www.epa.gov/oar/oaqps/greenbk/ancl.html#illinois</a>; USEPA determination of PM-2.5 attainment, 74 FR 62243, November 27, 2009, <a href="http://www.gpo.gov/fdsys/pkg/FR-2009-11-27/pdf/E9-28256.pdf#page=1">http://www.gpo.gov/fdsys/pkg/FR-2009-11-27/pdf/E9-28256.pdf#page=1</a></p>
<p><b>Farmland Protection Policy Act</b> [7 CFR 658]  Illinois Farmland Preservation Act [505 ILCS 75]</p>	<p>The proposed project is in compliance. Because the proposed project area is within the corporate limits of Richton Park, Illinois, and is not zoned for agriculture, it is considered “land already committed to urban development,” and is therefore not subject to the Farmland Protection Policy Act (7 CFR 658.2(a), definition of “farmland”).</p> <p>The Illinois Department of Agriculture (IDOA) reviewed the proposed project and concluded that it was in compliance with the Illinois Farmland Preservation Act (see e-mail from Terry Savko, IDOA Bureau of Land and Water Resources, in Appendix F).</p>
<p><b>Environmental Justice</b> [Executive Order 12898]</p>	<p>The proposed project is in compliance. As indicated by the other sections of this environmental assessment, the proposed project would have no significant adverse environmental impacts. The proposed project would therefore have no significant disproportionate adverse environmental impact on minority and low-income residents of the proposed project area.</p> <p>Source: Council on Environmental Quality, <i>Environmental Justice - Guidance Under the National Environmental Policy Act</i>, 1997, discussion of “disproportionately high and adverse human health effects” on page 26, <a href="http://www.epa.gov/compliance/ej/resources/policy/ej_guidance_nepa_ceq1297.pdf">http://www.epa.gov/compliance/ej/resources/policy/ej_guidance_nepa_ceq1297.pdf</a></p>

### HUD Environmental Standards Determination and Compliance Documentation

<p><b>Noise Abatement and Control</b> [24 CFR 51 B]</p>	<p>The proposed project is in compliance. HUD standards for noise exposure do not apply to infrastructure projects such as the proposed project because they are not noise sensitive uses (24 CFR 51.101).</p>
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<p><b>Toxic/Hazardous/ Radioactive Materials, Contamination, Chemicals or Gases</b> [24 CFR 58.5(i)(2)]</p>	<p>The proposed project is in compliance. Information in the USEPA Envirofacts database and the database of the Office of the Illinois State Fire Marshal indicates that the proposed project area is unlikely to contain hazardous materials that “could affect the health and safety of occupants or conflict with the intended utilization of the property” (24 CFR 58.5(i)(2)(i)).</p> <p>A search of the USEPA Envirofacts database, which includes all EPA records of pollutants or potential pollutants at specific sites, did not return any records near the proposed project area (see printout from online Envirofacts database in Appendix G). A search of the underground storage tank (UST) database of the Office of the Illinois State Fire Marshal identified 12 facilities with known USTs in Richton Park, but none of these facilities are near the proposed project area (see printout from online UST database in Appendix G).</p> <p>Sources: USEPA Envirofacts, <a href="http://www.epa.gov/enviro/">http://www.epa.gov/enviro/</a>; Office of the State Fire Marshal, UST Search, <a href="http://webapps.sfm.illinois.gov/ustsearch/Search.aspx">http://webapps.sfm.illinois.gov/ustsearch/Search.aspx</a></p>
<p><b>Siting of HUD- Assisted Projects near Hazardous Operations</b> [24 CFR 51 C]</p>	<p>The proposed project is not intended for residential, institutional, recreational, commercial or industrial use, and is therefore not a “HUD-assisted project” for purposes of 24 CFR Part 51, Subpart C—Siting of HUD Facilities Near Hazardous Operations. Because the proposed project is not a “HUD-assisted project” for purposes of Subpart C, the acceptable separation distance requirements in that subpart do not apply to the proposed project.</p> <p>Source: 24 CFR 51.201 and 51.202</p>
<p><b>Airport Clear Zones and Accident Potential Zones</b> [24 CFR 51 D]</p>	<p>The proposed project is in compliance. The proposed project area is more than 15 miles from the nearest commercial service airport, Gary/Chicago International Airport (see Figure 9 in Appendix A). The proposed project area is more than 9 miles from the state border and more than 200 miles from the only military airfield in Illinois, Scott Air Force Base.</p> <p>Sources: National Plan of Integrated Airport Systems (NPIAS) Reports, Appendix B, <a href="http://www.faa.gov/airports/planning_capacity/npias/reports/">http://www.faa.gov/airports/planning_capacity/npias/reports/</a>; aerial imagery accessed in Google™ Earth Pro</p>

## Environmental Assessment Checklist

[Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. **Impact Codes:** (1) - No impact anticipated; (2) - Potentially beneficial; (3) - Potentially adverse; (4) - Requires mitigation; (5) - Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Land Development	Code	Source or Documentation
Conformance with Comprehensive Plans and Zoning	1	It is presumed that an infrastructure project proposed by a local government would conform to applicable comprehensive plans and zoning.
Compatibility and Urban Impact	1	The proposed project would be compatible with existing land use in the proposed project vicinity. Because the proposed project would not allow additional people to live in the area or additional businesses to operate in the area, it would not have an urbanizing effect.
Slope	1	The proposed project work areas do not contain steep slopes (see Figure 2 in Appendix A). The proposed detention basin would create slopes, but these slopes would be appropriately designed to detain storm water (see Figure 6 in Appendix A). The stability of the project site would not be a concern for the project.
Erosion	4	The proposed project has the potential to cause erosion. Erosion and sedimentation control would be important for the proposed project, particularly to protect the adjacent wetland. Best management practices must be implemented to minimize erosion and sedimentation (see Conditions for Approval above or Mitigation Measures Recommended below).
Soil Suitability	1  4	The Natural Resources Conservation Service (NRCS) classifies the soils in the proposed project work areas as having a low potential for corrosion of concrete (see documentation in Appendix H).  The soils in the proposed project work areas are classified as "very limited" for shallow excavations because of a high groundwater table (see documentation in Appendix H). It is likely that water would have to be pumped out of the trenches to facilitate proper bedding of the pipe (see Conditions for Approval above or Mitigation Measures Recommended below).  Source: NRCS, Web Soil Survey, <a href="http://websoilsurvey.nrcs.usda.gov">http://websoilsurvey.nrcs.usda.gov</a>
Hazards and Nuisances including Site Safety	1	The proposed project area contains no unusual hazards, nuisances or safety concerns.
Energy Consumption	1	The proposed project would not consume a significant amount of energy, except for a typical amount during the construction phase.
<b>Noise</b> - Contribution to Community Noise Levels	4	There would be temporary, unavoidable increases in noise levels at nearby residences during the construction phase. Noise impacts would be mitigated to the greatest extent feasible (see Conditions for Approval above or Mitigation Measures Recommended below). The completed project would not generate noise.
<b>Air Quality</b> Effects of Ambient Air Quality on Project and Contribution to	4	There would be temporary, unavoidable increases in community air pollution levels during the construction phase. Air quality impacts would be mitigated to the greatest extent feasible (see Conditions for Approval above or Mitigation Measures Recommended below). The completed

Community Pollution Levels		project would not have an adverse impact on air quality in the community. Existing ambient air quality would have no effect on the proposed project.
<b>Environmental Design</b> Visual Quality - Coherence, Diversity, Compatible Use and Scale	1	The open, grassy field at the northwest corner of Steger Road and Central Park Avenue would be converted into a detention basin. The detention basin would be seeded with grass after construction and would not have a significant impact on the visual quality of the proposed project area.

<b>Socioeconomic</b>	<b>Code</b>	<b>Source or Documentation</b>
Demographic Character Changes	1	The proposed project would have no effect on the demographic character of the proposed project area.
Displacement	1	The proposed project would not displace any residents or businesses.
Employment and Income Patterns	1	The proposed project would have no effect on employment and income patterns in the proposed project area.

<b>Community Facilities and Services</b>	<b>Code</b>	<b>Source or Documentation</b>
Educational Facilities	1	The proposed project would not create a significant additional demand for educational services or interfere with delivery of educational services.
Commercial Facilities	1	The proposed project would not create a significant additional demand for commercial services or interfere with operation of commercial facilities.
Health Care	1	The proposed project would not create a significant additional demand for health care or interfere with delivery of health care.
Social Services	1	The proposed project would not create a significant additional demand for social services or interfere with delivery of social services.
Solid Waste	1	The proposed project would generate solid waste during the construction phase, but would not increase long term generation of solid waste.
Waste Water	1	The proposed project would not affect the wastewater collection, treatment, and disposal system.
	4	The excavations required for installation of the storm sewer and construction of the detention basin may require dewatering. Water removed from the excavations would have to be managed in accordance with applicable laws and regulations (see Conditions for Approval above or Mitigation Measures Recommended below).
Storm Water	2	The proposed project would make storm water drainage improvements to address flooding that occurs in the Farm Trace Subdivision as a result of storm events.
	4	The proposed project would create the potential for storm water runoff to cause erosion and sedimentation. Best management practices would be required to minimize erosion and sedimentation (see Conditions for Approval above or Mitigation Measures Recommended below).
Water Supply	1	The proposed project would not consume an unusual quantity of water and would not affect the water supply system.
Public Safety - Police	1	The proposed project would not create a significant additional demand for police services or interfere with delivery of police services.
- Fire	1	The proposed project would not create a significant additional demand for fire protection services or interfere with performance of fire protection services.
- Emergency Medical	1	The proposed project would not create a significant additional demand for emergency medical services or interfere with performance of emergency medical services.

Open Space and Recreation - Open Space	3	The open, grassy field at the northwest corner of Steger Road and Central Park Avenue would be converted into a detention basin seeded with grass. This would reduce the open space value of the site.
	1	The proposed bypass storm sewer would be below grade and would have no effect on open space.
- Recreation	1	The proposed project would not create additional demand for recreational facilities or interfere with the operation of recreation facilities.
- Cultural Facilities	1	The proposed project would not affect any cultural facility.
Transportation	4	The proposed project would not generate significant traffic or create a significant additional demand for transportation services. During construction, the project would have a minor, short term impact on travel on Steger Road in the proposed project area. Appropriate traffic control and access maintenance measures would be employed to address these short term impacts (see Conditions for Approval above or Mitigation Measures Recommended below).

Natural Features	Code	Source or Documentation
Water Resources	1	The proposed project would not involve significant water withdrawals and would not have a significant effect on water resources.
Surface Water	4	The surface water feature closest to the proposed project is the wetland adjacent to the proposed detention basin. Best management practices must be implemented to protect the wetland from sedimentation (see Conditions for Approval above or Mitigation Measures Recommended below).
Unique Natural Features and Agricultural Lands	1	There are no unique natural features or agricultural lands in the proposed project area. An actively farmed field is adjacent to the proposed storm sewer, but the proposed project would have no effect on this field. Two of the 18 Illinois sites listed in the National Registry of Natural Landmarks are in Cook County, but are not located in the vicinity of the proposed project (National Natural Landmarks Program, June 2009, page 29, <a href="http://www.nature.nps.gov/nnl/docs/NNLRegistry.pdf">http://www.nature.nps.gov/nnl/docs/NNLRegistry.pdf</a> ).
Vegetation and Wildlife	1	Although the open, grassy field at the northwest corner of Steger Road and Central Park Avenue would be converted into a detention basin, the proposed detention basin would be seeded with grass after construction. No significant wildlife would be disturbed by the proposed project.

Other Factors	Code	Source or Documentation
Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]	1	The proposed project is in compliance. The flood insurance requirements in 42 USC 4001-4028, referenced in 24 CFR 58.6(a), apply only to buildings and certain contents of buildings. They do not apply to infrastructure such as the proposed project.  Source: Definition of "financial assistance for acquisition or construction purposes" in 42 USC 4003(a)(4)
Coastal Barrier Resources Act/Coastal Barrier Improvement Act [§58.6(c)]	1	No units of the Coastal Barrier Resources System are in the State of Illinois.  Source: USFWS, Official Coastal Barrier Resources System Maps, <a href="http://www.fws.gov/CBRA/Maps/index.html#LocatorMaps">http://www.fws.gov/CBRA/Maps/index.html#LocatorMaps</a>
Airport Runway Clear Zone or Clear Zone	1	The proposed project is in compliance. The proposed project area is more than 15 miles from the nearest commercial service airport, Gary/Chicago

Disclosure [§58.6(d)]	International Airport (see Figure 9 in Appendix A). The proposed project area is more than 9 miles from the state border and more than 200 miles from the only military airfield in Illinois, Scott Air Force Base.  Sources: National Plan of Integrated Airport Systems (NPIAS) Reports, Appendix B, <a href="http://www.faa.gov/airports/planning_capacity/npias/reports/">http://www.faa.gov/airports/planning_capacity/npias/reports/</a> ; aerial imagery accessed in Google™ Earth Pro
Other Factors	None

## Summary of Findings and Conclusions

### ALTERNATIVES TO THE PROPOSED ACTION

**Alternatives and Project Modifications Considered** [24 CFR 58.40(e), Ref. 40 CFR 1508.9] (Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

The following alternatives were considered:

- No action alternative (see below)
- Constructing the detention basin in an alternative location

Construction of the detention basin in the village owned parcel west of the proposed location was considered and rejected. The primary benefit of the alternative location would be that the land is already owned by the village and therefore, there would be no land acquisition costs. In addition to short term construction impacts similar to the proposed project, the alternative location would construct the detention basin in a wetland. A detention basin, even if naturalized, would change the nature of a wetland and would require a U.S. Army Corps of Engineers individual permit.

#### **No Action Alternative** [24 CFR 58.40(e)]

(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

The no action alternative would be to not install a bypass storm sewer and to not construct a detention basin. The short term construction impacts would be avoided and the open, grassy field at the northwest corner of Steger Road and Central Park Avenue would not be disturbed under the no action alternative. During storm events the Farm Trace Subdivision's storm sewers and existing detention basins would continue to be overwhelmed, causing streets and the basements of homes to flood. Therefore, the no action alternative was rejected.

#### **MITIGATION MEASURES RECOMMENDED** [24 CFR 58.40(d), 40 CFR 1508.20]

(Recommend feasible ways in which the proposal or its external factors should be modified in order to minimize adverse environmental impacts and restore or enhance environmental quality.)

- Acquire all required federal, state and local permits before beginning construction
- Implement and maintain the applicable best management practices for erosion and sedimentation control and storm water management in the *Illinois Urban Manual* of the Association of Illinois Soil and Water Conservation Districts, available online at <http://aiswcd.org/IUM/>
- Do not remove or damage vegetation growing in the adjacent wetland
- Do not operate heavy equipment in the adjacent wetland
- Do not introduce invasive plants to the site

- Revegetate disturbed unpaved areas as soon as possible
- Implement appropriate traffic control and access maintenance measures
- Implement appropriate measures to remove water from pipe trenches to facilitate proper pipe bedding
- Manage any water removed from pipe trenches and other excavations in accordance with applicable laws and regulations
- Outfit all internal combustion equipment with effective mufflers
- Limit construction to hours allowed by local ordinance or Monday through Saturday from 7 a.m. to 6 p.m., whichever is more restrictive
- Use water or chemical dust suppressant in exposed areas to control dust
- Cover the load compartments of trucks hauling dust-generating materials
- Wash heavy trucks and construction vehicles before they leave the site
- Minimize engine idling
- Reduce vehicle speed on non-paved areas and keep paved areas clean
- Establish and follow specified procedures for managing contaminated materials discovered or generated during construction
- Employ spill mitigation measures immediately upon a spill of fuel or other hazardous material

#### **ADDITIONAL STUDIES PERFORMED**

(Attach studies or summaries)

Huff & Huff, Inc. Wetland Investigation of Farm Trace Parcel, Richton Park, Cook County, Illinois. August 2010. (see Appendix C)

#### **LIST OF SOURCES, AGENCIES AND PERSONS CONSULTED** [40 CFR 1508.9(b)]

Association of Illinois Soil and Water Conservation Districts. 2010. *Illinois Urban Manual*. Accessed at <http://aiswcd.org/IUM/> in 2012.

Council on Environmental Quality. *Environmental Justice - Guidance Under the National Environmental Policy Act*. Accessed at [http://www.epa.gov/compliance/ej/resources/policy/ej\\_guidance\\_nepa\\_ceq1297.pdf](http://www.epa.gov/compliance/ej/resources/policy/ej_guidance_nepa_ceq1297.pdf).

Ducks Unlimited. July 6, 2011. Illinois Draft National Wetlands Inventory Update. Accessed at <http://www.ducks.org/conservation/glaro/glaro-gis-nwi-update-data> in 2012.

Federal Emergency Management Agency (FEMA). August 19, 2008. Flood Insurance Rate Map for Cook County, Illinois and Incorporated Areas. Map number 17031C0802J. Accessed at <http://www.msc.fema.gov>.

Google™ Earth Pro aerial imagery

Huff & Huff, Inc. Wetland Investigation of Farm Trace Parcel, Richton Park, Cook County, Illinois. August 2010.

Illinois Department of Agriculture (IDOA). E-mail received from Terry Savko, Bureau of Land and Water Resources, July 10, 2012.

Illinois Department of Natural Resources (IDNR). 2011. Illinois Coastal Management Program Document. Chapter 3, Defining the Illinois Coastal Zone Boundary, and Appendix B, Coastal Management Program Boundaries. Accessed at <http://www.dnr.illinois.gov/cmp/Pages/documentation.aspx>.

IDNR. Ecological Compliance Assessment Tool (EcoCAT), IDNR Project Number 1300556, July 10, 2012. Accessed at <http://dnrecocat.state.il.us/ecopublic/>.

IDNR. Letter received from Tracy Evans, Division of Ecosystems and Environment, July 17, 2012.

Illinois Historic Preservation Agency (IHPA). E-mail received from Anne Haaker, Deputy State Historic Preservation Officer, July 11, 2012.

IHPA. Historic and Architectural Resources Geographic Information System (HARGIS). Accessed at <http://gis.hpa.state.il.us/hargis/> in 2012.

Illinois State Water Survey. Major Watersheds of Illinois. Accessed at <http://www.isws.illinois.edu/iswsdocs/maps/ISWSMS2000-01.pdf> in 2012.

National Natural Landmarks Program. 2009. *National Registry of Natural Landmarks*, page 29. Accessed at <http://www.nature.nps.gov/nnl/docs/NNLRegistry.pdf>

National Plan of Integrated Airport Systems (NPIAS) Reports. 2011. Airport maps in Appendix B. Accessed at [http://www.faa.gov/airports/planning\\_capacity/npias/reports/](http://www.faa.gov/airports/planning_capacity/npias/reports/).

National Wild & Scenic Rivers System. Designated Wild & Scenic Rivers. Accessed at <http://www.rivers.gov/wildriverslist.html> in 2012.

Natural Resources Conservation Service (NRCS). Web Soil Survey. Accessed at <http://websoilsurvey.nrcs.usda.gov> in 2012.

Office of the Illinois State Fire Marshal. UST Search. Accessed at <http://webapps.sfm.illinois.gov/ustsearch/> in 2012.

U.S. Department of Housing and Urban Development (HUD). Tribal Directory Assessment Tool (TDAT) Version 2.0. Accessed at <http://egis.hud.gov/tdat/Tribal.aspx> in 2012.

U.S. Environmental Protection Agency (USEPA). Envirofacts. Accessed at <http://www.epa.gov/enviro/> in 2012.

USEPA. Sole Source Aquifers in EPA Region V. Accessed at [http://www.epa.gov/safewater/sourcewater/pubs/qrg\\_ssamap\\_reg5.pdf](http://www.epa.gov/safewater/sourcewater/pubs/qrg_ssamap_reg5.pdf) in 2012.

USEPA. The Green Book Nonattainment Areas for Criteria Pollutants. Currently Designated Nonattainment Areas for All Criteria Pollutants – Illinois. Accessed at <http://www.epa.gov/oar/oaqps/greenbk/ancl.html#illinois> in 2012.

USFWS. Midwest Region's Endangered Species Section 7 Technical Assistance Step-by-Step Instructions. Accessed at <http://www.fws.gov/midwest/endangered/section7/s7process/7a2process.html> in 2012.

USFWS. Official Coastal Barrier Resources System Maps. Accessed at <http://www.fws.gov/CBRA/Maps/index.html#LocatorMaps> in 2012.

Village of Richton Park. Illinois "IKE" Disaster Recovery Program (IDRP) Public Infrastructure Program Application. January 31, 2011.

## **Appendices**

Appendix A: Figures

Appendix B: Historic Preservation

Appendix C: Wetland Investigation Report

Appendix D: IDNR EcoCAT Coordination

Appendix E: USFWS Endangered Species Consultation

Appendix F: Illinois Farmland Preservation Coordination

Appendix G: Hazardous Materials

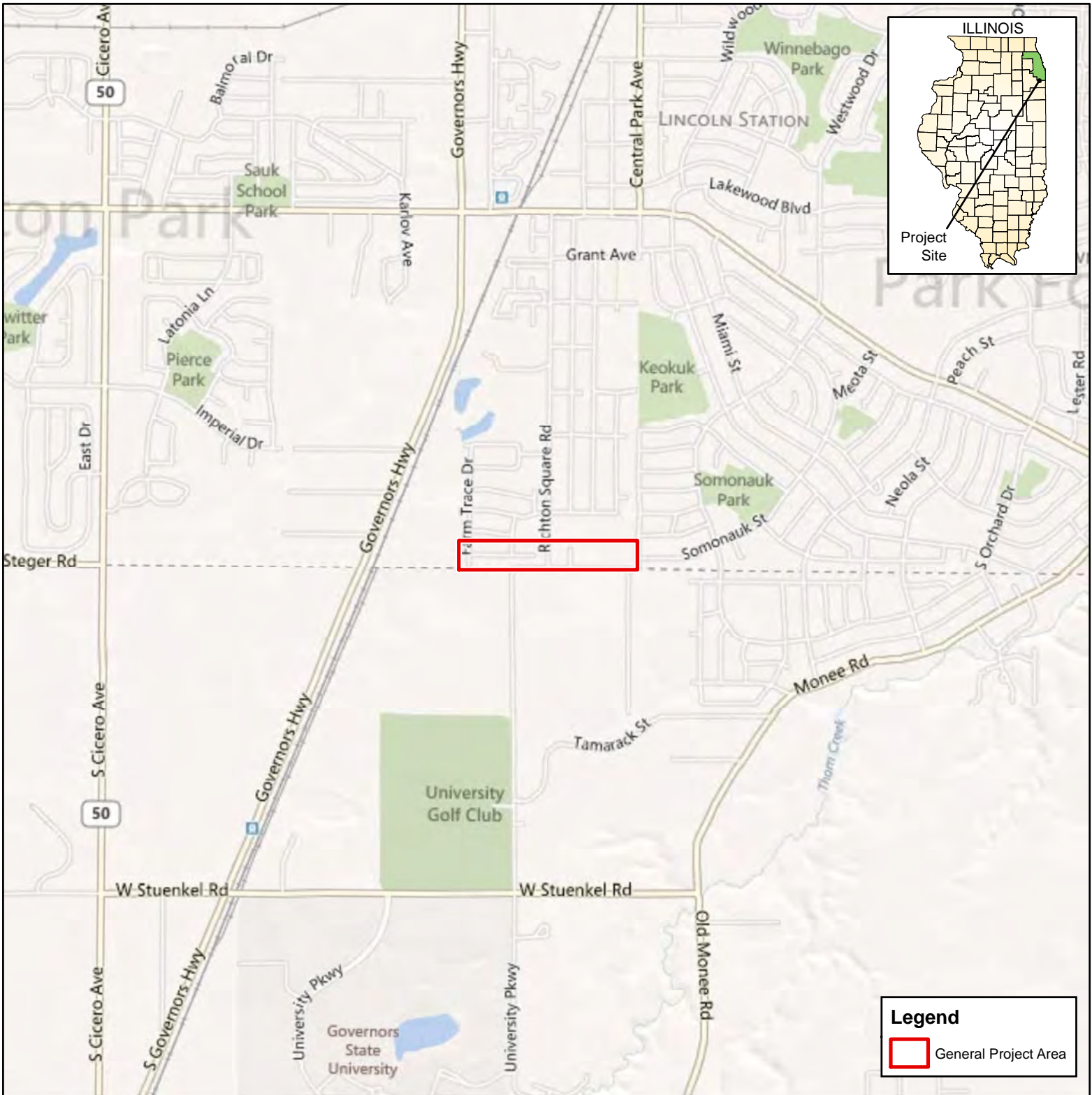
Appendix H: NRCS Soil Suitability



## **Appendix A**

### Figures

Figure 1: General Location Map



## General Location Map

### Public Infrastructure Program Village of Richton Park

*Farm Trace Bypass Storm Sewer  
and Detention Basin*

Data Source(s):  
Bing Maps Road

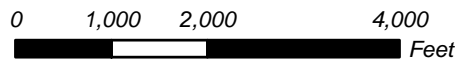
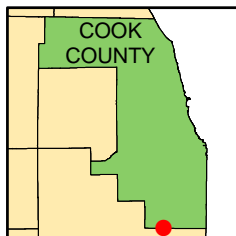
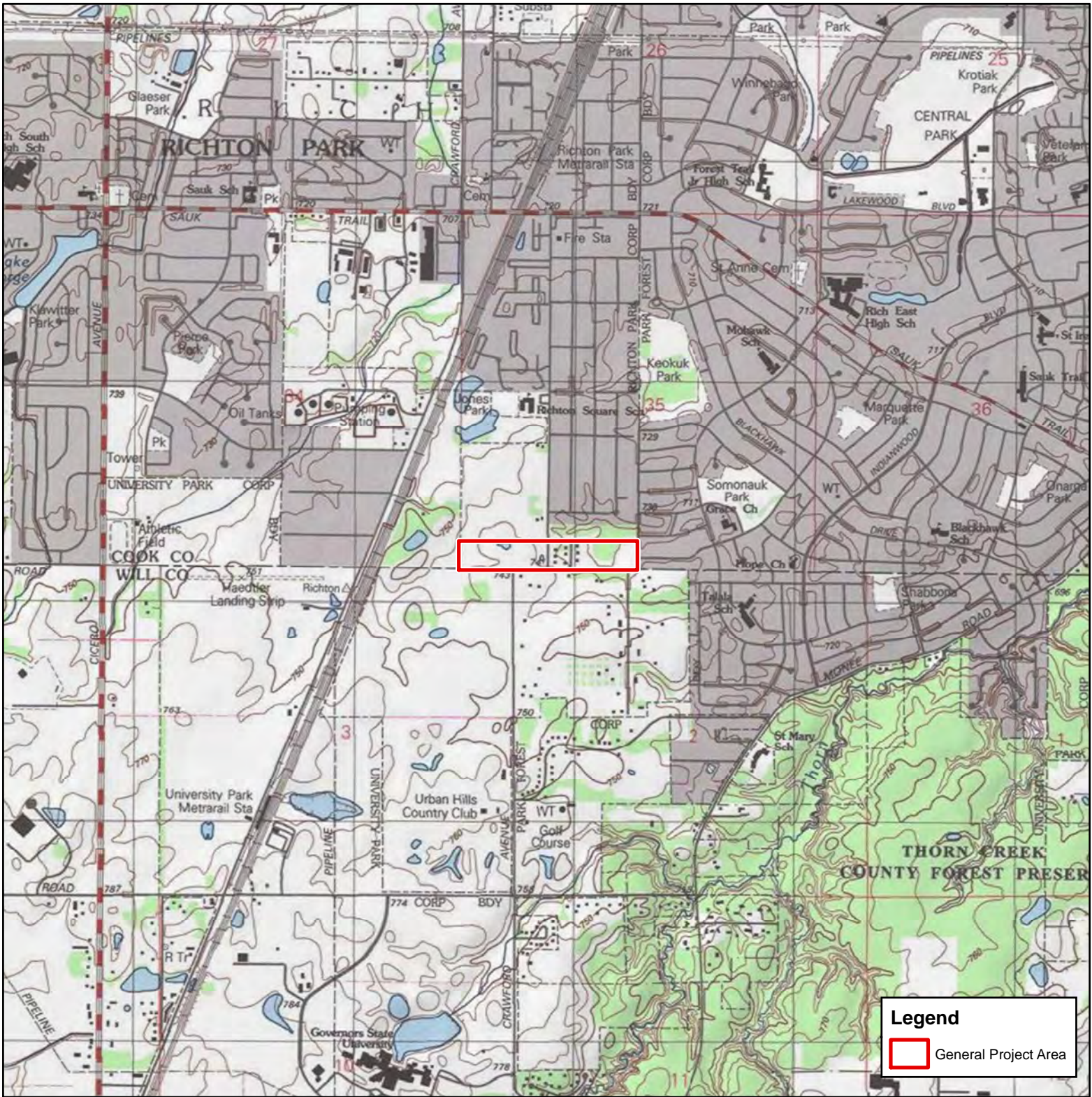



Figure 2: USGS Map



**Legend**  
 General Project Area

# USGS Map

## Public Infrastructure Program Village of Richton Park

*Farm Trace Bypass Storm Sewer  
 and Detention Basin*

Data Source(s):  
 USGS 7.5-Minute  
 Topographic Map  
 (Steger Quadrangle,  
 published in 1974 and  
 accessed via National  
 Geographic TOPO!)

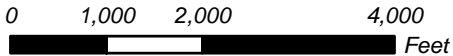
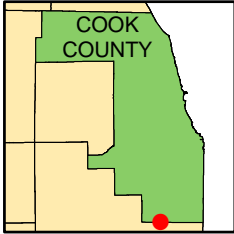


Figure 3: Project Area Map



**Legend**

- Proposed Storm Sewers
- Proposed Detention Basin
- Proposed Drainage Swale

## Project Area Map

### Public Infrastructure Program Village of Richton Park

*Farm Trace Bypass Storm Sewer  
and Detention Basin*

Data Source(s):  
Bing Maps Hybrid

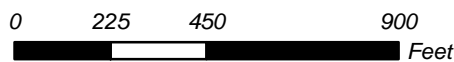
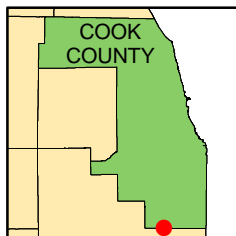
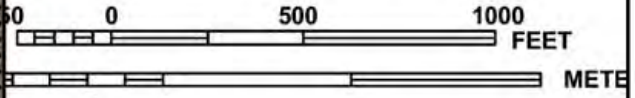


Figure 4: FEMA FIRMette





MAP SCALE 1" = 500'



**NFP**  
**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0802J

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**COOK COUNTY,**  
**ILLINOIS**  
**AND INCORPORATED AREAS**

**PANEL 802 OF 832**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
COOK COUNTY	170054	0802	J
MATTESON, VILLAGE OF	170123	0802	J
PARK FOREST, VILLAGE OF	170145	0802	J
RICHTON PARK, VILLAGE OF	170149	0802	J

General Project Area

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



**MAP NUMBER**  
**17031C0802J**  
**MAP REVISED**  
**AUGUST 19, 2008**

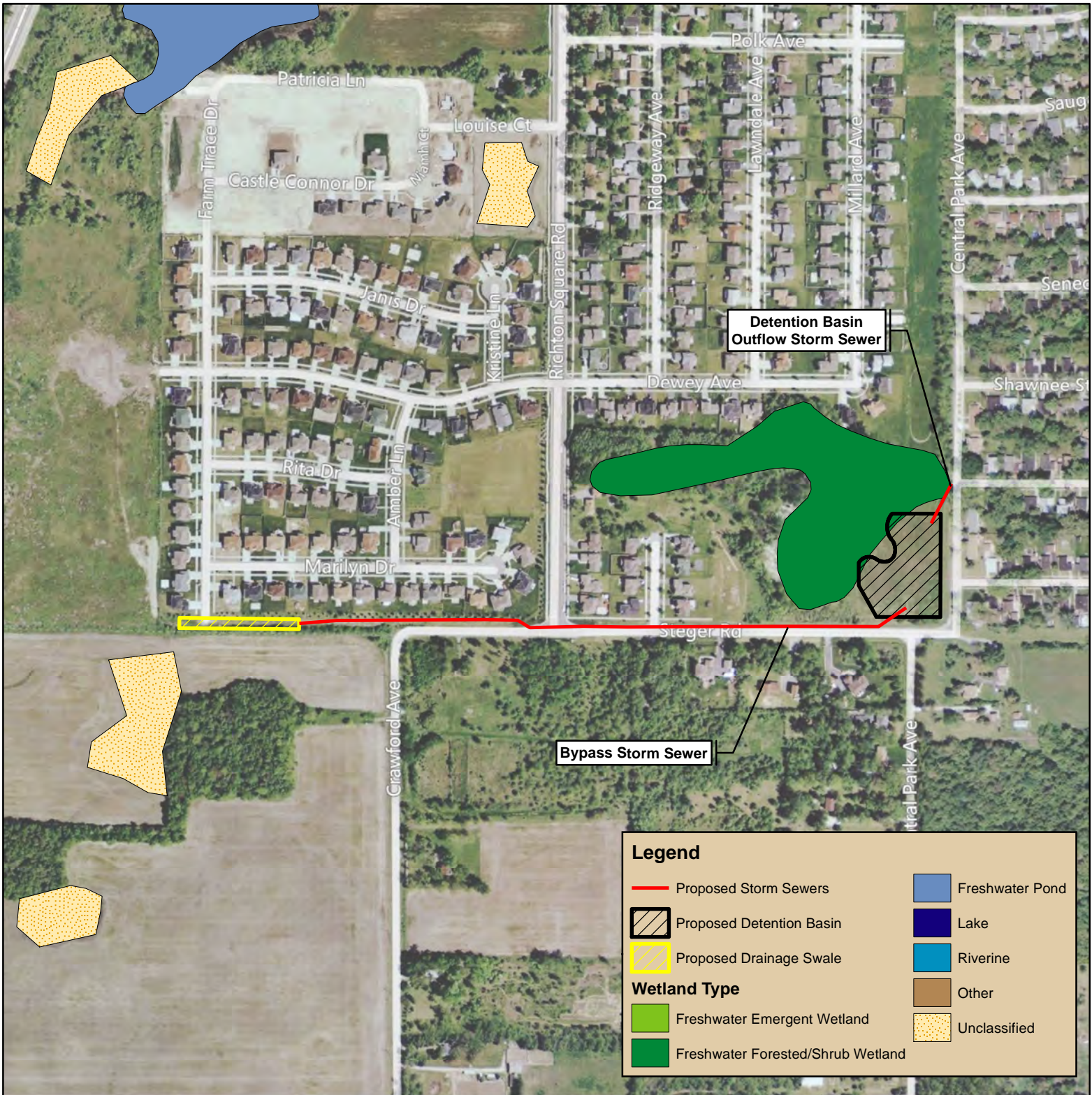
Federal Emergency Management Agency

FLOOD HAZARD INFORMATION NOT SHOWN ON THIS MAP AREAS OUTSIDE OF COOK COUNTY

41°00'00" E

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

Figure 5: Wetlands Map



# Wetlands Map

## Public Infrastructure Program Village of Richton Park

*Farm Trace Bypass Storm Sewer  
and Detention Basin*

Data Source(s):  
Ducks Unlimited Draft  
National Wetlands  
Inventory Update  
(accessed:  
<http://www.ducks.org/conservation/glaro/glaro-gis-nwi-update-data>),  
Bing Maps Hybrid

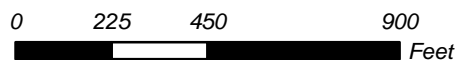
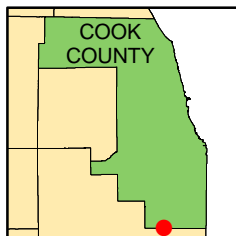


Figure 6: Preliminary Detention Basin Layout



**Clark Dietz**  
ENGINEERS  
DESIGN FIRM REGISTRATION  
No. 184-000450  
118 SOUTH CLINTON STREET  
SUITE 600  
CHICAGO, IL 60661  
PHONE : 312.648.9900  
FAX : 312.648.0204

PROJECT TITLE  
**VILLAGE OF RICHTON PARK  
FARM TRACE BYPASS  
STORM SEWER**  
COOK COUNTY, IL.

DESIGNED BY: TGS  
DRAWN BY: TGS  
CHECKED BY: CRG  
DATE CHECKED: 6/6/12  
NOTE: DIMENSIONAL DATA  
IS NOT TO BE OBTAINED BY  
SCALING ANY PORTION OF  
THIS DRAWING.

DATE	REVISION

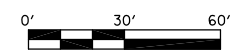
DRAWING TITLE  
**PROPOSED DETENTION  
EXHIBIT**

PROJECT No.  
**R0130143**

DRAWING No.  
**1**  
SHEET 1 OF 1 SHEETS



CENTRAL PARK AVE.



STEGER RD

FUTURE DETENTION BASIN  
VOLUME = 11.0 AC-FT

20+00 21+00 22+00 23+00

CENTERLINE

18" CMP  
15" CMP

24" FES  
I.E.=718.6

15" FES  
I.E.=725.2

15" FES  
W/4" RESTRICTOR  
I.E.=725.8

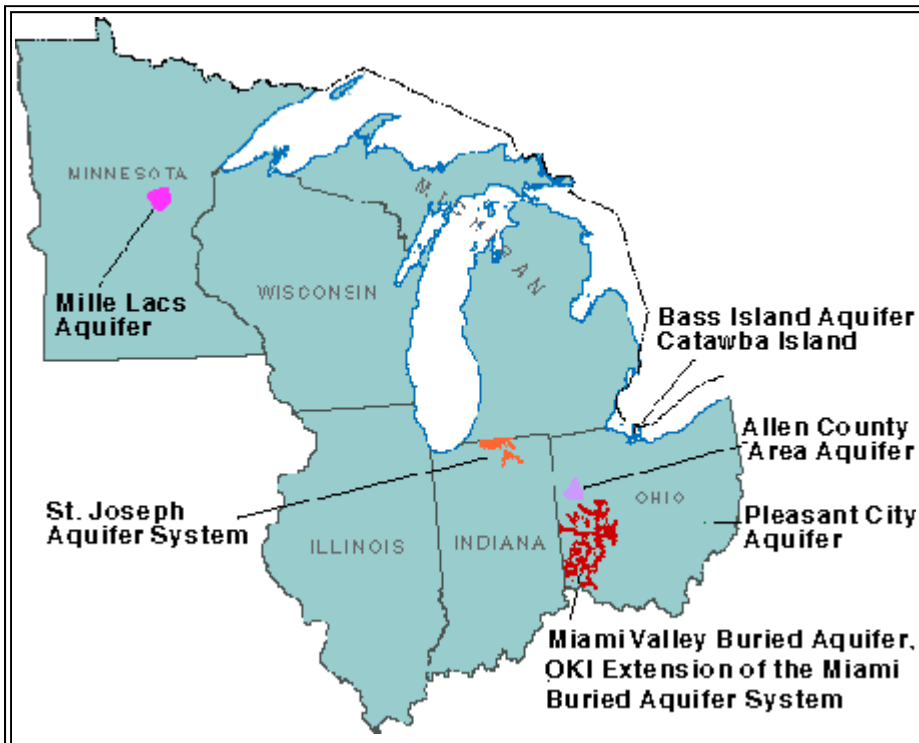
1 2 3 4 5 6

D  
C  
B  
A

Figure 7: Sole Source Aquifers in Region V

# DESIGNATED SOLE SOURCE AQUIFERS IN EPA REGION V

Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin



Thomas Poy  
Ground Water Branch, US EPA Region 5  
77 W. Jackson Blvd.  
Chicago, IL 60604  
phone: (312) 886-5991  
email: [poy.thomas@epa.gov](mailto:poy.thomas@epa.gov)

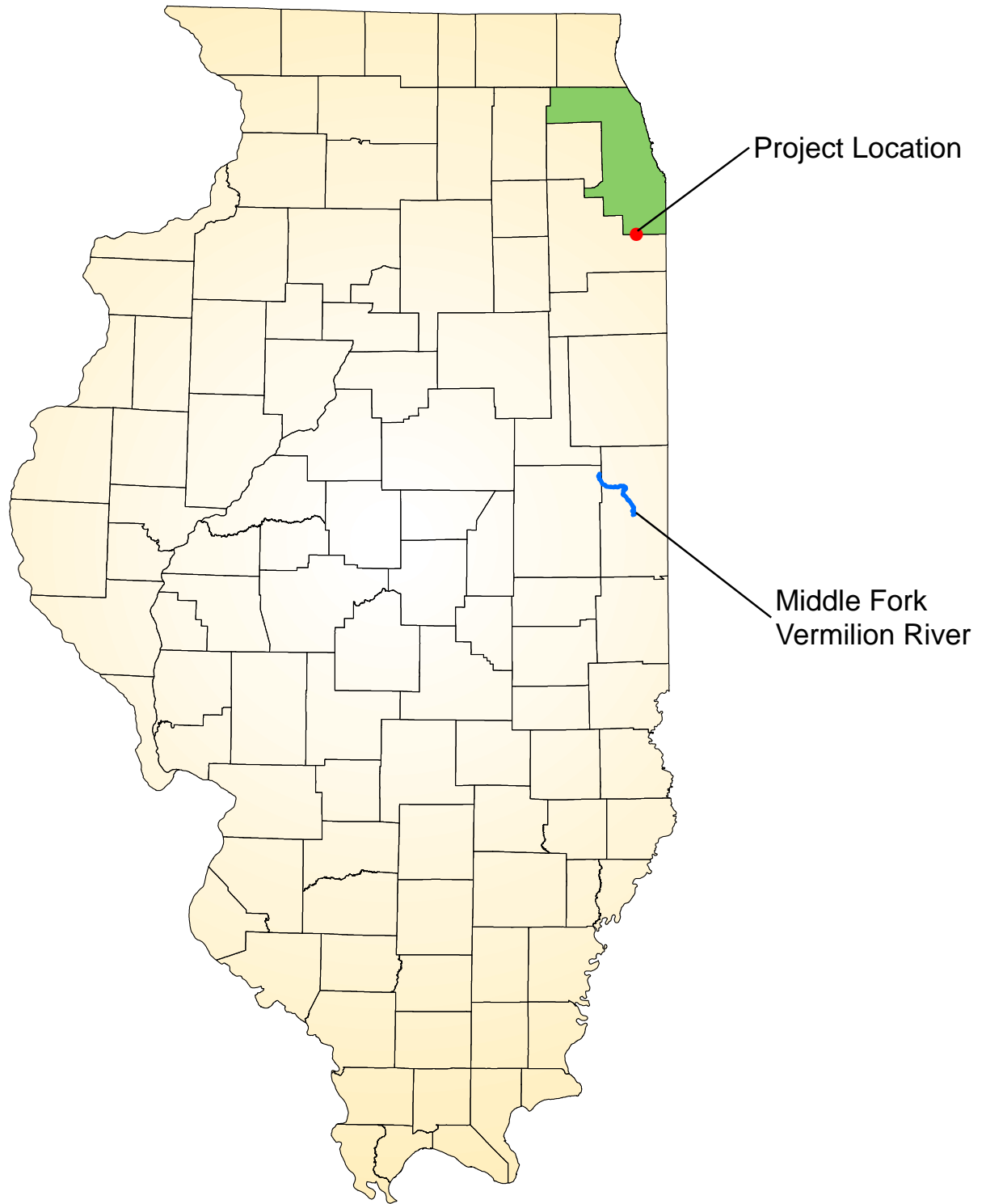
*Contact the coordinator above for more information.*

## DESIGNATED SOLE SOURCE AQUIFERS IN REGION V:

State	Sole Source Aquifer Name	Federal Register Cit.	Public. Date	GIS map
IN	St. Joseph Aquifer System	53 FR 23682	06/23/88	no
MN	Mille Lacs Aquifer	55 FR 43407	10/29/90	no
OH	Pleasant City Aquifer	52 FR 32342	08/27/87	yes
OH	Bass Island Aq., Catawba Island	52 FR 37009	10/02/87	yes
OH	Miami Valley Buried Aquifer	53 FR 15876	05/04/88	yes
OH	OKI extension of the Miami Buried Valley Aquifer	53 FR 25670	07/08/88	yes
OH	Allan County Area Combined Aquifer System	57 FR 53111	11/06/92	yes

Figure 8: Designated Wild and Scenic Rivers in Illinois





## Designated Wild and Scenic Rivers in Illinois

Data Source(s):  
National Wild &  
Scenic Rivers  
(accessed <http://www.rivers.gov/maps.html>)

**Public Infrastructure Program  
Village of Richton Park**

*Farm Trace Bypass Storm Sewer  
and Detention Basin*

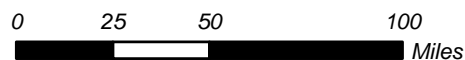
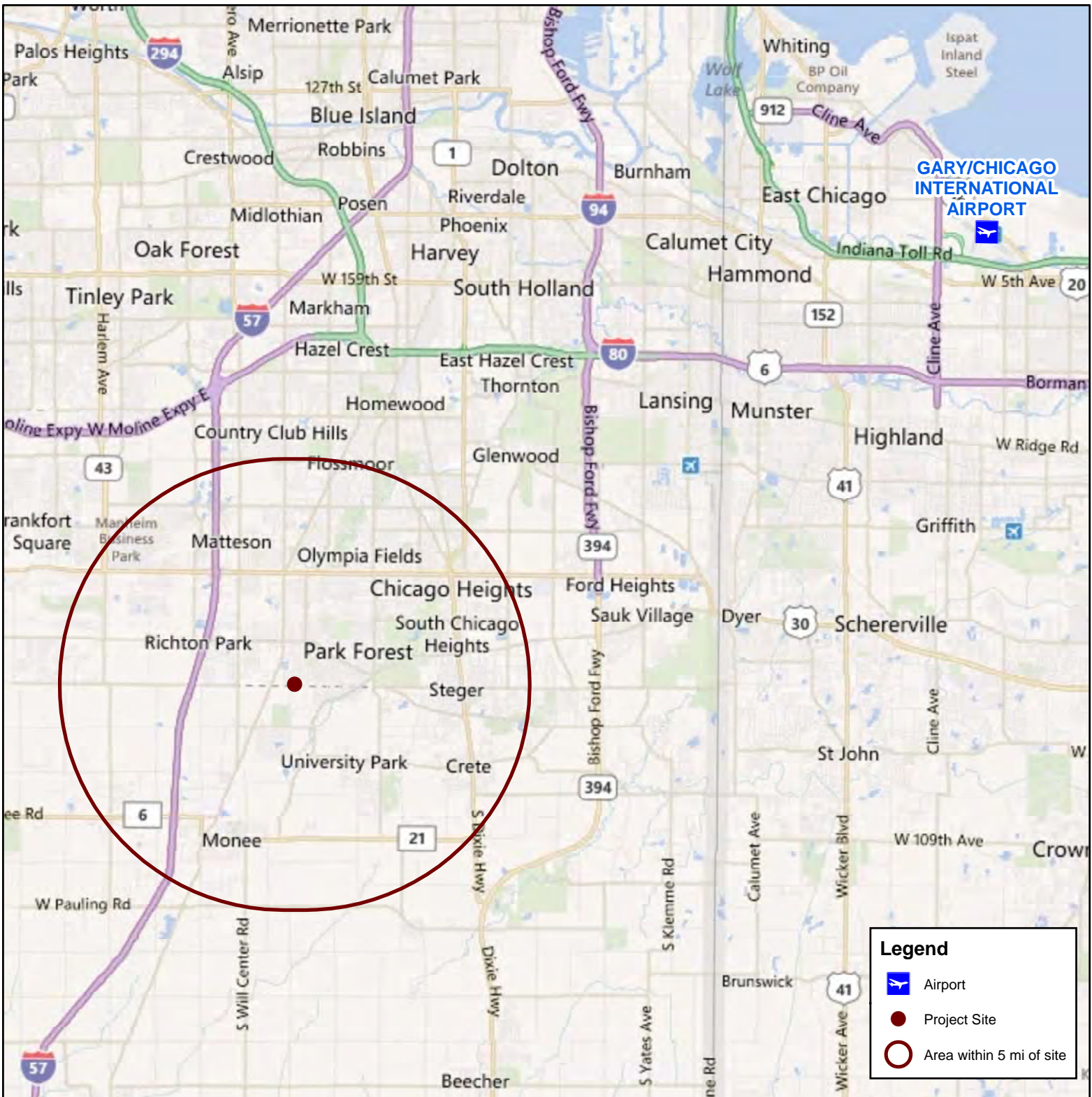


Figure 9: Airport Location Map

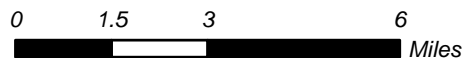
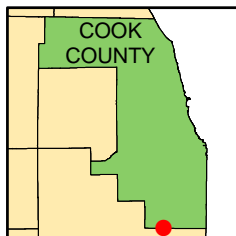


## Airport Location Map

### Public Infrastructure Program Village of Richton Park

*Farm Trace Bypass Storm Sewer  
and Detention Basin*

Data Source(s):  
Bing Maps Road



## **Appendix B**

### Historic Preservation

**Dunn, Patrick**

---

**From:** Haaker, Anne [Anne.Haaker@Illinois.gov]  
**Sent:** Wednesday, July 11, 2012 4:50 PM  
**To:** Dunn, Patrick  
**Subject:** RE: IKE funds for Farm Trace Bypass Storm Sewer & Detention Basin, Richton Park, IL

This project may proceed without further review by this office.

---

**From:** Dunn, Patrick [mailto:DunnPW@cdmsmith.com]  
**Sent:** Tuesday, July 10, 2012 11:35 AM  
**To:** Haaker, Anne  
**Subject:** IKE funds for Farm Trace Bypass Storm Sewer & Detention Basin, Richton Park, IL

Anne,

I hope everything has been going well with you.

The Village of Richton Park has received a Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) award from the Illinois Department of Commerce and Economic Opportunity (DCEO) for the Farm Trace Bypass Storm Sewer and Detention Basin project. The proposed project would reduce flooding in the Farm Trace Subdivision. The proposed improvements include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Center Park Avenue. Attached is a HARGIS map, USGS map, and Project Area map identifying the project location. There are no historic resources identified in the vicinity of the proposed project.

Can this project proceed without further review or consultation with your office? Thanks.

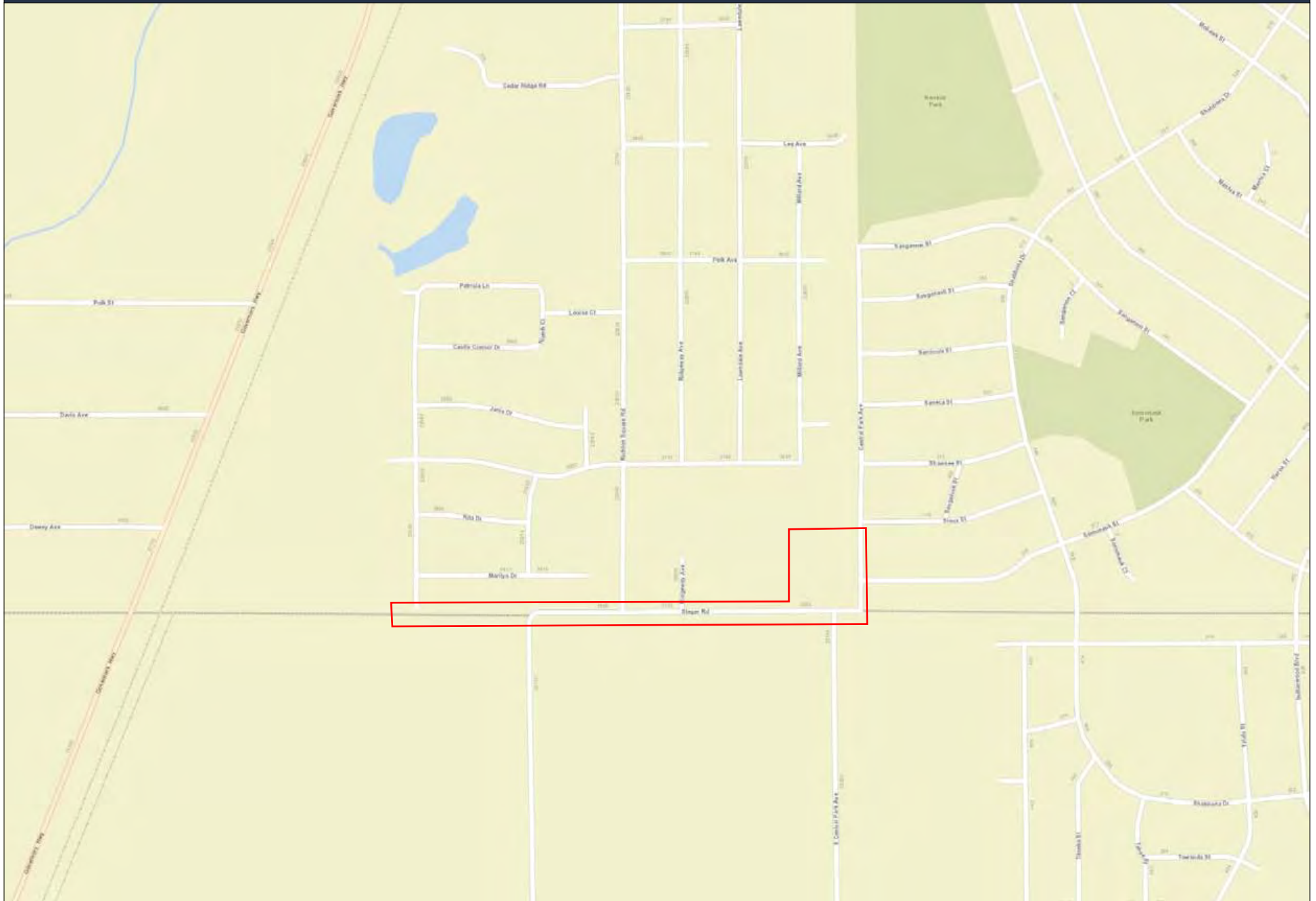
**Patrick Dunn, CFM**

Illinois "IKE" Disaster Recovery Program  
Phone: 312-780-7726

# Richton Park- Storm Sewer and Detention Basin Project

Created 07/10/12 10:59 AM

Illinois Historic  
Preservation Agency



Copyright 2010 IHPA

 General Project Area

**Dunn, Patrick**

---

**From:** Dunn, Patrick  
**Sent:** Tuesday, July 10, 2012 2:29 PM  
**To:** 'jbarrett@potawatomi.org'  
**Subject:** Village of Richton Park, Illinois- HUD CDBG funded project

Mr. Barrett,

Please accept the attached tribal consultation request from the Village of Richton Park, Illinois for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project that is funded with U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) funds. Thank you.

**Patrick Dunn, CFM**

Illinois "IKE" Disaster Recovery Program  
Phone: 312-780-7726



Chairman Tribal  
Consultation R...



# Village of Richton Park

July 10, 2012

John Barrett, Chairman  
Citizen Potawatomi Nation  
1601 S. Gordon Cooper Drive  
Shawnee, OK 74801

Subject: Tribal Consultation Request  
Illinois "IKE" Disaster Recovery Program  
Farm Trace Bypass Storm Sewer and Detention Basin, Richton Park, Illinois

Dear Mr. Barrett,

The Village of Richton Park has received a Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) award from the Illinois Department of Commerce and Economic Opportunity (DCEO) for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project. The proposed project would reduce flooding in the Farm Trace Subdivision in the Village of Richton Park, Illinois. The proposed improvements would include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Central Park Avenue. Enclosed are maps identifying the proposed project location.

Under U.S. Department of Housing and Urban Development (HUD) regulation 24 CFR 58.4, the Village of Richton Park has assumed HUD's environmental review responsibilities for the proposed project, including tribal consultation related to historic properties of religious and cultural significance. Historic properties of religious and cultural significance include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The Village of Richton Park will conduct a review of this proposed project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations in 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

Please respond within 30 days to indicate whether you wish to be a consulting party on this proposed project. If you have any initial concerns with impacts of the proposed project on religious or cultural properties, note them in your response and include the name and contact information for the tribe's principal representative in the consultation. If you do not respond within 30 days, we will conclude that you do not wish to be a consulting party for the proposed project, and we will proceed accordingly.

We value your assistance and look forward to consulting further if historic properties of religious and cultural significance to your tribe may be affected by this proposed project.

Sincerely,

Richard Reinbold, Village President  
Village of Richton Park



**Dunn, Patrick**

---

**From:** Dunn, Patrick  
**Sent:** Tuesday, July 10, 2012 2:31 PM  
**To:** 'kelli.mosteller@potawatomi.org'  
**Subject:** Village of Richton Park, Illinois- HUD CDBG funded project

Ms. Mosteller,

Please accept the attached tribal consultation request from the Village of Richton Park, Illinois for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project that is funded with U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) funds. Thank you.

**Patrick Dunn, CFM**

Illinois "IKE" Disaster Recovery Program  
Phone: 312-780-7726



THPO Tribal  
onsultation Reque..



# Village of Richton Park

July 10, 2012

Kelli Mosteller, Tribal Historic Preservation Officer  
Citizen Potawatomi Nation  
1601 S. Gordon Cooper Drive  
Shawnee, OK 74801

Subject: Tribal Consultation Request  
Illinois "IKE" Disaster Recovery Program  
Farm Trace Bypass Storm Sewer and Detention Basin, Richton Park, Illinois

Dear Ms. Mosteller,

The Village of Richton Park has received a Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) award from the Illinois Department of Commerce and Economic Opportunity (DCEO) for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project. The proposed project would reduce flooding in the Farm Trace Subdivision in the Village of Richton Park, Illinois. The proposed improvements would include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Central Park Avenue. Enclosed are maps identifying the proposed project location.

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We value your assistance and look forward to consulting further if historic properties of religious and cultural significance to your tribe may be affected by this proposed project.

Sincerely,

Richard Reinbold, Village President  
Village of Richton Park

**Dunn, Patrick**

---

**From:** Dunn, Patrick  
**Sent:** Tuesday, July 10, 2012 2:32 PM  
**To:** 'jessica.gouge2@fcpotawatomi-nsn.gov'  
**Subject:** Village of Richton Park, Illinois- HUD CDBG funded project

Mr. Frank,

Please accept the attached tribal consultation request from the Village of Richton Park, Illinois for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project that is funded with U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) funds. Thank you.

**Patrick Dunn, CFM**

Illinois "IKE" Disaster Recovery Program  
Phone: 312-780-7726



Chairman Tribal  
Consultation R...



# Village of Richton Park

July 10, 2012

Harold Frank, Chairman  
Forest County Potawatomi Community  
P.O. Box 340  
Crandon, WI 54520

Subject: Tribal Consultation Request  
Illinois "IKE" Disaster Recovery Program  
Farm Trace Bypass Storm Sewer and Detention Basin, Richton Park, Illinois

Dear Mr. Frank,

The Village of Richton Park has received a Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) award from the Illinois Department of Commerce and Economic Opportunity (DCEO) for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project. The proposed project would reduce flooding in the Farm Trace Subdivision in the Village of Richton Park, Illinois. The proposed improvements would include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Central Park Avenue. Enclosed are maps identifying the proposed project location.

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The Village of Richton Park will conduct a review of this proposed project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations in 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

Please respond within 30 days to indicate whether you wish to be a consulting party on this proposed project. If you have any initial concerns with impacts of the proposed project on religious or cultural properties, note them in your response and include the name and contact information for the tribe's principal representative in the consultation. If you do not respond within 30 days, we will conclude that you do not wish to be a consulting party for the proposed project, and we will proceed accordingly.

We value your assistance and look forward to consulting further if historic properties of religious and cultural significance to your tribe may be affected by this proposed project.

Sincerely,

Richard Reinbold, Village President  
Village of Richton Park

**Dunn, Patrick**

---

**From:** Dunn, Patrick  
**Sent:** Tuesday, July 10, 2012 2:34 PM  
**To:** 'tyderyien@hannahville.org'  
**Subject:** Village of Richton Park, Illinois- HUD CDBG funded project

Mr. Meshigaud,

Please accept the attached tribal consultation request from the Village of Richton Park, Illinois for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project that is funded with U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) funds. Thank you.

**Patrick Dunn, CFM**

Illinois "IKE" Disaster Recovery Program  
Phone: 312-780-7726



Chairperson Tribal  
Consultatio...



# Village of Richton Park

July 10, 2012

Kenneth Meshigaud, Chairperson  
Hannahville Indian Community  
N14911 Hannahville B1 Road  
Wilson, MI 49896-9728

Subject: Tribal Consultation Request  
Illinois "IKE" Disaster Recovery Program  
Farm Trace Bypass Storm Sewer and Detention Basin, Richton Park, Illinois

Dear Mr. Meshigaud,

The Village of Richton Park has received a Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) award from the Illinois Department of Commerce and Economic Opportunity (DCEO) for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project. The proposed project would reduce flooding in the Farm Trace Subdivision in the Village of Richton Park, Illinois. The proposed improvements would include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Central Park Avenue. Enclosed are maps identifying the proposed project location.

Under U.S. Department of Housing and Urban Development (HUD) regulation 24 CFR 58.4, the Village of Richton Park has assumed HUD's environmental review responsibilities for the proposed project, including tribal consultation related to historic properties of religious and cultural significance. Historic properties of religious and cultural significance include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The Village of Richton Park will conduct a review of this proposed project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations in 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

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We value your assistance and look forward to consulting further if historic properties of religious and cultural significance to your tribe may be affected by this proposed project.

Sincerely,

Richard Reinbold, Village President  
Village of Richton Park

**Dunn, Patrick**

---

**From:** Dunn, Patrick  
**Sent:** Tuesday, July 10, 2012 2:35 PM  
**To:** 'steveo@pbpnation.org'  
**Subject:** Village of Richton Park, Illinois- HUD CDBG funded project

Mr. Ortiz,

Please accept the attached tribal consultation request from the Village of Richton Park, Illinois for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project that is funded with U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) funds. Thank you.

**Patrick Dunn, CFM**

Illinois "IKE" Disaster Recovery Program  
Phone: 312-780-7726



Chairperson Tribal  
Consultatio...



# Village of Richton Park

July 10, 2012

Steve Ortiz, Chairperson  
Prairie Band of Potawatomi Nation  
16281 Q Road  
Mayetta, KS 66509

Subject: Tribal Consultation Request  
Illinois "IKE" Disaster Recovery Program  
Farm Trace Bypass Storm Sewer and Detention Basin, Richton Park, Illinois

Dear Mr. Ortiz,

The Village of Richton Park has received a Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) award from the Illinois Department of Commerce and Economic Opportunity (DCEO) for the proposed Farm Trace Bypass Storm Sewer and Detention Basin project. The proposed project would reduce flooding in the Farm Trace Subdivision in the Village of Richton Park, Illinois. The proposed improvements would include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Central Park Avenue. Enclosed are maps identifying the proposed project location.

Under U.S. Department of Housing and Urban Development (HUD) regulation 24 CFR 58.4, the Village of Richton Park has assumed HUD's environmental review responsibilities for the proposed project, including tribal consultation related to historic properties of religious and cultural significance. Historic properties of religious and cultural significance include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The Village of Richton Park will conduct a review of this proposed project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations in 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

Please respond within 30 days to indicate whether you wish to be a consulting party on this proposed project. If you have any initial concerns with impacts of the proposed project on religious or cultural properties, note them in your response and include the name and contact information for the tribe's principal representative in the consultation. If you do not respond within 30 days, we will conclude that you do not wish to be a consulting party for the proposed project, and we will proceed accordingly.

We value your assistance and look forward to consulting further if historic properties of religious and cultural significance to your tribe may be affected by this proposed project.

Sincerely,

Richard Reinbold, Village President  
Village of Richton Park



## **Appendix C**

### Wetland Investigation Report

**WETLAND INVESTIGATION  
Of  
Farm Trace Parcel  
Richton Park, Cook County, Illinois**

**Prepared for  
Clark Dietz Engineers, Inc.**

**Prepared by  
Huff & Huff, Inc.  
Oak Brook, Illinois**

**August 2010**

## TABLE OF CONTENTS

1.	INTRODUCTION .....	1
2.	METHODOLOGY .....	3
	2.1 Hydrophytic Vegetation .....	3
	2.2 Hydric Soil .....	4
	3.3 Wetland Hydrology .....	4
	2.4 Floristic Quality .....	5
3.	WETLAND FINDINGS .....	7
	3.1 Published Map Data .....	7
	3.2 Field Investigation .....	11
4.	SUMMARY OF WETLAND INVESTIGATION .....	13
5.	COORDINATION/PERMITS REQUIRED .....	14
	5.1 Permitting Agencies .....	14
	5.2 Interagency Wetland Policy Act .....	15
	5.3 Threatened and Endangered Species .....	15
	5.4 Illinois Historic Preservation Agency .....	15
	5.5 National Pollutant Discharge Elimination System .....	15
6.	MITIGATION .....	16
7.	LIMITATIONS AND EXCEPTIONS .....	17
	References .....	18

## LIST OF FIGURES

FIGURE		
1	SITE LOCATION MAP .....	2
2	SOIL SURVEY MAP .....	8
3	NATIONAL WETLAND INVENTORY MAP .....	9
4	FLOOD INSURANCE RATE MAP .....	10
5	WETLAND LOCATION MAP .....	12

## LIST OF TABLES

TABLE		
2-1	VEGETATION STRATA AND PLOT SIZE FOR THE MIDWEST REGION .....	3
2-2	WETLAND HYDROLOGY INDICATORS FOR THE MIDWEST REGION .....	5
4-1	WETLAND SUMMARY .....	13
6-1	IWPA MITIGATION RATIOS .....	16

APPENDIX A FIELD DATA SHEETS

APPENDIX B PHOTOGRAPHS

R:\Clark Dietz (CDI)\Farm Trace - Richton Park\WETLAND\_INVESTIGATION\_Farm Trace 6\_17\_10.doc

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters: .

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .  
 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain: .  
 Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

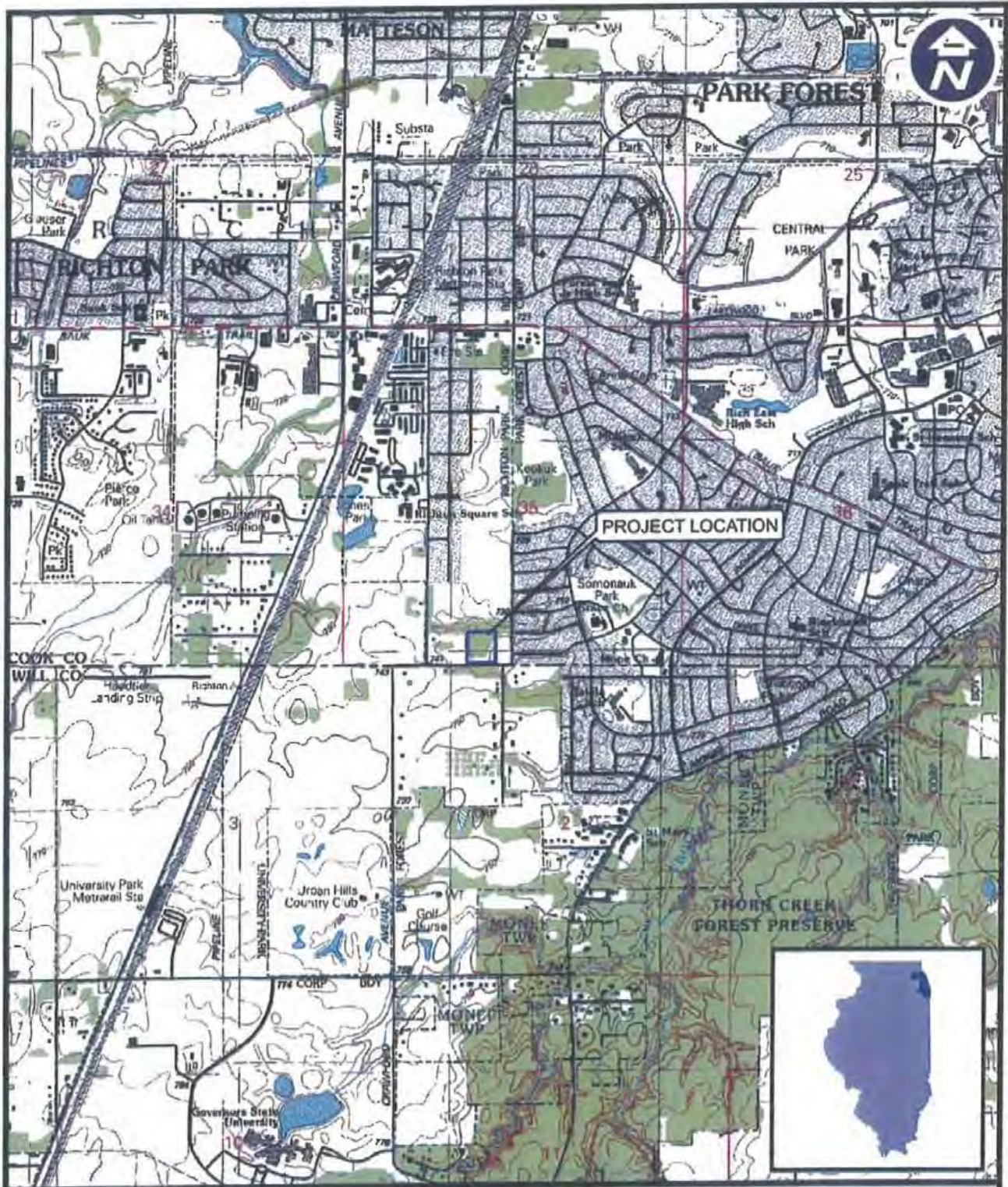
## 1. INTRODUCTION

The Village of Richton Park is proposing to construct a detention pond in the parcel located north of Steger Road and east of Richton Square Road in Richton Park, Cook County, Illinois (T35N, R13E, S35; 41.470248° N, -87.705463° W). The adjacent land use is residential. Huff & Huff, Inc. (H&H) conducted a wetland delineation for the proposed improvement project. The area investigated is depicted in Figure I.

The U.S. Army Corps of Engineers (COE) (Federal Register 1982) and the U.S. Environmental Protection Agency (Federal Register 1980) jointly define wetlands as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions". Identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology, originally set forth by the COE in the 1987 Environmental Laboratory publication, *Corps of Engineers Wetlands Delineation Manual: Technical Report Y-87-1*, referred to as the *1987 Wetland Delineation Manual*.

As of 2008, a series of regional supplements to the *1987 Wetland Delineation Manual* were published which outline updated technical guidelines and procedures for identifying and delineating wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. This wetland delineation was conducted using methodology presented in the *COE Interim Regional Supplement to the COE Wetland Delineation Manual: Midwest Region (COE Midwest Region Manual)* (COE, 2008). This manual is considered interim and is currently being used in the Midwest Region to solicit peer review. The COE has indicated that all wetlands will be delineated using this methodology.

H&H identified one wetland (Site 1) (Chicago-Calumet Watershed HUC 07120003) during the site inspection conducted on June 3, 2010. This report summarizes the findings of the field visit and the general wetland conditions.



**FIGURE 1**  
**SITE LOCATION MAP**  
**FARM TRACE**  
**RICHTON PARK, COOK COUNTY, ILLINOIS**

2,000  
 Feet



SOURCE: U.S. DEPARTMENT OF THE INTERIOR  
 U.S. GEOLOGICAL SURVEY  
 STEGER QUADRANGLE

## 2. METHODOLOGY

This wetland delineation was conducted based on the 2008 "COE Midwest Region Manual". Each potential wetland area is evaluated for the presence of wetland indicators comprised of hydrophytic vegetation, hydric soils, and wetland hydrology.

### 2.1 Hydrophytic Vegetation

To evaluate the presence of hydrophytic vegetation, data is gathered using a graduated series of plots, one for each vegetation stratum. Plot shape and size are dictated by vegetation type as well as shape and size of the plant community being evaluated. Table 2-1 presents vegetation strata and standard plot/sample sizes used for sampling purposes as defined by the 2008 COE Midwest Region Manual.

**Table 2 – 1. Vegetation Strata and Plot Size for the Midwest Region.**

Stratum	Description	Plot and sample size standards*
Trees	Woody plants three inches (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	30 foot (9.1 meter) radius
Sapling/Shrub	Woody plants less than three inches DBH and greater than 3.28 feet (1 m) tall.	15 foot (4.6 meter) radius
Herb	Herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 feet tall.	5 foot (1.5 meter) radius or 3.28 by 3.28 foot square (1 meter square) quadrat
Woody Vines	Woody vines greater than 3.28 feet in height.	30 foot (9.1 meter) radius

\* Plot size and shape may vary depending on field conditions.

The indicator status and percent absolute cover for the plant species within plots for all vegetation strata is then recorded. The indicator status for plant species is rated based on the estimated probability of occurring in wetlands. This rating system, which was published by the U.S. Fish and Wildlife Service in 1988 under the title "National List of Plant Species That Occur in Wetlands: North Central (Region 3)", consists of obligate wetland plants (OBL), facultative wet plants (FACW), facultative plants (FAC), facultative upland plants (FACU), and upland plants (UPL). Obligate plant species generally grow in water. Facultative plant species can exist in saturated or dry soil conditions, and upland plants typically require dry soil conditions to exist.

The dominance test (Indicator 1), the prevalence index (Indicator 2), and morphological adaptations (Indicator 3) determine the presence or absence of hydrophytic vegetation within plots for all vegetation strata. To pass the dominance test, more than 50 percent of the dominant plant species across all strata must be rated OBL, FACW, or FAC. The "50/20 rule", as outlined by the 2008 COE Midwest Region Manual, provides an objective procedure for the selection of dominant plant species within each stratum. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total.

The prevalence index is a weighted average wetland indicator status of all plants, both dominant and non-dominant species, within a sampling plot. This index is only used when the dominance test

fails and both hydric soils and wetland hydrology are present. Each indicator status category is given a numeric value (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and weighted by its abundance (absolute percent cover). A prevalence index of 3.0 or less indicates the presence of hydrophytic vegetation.

Morphological adaptations are often present in plants within wetland areas to help them survive prolonged inundation and saturation in the root zone. Morphological adaptations can be used as an additional hydrophytic vegetation indicator when observed in more than 50 percent of the individuals of a FACU species living in an area where indicators of hydric soil and wetland hydrology are present. Morphological adaptations are only used as a hydrophytic vegetation indicator when the dominance test fails, the prevalence index is not met, and when both hydric soils and wetland hydrology are present.

## 2.2 Hydric Soil

A description of the soil profile is used to evaluate the presence of hydric soil. Hydric soil indicators include the following as defined by the 2008 *COE Midwest Region Manual; Hydric Soil Indicators, Chapter 3*:

- |                                    |                               |
|------------------------------------|-------------------------------|
| • A1. Histisol                     | • S4. Sandy Gleyed Matrix     |
| • A2. Histic Epipedon              | • S5. Sandy Redox             |
| • A3. Black Histic                 | • S6. Stripped Matrix         |
| • A4. Hydrogen Sulfide             | • S7. Dark Surface            |
| • A5. Stratified Layers            | • S8. Polyvalue Below Surface |
| • A6. Organic Bodies               | • S9. Thin Dark Surface       |
| • A7. 5 cm Mucky Mineral           | • F1. Loamy mucky material    |
| • A8. 1 cm Muck                    | • F2. Loamy gleyed matrix     |
| • A10. 2 cm Muck                   | • F3. Depleted Matrix         |
| • A11. Depleted Below Dark Surface | • F6. Redox Dark Surface      |
| • A12. Thick Dark Surface          | • F7. Depleted Dark Surface   |
| • S1. Sandy Mucky Mineral          | • F8. Redox Depressions       |
| • S3. 5 cm Mucky Peat or Peat      | • F12. Iron-Manganese Masses  |

## 2.3 Wetland Hydrology

Wetland hydrology indicators, outlined by the 2008 *COE Midwest Region Manual; Wetland Hydrology Indicators, Chapter 4*, are separated into four groups and divided into a primary or secondary category based on their estimated reliability in this region. Primary indicators provide stand-alone evidence of a current or recent hydrological event. Secondary indicators provide evidence of recent inundation or saturation when supported by one or more other primary indicators or secondary wetland hydrology indicators, but should not be used alone. Documentation of wetland indicators is used to determine wetland hydrology during the site investigation. Table 2-2 presents the wetland hydrology indicators for this region.



**Table 2 – 2. Wetland Hydrology Indicators for the Midwest Region.**

Indicator	Category	
	Primary	Secondary
Group A - Observation of Surface Water or Saturated Soils		
A1 - Surface water	X	
A2 - High water table	X	
A3 - Saturation	X	
Group B - Evidence of Recent Inundation		
B1 - Water marks	X	
B2 - Sediment deposits	X	
B3 - Drift deposits	X	
B4 - Algal mat or crust	X	
B5 - Iron deposits	X	
B7 - Inundation visible on aerial imagery	X	
B8 - Sparsely vegetated concave surface	X	
B9 - Water-stained leaves	X	
B13 - Aquatic fauna	X	
B14 - True aquatic plants	X	
B6 - Surface soil cracks		X
B10 - Drainage patterns		X
Group C - Evidence of Current or Recent Soil Saturation		
C1 - Hydrogen sulfide odor	X	
C3 - Oxidized rhizospheres along living roots	X	
C4 - Presence of reduced iron	X	
C6 - Recent iron reduction in tilled soils	X	
C7 - Thin muck surface	X	
C2 - Dry-season water table		X
C8 - Crayfish burrows		X
C9 - Saturation visible on aerial imagery		X
Group D - Evidence from Other Site Conditions or Data		
D9 - Gauge or well data	X	
D1 - Stunted or stressed plants		X
D2 - Geomorphic position		X
D5 - FAC-neutral test		X

#### 2.4 Floristic Quality

A Floristic Quality Index (FQI) value is generated for each site based on the methodology outlined in "Plants of the Chicago Region" (Swink and Wilhelm, 1994). This index rates the quality of an area based on the composition of its plant community. A coefficient of conservatism (C value), ranging from 0 to 10, is assigned to native plants as listed in "Plants of the Chicago Region". Low C values have been assigned to weeds, or species that can exist in a wide range of conditions. An area of high natural quality would include conservative native plants that are adapted to a specialized community context and would have a mean C value of 5 or greater. From the mean C value, an FQI for the sample site is obtained by multiplying the mean C value of all native plants

encountered in a site by the square root of the number ( $N$ ) of native species. FQI values of 0 to 5.0 are considered severely degraded, 5.1 to 9.9 are degraded, 10 to 19.9 are considered to have moderate quality with some native character, and those with values greater than 20 are considered to have natural characteristics and considered high quality.

### **3. WETLAND FINDINGS**

#### **3.1 Published Map Data**

Data was gathered from the Cook County Soil Survey, the U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) Map, and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) to provide an indication of areas where wetlands potentially occur.

##### **Soil Survey**

The soil survey map for the area is depicted on Figure 2 as the "Cook County Soil Survey," and is prepared by the United States Department of Agriculture, Soil Conservation Service (now Natural Resource Conservation Service: NRCS) in conjunction with the Illinois Agricultural Experiment Stations, 1997.

The entire project area is mapped as Bryce silty clay, 0 to 2 percent slopes (235A). Bryce silty clay is listed as hydric on the Cook County hydric soil list.

##### **National Wetland Inventory**

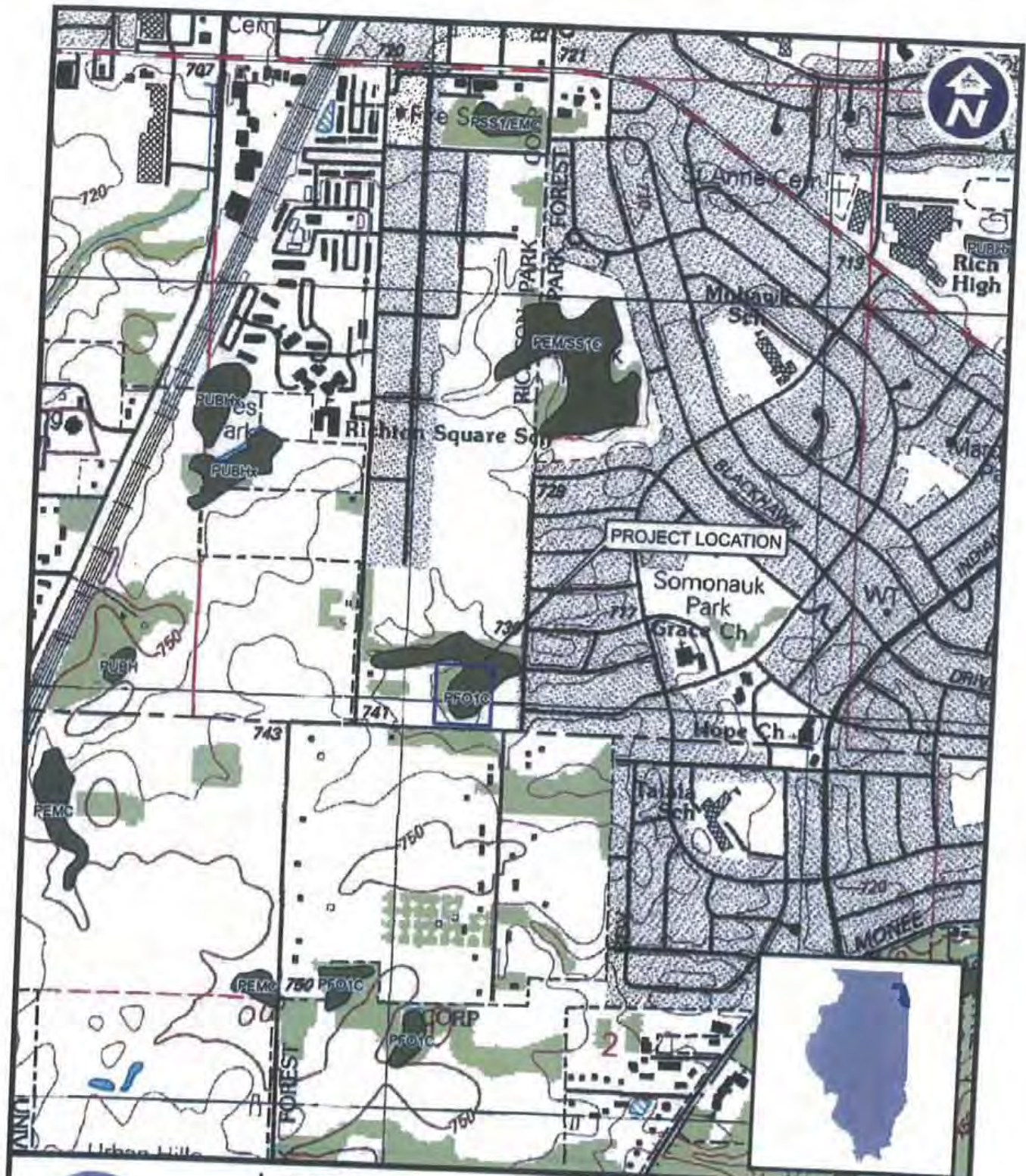
The digital format NWI maps were developed by FWS in collaboration with the U.S. Geological Survey (USGS), Water Resource Division using data from 1987. The maps were prepared primarily by stereoscopic analysis of high altitude aerial photographs. All wetlands are identified based on vegetation, visible hydrology, and geography in accordance with the Cowardin System. According to the FWS, the aerial photographs reflect conditions during the year and season they were taken; however, there is a margin of error inherent in the use of aerial photographs to delineate wetlands. Therefore, wetland boundaries established through interpretation of aerial photographs may be revised based upon detailed ground and historical analysis of an individual site.

The NWI Map (Figure 3) depicts PFO1C (palustrine, forested, broad-leaved deciduous, seasonally flooded) wetland system located in the center of the project area.

##### **FEMA FIRM Map**

The FIRM (Figure 4) depicts the entire area within the project limits as Zone X, areas outside of the 100 and 500-year floodplains.





**FIGURE 3**  
**NATIONAL WETLAND INVENTORY MAP**  
**FARM TRACE**  
**RICHTON PARK, COOK COUNTY, ILLINOIS**

SOURCE: U.S. DEPARTMENT OF THE INTERIOR  
 U.S. GEOLOGICAL SURVEY  
 U.S. FISH AND WILDLIFE SERVICE  
 STEGER, 24K QUADRANGLE

1,000  
 Feet



DAQHL6 CD1\_FARMTRACE\_HWS



**FIGURE 4  
FLOOD INSURANCE RATE MAP  
FARM TRACE  
RICHTON PARK, COOK COUNTY, ILLINOIS**

SOURCE: U.S. DEPARTMENT OF HOMELAND SECURITY  
FEDERAL EMERGENCY MANAGEMENT AGENCY  
FEMA Q3 DIGITAL FLOOD DATA FOR COOK AND WILL COUNTIES

**1,000  
Feet**



CADFILE: CDI\_FARMTRACE\_FIRM

### 3.2 Field Investigation

One wetland was investigated within the project limits based on soil properties, hydrology, and vegetative composition. These sites are briefly described below and are mapped on Figure 5. Photographic documentation is included in Appendix B.

Site 1 is a depressional forested/wet meadow/pond wetland located within the majority of the project area. Site 1 provides the functions of wildlife habitat, flood control and conveyance, sediment and nutrient uptake, recreation, and erosion control. The dominant vegetation at Site 1 includes the following:

- Tree stratum – silver maple (*Acer saccharinum*), white mulberry (*Morus alba*), green ash (*Fraxinus pennsylvanica subintegerrima*), American elm (*Ulmus americana*), black willow (*Salix nigra*),
- Sapling/shrub stratum – gray dogwood (*Cornus racemosa*), green ash, sandbar willow (*Salix interior*), multiflora rose (*Rosa multiflora*), wild gooseberry (*Ribes missouriense*), box elder (*Acer negundo*),
- Herb stratum – grass-leaved goldenrod (*Solidago graminifolia*), brown fox sedge (*Carex vulpinoidea*), reedtop (*Agrostis alba*), tall goldenrod (*Solidago altissima*), reed canary grass (*Phalaris arundinacea*), saw-tooth sunflower (*Helianthus grosseserratus*), white avens (*Geum canadense*), Dudley's rush (*Juncus dudleyii*),
- Woody vine stratum – poison ivy (*Toxicodendron radicans*), common morning glory (*Ipomoea purpurea*), and riverbank grape (*Vitis riparia*).

The dominance test was met, confirming the needed criterion for hydrophytic vegetation. The native FQI and mean C values for this site are 18.8 and 2.8, respectively, indicating moderate floristic quality with some native character.

Site 1 is mapped as Bryce silty clay, which is a hydric soil. The soil met the Redox Dark Surface (F6) criterion.

Site 1 receives surface runoff from adjacent upland areas. The wetland flows east into a storm sewer. Primary wetland hydrology indicators include high water table (A2) and saturation (A3). Secondary wetland hydrology indicators include crayfish burrows (C8), geomorphic position (D2), and FAC-neutral test (D5).

Site 1 is mapped as PFO1C on the NWI map. Site 1 is mapped on the FIRM as Zone X. Site 1 meets the hydrophytic vegetation, hydric soils, and wetland hydrology criteria. Site 1 appears to be isolated.



CADFILE: COI\_FARMTRACE\_WLM

**FIGURE 5**  
**WETLAND LOCATION MAP**  
**FARM TRACE**  
**RICHTON PARK, COOK COUNTY, ILLINOIS**

SOURCE: U.S. DEPARTMENT OF AGRICULTURE  
 NATURAL RESOURCE CONSERVATION SERVICE  
 COOK COUNTY

150  
 Feet



#### 4. SUMMARY OF WETLAND INVESTIGATION

Appendix A contains the data sheets detailing the findings of the wetland investigation. One wetland was identified within the project limits. Any work that includes dredge or fill of wetlands or significantly alters drainage, will require a permit from the COE if the wetland is considered jurisdictional. The COE verifies jurisdictional wetlands and "Waters of the U.S." and determines mitigation ratios based on current Section 404 guidelines.

Impacts to Site 1 will be verified and finalized when the construction plans are developed prior to any permitting activities. Table 4-1 summarizes the characteristics of Site 1.

**Table 4 – 1. Wetland Summary.**

Site	Wetland Type *	Dominant Vegetation (all strata)	Native FQI	Native Mean C	Mapped Soil Type	Isolated? Y/N**
1	Forested/wet meadow/ pond	Silver maple White mulberry Green ash American elm Black willow Gray dogwood Sandbar willow Multiflora rose Wild gooseberry Box elder Grass-leaved goldenrod Brown fox sedge Redtop Tall goldenrod Reed canary grass Sawtooth sunflower White avens Dudley's rush Poison ivy Common morning glory Riverbank grape	18.8	2.8	Bryce silty clay	Y

\* Wetland type is listed by IDOT classification on WIE forms.

\*\* Isolated is based on professional judgment in the field. The COE makes all final jurisdictional determinations. Isolated applies to the lack of hydrological connection to a "Waters of the U.S."

## **5. COORDINATION/PERMITS REQUIRED**

Avoidance of wetlands should be considered in project planning. If avoidance is not possible, permits for impacts and alterations will be required.

### **5.1 Permitting Agencies**

Permits for wetlands or "Waters of the U.S." impacts are issued through the Chicago District COE in Cook County. If wetlands or "Waters of the U.S." will be impacted, a jurisdictional determination will be necessary. Based on the proximity and lack of surface water connection to "Waters of the U.S." Site 1 appears to be isolated. Confirmation of this determination will be required through coordination with the COE. The COE uses maps and aerial photographs to determine whether the wetland is adjacent or connected to "Waters of the U.S.". The COE sometimes completes a field verification to confirm the jurisdictional determination.

The Supreme Court decision of January 2001 (known as SWANCC) reduced the COE authority over wetlands to areas immediately adjacent to navigable waterbodies that include streams and their tributaries. This ruling has changed the regulatory status of some wetlands, mainly those considered isolated from jurisdictional "waters of the U.S." Additionally, in the Rapanos and Carabell decisions of 2005 (referred to as Rapanos), the Supreme Court established new standards by which the COE can establish jurisdiction over a water body. One of the newer standards upholds jurisdiction if a water body, in combination with all wetlands adjacent to that water body, has a "significant nexus" to traditional navigable waters (TNWs). Based on discussions with the Chicago District COE, the jurisdictional status of wetlands is determined by their offices after a review of delineation information. Wetlands delineated on-site may later be determined to be non-jurisdictional. If this is the case, impacts to these non-jurisdictional wetlands may not require mitigation. The final determination regarding jurisdictional status and potential mitigation will be made by the COE.

Based on current guidelines, a sequence of impact assessments must be reviewed prior to the issuance of permits for wetland development. This sequence must take into account the potential for the complete avoidance of wetland impacts. If it can be proved that impacts are unavoidable, then the project must be designed to minimize wetland impacts. Once impacts are minimized to the least amount of impact possible, mitigation of these impacts will be reviewed. Under the COE Regional Permit Program, if impacts are less than 0.10 acres, mitigation will most likely not be required. If impacts are greater than 0.10 acres, then mitigation must be provided for the entire amount of wetland affected.

The permitting process for jurisdictional wetlands is initiated by the submittal of the Joint Application to the COE. This application is submitted to the following agencies:

- U.S. Fish and Wildlife Service (FWS)
- Illinois Environmental Protection Agency (401 Water Quality Certification).
- Illinois Department of Natural Resources (IDNR)
- Illinois Department of Natural Resources/Office of Water Resources (IDNR/OWR)
- Illinois Historic Preservation Agency (IHPA)

## 5.2 Interagency Wetland Policy Act

The Interagency Wetland Policy Act (IWPA) applies to projects that receive state or state pass-through funding. The IWPA requires mitigation of all wetland impacts, regardless of size. Additionally, the IWPA recognizes all wetlands and is not subject to the limitations on isolated wetlands that is the current policy of the COE. On-site mitigation through the IWPA is recognized as within one-mile of the project site. If on-site mitigation is not feasible, mitigation can be conducted off-site or through mitigation banks, but at a higher mitigation ratio.

## 5.3 Threatened and Endangered Species

Endangered species review is also required through the FWS and the IDNR. Endangered species surveys may be required, which can only be completed during certain portions of the year, depending on the species.

The FWS no longer conducts project by project review upon request; rather, the applicant for a particular project is required to conduct an assessment of their project and determine whether the project will impact federally listed species. To conduct this review, applicants are directed to the FWS website and proceed through the process for Section 7 Consultation and document the findings.

Endangered species review through the IDNR is initiated through the Ecological Compliance Assessment Tool (EcoCAT) found on the IDNR website. The EcoCAT was submitted and the IDNR has indicated that no state listed species are present on site.

## 5.4 Illinois Historic Preservation Agency

As part of the permitting process through the COE, the project must be reviewed by the IHPA if a portion of the land proposed for development is considered undeveloped. This agency may require a Phase 1 archeological survey to determine the potential impact to archeological resources prior to approving the project. A qualified archeological firm will be required to conduct this study if required. This agency's approval must be obtained prior to obtaining the final Section 404 permit.

## 5.5 National Pollutant Discharge Elimination System (NPDES) Permit

An NPDES permit would be required from the Illinois Environmental Protection Agency if the one-acre threshold for required permits will be exceeded. Final determination on this item will need to be addressed prior to construction commencement.

## 6. MITIGATION

Current wetland regulations require a sequencing of options concerning the development of wetlands. These options need to be addressed concerning the potential or possible development of existing wetlands. These options are: avoidance, minimization, and mitigation. Mitigation will only be required if the wetlands are considered jurisdictional under the Section 404 program. If impacts are less than 0.10 acre, mitigation through the COE may not be required. If impacts are greater than 0.10 acre, it is anticipated that a mitigation ratio of 1.5:1 for non-high quality aquatic resource (HQAR) wetlands. HQAR wetlands will be required. Impacts to HQARs may require a higher mitigation ratio.

If the project is state sponsored, the project must comply with the IWPA. Under the IWPA, all impacts to wetlands regardless of size must be mitigated within the affected drainage basin or within one mile of the proposed project limits. Although the COE would allow "fees in lieu" for mitigation, the IWPA does not. On-site, in-basin mitigation is preferred, but wetland banking can be utilized. The IWPA is regulated by the IDNR. Table 6-1 summarizes the mitigation ratios required under the IWPA.

**Table 6 – 1. IWPA Mitigation Ratios**

Degree of Adverse Impact	Location of the Replacement Wetland		
	On-Site	Off-Site	Out-of-Basin
Minimal Alteration	1.0:1 1.5:1	1.5:1	2.0:1
Significant Alteration	1.5:1	2.0:1	3.0:1
Destruction	2.5:1	4.0:1	5.5:1

There are currently two options by which mitigation criteria can be met: 1) use of a wetland bank, or 2) new wetland construction. As discussed above, avoidance of the wetlands is preferable; however, this may not be practical for all jurisdictional sites.

Wetland banking is typically the best way to provide mitigation for wetland impacts and is the preferred option of the Chicago District COE. The creation of small isolated mitigated wetlands does not replace the functions of wetlands as well as a large scale wetland bank. In many cases, the regulatory community prefers the use of wetland banks to mitigate impacts. Banking is a viable mitigation option for this project if mitigation is required.

New wetland construction requires approval of a wetland mitigation plan by the COE as well as a maintenance and monitoring program. Other means to accomplish on-site mitigation would be to establish the wetland site in areas already set aside for open space, such as parks, nature areas or forest preserves. If this mitigation plan is approved, an agreement would need to be developed between all participating parties concerning future management of the site.

## **7. LIMITATIONS AND EXCEPTIONS**

The wetland delineation detailed in this report was performed in accordance with accepted methods and practices of the "*COE Midwest Region Manual*" (COE, 2008). The scope and depth of this study are consistent with H&H representations, and have been agreed to by the Village of Richton Park and Clark Dietz, Inc (CDI). The following limitations and exceptions apply:

- This document has been prepared specifically for the Village of Richton Park and CDI by H&H. No additional party other than CDI may use the information contained in this document without written permission from the Village of Richton Park, CDI and H&H.
- This document must be read and interpreted as a whole. Specific individual sections of this document are dependent upon the balance of this document, and upon terms, conditions, and stipulations contained in the associated proposal and any written amendments thereto accepted by H&H.
- This document is time sensitive in the fact that the field delineations are only acceptable for a maximum of five years, and in some states and counties with local ordinances, a shorter time frame than five years.

## References

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**APPENDIX A**  
**FIELD DATA SHEETS**  
**and FQI**

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Farm Trace II City/County: Richton Park, Cook County Sampling Date: 6/3/10  
 Applicant/Owner: Clark Dietz State: IL Sampling Point: 1-1  
 Investigator(s): A. Klueenberg (Huff & Huff, Inc.) Section, Township, Range: T35N, R13E, S35  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 5% Lat: 41.470926 N Long: -87.706095 W Datum: WGS84  
 Soil Map Unit Name: Bryce silty clay (235A) NWI or WWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This is a depressional forested/emergent wetland.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharinum</u>	10	Y	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>88</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
<u>10</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: _____ (A) <u>0</u> (B)  Prevalence Index = B/A = <u>0</u>
Sapling/Shrub Stratum (Plot size: <u>15' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus racemosa</u>	5	Y	FACW	
2. <u>Fraxinus pennsylvanica subintegerrima</u>	10	Y	FAC	
3. _____				
4. _____				
5. _____				
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Solidago graminifolia</u>	30	Y	FACW	
2. <u>Carex vulpinoidea</u>	20	Y	OBL	
3. <u>Agrostis alba</u>	20	Y	FACW	
4. <u>Scirpus validus crober</u>	10	N	OBL	
5. <u>Juncus effusus</u>	10	N	OBL	
6. <u>Carex cristatella</u>	10	N	FACW	
7. <u>Juncus dudleyi</u>	5	N	FAC	
8. <u>Ambrosia artemisiifolia elatior</u>	5	N	FACU	
9. _____				
10. _____				
<u>110</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>15' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>Toxicodendron radicans</u>	5	Y	FAC	
2. <u>Ipomoea purpurea</u>	5	Y	FACU	
<u>10</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)  The predominant vegetation at this location is hydrophytic.				



SOIL

Sampling Point: 1-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR3/1	80	10YR4/4	20	C	M	SiCL	
3-10	10YR2/1	70	7.5YR4/6	30	C	M/PL	SiCL	
10-14	10YR2/1	80	7.5YR4/6	20	C	M/PL	Clay	
			10YR5/2	10	D	M		
14-18	10YR4/2	80	10YR5/2	10	D	M	Clay	
			10YR5/6	5	C	M		
			10YR2/1	5	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

Hydric soil conditions were confirmed by the Indicator Redox Dark Surface (F6).

HYDROLOGY

**Wetland Hydrology Indicators:**

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): 0	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 6"	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 3"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This area is depressional and receives overland flow from adjacent uplands. This site appears to be isolated.

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Farm Trace II City/County: Richton Park, Cook County Sampling Date: 6/3/10  
 Applicant/Owner: Clark Dietz State: IL Sampling Point: 1-2  
 Investigator(s): A. Klauenberg (Huff & Huff, Inc.) Section, Township, Range: T35N, R13E, S35  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave  
 Slope (%): 5% Lat: 41.470874 N Long: -87.706119 W Datum: WGS84  
 Soil Map Unit Name: Bryca silty clay (235A) NWI or WWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: This is an old-field area on southwest of the wetland.			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)
1. <u>Rhamnus cathartica</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>20</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: _____ (A) <u>0</u> (B) Prevalence Index = B/A = <u>0</u>
Sapling/Shrub Stratum (Plot size: <u>15' diameter</u> )				
1. <u>Rosa multiflora</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5' diameter</u> )				
1. <u>Solidago altissima</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Dactylis glomerata</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
4. <u>Solidago graminifolia</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>95</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>15' diameter</u> )				
1. _____				
2. _____				
_____ = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				
The predominant vegetation at this location is not hydrophytic.				

**SOIL**

Sampling Point: 1-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>		
0-8	10YR2/1	99	10YR5/2	1	C	M	SiCL	
8-12	10YR2/1	99	10YR5/2	1	C	M	Clay	
12-18	10YR3/1	80	10YR5/3	20	D	M	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators:</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if observed):</b>								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks:								
There were no indicators of hydric soil conditions present.								

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	
<b>Field Observations:</b>		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	None
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	None
Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	None
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
Water flows from this area to the adjacent wetland. There were no indicators of wetland hydrology present.		

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Farm Trace II City/County: Richton Park, Cook County Sampling Date: 6/3/10  
 Applicant/Owner: Clark Dietz State: IL Sampling Point: 1-3  
 Investigator(s): A. Klunenberg (Huff & Huff, Inc.) Section, Township, Range: T35N, R13E, S35  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 1% Lat: 41.470248 N Long: -87.705463 W Datum: WGS84  
 Soil Map Unit Name: Bryce silty clay (235A) NWI or WWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)

Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No

Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			
This is a depression forested/emergent wetland. The datapoint is located along the southwest side of the wetland.			

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)
1. <u>Morus alba</u>	30	Y	FAC	
2. <u>Fraxinus pennsylvanica subintegerrima</u>	10	Y	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>89</u> (A/B)
3. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
4. _____				
5. _____				FACW species _____ x 2 = <u>0</u>
	40 = Total Cover			FAC species _____ x 3 = <u>0</u>
Sapling/Shrub Stratum (Plot size: <u>15' diameter</u> )				FACU species _____ x 4 = <u>0</u>
1. <u>Cornus racemosa</u>	20	Y	FACW	UPL species _____ x 5 = <u>0</u>
2. <u>Salix litoralis</u>	30	Y	OBL	Column Totals: _____ (A) <u>0</u> (B)
3. <u>Rosa multiflora</u>	10	N	FACU	Prevalence Index = B/A = <u>0</u>
4. _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____				
	60 = Total Cover			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5' diameter</u> )				
1. <u>Solidago altissima</u>	30	Y	FACU	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Phalaris arundinacea</u>	20	Y	FACW	
3. <u>Helianthus grosseserratus</u>	20	Y	FACW	
4. <u>Geum canadense</u>	20	Y	FAC	
5. <u>Fragaria virginiana</u>	10	N	FAC	
6. <u>Rumex crispus</u>	5	N	FAC	
7. <u>Solidago graminifolia</u>	10	N	FACW	
8. _____				
9. _____				
10. _____				
	115 = Total Cover			
Woody Vine Stratum (Plot size: <u>15' diameter</u> )				
1. <u>Toxicodendron radicans</u>	5	Y	FAC	
2. _____				
	5 = Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)				
The predominant vegetation at this location is hydrophytic.				

**SOIL**

Sampling Point: 1-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR2/1	75	10YR5/2	20	D	M	Clay	
			10YR4/6	5	C	M		
4-12	10YR3/1	95	10YR5/2	5	D	M	Clay	
12-14	10YR3/1	95	7.5YR5/8	5	C	M	Clay	
14-22	10YR2/1	100					SiCL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
 Hydric soil conditions were confirmed by the indicator Redox Dark Surface (F6). Soil appears to be disturbed; possibly from construction of adjacent detention area.

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>None</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>None</u>	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>None</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			

Remarks:  
 This area is depressional and receives overland flow from adjacent uplands. This site appears to be isolated.

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Farm Trace II City/County: Richton Park, Cook County Sampling Date: 6/3/10  
 Applicant/Owner: Clark Dietz State: IL Sampling Point: 1-4  
 Investigator(s): A. Klauenberg (Huff & Huff, Inc.) Section, Township, Range: T35N, R13E, S35  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave  
 Slope (%): 10% Lat: 41.470230 N Long: -87.70545 W Datum: WGS84  
 Soil Map Unit Name: Bryca silty clay (235A) NWI or WWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: This is an old-field area on southwest of the wetland.			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				= Total Cover
<b>Sapling/Shrub Stratum (Plot size: <u>15' diameter</u>)</b>				
1. <u>Salix interior</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: _____ (A) <u>0</u> (B) Prevalence Index = B/A = <u>0</u>
2. <u>Juniperus virginiana crebra</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
4. _____				
5. _____				
<b>Herb Stratum (Plot size: <u>5' diameter</u>)</b>				
1. <u>Solidago altissima</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Cornus racemosa</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Solidago gigantea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Fragaria virginiana</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
7. <u>Lonicera tatarica</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
8. _____				
9. _____				
10. _____				
<b>Woody Vine Stratum (Plot size: <u>15' diameter</u>)</b>				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) The predominant vegetation at this location is not hydrophytic.				



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Farm Trace II City/County: Richton Park, Cook County Sampling Date: 6/3/10  
 Applicant/Owner: Clark Dietz State: IL Sampling Point: 1-5  
 Investigator(s): A. Klueenberg (Huff & Huff, Inc.) Section, Township, Range: T35N, R13E, S35  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 2% Lat: 41.470205 N Long: -87.704530 W Datum: WGS84  
 Soil Map Unit Name: Bryce silty clay (235A) NWI or WWI classification: PFO1C  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks: This is a depressional forested/emergent wetland. The datapoint is located along the southeast side of the wetland.			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Ulmus americana</u>	5	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)
2. <u>Acer saccharinum</u>	5	Y	FACW	Total Number of Dominant Species Across All Strata: <u>9</u> (B)
3. <u>Salix nigra</u>	5	Y	OBL	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>89</u> (A/B)
4. _____				
5. _____				
<u>15</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Fraxinus pennsylvanica subintegerrima</u>	15	Y	FAC	Total % Cover of: _____ Multiply by: _____
2. <u>Salix interior</u>	40	Y	OBL	OBL species _____ x 1 = <u>0</u>
3. <u>Ribes missouriense</u>	5	N	UPL	FACW species _____ x 2 = <u>0</u>
4. <u>Acer negundo</u>	5	N	FACW	FAC species _____ x 3 = <u>0</u>
5. _____				FACU species _____ x 4 = <u>0</u>
<u>65</u> = Total Cover				UPL species _____ x 5 = <u>0</u>
				Column Totals: _____ (A) <u>0</u> (B)
				Prevalence Index = B/A = <u>0</u>
Herb Stratum (Plot size: <u>5' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Solidago altissima</u>	30	Y	FACU	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Phalaris arundinacea</u>	20	Y	FACW	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>Juncus dudleyi</u>	20	Y	FAC	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>70</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>15' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>Vitis riparia</u>	5	Y	FACW	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>5</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) The predominant vegetation at this location is hydrophytic.				



**SOIL**

Sampling Point: 1-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR2/1	95	10YR4/1	5	D	M	SiCL	
6-10	10YR2/1	90	10YR4/1	5	D	M	SiCL	
			10YR5/2	5	D	M		
10-14	10YR3/1	90	10YR5/3	10	D	M	Clay	
14-20	10YR5/4	50					Clay	mixed matrix
	10YR4/2	50						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
 Hydric soil conditions were confirmed by the indicator Redox Dark Surface (F6). Soil appears to be disturbed; possibly from previous farming.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>None</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>None</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: This area is depressional and receives overland flow from adjacent uplands. This site appears to be isolated.		

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Farm Tract II City/County: Richton Park, Cook County Sampling Date: 8/3/10  
 Applicant/Owner: Clark Dietz State: IL Sampling Point: 1-6  
 Investigator(s): A. Klueenberg (Huff & Huff, Inc.) Section, Township, Range: T35N, R13E, S35  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave  
 Slope (%): 5% Lat: 41.470210 N Long: -87.704367 W Datum: WGS84  
 Soil Map Unit Name: Bryce silty clay (235A) NWI or WWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: This is a fallow farm field on the east side of the wetland.			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				= Total Cover
Shrub/Straw Stratum (Plot size: <u>15' diameter</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: _____ (A) <u>0</u> (B) Prevalence Index = B/A = <u>0</u>
1. <u>Rhamnus cathartica</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				= Total Cover
Herb Stratum (Plot size: <u>5' diameter</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Solidago altissima</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Taraxacum officinale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				= Total Cover
Woody Vine Stratum (Plot size: <u>15' diameter</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____				
2. _____				
Remarks: (Include photo numbers here or on a separate sheet.) The predominant vegetation at this location is not hydrophytic.				

**SOIL**

Sampling Point: 1-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR2/1	100					SiCL	
8-12	10YR2/1	100					Clay	
12-18	10YR2/1	45	10YR4/1	10	D	M	Clay	Mixed matrix
	10YR5/4	45						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators:			Sandy Gleyed Matrix (S4)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):						Hydric Soil Present?    Yes _____ No <input checked="" type="checkbox"/>		
Type: _____ Depth (inches): _____								
Remarks:								
There were no indicators of hydric soil conditions present.								

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	
Field Observations:		
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ None
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ None
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ None
(Includes capillary fringe)		Wetland Hydrology Present?    Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
Water flows from this area to the adjacent wetland. There were no indicators of wetland hydrology present.		

Site: Farm Trace  
 Locals: Site 1  
 By: Huff & Huff, Inc. (Klusenberg)  
 File: z:\Clock Data (CDI)\Farm Trace - Richton Park\PC\FQE Site 1 Richton Park.dbr

FLORISTIC QUALITY DATA		Native		Adventive			
45	NATIVE SPECIES	Tree	7	11.7%	Tree	1	1.7%
60	Total Species	Shrub	6	10.0%	Shrub	4	6.7%
2.8	NATIVE MEAN C	W-Vine	3	5.0%	W-Vine	0	0.0%
2.3	W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
16.8	NATIVE FQI	P-Forb	13	21.7%	P-Forb	6	10.0%
16.3	W/Adventives	B-Forb	2	3.3%	B-Forb	1	1.7%
-1.7	NATIVE MEAN W	A-Forb	1	1.7%	A-Forb	1	1.7%
-0.8	W/Adventives	P-Grass	3	5.0%	P-Grass	2	3.3%
AVG: Fac. Wetland (-)		A-Grass	0	0.0%	A-Grass	0	0.0%
		P-Sedge	9	15.0%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Cryptogam	1	1.7%			

ACRONYM	C SCIENTIFIC NAME	W WEINSTEIN	PHYSIOGNOMY	COMMON NAME
ACENEG	0 Acer negundo	-2	FACW- Nt Tree	BOX ELDER
ACESAL	0 Acer saccharinum	-3	FACW Nt Tree	SILVER MAPLE
ACHMIL	0 ACHILLEA MILLEFOLIUM	3	FACU Ad P-Forb	YARROW
AGRALA	0 AGROSTIS ALBA	-3	FACW Ad P-Grass	REDFEED
AMBARE	0 Ambrosia artemisiifolia elatior	3	FACU Nt A-Forb	COMMON RAGWEED
ASTNOV	4 Aster novae-angliae	-3	FACW Nt E-Forb	NEW ENGLAND ASTER
BOECYC	2 Boehmeria cylindrica	-5	OBL Nt P-Forb	FALSE NETTLE
CXAGGR	5 Carex aggregata	5	UPL Nt P-Sedge	SMOOTH CLUSTERED SEDGE
CXBLAN	1 Carex blanda	0	FAC Nt P-Sedge	COMMON WOOD SEDGE
CXCRIS	4 Carex cristatella	-4	FACW+ Nt P-Sedge	CRESTED OVAL SEDGE
CXLACU	6 Carex lacustris	-5	OBL Nt P-Sedge	COMMON LAKE SEDGE
CXMOLE	2 Carex molesta	-1	FAC+ Nt P-Sedge	FIELD OVAL SEDGE
CXVULP	2 Carex vulpinoidea	-5	OBL Nt E-Sedge	BROWN FOX SEDGE
CIPARV	0 CIRSIIUM ARVENSE	5	UPL Ad P-Forb	FIELD THISTLE
CIRDIS	2 Cirsium discolor	5	UPL Nt B-Forb	PASTURE THISTLE
CORRAC	1 Cornus racemosa	-2	FACW- Nt Shrub	GRAY DOGWOOD
CORSTO	6 Cornus stolonifera	-3	FACW Nt Shrub	RED-OSIER DOGWOOD
DAUCAR	0 DAUCUS CAROTA	5	UPL Ad B-Forb	QUEEN ANNE'S LACE
EQUARV	0 Equisetum arvense	0	FAC Cryptogam	HORSETAIL
ERIANV	0 Erigeron annuus	1	FAC- Nt E-Forb	ANNUAL FLEABANE
FRAVIR	1 Fragaria virginiana	1	FAC- Nt P-Forb	WILD STRAWBERRY
FRAPES	1 Fraxinus pennsylvanica subintegerrima	0	FAC Nt Tree	GREEN ASH
GEUCAN	1 Geum canadense	0	FAC Nt P-Forb	WOOD AVENS
GLEHER	0 GLECHOMA HEDERACEA	3	FACU Ad P-Forb	CREeping CHARLIE
GLYSTR	1 Glyceria striata	-3	FACW+ Nt P-Grass	FOWL MANNA GRASS
HELGR0	2 Helianthus grosseserratus	-2	FACW- Nt P-Forb	SAWTOOTH SUNFLOWER
IPOPUR	0 IPOMOEA PURPUREA	4	FACU- Ad A-Forb	COMMON MORNING GLORY
JUNDUD	4 Juncus dudleyi	0	FAC+ Nt P-Forb	DUDLEY'S RUSH
JUNEFF	7 Juncus effusus	-5	OBL Nt P-Forb	COMMON RUSH
LEEVIR	7 Leersia virginica	-3	FACW Nt P-Grass	WHITE GRASS
LONTAT	0 LONICERA TATARICA	5	UPL+ Ad Shrub	TARTARIAN HONEYSUCKLE
LYCAME	5 Lycopodium americanum	-5	OBL Nt P-Forb	COMMON WATER HOREHOUND
LYTSAL	0 LYTHRUM SALICARIA	-5	OBL Ad P-Forb	PURPLE LOOSESTRIFE
MORALB	0 MORUS ALBA	0	FAC Ad Tree	WHITE MULBERRY
PARQUI	2 Parthenocissus quinquefolia	1	FAC- Nt W-Vine	VIRGINIA CREEPER
PHARAU	0 PHALARIS ARUNDINACHA	-4	FACW+ Ad P-Grass	REED CANARY GRASS
PHRAUS	1 Phragmites australis	-4	FACW+ Nt P-Grass	COMMON REED
POPDEL	2 Populus deltoides	-1	FAC+ Nt Tree	EASTERN COTTONWOOD
POPTRE	6 Populus tremuloides	0	FAC Nt Tree	QUAKING ASPEN
RHACAT	0 RHAMNUS CATHARTICA	3	FACU Ad Shrub	COMMON ROCKTHORN
RHURAD	2 Rhus radicans	-1	FAC+ Nt W-Vine	POISON IVY
RTBMIS	5 Ribes missouriense	5	UPL Nt Shrub	WILD GOOSEBERRY
ROSMUL	0 ROSA MULTIFLORA	3	FACU Ad Shrub	MULTIFLORA ROSE
ROMCRI	0 RUMEX CRISPUS	-1	FAC+ Ad P-Forb	CURLY DOCK
SAGLAT	4 Sagittaria latifolia	-5	OBL Nt P-Forb	COMMON ARROWHEAD
SALINT	1 Salix interior	-5	OBL Nt Shrub	SANDBAR WILLOW
SALNIG	4 Salix nigra	-5	OBL Nt Tree	BLACK WILLOW
SAMCAN	1 Sambucus canadensis	-2	FACW- Nt Shrub	ELDERBERRY
SCIFLU	4 Scirpus fluviatilis	-5	OBL Nt P-Sedge	RIVER BULRUSH

SCIPEN 4 Scirpus pendulus  
 SCIVAC 5 Scirpus validus creber  
 SOLALT 1 Solidago altissima  
 SOLGIG 4 Solidago gigantea  
 SOLGRG 4 Solidago graminifolia  
 GOLDENROD  
 TRIFRA 0 TRIFOLIUM PRATENSE  
 TYPANG 1 Typha angustifolia  
 OLNAME 3 Ulmus americana  
 VIBDEN 0 VIBURNUM DENTATUM  
 VIBPRU 5 Viburnum prunifolium  
 VITRIP 2 Vitis riparia

-5 OBL. Nt P-Sedge RED BULRUSH  
 -5 OBL. Nt P-Sedge GREAT BULRUSH  
 3 FACU Nt P-Forb TALL GOLDENROD  
 -3 FACW Nt P-Forb LAYE GOLDENROD  
 -2 FACW- Nt P-Forb COMMON GRASS-LEAVED  
 5 UPL Ad P-Forb RED CLOVER  
 -5 OBL Nt P-Forb NARROW-LEAVED CATTAIL  
 -2 FACW- Nt Tree AMERICAN ELM  
 5 UPL Ad Shrub ARROW-WOOD  
 3 FACU Nt Shrub BLACK HAW  
 -2 FACW- Nt W-Vine RIVERBANK GRAPE

**APPENDIX B**  
**PHOTOGRAPHS**



Photo 1: Site 1, Datapoint 1-1 facing east (6/3/10).



Photo 3: Datapoint 1-3 facing north (6/3/10).

U:\Photos\Clark Diezi\Farm Trace - Richton Park\Photo Log\_Farm Trace.doc



Photo 2: Datapoint 1-2 facing south (6/3/10)



Photo 4: View of datapoint 1-4 facing north (6/3/10).



Photo 5: View of datapoint 1-6 facing southeast (6/3/10).



Photo 6: View of Site 1, datapoint 1-5 facing west (6/3/10).



Photo 7: View of the center portion of Site 1 (6/3/10).



Photo 8: View of the south side of Site 1, facing east along Steger Road (6/3/10).



## **Appendix D**

### IDNR EcoCAT Coordination



# Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271  
<http://dnr.state.il.us>

Pat Quinn, Governor  
Marc Miller, Director

July 17, 2012

Patrick Dunn  
CDM Smith  
125 S. Wacker Drive  
Suite 600  
Chicago, IL 60606

**Re: Farm Trace Bypass Storm Sewer and Detention Basin**  
**Project Number(s): 1300556**  
**County: Cook**

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 and 1090 is terminated.

Consultation for Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Consultation for Part 1090 (Interagency Wetland Policy Act) is valid for three years.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database and the Illinois Wetlands Inventory at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Tracy Evans  
Division of Ecosystems and Environment  
217-785-5500

*Applicant:* CDM Smith  
*Contact:* Patrick Dunn  
*Address:* 125 S. Wacker Drive  
Suite 600  
Chicago, IL 60606

*IDNR Project #:* 1300556  
*Date:* 07/10/2012

*Project:* Farm Trace Bypass Storm Sewer and Detention Basin  
*Address:* Steger Road, Richton Park

*Description:* The proposed project would reduce flooding in the Farm Trace Subdivision in the Village of Richton Park. The proposed improvements include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Center Park Avenue.

### Natural Resource Review Results

#### Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Thorn Creek Woods INAI Site  
Thorn Creek Woods Nature Preserve

#### Wetland Review (Part 1090)

The National Wetlands Inventory shows wetlands within 250 feet of the project location.

**An IDNR staff member will evaluate this information and contact you within 30 days to request additional information or to terminate consultation if adverse effects are unlikely.**

#### Location

The applicant is responsible for the accuracy of the location submitted for the project.

*County:* Cook

*Township, Range, Section:*

35N, 13E, 34                      35N, 13E, 35



**IL Department of Natural Resources Contact**

Tracy Evans  
217-785-5500  
Division of Ecosystems & Environment

**Local or State Government Jurisdiction**

IL Department of Commerce and Economic Opportunity  
Maureen Palmer  
427 E. Monroe Street  
Springfield, Illinois 62701

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**Disclaimer**

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

**Terms of Use**

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.
2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.
3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

**Security**

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law. Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

**Privacy**

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.

## **Appendix E**

### USFWS Endangered Species Consultation

# Illinois County Distribution

## Federally Endangered, Threatened, and Candidate Species

County	Species	Status	Habitat
Adams Field Office to Contact: U.S. Fish and Wildlife Service Rock Island Illinois Field Office 1511 47th Avenue Moline, Illinois 61265 (309) 757-5800 e: mail <a href="mailto:RockIsland@fws.gov">RockIsland@fws.gov</a> FAX: 309-757-5807	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
	<a href="#">Higgins eye pearl mussel</a> ( <i>Lampsilis higginsii</i> )	Endangered	Mississippi River; Rock River to Steel Dam
	<a href="#">Eastern prairie fringed orchid</a> ( <i>Platanthera leucophaea</i> )	Threatened	Mesic to wet prairies
Alexander Field Office to Contact: U.S. Fish and Wildlife Service Marion Illinois Sub- Office 8588 Route 148 Marion, Illinois 62959 Phone: (618) 997-3344, ext. 340 FAX: (618) 997-8961 e: mail <a href="mailto:Marion@fws.gov">Marion@fws.gov</a>	<a href="#">Gray bat</a> ( <i>Myotis grisescens</i> )	Endangered	Caves and mines; rivers & reservoirs adjacent to forests
	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
	<a href="#">Least tern</a> ( <i>Sterna antillarum</i> )	Endangered	Bare alluvial and dredged spoil islands
	<a href="#">Pallid sturgeon</a> ( <i>Scaphirynchus albus</i> )	Endangered	Large rivers
	Rabbitsfoot ( <i>Quadrula cylindrica cylindrica</i> )	Candidate	Ohio River
	<a href="#">Sheepnose mussel</a> ( <i>Plethobasus cyphus</i> )	Endangered	Shallow areas in larger rivers and streams
Bond Field Office to Contact: U.S. Fish and Wildlife Service Marion Illinois Sub- Office 8588 Route 148 Marion, Illinois 62959 Phone: (618) 997-3344, ext. 340 FAX: (618) 997-8961 e: mail <a href="mailto:Marion@fws.gov">Marion@fws.gov</a>	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
	<a href="#">Piping plover</a> <i>Charadrius melodus</i>	Endangered	May be present in Bond County during migration.
	<a href="#">Eastern massasauga</a> ( <i>Sistrurus catenatus</i> )	Candidate	Graminoid dominated plant communities (fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands)
	<a href="#">Eastern prairie fringed orchid</a> ( <i>Platanthera leucophaea</i> )	Threatened	Mesic to wet prairies
Boone  Field Office to Contact: U.S. Fish and Wildlife Service Rock Island Illinois	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)

<p>Office 8588 Route 148 Marion, Illinois 62959 Phone: (618) 997-3344, ext. 340 FAX: (618) 997-8961 e: mail <a href="mailto:Marion@fws.gov">Marion@fws.gov</a></p>	<p><a href="#">Eastern prairie fringed orchid</a> (<i>Platanthera leucophaea</i>)</p>	<p>Threatened</p>	<p>Mesic to wet prairies</p>
<p>Clinton  Field Office to Contact: U.S. Fish and Wildlife Service Marion Illinois Sub-Office 8588 Route 148 Marion, Illinois 62959 Phone: (618) 997-3344, ext. 340 FAX: (618) 997-8961 e: mail <a href="mailto:Marion@fws.gov">Marion@fws.gov</a></p>	<p><a href="#">Indiana bat</a> (<i>Myotis sodalis</i>)</p>	<p>Endangered</p>	<p>Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)</p>
	<p><a href="#">Piping plover</a> <i>Charadrius melodus</i></p>	<p>Endangered</p>	<p>May be present in Clinton County during migration.</p>
	<p><a href="#">Eastern massasauga</a> (<i>Sistrurus catenatus</i>)</p>	<p>Candidate</p>	<p>Graminoid dominated plant communities (fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands)</p>
	<p><a href="#">Eastern prairie fringed orchid</a> (<i>Platanthera leucophaea</i>)</p>	<p>Threatened</p>	<p>Mesic to wet prairies</p>
	<p><a href="#">Lakeside daisy</a> (<i>Hymenoxys acaulis</i> var. <i>glabra</i>)</p>	<p>Threatened</p>	<p>Dry rocky prairies</p>
<p>Coles  Field Office to Contact: U.S. Fish and Wildlife Service Marion Illinois Sub-Office 8588 Route 148 Marion, Illinois 62959 Phone: (618) 997-3344, ext. 340 FAX: (618) 997-8961 e: mail <a href="mailto:Marion@fws.gov">Marion@fws.gov</a></p>	<p><a href="#">Indiana bat</a> (<i>Myotis sodalis</i>)</p>	<p>Endangered</p>	<p>Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)</p>
	<p><a href="#">Snuffbox</a> (<i>Epioblasma triquetra</i>)</p>	<p>Endangered</p>	<p>Small to medium-sized creeks and some larger rivers, in areas with a swift current</p>
	<p><a href="#">Eastern prairie fringed orchid</a> (<i>Platanthera leucophaea</i>)</p>	<p>Threatened</p>	<p>Mesic to wet prairies</p>
<p><b>Cook</b>  Field Office to Contact: USFWS Chicago Illinois FO 1250 South Grove, Suite 103 Barrington, Illinois 60010 (847) 381-2253 e: mail <a href="mailto:Chicago@fws.gov">Chicago@fws.gov</a> <a href="mailto:Cathy_Pollack@fws.gov">Cathy_Pollack@fws.gov</a></p>	<p><a href="#">Piping plover</a> <i>Charadrius melodus</i></p>	<p>Endangered</p>	<p>Lakeshore beaches</p>
	<p><a href="#">Eastern massasauga</a> (<i>Sistrurus catenatus</i>)</p>	<p>Candidate</p>	<p>Graminoid dominated plant communities (fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands)</p>
	<p>Hine's emerald dragonfly (<i>Somatochlora hineana</i>)</p>	<p>Endangered</p>	<p>Spring fed wetlands, wet meadows and marshes</p>
	<p>Hine's emerald dragonfly (<i>Somatochlora hineana</i>)</p>	<p>Critical Habitat Designated</p>	<p><a href="#">Go here for a map and written description of the areas designated as Critical Habitat</a> (PDF)</p>

	<a href="#">Eastern prairie fringed orchid</a> ( <i>Platanthera leucophaea</i> ) <a href="#">Go here for specific guidance on how to determine whether this species is present on a site.</a>	Threatened	Moderate to high quality wetlands, sedge meadow, marsh, and mesic to wet prairie
	<a href="#">Leafy-prairie clover</a> ( <i>Dalea foliosa</i> )	Endangered	Prairie remnants on thin soil over limestone
	<a href="#">Mead's milkweed</a> ( <i>Asclepias meadii</i> )	Threatened	Late successional tallgrass prairie, tallgrass prairie converted to hay meadow, and glades or barrens with thin soil
	<a href="#">Prairie bush clover</a> ( <i>Lespedeza leptostachya</i> )	Threatened	Dry to mesic prairies with gravelly soil
Crawford Field Office to Contact: U.S. Fish and Wildlife Service Marion Illinois Sub- Office 8588 Route 148 Marion, Illinois 62959 Phone: (618) 997- 3344, ext. 340 FAX: (618) 997-8961 e: mail <a href="mailto:Marion@fws.gov">Marion@fws.gov</a>	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
	Rabbitsfoot ( <i>Quadrula cylindrica cylindrica</i> )	Candidate	Wabash River
	<a href="#">Eastern prairie fringed orchid</a> ( <i>Platanthera leucophaea</i> )	Threatened	Mesic to wet prairies
Cumberland  Field Office to Contact: U.S. Fish and Wildlife Service Marion Illinois Sub- Office 8588 Route 148 Marion, Illinois 62959 Phone: (618) 997- 3344, ext. 340 FAX: (618) 997-8961 e: mail <a href="mailto:Marion@fws.gov">Marion@fws.gov</a>	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
	<a href="#">Snuffbox</a> ( <i>Epioblasma triquetra</i> )	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current
	<a href="#">Eastern prairie fringed orchid</a> ( <i>Platanthera leucophaea</i> )	Threatened	Mesic to wet prairies
DeKalb  Field Office to Contact: U.S. Fish and Wildlife Service Rock Island Illinois Field Office 1511 47th Avenue Moline, Illinois 61265 (309) 757-5800 e: mail <a href="mailto:RockIsland@fws.gov">RockIsland@fws.gov</a> FAX: 309-757-5807	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
	<a href="#">Eastern prairie fringed orchid</a> ( <i>Platanthera leucophaea</i> )	Threatened	Mesic to wet prairies
DeWitt  Field Office to Contact: U.S. Fish and Wildlife Service Rock Island Illinois	<a href="#">Indiana bat</a> ( <i>Myotis sodalis</i> )	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)



## **Appendix F**

Illinois Farmland Preservation Coordination

**Dunn, Patrick**

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**From:** Savko, Terry [Terry.Savko@Illinois.gov]  
**Sent:** Tuesday, July 10, 2012 1:36 PM  
**To:** Dunn, Patrick  
**Cc:** Chard, Steve  
**Subject:** Richton Park- IKE funds for Farm Trace Bypass Storm Sewer & Detention Basin

Hi Patrick,

Because the storm sewer work will occur within Richton Park's corporate boundaries, the project is exempt from further review in accordance with Section 3 of the IDOA-DCEO Cooperative Working Agreement.

We have determined that the project complies with the Illinois Farmland Preservation Act.

Terry

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**Terry Savko, IL Dept of Agriculture  
Bureau of Land and Water Resources**

State Fairgrounds, P.O. Box 19281, Springfield, IL 62794-9281

**217-785-4458** Fax 217-557-0993 [terry.savko@illinois.gov](mailto:terry.savko@illinois.gov)

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**From:** Dunn, Patrick [mailto:DunnPW@cdmsmith.com]  
**Sent:** Tuesday, July 10, 2012 11:50 AM  
**To:** Savko, Terry  
**Subject:** Richton Park- IKE funds for Farm Trace Bypass Storm Sewer & Detention Basin

Terry,

The Village of Richton Park has received a Community Development Block Grant (CDBG) Illinois "IKE" Disaster Recovery Program (IDRP) award from the Illinois Department of Commerce and Economic Opportunity (DCEO) for the Farm Trace Bypass Storm Sewer and Detention Basin project. The proposed project would reduce flooding in the Farm Trace Subdivision. The proposed **improvements include installing a 60-inch storm sewer along Steger Road and constructing a detention basin at the northwest corner of Steger Road and Center Park Avenue.** The proposed **project would occur within the corporate limits of the Village of Richton Park.**

Attached is a project location map. Please let me know if you need any further details.

Can this project proceed without further review or consultation with your office? Thanks.

**Patrick Dunn, CFM**

Illinois "IKE" Disaster Recovery Program

Phone: 312-780-7726

## **Appendix G**

### Hazardous Materials



# Envirofacts Search Results

Search Results for:  
Map Recentered

Envirofacts Links

- [EF Overview](#)
- [Search](#)
- [Model](#)
- [Data Update](#)
- [Multisystem Search User Guide](#)
- [Contact Us](#)

**API Link for Report Data:**  
<http://iaspub.epa.gov/enviro/efservice/multisystem/minLatitude/41>  
 Copy and paste the link above to view the data from this report

- [Info](#)
- [AIR](#)
- [TOXICS](#)
- [WASTE](#)
- [RADIATION](#)
- [WATER](#)

\*Zoom or pan map to change location.



Click on a tab to see a summary view of data for a media type.

Project Area

**AIR**

- Facilities that produce and release air pollutants: **0**

**TOXICS**

- Facilities that have reported toxic releases: **0**

**WASTE**

- Facilities that have reported hazardous waste activities: **0**
- Number of sites dealing with the generation, management, and minimization of hazardous waste: **0**
- Potential hazardous waste sites that are part of Superfund that exist: **0**

**RADIATION**

- Facilities regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity: **0**

**WATER**

- Facilities with permits and discharges to waters of the United States: **0**
- Transient Non-Community Water Systems that do not consistently serve the same people (e.g. rest stops, campgrounds, gas stations): **332**
- Community Water Systems that serve the same people year-round (e.g. in homes or businesses): **75**
- Non-Transient Non-Community Water Systems that serve the same people, but not year-round (e.g. schools that have their own water system): **50**

## LIST OF EPA-REGULATED FACILITIES IN ENVIROFACTS

The facility list below is based upon the facilities that are visible with the map above. To refine your search to a more targeted area of interest, please visit the [Envirofacts Multisystem Search Form](#). To search Envirofacts via an interactive map, please view your results in [EnviroMapper for Envirofacts](#)

Total Number of Facilities Displayed: **0**

[Return to more topical information](#)

## Division of Petroleum & Chemical Safety

Search Results - 12 matches found

[Export to Excel](#)

Facility Nbr	Facility Name	Address	City	Facility Type	Owner Name	Status
<a href="#">2044572</a>	Former Sparks Auto Care	<a href="#">22301 Governors Highway</a>	Richton Park	None	Village of Richton Park	Exempt
<a href="#">2024862</a>	JAMS BP Properties, Inc.	<a href="#">4769 West Sauk Trail</a>	Richton Park	Self-Service Station	JAMS BP Properties, Inc.	Active
<a href="#">2034603</a>	Lakewood Pool	<a href="#">5025 Imperial Dr</a>	Richton Park	Other	Burnside Construction Company	Closed
<a href="#">2042220</a>	Natural Fuels, Inc. d/b/a 57 Gas	<a href="#">5151 Sauk Trail Road</a>	Richton Park	Self-Service Station	BAPA, LLC & PT, LLC	Active
<a href="#">2012050</a>	Oasis Station #1078	<a href="#">22429 Governors Hwy</a>	Richton Park	None	Zayre Corporation	Closed
<a href="#">2008367</a>	Rich Township Of	<a href="#">22013 Governors Hwy</a>	Richton Park	None	Rich Township Of	Closed
<a href="#">2011567</a>	Richton Park Citgo, Inc.	<a href="#">3600 Sauk Trail</a>	Richton Park	Self-Service Station	Richton Park Citgo, Inc.	Active
<a href="#">2006964</a>	Shell Station 6615-01	<a href="#">4801 West Sauk Trail</a>	Richton Park	Golf Course	Shell Oil Products US c/o Gilbarco Veeder-Root	Closed
<a href="#">2013816</a>	Speedway #8302	<a href="#">22300 Governor's Hwy Sauk Trail</a>	Richton Park	Self-Service / Unattended Self-Service	Speedway, LLC	Closed
<a href="#">2000662</a>	Urban Hills Country Club Inc	<a href="#">23520 Crawford Ave</a>	Richton Park	None	Urban Hills Country Club Inc	Closed
<a href="#">2018628</a>	Village of Richton Park	<a href="#">4455 Sauk Trail</a>	Richton Park	City / Town	Village of Richton Park	Active
<a href="#">2020496</a>	Zayre Dept Store #365	<a href="#">22420 Governors Hwy</a>	Richton Park	Commercial / Retail	Zayre Corp	Exempt

Search Results - 12 matches found

[Export to Excel](#)

## **Appendix H**

### NRCS Soil Suitability

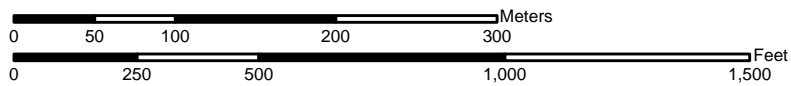
Corrosion of Concrete—Cook County, Illinois, and Will County, Illinois



87° 42' 50"




Map Scale: 1:4,870 if printed on A size (8.5" x 11") sheet.



## MAP LEGEND


### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils


 Soil Map Units

### Soil Ratings

 High

 Moderate


 Low

 Not rated or not available

### Political Features

 Cities

### Water Features

 Streams and Canals


### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

## MAP INFORMATION

Map Scale: 1:4,870 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois  
Survey Area Data: Version 6, Nov 2, 2011

Soil Survey Area: Will County, Illinois  
Survey Area Data: Version 7, Jan 20, 2012

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Date(s) aerial images were photographed: 7/30/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Corrosion of Concrete

Corrosion of Concrete— Summary by Map Unit — Cook County, Illinois (IL031)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
235A	Bryce silty clay, 0 to 2 percent slopes	Low	9.1	30.7%
320B	Frankfort silt loam, 2 to 4 percent slopes	Low	11.2	37.7%
320C2	Frankfort silty clay loam, 4 to 6 percent slopes, eroded	Low	0.7	2.4%
925B	Frankfort-Bryce complex, 1 to 6 percent slopes	Low	3.0	10.1%
<b>Subtotals for Soil Survey Area</b>			<b>23.9</b>	<b>80.9%</b>
<b>Totals for Area of Interest</b>			<b>29.6</b>	<b>100.0%</b>

Corrosion of Concrete— Summary by Map Unit — Will County, Illinois (IL197)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
235A	Bryce silty clay, 0 to 2 percent slopes	Low	2.1	7.2%
320B	Frankfort silt loam, 2 to 4 percent slopes	Low	3.0	10.1%
320C2	Frankfort silty clay loam, 4 to 6 percent slopes, eroded	Low	0.5	1.8%
<b>Subtotals for Soil Survey Area</b>			<b>5.6</b>	<b>19.1%</b>
<b>Totals for Area of Interest</b>			<b>29.6</b>	<b>100.0%</b>

## Description

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

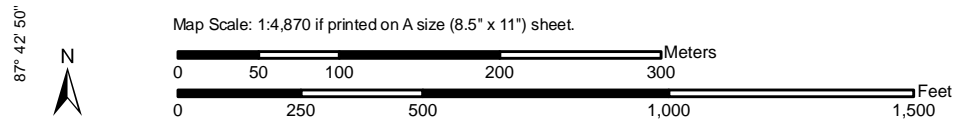
## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified


*Tie-break Rule:* Higher

Shallow Excavations—Cook County, Illinois, and Will County, Illinois



## MAP LEGEND

### Area of Interest (AOI)


 Area of Interest (AOI)


### Soils


 Soil Map Units

### Soil Ratings

 Very limited

 Somewhat limited


 Not limited

 Not rated or not available

### Political Features

 Cities

### Water Features

 Streams and Canals


### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

## MAP INFORMATION

Map Scale: 1:4,870 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois  
Survey Area Data: Version 6, Nov 2, 2011

Soil Survey Area: Will County, Illinois  
Survey Area Data: Version 7, Jan 20, 2012

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Date(s) aerial images were photographed: 7/30/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Shallow Excavations

Shallow Excavations— Summary by Map Unit — Cook County, Illinois (IL031)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
235A	Bryce silty clay, 0 to 2 percent slopes	Very limited	Bryce (94%)	Depth to saturated zone (1.00)	9.1	30.7%
				Too clayey (0.50)		
				Unstable excavation walls (0.10)		
320B	Frankfort silt loam, 2 to 4 percent slopes	Very limited	Frankfort (92%)	Depth to saturated zone (1.00)	11.2	37.7%
				Too clayey (0.32)		
				Unstable excavation walls (0.10)		
320C2	Frankfort silty clay loam, 4 to 6 percent slopes, eroded	Very limited	Frankfort, eroded (92%)	Depth to saturated zone (1.00)	0.7	2.4%
				Too clayey (0.32)		
				Unstable excavation walls (0.10)		
925B	Frankfort-Bryce complex, 1 to 6 percent slopes	Very limited	Frankfort (53%)	Depth to saturated zone (1.00)	3.0	10.1%
				Too clayey (0.32)		
				Unstable excavation walls (0.10)		
			Bryce (42%)	Depth to saturated zone (1.00)		
				Too clayey (0.50)		
				Unstable excavation walls (0.10)		
<b>Subtotals for Soil Survey Area</b>					<b>23.9</b>	<b>80.9%</b>
<b>Totals for Area of Interest</b>					<b>29.6</b>	<b>100.0%</b>

Shallow Excavations— Summary by Map Unit — Will County, Illinois (IL197)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
235A	Bryce silty clay, 0 to 2 percent slopes	Very limited	Bryce (94%)	Depth to saturated zone (1.00)	2.1	7.2%
				Too clayey (0.50)		
				Unstable excavation walls (0.10)		

Shallow Excavations— Summary by Map Unit — Will County, Illinois (IL197)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
320B	Frankfort silt loam, 2 to 4 percent slopes	Very limited	Frankfort (92%)	Depth to saturated zone (1.00)	3.0	10.1%
				Too clayey (0.32)		
				Unstable excavation walls (0.10)		
320C2	Frankfort silty clay loam, 4 to 6 percent slopes, eroded	Very limited	Frankfort, eroded (92%)	Depth to saturated zone (1.00)	0.5	1.8%
				Too clayey (0.32)		
				Unstable excavation walls (0.10)		
<b>Subtotals for Soil Survey Area</b>					<b>5.6</b>	<b>19.1%</b>
<b>Totals for Area of Interest</b>					<b>29.6</b>	<b>100.0%</b>

Shallow Excavations— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Very limited	29.6	100.0%
<b>Totals for Area of Interest</b>	<b>29.6</b>	<b>100.0%</b>

## Description

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher