



Village of Park Forest, Illinois

Water System Improvements Project Plan

March 2020



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Drinking Water Project Planning Submittal Checklist Planning File

Before the Agency will begin review of a Project Plan, all of the items below comprising the basic minimum requirements of a Project Plan must be included and the page number(s) of all items noted. Project planning must contain all pertinent information detailed in Ill. Adm. Code 35 Section 662.320(e). The loan applicant should be familiar with their planning responsibilities as detailed in Sections 662.320 and 662.330.

Complete this form online using Adobe Acrobat Reader, save it to your computer, then print and sign it.

Loan Applicant: Village of Park Forest, Illinois

Consulting Engineer: Baxter & Woodman Phone Number: 815-459-1260

Project Description:

This project consists of the replacement of approximately 8,800 linear feet of water main and the construction of a new elevated tank adjacent to the Village's water treatment plant. 6,500 linear feet of water main will be replaced in 2021, with the additional 2,300 linear feet and the elevated tank constructed in 2022.

Fill in the blank with the page(s) where each item below is found in the project plan. Additional information and/or examples for each item number are provided by corresponding numbers contained in the attached instructions.

No.	Page(s) or Comment	Information
1.	15-16, Exhibit 1	Loan applicant's background, total population served by the applicant, customer base, and project location information.
2.	19-22	Detailed description of the EXISTING public water supply source(s), treatment facilities, water storage facilities, and distribution system.
3.	23	Project description that explains the need and justification of the proposed project, including the benefits of the project.
4.	22	Discussion of the system's compliance with all applicable laws and regulations governing public water systems.
5.	23	Basis of design for chosen alternative.
6.	Appendices A-D	Inventory of environmental impacts of selected alternative, a discussion of the required mitigation measures, and a completed IEPA Loan Applicant Environmental Checklist form with sign-off documentation.
7.	Exhibit 1	Reproducible 8.5 X 11 inch map(s) showing the project(s) location(s) relative to the community.
8.	23	An estimate of the total project costs and a detailed estimate of construction item costs.
9.	27, 29	Estimated loan terms, including: IEPA loan amount, interest rate, repayment period in years, and the annual loan repayment.
10.	29	Financial arrangements for assuring adequate annual debt service and O, M, and R coverage, a description of the dedicated source of revenue necessary for loan repayment, and any other funding involved in the project.
11.	28-30	Detailed description of the existing residential rate structure, water consumption, any proposed rate changes, and an example of the existing and the proposed average monthly residential bill because of the project(s).

No.	Page(s) or Comment	Information
11.	28-30	Detailed description of the existing residential rate structure, water consumption, any proposed rate changes, and an example of the existing and the proposed average monthly residential bill because of the project(s).
12.	Submitted below	One copy of completed Existing User Charge and O, M, and R Certification Sheet found on page 3 (attached) should be submitted with the Project Plan.
13.	N/A	Discussion of any "green" project components that are part of the proposed project.
14.	26-27	Schedule for project implementation.
15.	N/A	Copies of inter-governmental and/or service agreements.
16.	N/A	IEPA construction permit status.
17.	16	Name and address of the local newspaper(s).

Three (3) copies of the Project Plan and related documents should be submitted along with one (1) copy of this completed checklist (pages 1 through 3) to:

Infrastructure Financial Assistance Section (IFAS)
 Illinois Environmental Protection Agency
 1021 North Grand Avenue East
 P.O. Box 19276
 Springfield, IL 62794-9276

IFAS will distribute the planning documents to the appropriate Agency staff for review, comment, and approval. IFAS will contact the loan applicant if further information is needed. Please use the box below for any special instructions or notes.



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Existing User Charge and O, M, and R Certification Sheet

21,975 Number of current residential customers served by the system.
1,270 gal/capita/m Actual average residential water use per customer per month (based on historical billing data)
\$61.18 Current average monthly residential bill

Provide details that apply to your specific user rate charges:

Water use charges: \$16.42 per 1,000 gallons
 _____ per _____ cubic feet

Flat Fee or Monthly User Charge: \$3.99

Debt Service Charge: \$3.00

Capital Improvement Charge: _____

Wholesale Charge: _____

Meter Service Fee (average-sized meter): \$120.00

Other Charge: _____ Explain: _____

Other Charge: _____ Explain: _____

- Is the water/sewer fund annually operating in a positive or negative balance at this time? (select one)
 Positive Negative
- Based upon your most recent annual budget please indicate the net operating income for your water/sewer fund:
\$784,772.00
 - Net Operating Income = Total Revenue - Total Cost of Providing Service
 - Total Revenue = Revenue from user charges, commercial, residential, or wholesale, plus any other dedicated water/sewer fund revenue
 - Total Cost of Providing Service = All Operation and Maintenance costs (including replacement fund) plus dedicated water/sewer fund debt
- Will a rate increase or other revenue generating action be necessary to pay for this project? (select one)
 Yes No
- If a rate increase (or other cost increase) is necessary, please provide the proposed user rate charges and proposed average monthly residential water bill as an attachment.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Thomas K. Mick _____ Village Manager _____
 Authorized Representative (Printed) Title

TK Mick _____ 3-24-2020 _____
 Signature Date

IEPA Loan Applicant Environmental Checklist and Certification Form

Loan Applicant: Village of Park Forest

L17#: L175814

This form must be signed by the loan applicant's Authorized Representative (not the consultant). All loan applicants must provide items 1 and 2 below. The information that must be provided for items 3-7 are specific to conditions of the project. See the attached instructions that explain the requirements and provide contact information. If you believe an item is not required for your project, enter N/A instead of the date of response and provide an explanation in the planning report. For checklist items marked as N/A, also indicate the page number of the planning report where the explanation is located.

Provide records of consultation with Illinois Department of Natural Resources (IDNR), State Historic Preservation Office (SHPO) for the National Historic Preservation Act, Section 106 sign-off.

1) Date of IDNR, SHPO response: 11/22/19, 8/19/20

Provide records of consultation with IDNR's Impact Assessment Section for evaluation pursuant to the Illinois Endangered Species Protection Act [520 ILCS 10/11], the Illinois Natural Areas Preservation Act [525 ILCS 30/17], Title 17 Illinois Administrative Code, Part 1075, and Interagency Wetlands Policy Act of 1989 (Illinois Administrative Code, Part 1090). Date of EcoCAT printout: 8/19/19, 10/15/19, 3/4/20, 3/5/20

2) Date of IDNR follow-up letter (when protected resources are identified):

For projects located within any wetland, river, stream, flood plain, floodway, waterway, any body of water, or construction located within 250 feet of these areas; provide records of consultation from:

3) U.S. Army Corps of Engineers (USACE) Date of USACE response:

For projects located within a flood plain or floodway, or along a jurisdictional river, lake, or stream without a mapped floodway or flood plain, provide records of consultation from:

4) IDNR Office of Water Resources (OWR) Date of IDNR OWR response:

If the project involves conversion of prime agricultural land to other uses, provide records of consultation from:

5) Illinois Department of Agriculture (IDOA). Date of IDOA response:

If the project includes 30% or more reserve capacity for future growth in the existing or proposed service areas, provide records of consultation from all applicable environmental regulatory entities listed on this form for the known growth/development areas associated with the identified secondary/indirect environmental impacts.

6) Secondary impacts list of applicable regulatory entities and date of their responses:

If any project with secondary impacts is located in a county under the jurisdiction of a Designated Water Quality Management Agency (DWQMA), which are the Greater Egypt Regional Planning & Development Commission (GERPDC), the Southwestern Illinois Metropolitan and Regional Planning Commission (SIMAPC), and the Chicago Metropolitan Agency for Planning (CMAP), provide records of consultation from:

7) Date of DWQMA response:

Certification: By signing this form, the Loan Applicant is certifying that the applicable environmental evaluations were conducted for the proposed project locations, and if the review results for any of these environmental evaluations include recommendations, conditions, certifications, and/or permits, the Loan Applicant agrees to comply with them and include them within the bidding and construction contract documents.

Signed: [Signature] Loan Applicant's Authorized Representative

Date: 8-28-2020

IEPA Loan Applicant Environmental Checklist and Certification Form Instructions

To obtain Project Plan approval, a loan applicant must satisfy the IEPA that the project will comply with various State and Federal enactments for protection of historical/cultural resources, recreational areas, rivers, streams wetlands, any body of water, floodplains, river and stream banks, rare and endangered species, prime agricultural land, air and water quality and other sensitive environmental areas. These required evaluations are intended to ensure compliance with Section II, Environmental Authorities, of the USEPA Handbook for Cross-cutting Federal Authorities. Please note that in Illinois, the Wild and Scenic Rivers Act requirements only apply to a designated 17.1-mile part of the middle fork of the Vermilion River, which is located west of Danville, Illinois, in Vermilion County.

These requirements can be satisfied by providing the information noted on this checklist. This checklist itemizes the project conditions that determine which environmental evaluations are required. The loan applicant must ask the identified regulating entities to evaluate their proposed project and then provide records of consultation to the IEPA. Records of consultation consist of copies of the loan applicants request for consultation; all correspondence to document the evaluation of the project; and the final review results. If the final environmental review results include recommendations, conditions, certifications, or if permits are issued, copies must be provided as part of the records of consultation. The records of consultation for all necessary environmental evaluations must be provided to the IEPA before we can complete the project summary document (Categorical Exclusion or Preliminary Environmental Impacts Determination), which is necessary to comply with the public notification and project planning approval requirements. Depending on the site-specific project conditions, the required environmental evaluations can take two or more months to complete. If your project meets any listed conditions, it is suggested that you submit the project information to the regulating entity as soon as possible.

To determine whether evaluations by USACE (Item 3) and IDNR-OWR (Item 4) are required, all loan applicants must provide the IEPA Loan Program a minimum of two maps that show the project location and the specified environmentally sensitive areas. One map must be an official floodway location map as described in Item 4 to determine whether IDNR-OWR evaluation must be conducted. One or more other maps that show wetlands, rivers, streams and any body of water as described in Item 3 must be provided to determine whether USACE evaluation must be conducted. If the project is located in any one of the specified areas, the loan applicant must submit a joint application form to IDNR-OWR and/or USACE and provide records of consultation to IEPA. If the provided maps demonstrate that project is not located in the specified areas, further evaluation is not required for Items 3 and 4.

By signing the Environmental Checklist and Certification Form, the loan applicant is certifying that the correct environmental evaluations were done for all proposed project construction areas and that they will comply with all environmental requirements. **The checklist and certification form must be signed and dated by the loan applicant's Authorized Representative (not the consulting engineer) and submitted to IEPA.**

Some environmental evaluation results specify a time period that the consultation remains valid. The time period may expire in two or three years or may be project specific and is determined by each regulating entity. The environmental evaluations must be current and in effect when the IEPA approves the project planning. If an environmental consultation expires before IEPA loan project planning approval, the loan applicant must provide new updated records of consultation.

If you have any questions regarding this package, please contact the IEPA Infrastructure Financial Assistance Section (IFAS) in the Bureau of Water at 217/782-2027.

1) Historical/Cultural Resources - National Historic Preservation Act, Section 106

A sign-off from the Illinois Department of Natural Resources State Historic Preservation Office (SHPO) must be provided to IEPA. The request for evaluation must indicate that the project will be funded through the IEPA loan program and therefore will require a federal Section 106 Sign-off (this will also satisfy the State Agency Historic

Preservation Protection Act of 1966). The sign-off may be unconditional, or it may be conditional upon the applicant agreeing to incorporate measures to protect or recover historic or archeological resources.

More information via the internet: <https://www2.illinois.gov/dnrhistoric/Preserve/Pages/Resource-Protection.aspx>

IL Historic Preservation Office phone number: (217) 782-4836

Direct the request for SHPO review to: State Historic Preservation Office -IDNR
Attn: Review & Compliance
1 Old State Capitol Plaza
Springfield, Illinois 62701

2) Threatened & Endangered Species, Natural Areas, Wetlands - Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, Illinois Interagency Wetland Policy Act

All projects, except for equipment only purchases, must be evaluated by the Illinois Department of Natural Resources (IDNR) Impact Assessment Section (IAS) for potential adverse effects to protected natural resources pursuant to the Illinois Endangered Species Protection Act [520 ILCS 10/11], the Illinois Natural Areas Preservation Act [525 ILCS 30/17], Title 17 Illinois Administrative Code, Part 1075, and Interagency Wetlands Policy Act of 1989 (Illinois Administrative Code, Part 1090). Loan applicants should submit the project via IDNR's EcoCAT website at: <https://dnr2.illinois.gov/EcoPublic/>. **Please note, a fee is not applicable to consultations required for State or Federal Government funded projects.** Applicants must then provide copies of the following records of consultation to IEPA:

- An EcoCAT review report which states that consultation under Part 1075 is terminated and that the wetland review under Part 1090 is terminated. If protected resources are identified, also provide;
- A letter from IDNR terminating the Part 1075 consultation and the Part 1090 wetland review because adverse effects are unlikely, or
- A letter from IDNR detailing any recommendations or measures which must be taken to avoid, minimize or mitigate adverse effects. All recommendations or measures must be incorporated into the project bidding and construction contract specifications.

Loan applicants may contact IDNR, IAS in at: Illinois Department of Natural Resources
Office of Realty and Capital Planning
Impact Assessment Section
One Natural Resources Way
Springfield, Illinois 62702-1271
Phone: 217-785-5500
Email: DNR.Ecocat@Illinois.gov

Reminder: Fees are not applicable to consultations required by State or Federal Government projects. If this consultation is for an IEPA funded project, do not pay the fee.

3) U.S. Army Corps of Engineers (USACE) for construction located within a river, stream, wetland, flood plain, floodway, waterway, or any body of water; or construction within 250 feet of these areas.

To demonstrate compliance, all applicants must provide a copy of an area topographic or satellite image map that shows the project location and at least one-quarter mile of surrounding area and identifies all the following areas: rivers, streams, wetlands, flood plains, floodways, waterways, or any body of water or that will verify these areas are not present. The origin of the map must be provided. It is acceptable to provide as many maps as necessary to show the listed environmentally sensitive areas. Please note that an official flood plain/floodway map must be provided separately for item 4 below. If the project is not located in, or within 250 feet of the listed areas, Item 3 of the checklist can be marked N/A and further evaluation by USACE is not necessary.

For all projects located in any of these areas or within 250 feet of these areas, the loan applicant must submit a Joint Application Form and supporting project information to USACE. If the review results obtained from the IDNR Eco-CAT, Part 1090 Wetland Protection Act evaluation identify wetlands within 250 feet of the project location, the loan applicant must submit the project to USACE for evaluation, regardless of whether the Eco-CAT review was terminated. If the project locations are in previously disturbed areas; or directional boring will be used, the USACE evaluation must still be conducted. **The Joint Application Form** is available on the USACE website at this link: <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/> Click on Applications and Application Information to see several options for District Specific Permit information. **Attachment A** to this guidance provides a map and addresses to help you determine the appropriate Army Corps of Engineers District Office for your project.

When USACE evaluation is required, the loan applicant must provide IEPA with a copy of the evaluation request and the review results that were obtained from USACE. Acceptable review results must be from the regulating entity and can consist of a letter or email stating that the project is not regulated, and/or a permit is not required. If the review results include recommendations, conditions, and/or permits, the loan applicant must provide IEPA with a copy of all correspondence. If recommendations, conditions and/or permits are issued, the loan applicant must agree to comply. The conditions must be included within the bidding and construction contract documents before a loan is issued.

4) IDNR Office of Water Resources (OWR) for projects located within a flood plain or floodway, or along a jurisdictional river, lake, or stream without a mapped floodway or floodplain

IDNR/OWR has jurisdiction on any river, lake, or stream with a drainage area greater than one square mile in an urban area, or ten square miles in a rural area.

To demonstrate compliance, all applicants must provide a copy of an official floodways area map that shows the project location and at least one-quarter mile of surrounding area. Acceptable floodway location maps can be the Flood Insurance Rate Map for the project location's county or community, or from the Federal Emergency Management Agency (FEMA). The origin of the map must be provided. Some flood plain areas regulated by the IDNR-OWR have not been identified on flood insurance rate or FEMA mapping. If the project is located in an area that is not shown on an official flood insurance rate or FEMA map, the loan applicant must provide a topographic or satellite image map that documents the project is not in the flood plain of any river, lake, or stream with a drainage area greater than one square mile in an urban area or ten square miles in a rural area. A printout report from the U.S. Geological Survey (USGS) StreamStats website that shows the square miles of the drainage area (Parameter Code DRNAREA) can be used to document flood drainage areas in unmapped locations. The StreamStats website is at: <https://water.usgs.gov/osw/streamstats/>. If the project is not located within a flood plain or floodway or jurisdictional area, Item 4 of the checklist form can be marked as N/A and further evaluation by IDNR-OWR is not necessary.

If the project is located within any area designated as a flood plain or floodway area, or along a jurisdictional river, lake or stream without a mapped floodway or floodplain, the loan applicant must submit a Joint Application Form and supporting project information to IDNR-OWR. If the project locations are in previously disturbed areas; or directional boring will be used, the IDNR-OWR evaluation must still be conducted. **The Joint Application Form** is available on the IDNR website at this link: <https://www2.illinois.gov/dnr/WaterResources/Pages/PermitApplicationandInstructions.aspx>

When IDNR OWR evaluation is required, the loan applicant must provide IEPA with a copy of the evaluation request and the review results that were obtained from IDNR OWR. Acceptable review results must be from the regulating entity and can consist of a letter or email stating that the project is not regulated, and/or a permit is not required. If the review results include recommendations, conditions, and/or permits, the loan applicant must provide IEPA with a copy of all correspondence and agree to comply. The conditions must be included within the bidding and construction contract documents before a loan is issued.

IDNR OWR contact information: <https://www.dnr.illinois.gov/WaterResources/Pages/ResourceManagement.aspx>

Projects in Cook, Lake, McHenry, DuPage, Kane and Will Counties Illinois Department of Natural Resources – Office of Water Resources phone: 847/608-3100
Division of Resource Management
2050 West Stearns Road
Bartlett, Illinois 60103

Projects in remainder of the State Illinois Department of Natural Resources – Office of Water Resources phone: 217/782-3863
Downstate Regulatory Programs Section
One Natural Resources Way
Springfield, Illinois 62702-1271

5) Conversion of Prime Agricultural Land to Other Uses (Federal Farmland Preservation Policy Act)

If the project involves permanent conversion of prime agricultural land to other uses, a description and map of the area to be converted along with a discussion of the necessity of utilizing prime agricultural land for the project must be provided. A copy of the evaluation request and review results must be provided to IEPA. If prime agricultural land is being converted, comments should be obtained from the IL Department of Agriculture, Bureau of Land & Water Resources: <https://www2.illinois.gov/sites/agr/Resources/LandWater/Documents/agsitereview.pdf>

Or by writing or calling: Illinois Department of Agriculture, Bureau of Land and Water Resources, P.O. Box 19281
State Fairgrounds, Springfield, IL 62794-9281 (217) 785-4389

6) Secondary Environmental Impacts

Projects that include 30% or more reserve capacity for future growth in the existing or proposed service areas, must include a discussion of the potential secondary impacts of the proposed project(s) in the planning documents. The loan applicant must identify reasonably foreseeable secondary/indirect environmental impacts from the project that are likely to occur. Secondary/ indirect impacts can include changes in the rate, density, type of development or use of open space, floodplain, prime agricultural land, impacts to historical/cultural resources, endangered or threatened species, natural areas, wetlands, rivers and streams, floodways, waterways, or any body of water. Provide a map that shows all proposed growth/development areas. The impacts to sensitive ecosystems due to induced growth must be evaluated and appropriate measures for mitigation proposed if necessary.

Projects that have 30% or more reserve growth capacity and know the actual location of growth/development areas, must also submit these known growth/development areas for evaluation to the same regulating entities listed above that evaluate the identified project construction areas. For example: If a WWTP is being expanded to a capacity that is 30% more than the existing capacity for reasons that includes serving a new 40-acre subdivision, the 40-acre property must be evaluated for environmental impacts using the same criteria listed in items 1-5 of this checklist. These secondary environmental impacts evaluations must be identified separately from the project's direct construction impacts. A copy of the evaluation requests and records of consultation must be provided to the IEPA. If recommendations, conditions and/or permits are issued, the loan applicant must agree to the conditions and to include them in the bidding and construction contract documents before a loan is issued.

7) Designated Water Quality Management Agency (DWQMA) Consultation/Sign-off

This evaluation is only applicable to projects that identify secondary impacts as noted in item 6 above and are located in any of the counties covered by a Designated Water Quality Management Agency (DWQMA) that are identified in **Attachment B** and the contact information below. The DWQMA will determine whether the project is consistent with that Agency's goals, future growth service areas, and their Water Quality Management Plans. A copy of the evaluation requests and records of consultation must be provided to the IEPA. If recommendations and/or conditions are issued, the loan applicant must agree to the conditions and to include them in the bidding and construction contract documents before a loan is issued. See Item No. 6 for a list of secondary impacts. Contact information for DWQMAs is below.

Chicago Metropolitan Agency for Planning (CMAP)
233 South Wacker Drive
Suite 800
Chicago, Illinois 60606
(312) 454-0400
<https://www.cmap.illinois.gov/>

Counties: Cook, DuPage, Kane,
Kendall, Lake, McHenry, Will

Greater Egypt Regional Planning & Development Commission
3000 West DeYoung St.
Suite 800B-3
Marion, Illinois 62959
(618) 997-9351
<http://greateregypt.org/>

Counties: Franklin,
Jefferson, Jackson,
Perry, Williamson

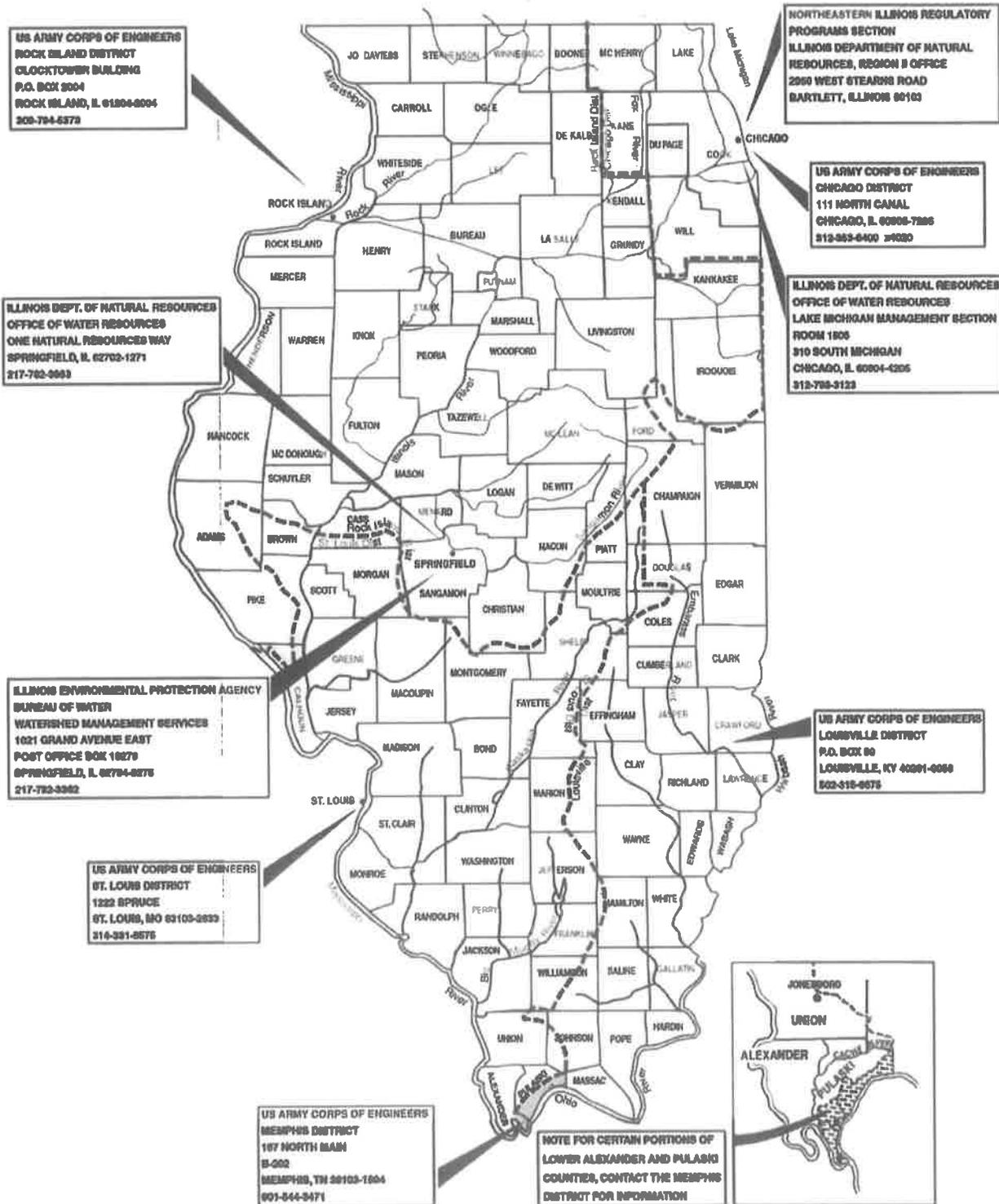
Southwestern Illinois Metropolitan and Regional Planning
Commission
10025 Bunkum Road, #201
Fairview Heights, Illinois 62208
(618) 344-4250
<https://simapc.org/>

Counties: Bond, Clinton, Madison
Monroe, Randolph, St. Clair,
Washington

The remainder of this page is blank. Continue to following pages for Attachment A maps.

Attachment A

REGULATORY JURISDICTIONAL BOUNDARIES



Village of Park Forest, Illinois

Water System Improvements Project Plan

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
EXECUTIVE SUMMARY	
1. PURPOSE OF STUDY	
2. BACKGROUND INFORMATION	
2.1 Location.....	14
2.2 Present and Future Service Area.....	14
2.3 Historical and Projected Population.....	14
2.4 Makeup of Customer Base.....	15
3. EXISTING AND PROJECTED WATER USAGE	
3.1 Existing and Projected Water Usage.....	16
4. EXISTING WATER SYSTEM	
4.1 Overview.....	18
4.2 Water Supply.....	18
4.3 Water Treatment.....	19
4.4 Water Storage.....	19
4.4.1 Operational Volume.....	20
4.4.2 Equalization Volume.....	20
4.4.3 Fire Flow Demand.....	20
4.4.4 Reserve Capacity.....	20
4.4.5 Required Storage.....	20
4.5 Water Distribution System.....	21
4.6 Compliance Issues.....	21
5. PROPOSED WATER SYSTEM IMPROVEMENTS	
5.1 Basis of Design.....	22
5.2 Proposed Improvements.....	22
6. ENVIRONMENTAL ASSESSMENT	
6.1 Rare and Endangered Species.....	23
6.2 Historic and Cultural Resources.....	23
6.3 Prime Agricultural Land.....	23
6.4 Air Quality.....	23
6.5 Water Quality.....	23
6.6 Wetlands.....	23

6.7 Floodplains 24

6.8 Public Health..... 24

6.9 Summary of Environmental Assessment..... 24

7. IMPLEMENTATION PLAN

7.1 Recommended Actions 25

7.2 Project Schedules..... 25

7.3 Financial Schedule..... 26

8. EXISTING REVENUE SOURCES

8.1 Residential Rate Structure 27

8.2 Proposed Rate Changes and Monthly Bills Resulting from Projects 28

8.3 Average Water Usage and Monthly Bills 28

LIST OF TABLES

<u>Table</u>	<u>Page No.</u>
1 Historical and Projected Water Demands	16
2 Well Summary.....	18
3 Summary of Storage Volume Requirements	19
4 Summary of Storage Volume Requirements	21
5 Summary of Water Distribution System	21
6 Summary of Proposed Improvements.....	22
7 Preliminary OPPC for Proposed Improvements	22
8 Anticipated Construction Schedules.....	25
9 Financial Summary	26
10 Scheduled Water Rates.....	27
11 Scheduled Monthly Water Service Charges	27
12 Minimum Required Water Rate Increase Compared to Proposed Rate Increase.....	28
13 Average Monthly Residential Bills.....	29

LIST OF FIGURES

<u>Figure</u>	<u>Page No.</u>
1 Historical and Projected Population.....	15
2 Historical Average and Maximum Daily Demand.....	17

LIST OF APPENDICES

<u>Appendix</u>	
A	EcoCAT Review Results
B	IHPA Letter of No Objection
C	National Wetlands Inventory Map
D	FEMA Flood Insurance Rate Maps

LIST OF EXHIBITS

<u>Exhibit</u>	
A	Existing Water System
B	Proposed Water System Improvements (2018-2021)

LIST OF ABBREVIATIONS

ADD	-	average daily demand
CDBG	-	Community Development Block Grant
CE	-	categorical exclusion
cf	-	cubic foot
ft	-	feet
FY	-	fiscal year
gcd	-	gallons per capita per day
gpm	-	gallons per minute
IDNR	-	Illinois Department of Natural Resources

IEPA	-	Illinois Environmental Protection Agency
IHPA	-	Illinois Historic Preservation Agency
ISO	-	Insurance Services Organization
lbs	-	pounds
max	-	maximum
MDD	-	maximum daily demand
MG	-	million gallons (or mil gal)
MGD	-	million gallons per day
mg/L	-	milligrams per liter (parts per million in dilute solutions)
MHI	-	median household income
NIU	-	Northern Illinois University
OM&R	-	operation, maintenance, and repair
OPPC	-	opinion of probable project cost
PE	-	population equivalent
PWSLP	-	Public Water Supply Loan Program
SRF	-	State Revolving Fund
USA	-	Urban Services Area
WM	-	water main
WTP	-	water treatment plant

EXECUTIVE SUMMARY

Purpose

This Water System Improvements Project Plan summarizes the results of an investigation of the water supply, storage, distribution, and treatment needs for the Village of Park Forest. The purpose of this report is to evaluate the existing drinking water system, identify needs, make recommendations to improve the system, provide engineer's estimates of probable construction cost, and recommend how the improvements will be funded.

The Village of Park Forest intends to apply for a low-interest loan through the IEPA to finance two years of water main replacement projects and the construction of a new elevated tank. This report also contains all pertinent information required by the Illinois Environmental Protection Agency (IEPA) to fulfill the Project Plan requirements of the Public Water Supply Loan Program (PWSLP).

Historic and Projected Population

The Village's population, according to the 2000 U.S. Census, was 23,462. In 2010, the population was 21,975. The average annual rate of population decline between 2000 and 2010 was -0.65%. If we assume CMAP's projected average growth of 0.34% per year from now until 2050, the 2050 projected population is 25,173.

Existing and Projected Water Usage

Baxter & Woodman reviewed four years of well pump data (2015 to 2018) provided by the Village. The average day demand (ADD) from 2015 to 2018 was 1.3 million gallons per day (MGD). The Village experienced a MDD of 2.06 MGD. The ADD in 2018 was 1.50 MGD, which was a slight increase from previous years and which we used for future projections. The maximum day demand (MDD) to ADD ratio is 1.37 ($= 2.06 \div 1.50$).

Existing System

The Village of Park Forest's public water supply system consists of the following:

- Six active wells
- One water treatment plant
- One standpipe
- Two elevated storage tanks
- One ground-level reservoir
- Three booster pump stations
- Distribution system consisting of approximately 74 miles of water main

Proposed Water System Improvements

The Village intends to apply for \$1,300,000 and \$3,700,000 in State Revolving Funds (SRF) to construct the next two years of improvements (2021 to 2022, respectively). Water main replacements will take place on Apache Street, Arrowhead Street, Lester Road, Washington Street, and Wilshire Street. The new elevated tank will be constructed adjacent to the Village's water treatment plant. Water main replacement locations were selected based on history of main breaks and to improve the system's capacity. The elevated tank was selected after a study evaluating options to alleviate the leaking of the existing reservoir at the treatment plant. OPPCs are summarized in the following table. Note that Engineering & Administration will not be covered under the PWSLP loan.

Preliminary OPPC for Proposed Improvements

Description	2021	2022
Water Main - 8"	\$1,230,000	\$440,000
Elevated Tank	-	\$2,880,000
Contingencies (10%)	\$123,000	\$332,000
Engineering & Administration (12%)	\$170,000	\$440,000
Preliminary OPPC (2020\$\$)	\$1,530,000	\$4,100,000

Implementation Plan

The anticipated construction schedules for the water main (WM) replacements are provided below.

Anticipated Construction Schedule for WM Replacements

Task	
Year 1 Design (not in contract)	Summer 2019 – Spring 2020
Year 1 WM Advertisement for Bids	January 2021
Year 1 WM Construction Start	April 2021
Year 1 WM Construction Completion	September 2021
Year 2 Design (not in contract)	Summer – Winter 2020
Year 2 WM Advertisement for Bids	January 2022
Year 2 WM Construction Start	April 2022
Year 2 WM Construction Completion	September 2022
Year 2 Tank Advertisement for Bids	January 2022
Year 2 Tank Construction Start	April 2022
Year 2 Tank Construction Completion	September 2022

The Village of Park Forest intends to apply for a low-interest loan through the IEPA to finance the improvements. The current (July 1, 2019 through June 30, 2020) IEPA loan interest rate is 2.00%. Assuming that the project cost will be funded through the existing PWSLP, an interest rate of 2.00%, and a payback period of 20 years, the new annual debt service costs will be \$79,000 in 2021, and go up to \$303,700 in 2022 when the Village is paying debt service on both projects.

The following table summarizes the preliminary engineer's opinion of probable project cost (OPPC), annual debt service costs, net increases in the operation, maintenance and repair (OM&R) costs, and net increases in the total annual costs.

Financial Summary

	2021 WM Imps	2022 Imps
Preliminary OPPC (2020\$\$)	\$1,530,000	\$4,100,000
Funding Request from PWSLP	\$1,350,000	\$3,650,000
Drinking Water Loan Interest Rate	2.00%	2.00%
Loan Term, years	20	20
Monthly Debt Service Cost	\$6,830	\$18,465
Annual Debt Service Cost	\$82,000	\$221,600
Net Increase in Annual O&M Costs	<u>Insignificant</u>	<u>Insignificant</u>
Net Increase in Total Annual Cost	\$82,000	\$221,600

Existing Revenue Sources

The current (July 1, 2019) combined water and sewer rate is \$16.42 per 1000 gallons of water used, with a monthly service charge of \$3.99 and a monthly water main infrastructure replacement fee of \$3.00.

The overall average water usage for residential customers is approximately 3300 gallons or 440 cf per household per month. This equates to \$61.18 per month for the average household in 2020.

\$3.99 per hh every month + \$3.00 per hh per month + \$16.42 per 1000 gallons × 3300 gallons per hh per month = \$61.18 per hh per month

Proposed Rate Changes

The Village approved Section 106-49 of the Code of Ordinances on July 18, 2019, which listed scheduled water fee and water rate increases from 2018 to 2022, which are effective on July 1 of each year. The proposed rate changes are sufficient to cover the debt service cost.

2021		
Annual Debt Service Cost (2021 WM Improvements)	\$82,000	per year
Monthly Debt Service Cost	\$6,830	per month
Number of households	<u>8,302</u>	households
Monthly Debt Service Cost per household	\$0.83	per hh/month
Minimum required water rate, \$/1000 gallons (2021)	\$ 16.67	per 1000 gallons
Scheduled water rate (July 2020)	\$ 17.24	per 1000 gallons

2022		
Annual Debt Service Cost (2022 Improvements)	\$221,600	per year
Monthly Debt Service Cost	\$18,465	per month
Number of households	8,302	households
Monthly Debt Service Cost per household	\$2.23	per hh/month
Minimum required water rate, \$/1000 gallons (2022)	\$ 17.92	per 1000 gallons
Scheduled water rate (July 2021)	\$ 18.11	per 1000 gallons

1. PURPOSE OF STUDY

This Water System Improvements Project Plan summarizes the results of an investigation of the water supply, storage, distribution, and treatment needs for the Village of Park Forest. The purpose of this report is to evaluate the existing system, identify needs, make recommendations to improve the system, provide engineer's estimates of probable construction cost, and determine how the improvements will be funded.

The Village of Park Forest intends to apply for a low-interest loan through the IEPA to finance two years of water main replacement projects and the construction of a new elevated tank. This report also contains all pertinent information required by the Illinois Environmental Protection Agency (IEPA) to fulfill the Project Plan requirements of the Public Water Supply Loan Program (PWSLP).

The first major step in the loan application process is submission of a project planning report. The IEPA has developed a "Project Planning Submittal Checklist" to identify the minimum requirements of a Project Plan. A copy of the completed checklist is attached after the cover of this report. This Project Plan contains all pertinent information required by the IEPA to fulfill the requirements of the PWSLP.

2. BACKGROUND INFORMATION

2.1 Location

The Village of Park Forest is located in the southwest corner of Cook County, with a small portion of the south end of the Village in Will County, approximately 30 miles south of the Chicago Loop. The Village covers an area of approximately five square miles and is roughly bounded by Route 30 to the north, Western Avenue to the east, Monee Road to the south, and Central Park Avenue to the west. The Village of Park Forest owns and operates the water treatment plant and the water distribution system. The Village of Park Forest is a municipal corporation of the State of Illinois. The nearest newspaper is the Daily Southtown, located at 18501 Graphics Court, Tinley Park, IL 60477.

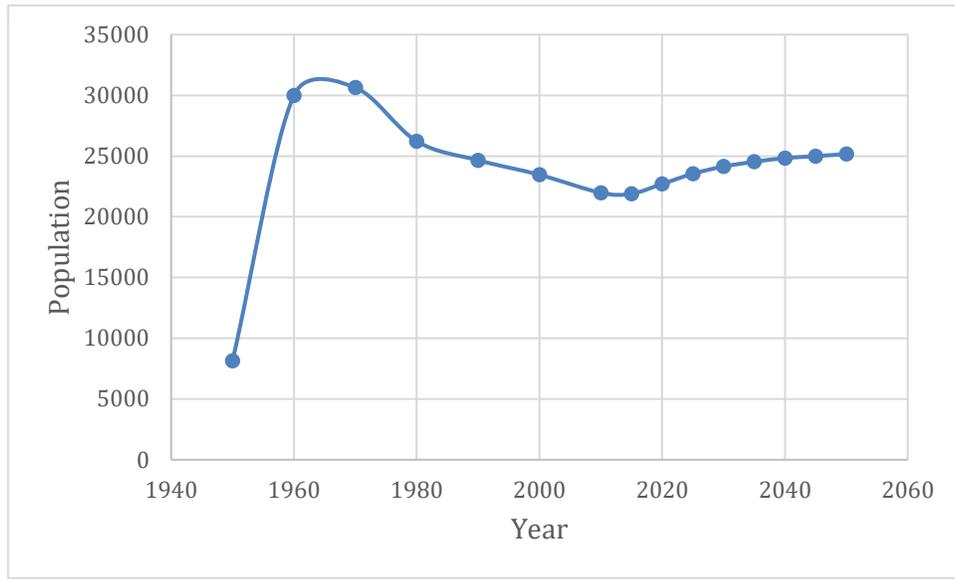
2.2 Present and Future Service Area

The Water Service Area is the region to which the Village will ultimately provide water service. The Water Service Area is generally bounded by the jurisdictional boundary with Chicago Heights to the east, Olympia Fields to the north, University Park to the south, and Richton Park and Matteson to the west.

2.3 Historical and Projected Population

At the time of the 2010 census, the Village of Park Forest had a population of 21,975 persons living in 8,750 households (an average of 2.5 persons per household). U.S. census estimates place the Village's current population at 21,429 persons living in 8,302 households (an average of 2.6 persons per household). CMAP's 2050 population projections for the Village are 25,173 persons living in 10,860 households (an average of 2.3 persons per household). While the population increase from the 2010 census to the 2050 projections is an increase of fifteen percent, water use rates are likely to remain the same, with an average daily water consumption of 1.5 MGD and a maximum daily demand of 2.1 MGD. Figure 1 below shows the historical and projected population of the Village.

FIGURE 1
Historical and Projected Population



2.4 Makeup of Customer Base

The Village has 8,243 residential service connections, and water customers are primarily residential, with other commercial and industrial customers. The Village has 202 commercial service connections. Based on billing data from 2019, approximately 98% of water usage is by residential customers and 2% is by commercial customers.

3. EXISTING AND PROJECTED WATER USAGE

3.1 Existing and Projected Water Usage

Baxter & Woodman reviewed four years of well pump data (2015 to 2018) provided by the Village. The ADD based on finished water pumpage records from 2015 to 2018 was 1.3 MGD, although the ADD increased significantly to 1.5 MGD in 2018 and the first half of 2019. The Village experienced a MDD of 2.1 MGD in 2016. The ADD in 2016 was 1.2 MGD, meaning the maximum MDD: ADD ratio is 1.7 ($= 2.1 \div 1.2$).

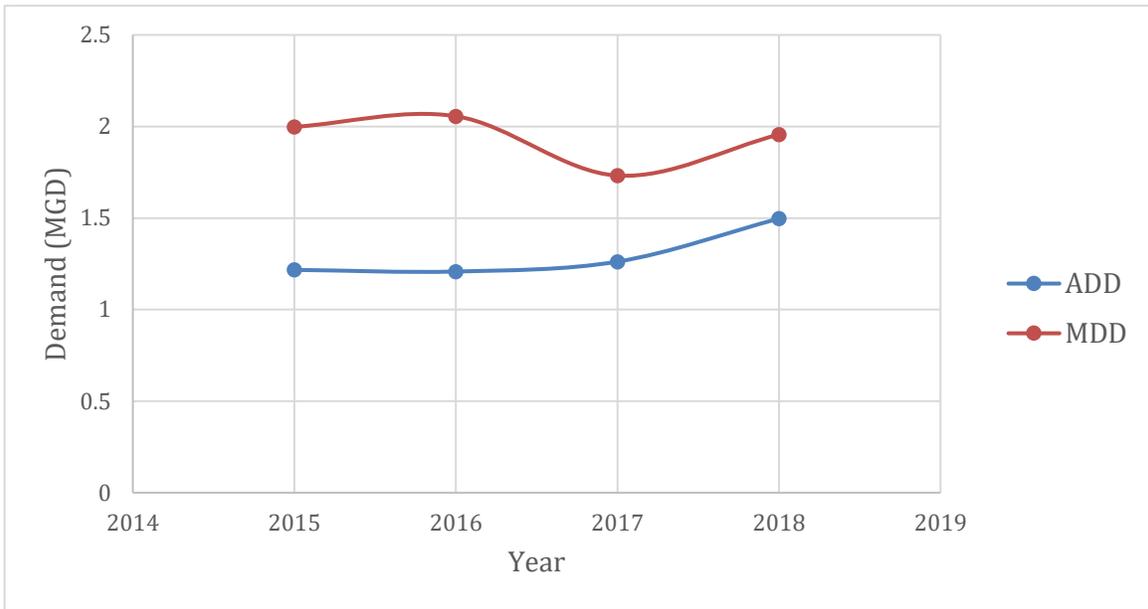
The historical ADD and MDD are summarized in Table 1. Projected (2019 and beyond) ADD is assumed to remain at 1.50 MGD. Projected MDD is assumed to be the same as the highest MDD from 2015 to 2018, 2.06 MGD. Peak hourly demands were calculated as $2.0 \times$ MDD. Figure 2 below summarizes the Village's historical and projected water demands.

TABLE 1
Historical and Projected Water Demands

Year	Total Population (Estimate)	Average Daily Demand ¹ (MGD)	Per Capita Usage (gcd)	Maximum Daily Demand (MGD)	MDD:ADD	Peak Hourly Demand (MGD)
2015	21,902	1.22	55.7	2.00	1.64	3.00
2016	22,060	1.21	54.9	2.06	1.70	3.09
2017	22,219	1.26	56.7	1.73	1.37	2.60
2018	22,378	1.50	67.0	1.96	1.31	2.94
2019	22,540	1.50	66.5	2.06	1.37	3.09
2020	22,702	1.50	66.1	2.06	1.37	3.09
2021	22,865	1.50	65.6	2.06	1.37	3.09
2022	23,030	1.50	65.1	2.06	1.37	3.09
2050	25,173	1.50	59.6	2.06	1.37	3.09

¹ 2015 to 2018 ADDs are the finished water pumpage based on data supplied by the Village.

FIGURE 2
Historical Average and Maximum Daily Demand



4. EXISTING WATER SYSTEM

4.1 Overview

The Village of Park Forest's public water supply consists of the following:

- Six active wells
- One water treatment plant
- One standpipe
- Two elevated storage tanks
- One ground-level reservoir
- Three booster pump stations
- Distribution system consisting of approximately 74 miles of water main

A map of the existing water system is provided as Exhibit A.

4.2 Water Supply

The Village's water is supplied by six wells. A summary of the physical features of each well is given below in Table 2.

TABLE 2
Well Summary

Well No.	Location	Capacity (gpm)
1	Well Court	1,000
2	140 Algonquin Street	1,000
3	Water Treatment Plant	800
4	Downtown Park Forest	800
5	South Street/Western Avenue	1,500
6	Central Park	800
Total		5,900

Well No. 2 produces water of poor quality, so Well Nos. 1, 3, and 5 are normally preferred for production. The water supply facilities should be capable of providing the MDD of a community. The capacity of Well No. 5, the largest of the Village's wells, is 1,500 gpm or 1.6 MGD. The combined capacity of the remaining wells is 4,400 gpm, or 6.3 MGD. When Well No. 2 is discounted (because it produces water of poor quality), the total maximum capacity is 4,900 gpm (7.1 MGD). The 18-hour firm capacity of the wells, which excludes Well No. 5, is 3300 gpm, or 4.75 MGD, which is sufficient to supply the Village's 2015-2018 MDD of 2.06 MGD.

4.3 Water Treatment

The Village owns and operates one water treatment plant (WTP). The WTP utilizes lime-soda ash for softening. The WTP treats flow from all of the Village's wells and has a maximum design flow of 3500 gpm or 5 MGD.

4.4 Water Storage

The distribution system contains a 3,000,000-gallon standpipe, two 500,000-gallon elevated storage tanks, and one 1,000,000-gallon pre-stressed concrete ground level reservoir. The ground-level storage tank is located on the plant property and was drained and rehabilitated in 2006. Water is transferred from the water reservoirs to the distribution system by high service pumps. The standpipe was built in 1987 and is located in the southern portion of the Village, east of Crawford Avenue and south of Tamarack Street. A 12-inch main interconnects it with the system. A booster pumping station exists at the standpipe and pumping stations exist at both elevated storage tanks. The booster station at the stand pipe was rehabilitated in 2010 and the pumping stations at the elevated storage tanks were installed in 2010.

One of the elevated storage tanks is located in the south central portion of the Village at the intersection of Blackhawk Drive and Indianwood Boulevard and it is connected to the system through a 12-inch main. The second elevated storage tank was constructed in 2007 and is located at the southeast portion of the Village along North Arbor Trails, east of Western Avenue. This storage tank is connected to the system through a 12-inch main. The two tanks have a combined storage capacity of 1 MG. These two tanks plus the standpipe provide a total of 4.0 MG of storage, which equates to 64 hours of storage at an ADD of 1.50 MGD and 45 hours of storage at a MDD of 2.1 MGD. A summary is provided in Table 3.

TABLE 3
Summary of Storage Volume Requirements

Facility	Storage (MG)
Standpipe	3.0
Elevated Tank (Blackhawk & Indianwood)	0.5
Elevated Tank (North Arbor Trails)	0.5
Ground-Level Reservoir	1.0
Total	5.0

Water storage facilities provide: (1) water for normal fluctuations in water level due to operations, (2) water to supplement the wells during peak hour demands, (3) water for fire protection, and (4) a reserve capacity for emergencies such as periods when the supply system is inoperable and when the tank is not completely full.

$$\text{Required Storage Volume} = \text{Operational Volume} + \text{Equalization Volume} + \text{Fire Flow Demand} + \text{Reserve Capacity}$$

4.4.1 Operational Volume

The operational volume is the top portion of the tank that is used by operators to control the pumps delivering water to the distribution system, or the volume between the “Pump On” elevation and the “Pump Off” elevation. A typical average height is approximately five to six feet, or approximately 15% of the total tank volume. This accounts for both the portion of the tank that is not used in order to turn pumps off before overflowing the tank and five feet to control multiple pumps.

$$\text{Operational Volume} = 15\% \times 5 \text{ MG} = 0.75 \text{ MG}$$

4.4.2 Equalization Volume

The storage facilities must provide the difference between the firm capacity of the wells and the peak hourly rate of usage. We recommend storage volume be sufficient to provide the difference between these rates for a minimum of eight hours. Because the firm capacity of the wells exceed the anticipated peak hourly usage rate, the required equalization volume is zero.

$$\text{Equalization Volume} = \frac{(3.09 \text{ MGD} - 6.3 \text{ MGD}) \times 8 \text{ hrs}}{24 \text{ hours/day}} = 0 \text{ MG}$$

4.4.3 Fire Flow Demand

The storage volume required for fire protection is dependent upon the fire flow rate and duration. Typical fire flow rates are based on the Insurance Services Office (ISO) requirements of 1,000 gpm for residential areas with a distance between buildings of 11 feet to 30 feet and 1,500 gpm for residential areas with a distance of 10 feet between buildings and up to 3,500 gpm for commercial, industrial, and institutional structures for a duration of three hours.

$$\text{Fire Flow Demand} = \frac{3,500 \text{ gpm} \times 60 \text{ min/hr} \times 3 \text{ hrs}}{1,000,000 \text{ gal/MG}} = 0.63 \text{ MG}$$

4.4.4 Reserve Capacity

An additional amount of storage is required to provide a reserve supply of water to meet the demands during emergencies and provide capacity in the event of a fire occurring when the tank is only partially full. We recommend providing a reserve capacity of 10 to 20% of the total storage volume.

$$\text{Reserve Capacity} = 20\% \times 5 \text{ MG} = 1.0 \text{ MG}$$

4.4.5 Required Storage

Table 4 represents the water storage requirements for the Village through the year 2050.

TABLE 4
Summary of Storage Volume Requirements

	2020	2050
Operational Volume = 15% of total volume	0.75	0.75
Equalization Volume = PHD - MDD x 8 hrs (MG)	0	0
Fire Flow Demand (MG) = 3,500 gpm for 3 hours	0.63	0.63
Reserve Capacity (MG) = 20% of total volume	1.0	1.0
Total Required Storage (MG)	2.38	2.38
Existing Capacity (MG)	5.00	5.00

The Village has adequate storage for equalization, fire storage, and emergency storage for the 20-year planning period.

4.5 Water Distribution System

The distribution system consists of water main of 4-inch to 16-inch diameter. There are approximately 74 miles of water mains in the system with shut-off valves and fire hydrants. The Village's system was modeled in 2015 to identify deficiencies in the system and will be modeled again in 2020. A summary of the existing distribution system as of August 2019 is shown in Table 5 below.

TABLE 5
Summary of Water Distribution System

Pipe Size	Length (feet)	Percentage of Total System
4-inch	236	0%
6-inch	151,001	39%
8-inch	150,270	38%
10-inch	15,493	4%
12-inch	60,850	16%
16-inch	12,872	3%
Total	390,722	100%

4.6 Compliance Issues

The Village has no existing violations and does not anticipate any future violations of federal or state public water supply regulations.

5. PROPOSED WATER SYSTEM IMPROVEMENTS

5.1 Basis of Design

The Village has identified several mains for replacement due to hydraulic restrictions and/or history of main breaks. Proposed water main improvements are summarized in Table 6 below and designed to maintain a minimum pressure of 20 psi during fire flow demands. The elevated tank was selected from several alternatives in response to the leaking of the existing reservoir at the water treatment plant. The tank was selected for being the most cost-effective and constructible means of mitigating this problem.

5.2 Proposed Improvements

The Village intends to apply for a total of \$5,000,000 in SRF funds to construct the next two years of improvements (2021 to 2022). Locations were selected to coordinate with other utility improvements including pavement replacement projects. Selections were also based on history of main breaks and severity of hydraulic restriction. A summary of proposed improvements is listed below in Table 6.

TABLE 6
Summary of Proposed Improvements

Project	Length LF	Existing Pipe Dia	New Pipe Dia
2021 WM Improvements			
Arrowhead St, Allegheny to Allegheny	2,200	6	8
Apache St, Allegheny to Allegheny	1,700	6	8
Lester Rd, Indianwood to Sauk Trail	2,600	6/8	8
2022 Improvements			
Elevated Tank			
Washington St/Ct, Westgate to Wilshire	1,200	6	8
Windsor St, Lakewood to Sauk Trail	1,100	6	8

A map showing the next two years of proposed projects are provided as Exhibit B. A preliminary OPPC for the water main improvements is provided in Table 7.

TABLE 7
Preliminary OPPC for Proposed Improvements

Description	2021	2022
Water Main - 8"	\$1,230,000	\$440,000
Elevated Tank	-	\$2,880,000
Contingencies (10%)	\$123,000	\$332,000
Engineering & Administration (12%)	\$170,000	\$440,000
Preliminary OPPC (2020\$\$)	\$1,530,000	\$4,100,000

6. ENVIRONMENTAL ASSESSMENT

This section includes discussion of the environmental impacts associated with the construction of the proposed water improvements and the measures to be implemented during construction to mitigate negative impacts.

6.1 Rare and Endangered Species

The proposed projects will be located within the existing rights-of-way. Several consultations for endangered species and natural areas preservation with the Illinois Department of Natural Resources (IDNR) were initiated to comply with the Illinois Endangered Species Protection Act [520 ILCS 10/11(b)]. The EcoCAT did not contain records of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves near the project locations, and the Natural Resource reviews were terminated. Copies of the EcoCAT reports and IDNR's letters stating that consultation is terminated are provided in Appendix 1.

6.2 Historic and Cultural Resources

Because the projects will be located within the existing right-of-way, we do not anticipate that any archaeological sites will be disturbed by construction. A letter of no objection from the Illinois Department of Natural Resources (IDNR) is included as Appendix 2.

6.3 Prime Agricultural Land

Construction on the existing sites will have no impact on agricultural land or open spaces.

6.4 Air Quality

There will be no long term adverse impacts on air quality. There will be a temporary negative impact on air quality during construction due to dust and fossil fuel exhaust produced from construction activities. The contractor will be required to provide dust control during construction.

6.5 Water Quality

The project will not result in any discharges to waterways. Erosion and sediment control measures will be implemented during construction.

6.6 Wetlands

The National Wetlands Inventory and EcoCAT do not show wetlands within 250 feet of the project locations, except for Lewis Street. A wetlands inventory map and IDNR's letter stating that consultation is terminated are provided as Appendix 3.

6.7 Floodplains

None of the proposed water main projects are located within floodplain or floodway. Copies of the flood insurance rate maps are provided as Appendix 4.

6.8 Public Health

The water main replacement projects will increase reliability of the water supply to the residents and property owners. There are no anticipated public health concerns.

6.9 Summary of Environmental Assessment

In summary, there appears to be minimal potential for adverse impacts on floodplains and wetlands, threatened and endangered species, or archaeological-historic-cultural resources. For additional information, see the IEPA Loan Applicant Environmental Checklist provided with the Project Planning Checklist.

7. IMPLEMENTATION PLAN

7.1 Recommended Actions

After the Village of Park Forest approves this report, there are several actions that must be completed prior to the award of an IEPA Low Interest Loan through the PWSLP for construction of the water system improvements.

1. Submit this Project Plan to IEPA and request the Agency's review and approval.
2. Address IEPA staff review comments regarding the Project Plan.
3. Review the schedule for completion of the improvements. IEPA is now requiring that all financial information and loan application documents be approved prior to bidding.
4. Provide IHPA signoff.
5. When IEPA issues a Notice of Categorical Exclusion (CE), advertise the Notice and/or hold a Public Hearing as required.
6. Prepare detailed construction drawings, specifications, and bidding documents.
7. Submit construction documents to the IEPA for construction permit review.
8. Bid construction projects in conformance with the IEPA SRF regulations.

File the IEPA loan application package including the required resolutions, ordinances, certifications, financial information, schedules, intergovernmental agreements, bid documents, and notice of intent to award the construction contract in accordance with the schedule accepted by the IEPA.

7.2 Project Schedules

The anticipated construction schedule for water main improvements is provided in Table 8.

TABLE 8
Anticipated Construction Schedules

Task	
Year 1 Design (not in contract)	Summer 2019 – Spring 2020
Year 1 WM Advertisement for Bids	January 2021
Year 1 WM Construction Start	April 2021
Year 1 WM Construction Completion	September 2021
Year 2 Design (not in contract)	Summer – Winter 2020
Year 2 WM Advertisement for Bids	January 2022
Year 2 WM Construction Start	April 2022

Task	
Year 2 WM Construction Completion	September 2022
Year 2 Tank Advertisement for Bids	January 2022
Year 2 Tank Construction Start	April 2022
Year 2 Tank Construction Completion	September 2022

7.3 Financial Schedule

The Village finances the operational cost of its water supply, storage, and distribution system with charges to its customers based on metered water usage. Specifically, these costs include system maintenance, principal payments, engineering, administrative, testing, and other miscellaneous costs. The addition of the backup generator is not anticipated to significantly increase OM&R costs.

The Village intends to apply for the PWSLP to fund the capital costs of the improvements. The 2020 Intended Use Plan dated August 2019 describes IEPA's process for prioritizing projects, distributes funds, and administers the PWSLP for the Illinois Fiscal Year (FY) 2020, which runs from July 1, 2019 through June 30, 2020. The FY2020 drinking water loan interest rate effective July 1, 2019 through June 30, 2020 is 2.00%.

Table 9 summarizes the preliminary engineer's OPPC, annual debt service costs, net increases in the OM&R costs, and net increases in the total annual costs. Estimated debt service costs are based on assumptions that the project cost will be funded through the existing PWSLP and assume a payback period of 20 years.

TABLE 9
Financial Summary

	2021 WM Imps	2022 Imps
Preliminary OPPC (2020\$\$)	\$1,530,000	\$4,100,000
Funding Request from PWSLP	\$1,350,000	\$3,650,000
Drinking Water Loan Interest Rate	2.00%	2.00%
Loan Term, years	20	20
Monthly Debt Service Cost	\$6,830	\$18,465
Annual Debt Service Cost	\$82,000	\$221,600
Net Increase in Annual O&M Costs	Insignificant	Insignificant
Net Increase in Total Annual Cost	\$82,000	\$221,600

8. EXISTING REVENUE SOURCES

Annual debt service will be repaid with increases in water rates.

8.1 Residential Rate Structure

The Village bills for water services with the intent to collect sufficient revenue to allow these utilities to be self-sustaining. The water rate structure includes a rate charge per 1000 gallons (134 cf) of water used. The current (July 1, 2019-June 30, 2020) combined water and sewer rate is \$16.42 per 1000 gallons of water used, with fixed monthly service charges and water main infrastructure replacement fees of \$3.99 and \$3.00, respectively. The Village approved Section 106-49 of the Code of Ordinances on July 18, 2019, which listed scheduled water fee and water rate increases from 2018 to 2022 that are effective on July 1 of each year. The fees and rates are listed in Table 10 and Table 11.

TABLE 10
Scheduled Water Rates

Year	\$ per 1000 gallons
July 1, 2018 – June 30, 2019	\$15.64
July 1, 2019 – June 30, 2020	\$16.42
July 1, 2020 – June 30, 2021	\$17.24
July 1, 2021 – June 30, 2022	\$18.11
July 1, 2022 – June 30, 2023	\$19.01

TABLE 11
Scheduled Monthly Water Service Charges

Meter Size	Service Charge
5/8" - 3/4"	\$3.99
1"	\$3.99
1½"	\$3.99
2"	\$5.28
3"	\$18.50
4"	\$23.50
6"	\$35.50
8"	\$48.50
10"	\$63.50
12"	\$75.00

8.2 Proposed Rate Changes and Monthly Bills Resulting from Projects

The Village's proposed rate changes are sufficient to cover the debt service cost as shown in Table 12.

TABLE 12

Minimum Required Water Rate Increase Compared to Proposed Rate Increase

2021		
Annual Debt Service Cost (2021 WM Improvements)	\$82,000	per year
Monthly Debt Service Cost	\$6,830	per month
Number of households	8,302	households
Monthly Debt Service Cost per household	\$0.82	per hh/month
Service charge, monthly	\$3.99	per hh/month
Water main infrastructure replacement fee, monthly	\$3.00	per hh/month
Average household water use per month, gallons	3,300	gallons/month
Minimum required water rate increase, \$/1000 gallons	\$0.25	per 1000 gallons
July 2019 Water Rate, \$/1000 gallons, per Ordinance 2015-044	\$16.42	per 1000 gallons
Minimum required water rate, \$/1000 gallons (2020)	\$16.67	per 1000 gallons
Scheduled July 2020 water rate	\$17.24	per 1000 gallons
2022		
Annual Debt Service Cost (2022 Improvements)	\$221,600	per year
Monthly Debt Service Cost	\$18,465	per month
Number of households	8,302	households
Monthly Debt Service Cost per household	\$2.23	per hh/month
Service charge, monthly	\$3.99	per hh/month
Water main infrastructure replacement fee, monthly	\$3.00	per hh/month
Average household water use per month, gallons	3,300	gallons/month
Minimum required water rate increase, \$/1000 gallons	\$0.68	per 1000 gallons
July 2020 Water Rate, \$/100 cf, per Ordinance 2015-044	\$17.24	per 1000 gallons
Minimum required water rate, \$/1000 gallons (2021)	\$17.92	per 1000 gallons

8.3 Average Water Usage and Monthly Bills

The overall average water usage for residential customers is approximately 3300 gallons or 440 cf per household per month. This equates to \$61.18 per month for the average household in January-June 2020.

\$3.99 per hh every month + \$3.00 per hh per month + \$16.24 per 1000 gallons × 3300 gallons per hh per month = \$61.18 per hh per month.

Resulting average monthly bills for 2018 to 2022 are given in Table 13 assuming residential water usage remains the same.

TABLE 13
Average Monthly Residential Bills

Year	Monthly Service Charge	Monthly Water Main Infrastructure Replacement Fee	\$ per 1000 gallons	Average Monthly Bill
July 1, 2018 – June 30, 2019	\$3.99	\$3.00	\$15.64	\$58.60
July 1, 2019 – June 30, 2020	\$3.99	\$3.00	\$16.42	\$61.18
July 1, 2020 – June 30, 2021	\$3.99	\$3.00	\$17.24	\$63.88
July 1, 2021 – June 30, 2022	\$3.99	\$3.00	\$18.11	\$66.75
July 1, 2022 – June 30, 2023	\$3.99	\$3.00	\$19.01	\$69.72

APPENDIX A

Applicant: William Worsham
Contact: William Worsham
Address: 8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

IDNR Project Number: 2001765
Date: 08/19/2019

Project: Park Forest Water System Evaluation
Address: Apache Street, Park Forest

Description: 1,700 linear feet of water main, including hydrants, valves, and services

Natural Resource Review Results

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

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under part 1075 is terminated.**

Wetland Review (Part 1090)

The Illinois Wetlands Inventory does not show wetlands within 250 feet of the project location. **Therefore, the wetland review under Part 1090 is terminated.**

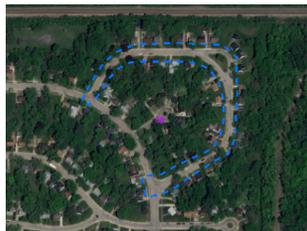
This review is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, Natural Areas, or wetlands are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

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

County: Cook

Township, Range, Section:
35N, 14E, 30



**IL Department of Natural Resources
Contact**
Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Melissa Parrott
1021 North Grand Avenue East
Springfield, Illinois 62794 -9276

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.



Illinois Department of Natural Resources

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

JB Pritzker, Governor

Colleen Callahan, Director

October 15, 2019

William Worsham
William Worsham
8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

RE: Park Forest Water System Evaluation
Project Number(s): 2001765
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.

Brian Willard
Division of Ecosystems and Environment
217-785-5500

Applicant: William Worsham
Contact: William Worsham
Address: 8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

IDNR Project Number: 2001764
Date: 08/19/2019

Project: Park Forest Water System Evaluation
Address: Allegheny St and Arrowhead St, Park Forest

Description: 2,200 linear feet of water main including hydrants, valves, and services

Natural Resource Review Results

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

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under part 1075 is terminated.**

Wetland Review (Part 1090)

The Illinois Wetlands Inventory does not show wetlands within 250 feet of the project location. **Therefore, the wetland review under Part 1090 is terminated.**

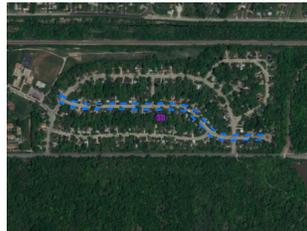
This review is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, Natural Areas, or wetlands are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

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

County: Cook

Township, Range, Section:
35N, 14E, 30



**IL Department of Natural Resources
Contact**
Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Melissa Parrott
1021 North Grand Avenue East
Springfield, Illinois 62794 -9276

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.



Illinois Department of Natural Resources

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

JB Pritzker, Governor

Colleen Callahan, Director

October 15, 2019

William Worsham
William Worsham
8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

RE: Park Forest Water System Evaluation
Project Number(s): 2001764
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.

Brian Willard
Division of Ecosystems and Environment
217-785-5500

Applicant: William Worsham
Contact: William Worsham
Address: 8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

IDNR Project Number: 2007280
Date: 03/04/2020

Project: 2021 Water System Improvement
Address: 137 Lester Road, Park Forest

Description: This project consists of the replacement of 2,600 LF of water main, including valves, hydrants, and appurtenances.

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 Illinois Wetlands Inventory does not show wetlands within 250 feet of the project location.

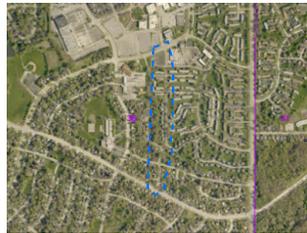
An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

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

County: Cook

Township, Range, Section:
35N, 13E, 36



IL Department of Natural Resources
Contact
Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Melissa Parrott
1021 North Grand Avenue East
Springfield, Illinois 62794

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.



Illinois Department of Natural Resources

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

JB Pritzker, Governor

Colleen Callahan, Director

March 05, 2020

William Worsham
William Worsham
8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

RE: 2021 Water System Improvement
Project Number(s): 2007280
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.

Kyle Burkwald
Division of Ecosystems and Environment
217-785-5500

Applicant: William Worsham
Contact: William Worsham
Address: 8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

IDNR Project Number: 2001776
Date: 08/19/2019

Project: 2020 Water System Improvement
Address: Washington St/Ct from Westgate to Wilshire, Park Forest

Description: 1,200 linear feet of water main including hydrants, valves, and services

Natural Resource Review Results

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

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under part 1075 is terminated.**

Wetland Review (Part 1090)

The Illinois Wetlands Inventory does not show wetlands within 250 feet of the project location. **Therefore, the wetland review under Part 1090 is terminated.**

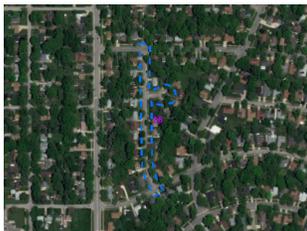
This review is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, Natural Areas, or wetlands are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

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

County: Cook

Township, Range, Section:
35N, 13E, 26



**IL Department of Natural Resources
Contact**
Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Melissa Parrott
1021 North Grand Avenue East
Springfield, Illinois 62794 -9276

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.



Illinois Department of Natural Resources

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

JB Pritzker, Governor

Colleen Callahan, Director

October 15, 2019

William Worsham
William Worsham
8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

RE: 2020 Water System Improvement
Project Number(s): 2001776
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.

Brian Willard
Division of Ecosystems and Environment
217-785-5500

Applicant: William Worsham
Contact: William Worsham
Address: 8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

IDNR Project Number: 2001785
Date: 08/19/2019

Project: 2020 Water System Improvement
Address: Windsor St from Lakewood to Sauk Trail, Park Forest

Description: 1,100 linear feet of water main including hydrants, valves, and service

Natural Resource Review Results

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

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under part 1075 is terminated.**

Wetland Review (Part 1090)

The Illinois Wetlands Inventory does not show wetlands within 250 feet of the project location. **Therefore, the wetland review under Part 1090 is terminated.**

This review 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, Natural Areas, or wetlands 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. Termination does not imply IDNR's authorization or endorsement.

Location

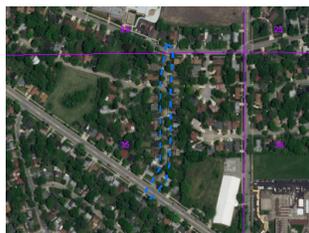
The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:

35N, 13E, 26

35N, 13E, 35



IL Department of Natural Resources

Contact

Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction

IL Environmental Protection Agency
Melissa Parrott
1021 North Grand Avenue East
Springfield, Illinois 62794 -9276

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.



Illinois Department of Natural Resources

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

JB Pritzker, Governor

Colleen Callahan, Director

October 15, 2019

William Worsham
William Worsham
8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

RE: 2020 Water System Improvement
Project Number(s): 2001785
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.

Brian Willard
Division of Ecosystems and Environment
217-785-5500

Applicant: William Worsham
Contact: William Worsham
Address: 8430 West Bryn Mawr Ave
Suite 400
Chicago, IL 60631

IDNR Project Number: 2007277
Date: 03/04/2020

Project: 2022 Water System Improvement
Address: 100 Park Street, Park Forest

Description: This project consists of the construction of an elevated tank adjacent to the Park Forest Water Treatment Plant.

Natural Resource Review Results

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

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under part 1075 is terminated.**

Wetland Review (Part 1090)

The Illinois Wetlands Inventory does not show wetlands within 250 feet of the project location. **Therefore, the wetland review under Part 1090 is terminated.**

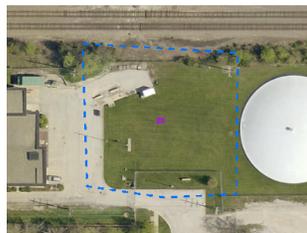
This review is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, Natural Areas, or wetlands are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

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

County: Cook

Township, Range, Section:
35N, 13E, 25



IL Department of Natural Resources
Contact
Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Melissa Parrott
1021 North Grand Avenue East
Springfield, Illinois 62794

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 B



Illinois Department of Natural Resources

www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

Mailing address: State Historic Preservation Office, 1 Old State Capitol Plaza, Springfield, IL 62701

Cook County
Park Forest

PLEASE REFER TO: SHPO LOG #004103019

Antietam St., Apache St., Apple Lane, Arrowhead St., Douglas St., Lester Rd., Manitowac St., Merrimac St., Monee Rd & Court, Nassau St., Sangamon St., Somonauk St., Washington Street & Court, Windsor St.

Section:1-Township:34N-Range:13E, Section:23-Township:35N-Range:13E, Section:24-Township:35N-Range:13E, Section:26-Township:35N-Range:13E, Section:30-Township:35N-Range:14E, Section:35-Township:35N-Range:13E, Section:36-Township:35N-Range:13E

IEPA LOAN

Water transmission main replacements

November 22, 2019

Lauren M. Schuld
Baxter & Woodman Consulting Engineers
8840 West 192nd Street
Mokena, IL 60448

Dear Ms. Schuld:

We have reviewed the documentation submitted for the referenced project(s) in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

Please retain this letter in your files as evidence of compliance with section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two (2) years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

If you are an applicant, please submit a copy of this letter to the state or federal agency from which you obtain any permit, license, grant, or other assistance. If further assistance is needed contact Jeff Kruchten, Chief Archaeologist at 217/785-1279 or Jeffery.kruchten@illinois.gov.

Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271

www.dnr.illinois.gov

Mailing Address: 1 Old State Capitol Plaza, Springfield, IL 62701

JB Pritzker, Governor
Colleen Callahan, Director

FAX (217) 524-7525

Cook County
Park Forest

Demolition of a Drinking Water Reservoir and New Construction of an Elevated Water Storage Tank

100 Park St.

BAXTER-190100.49

SHPO Log #026080520

August 19, 2020

Veronica Hall
Baxter & Woodman, Inc.
8430 W. Bryn Mawr Ave., Suite 400
Chicago, IL 60631

Dear Ms. Hall:

We have reviewed the documentation submitted for the referenced project in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

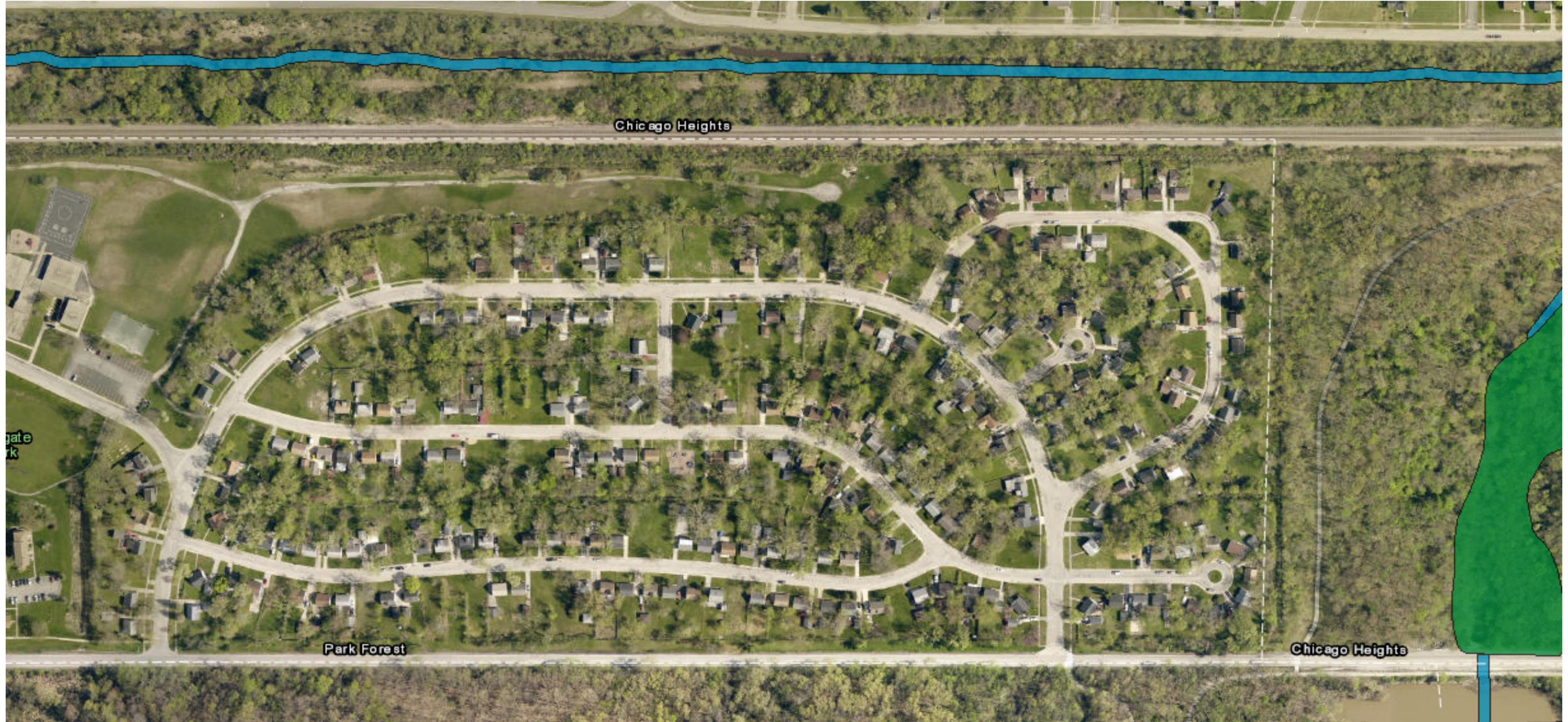
Please retain this letter in your files as evidence of compliance with section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

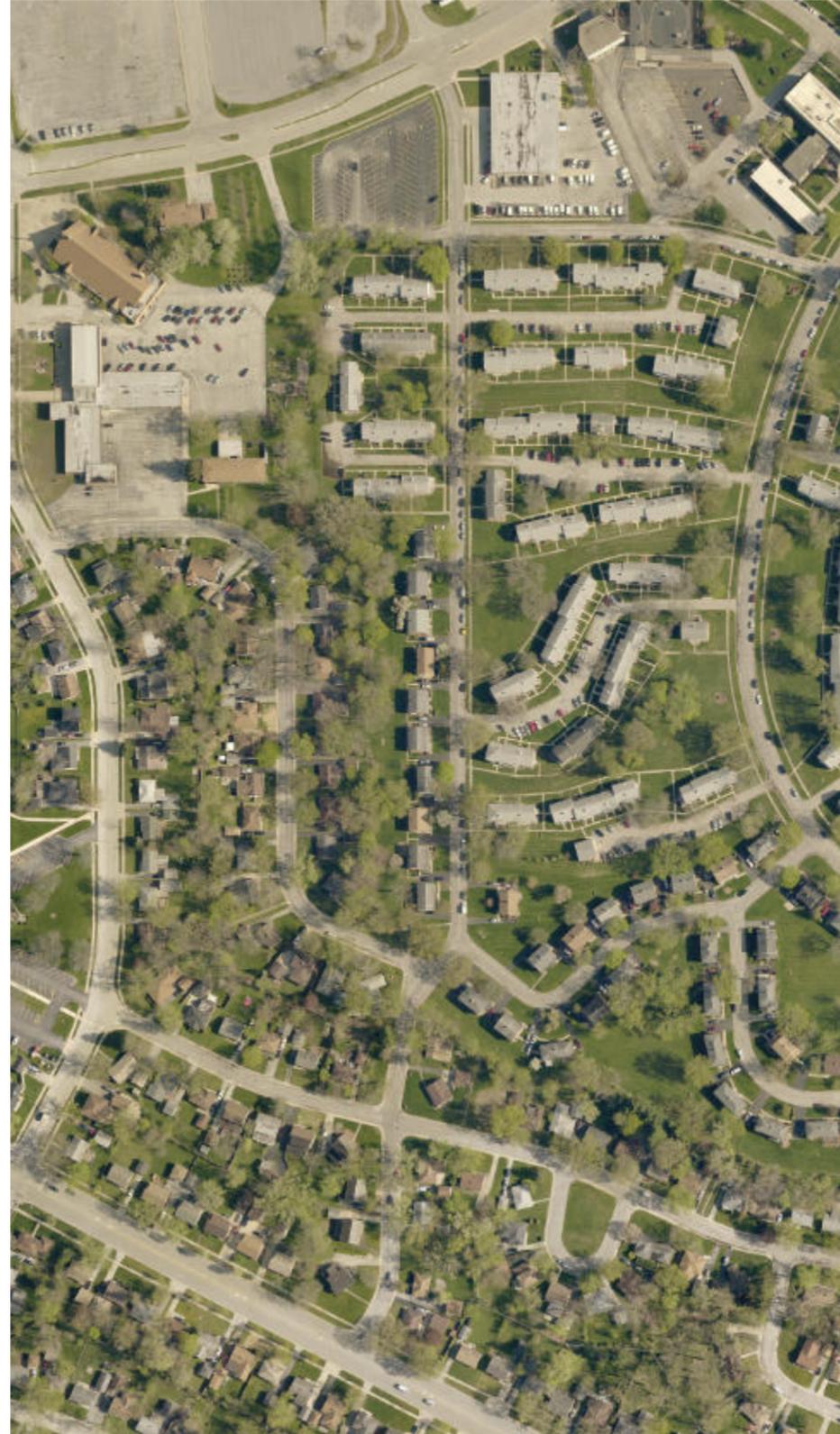
If you have any further questions, please call 217/782-4836.

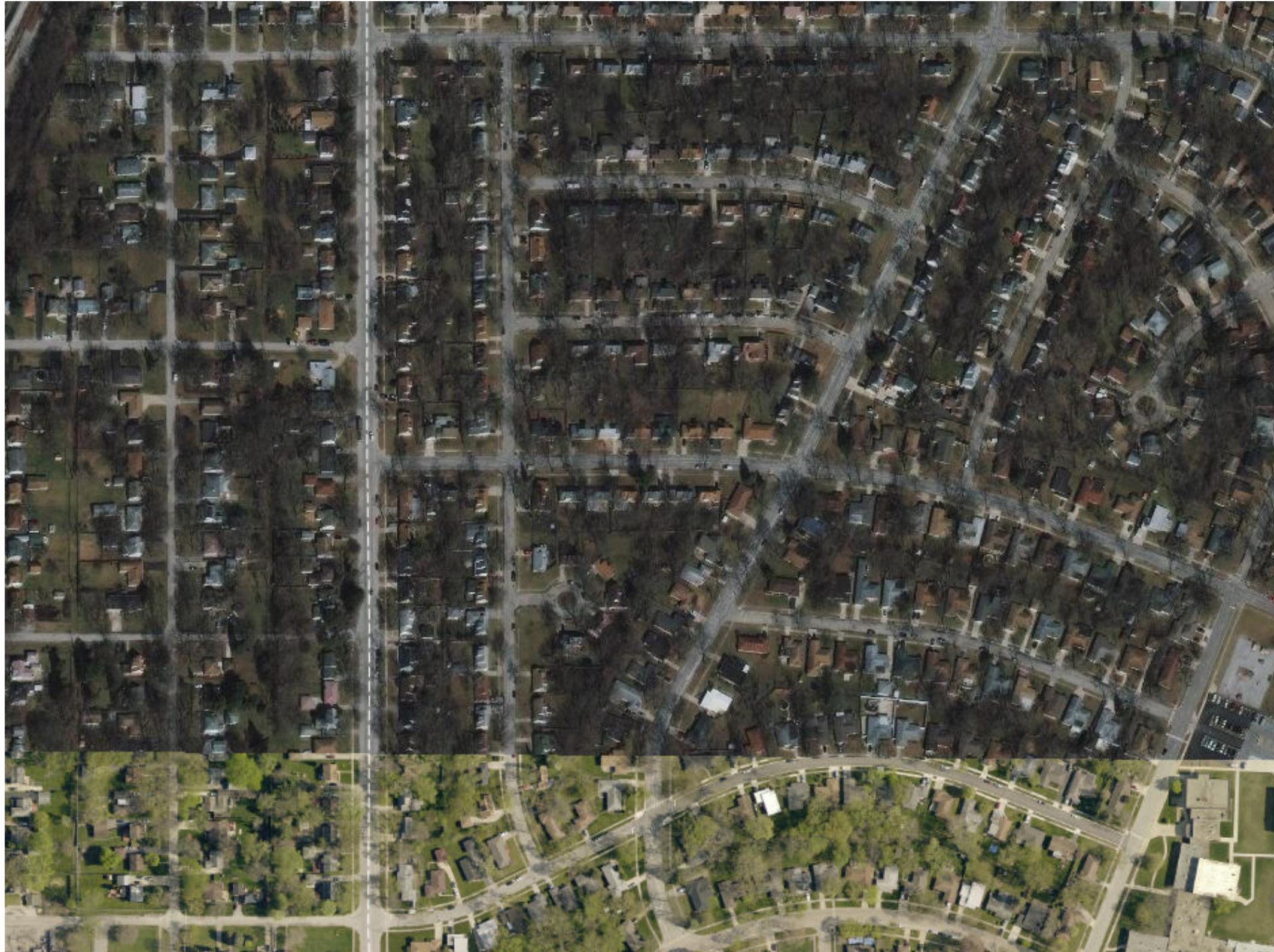
Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer

APPENDIX C









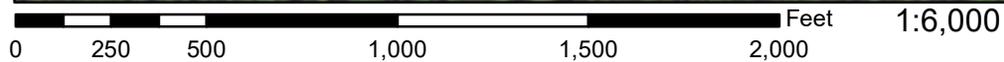
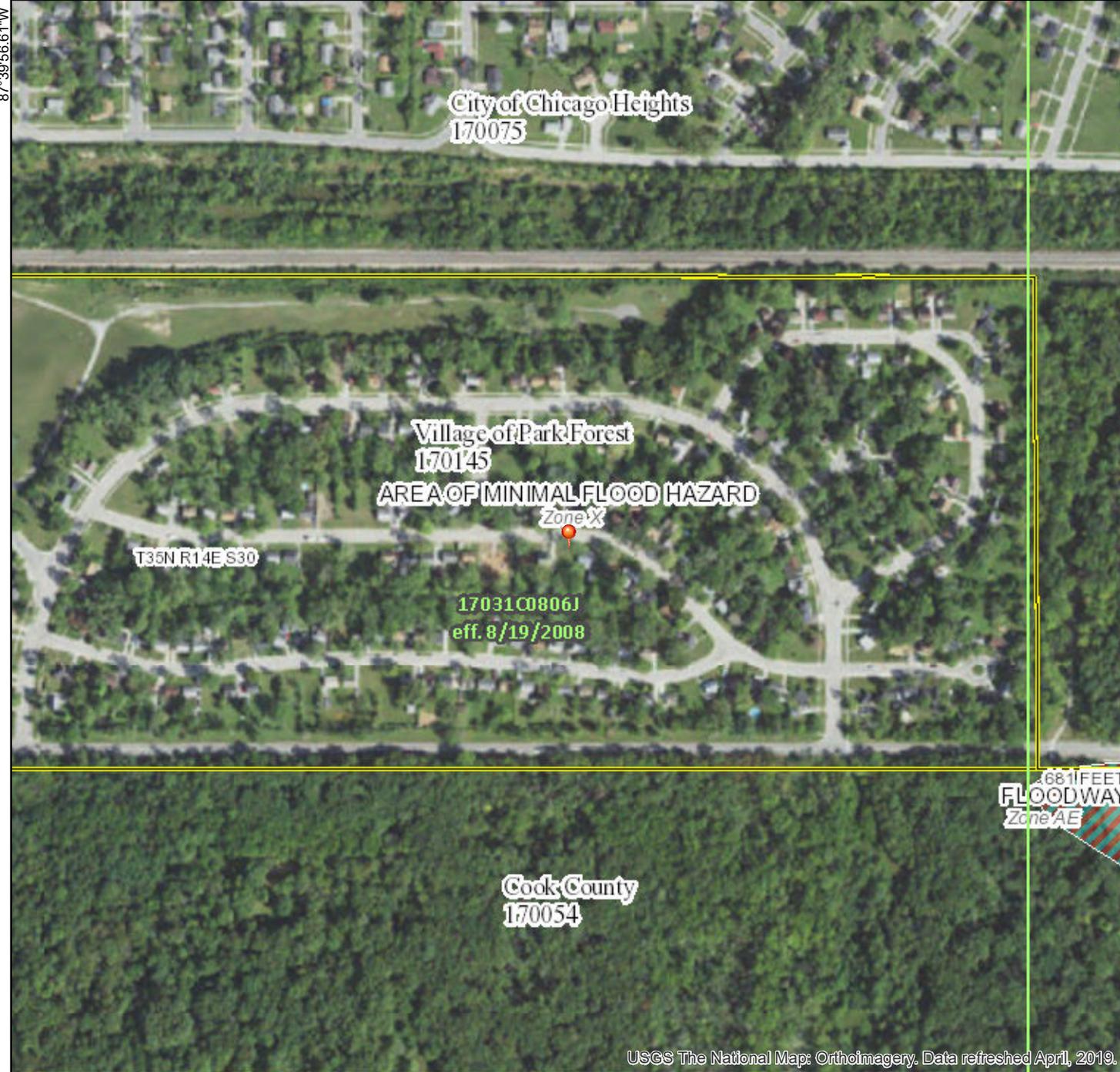


APPENDIX D

National Flood Hazard Layer FIRMette



41°29'48.31"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
Zone A, V, A99 |
| | | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | | Area with Flood Risk due to Levee Zone D |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | | Effective LOMRs |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard Zone D |
| | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| MAP PANELS | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/27/2020 at 6:10:00 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

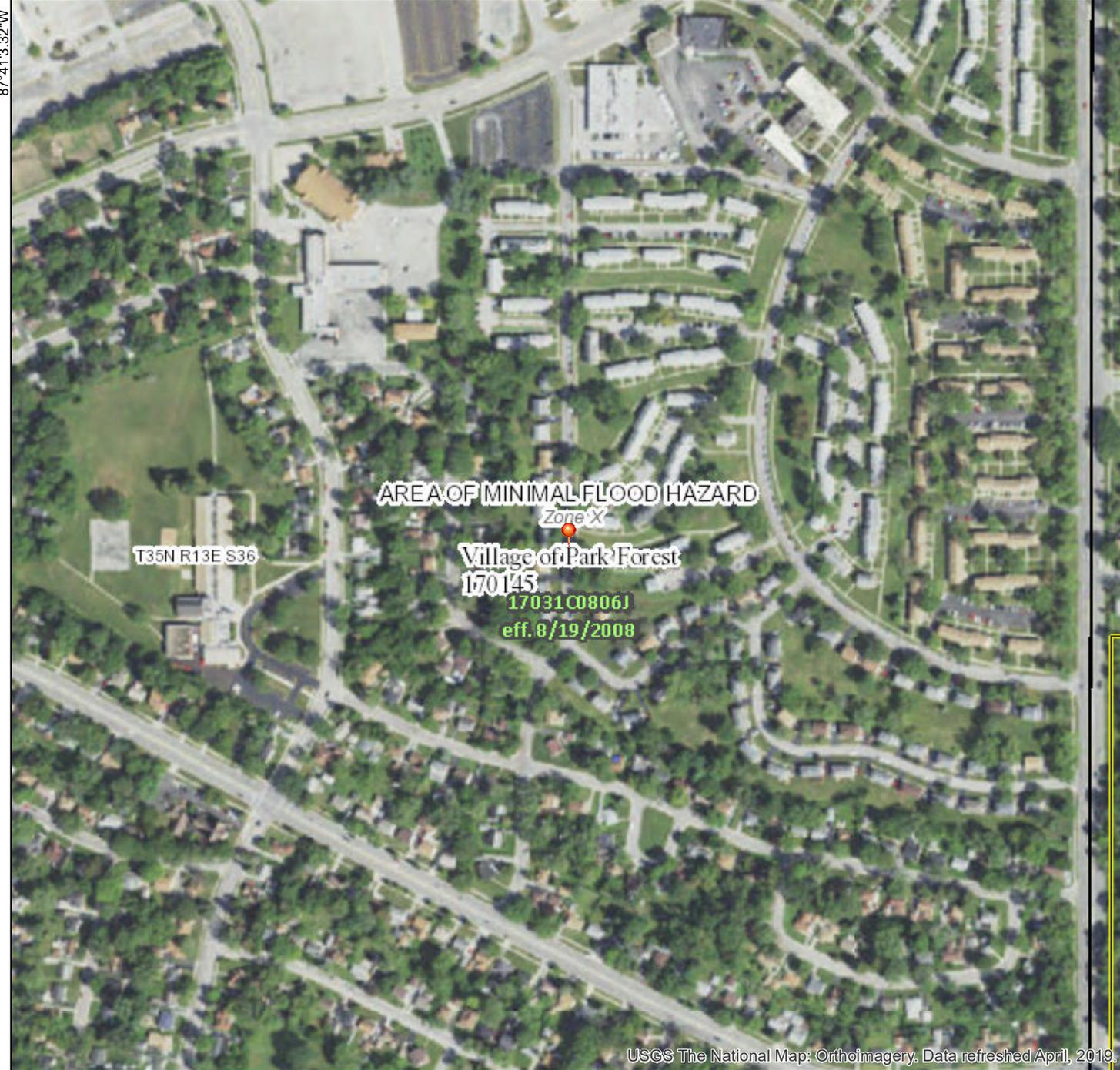
87°39'19.16"W

41°29'21.37"N

National Flood Hazard Layer FIRMMette



41°28'53.43"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
<i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| MAP PANELS | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/27/2020 at 6:12:24 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

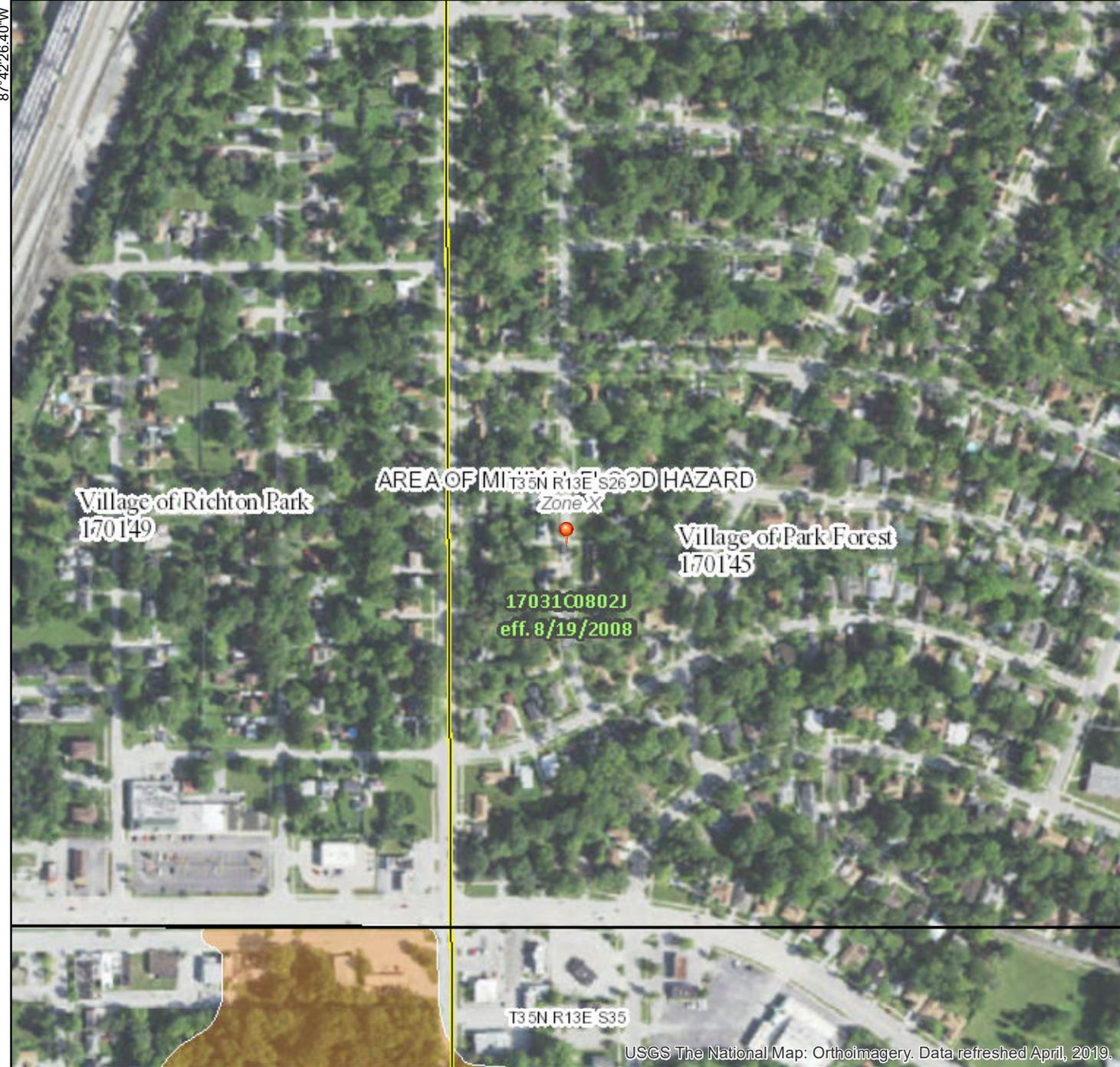
87°41'3.32"W

87°40'25.86"W

National Flood Hazard Layer FIRMMette



41°29'26.73"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/27/2020 at 6:13:48 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

41°28'59.78"N

87°41'48.94"W



National Flood Hazard Layer FIRMette



41°29'12.53"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
Zone A, V, A99 |
| | | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | | Area with Flood Risk due to Levee Zone D |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard Zone D |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/27/2020 at 6:15:40 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

USGS The National Map: Orthoimagery. Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

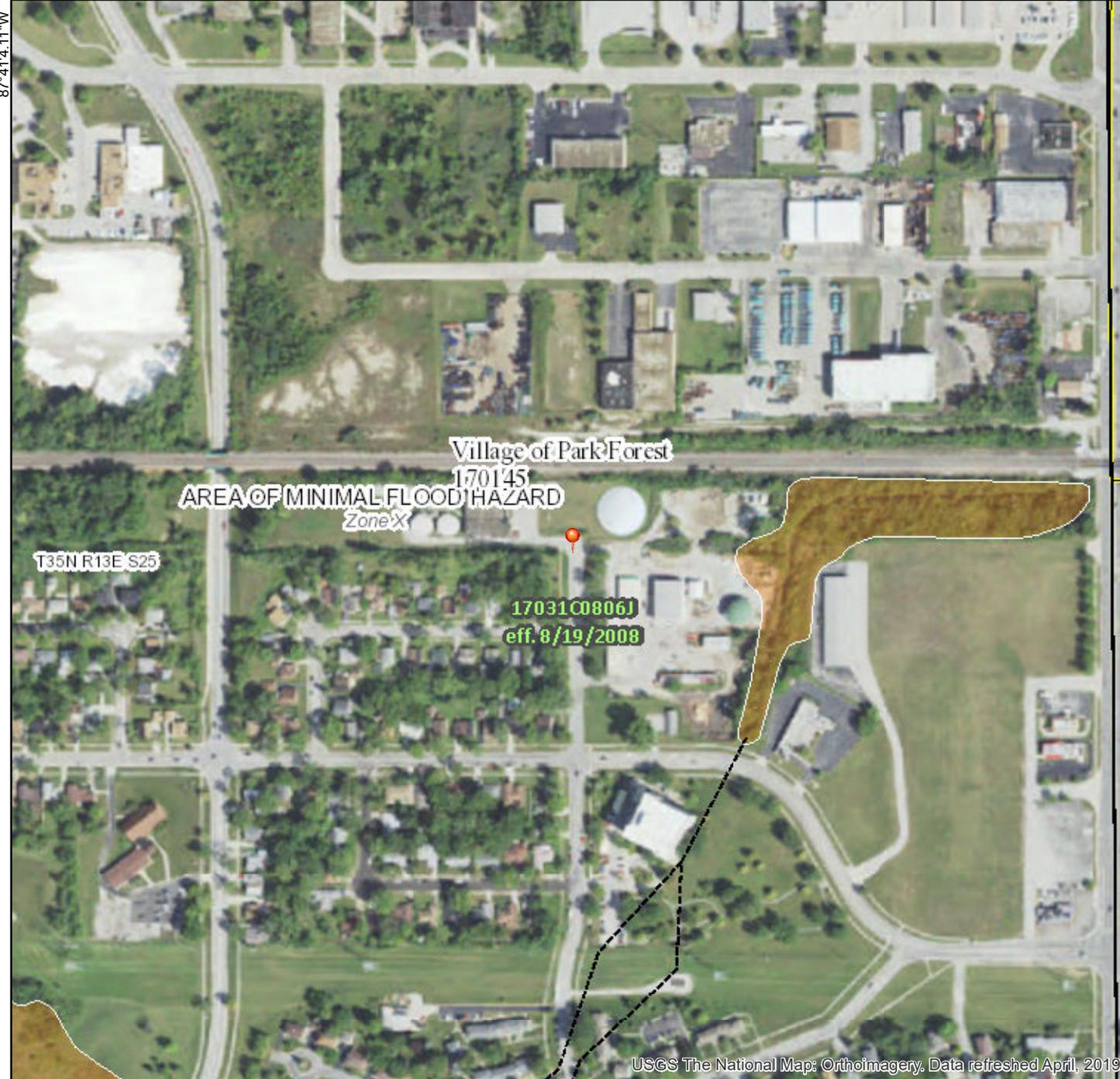
41°28'45.57"N

87°41'24.90"W

National Flood Hazard Layer FIRMette



41°29'53.41"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/27/2020 at 6:16:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

USGS The National Map: Orthoimagery, Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

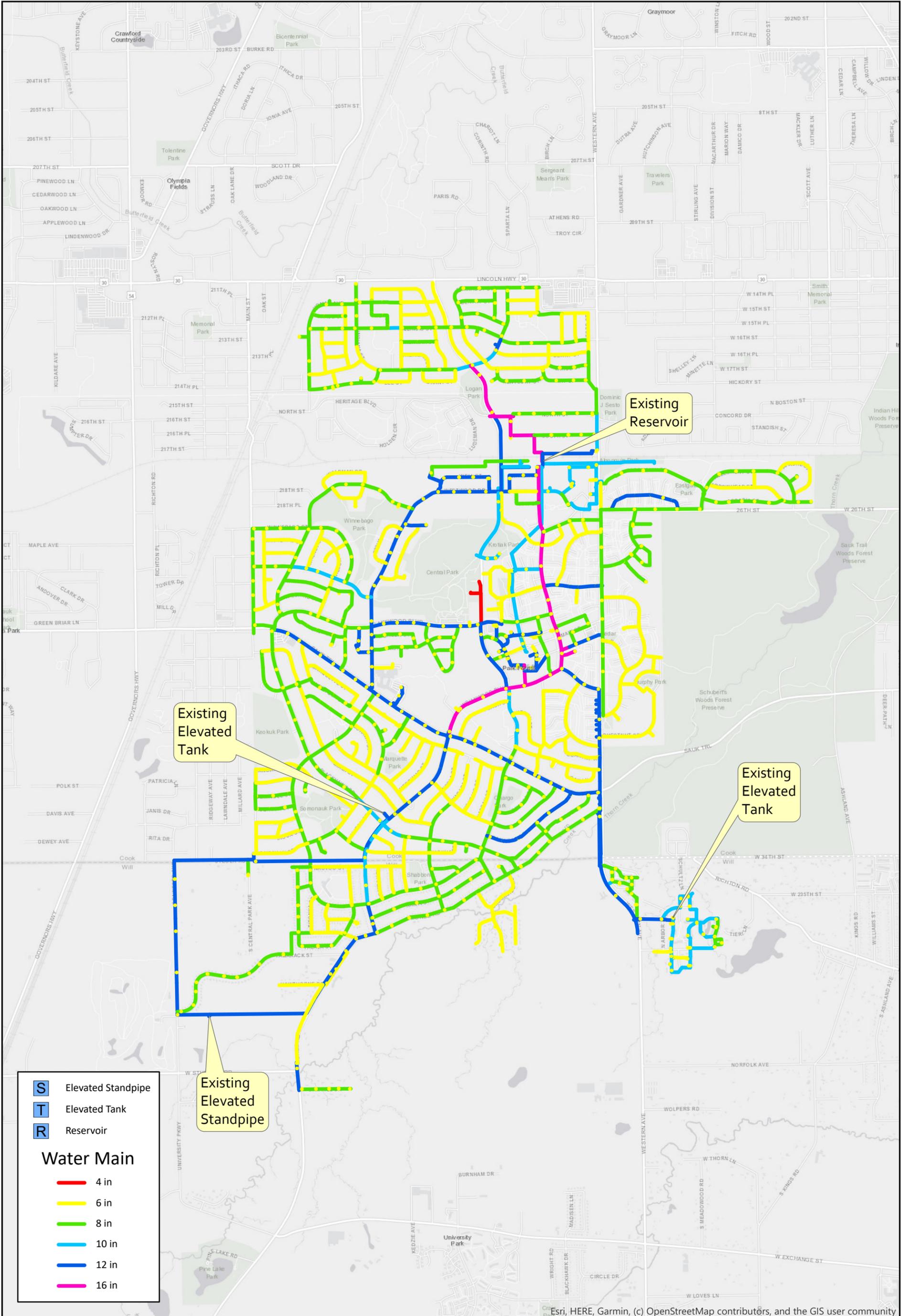
41°29'26.46"N

87°40'26.65"W

87°41'4.11"W

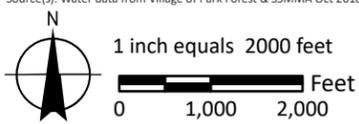
EXISTING WATER SYSTEM

EXHIBIT A



X:\Projects_Comp\ParkForest\GIS\AGP_Projects\Park Forest water model.aprx Saved: 3/6/2020 8:29 AM Designer: 503jm

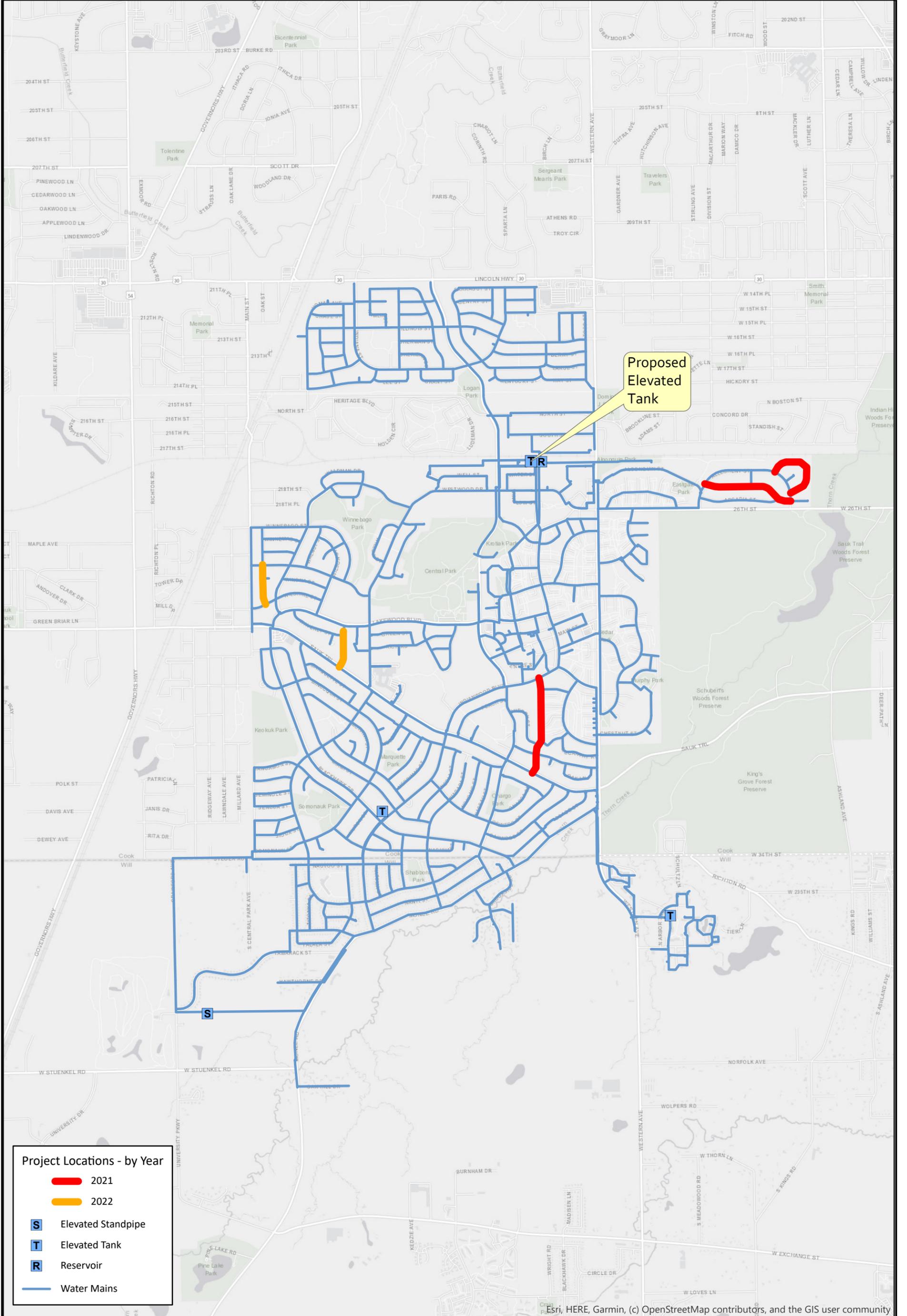
Source(s): Water data from Village of Park Forest & SSMMA Oct 2018



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

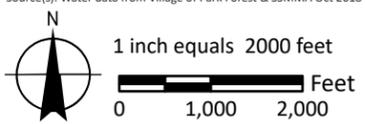
PROJECT LOCATIONS

EXHIBIT B



X:\Projects_Comp\ParkForest\GIS\Map_Series\3/6/2020 9:49 AM Designer: 503.jm

Source(s): Water data from Village of Park Forest & SSMMA Oct 2018



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community