State of Illinois
County of Kendall

Zoning Petition
#21-47

ORDINANCE NUMBER 2022-06

GRANTING VARIANCES TO SECTION 203.1.B (SITE RUNOFF STORAGE REQUIREMENTS) AND SECTION 403 (COMPENSATORY STORAGE VOLUME REQUIREMENTS) OF THE KENDALL COUNTY STORMWATER MANAGEMENT ORDINANCE FOR APPROXIMATELY TWENTY-ONE ACRES OF LAND LOCATED WEST OF 304 RIVER STREET (PIN: 02-32-231-008) IN THE UNITED CITY OF YORKVILLE

WHEREAS, Article 9 of the Kendall County Stormwater Mangement Ordinance permits the Kendall County Board to grant variances to the Kendall County Stormwater Management Ordinance and provides the procedure through which variances are granted; and

WHEREAS, on May 21, 2013, the Kendall County Board adopted Ordinance 2013-10 which established a list of certified communities in Kendall County for the Stormwater Water Management Ordinance and the United City of Yorkville was included on this list; and

WHEREAS, the property which is the subject of this Ordinance consists of approximately 21 acres located west 304 River Street inside the United City of Yorkville and is identified by Parcel Identification Number 02-32-231-008. The legal description is set forth in Exhibit A, attached hereto and incorporated by reference, and this property shall hereinafter be referred to as "the subject property"; and

WHEREAS, the subject property is currently owned by the Yorkville Bristol Sanitary District as represented by it Executive Director Cyrus McMains and shall hereinafter be referred to as "Petitioner"; and

WHEREAS, on or about October 22, 2021, Petitioner's representative filed a petition for variances to Section 203.1.b of the Kendall County Stormwater Management Ordinance pertaining to stormwater detention requirements and Section 403 of the Kendall County Stormwater Mangement Ordinance pertaining to compensatory storage requirements as outlined in Exhibit B attached hereto and incorporated by reference; and

WHEREAS, following due and proper notice by publication in the Aurora Beacon on December 23, 2021, the Yorkville Planning and Zoning Commission held a public hearing on January 12, 2022, at 7:00 p.m., in the Yorkville City Hall at 800 Game Farm Road in Yorkville, at which the Petitioner presented evidence, testimony, and exhibits in support of the requested variances and zero members of the public testified in favor or in opposition or expressed concerns regarding the requested variances; and

WHEREAS, based on the evidence, testimony, and exhibits, the Yorkville Planning and Zoning Commission has made Findings of Fact and recommended approval of the variances as set forth Exhibit B; and

WHEREAS, the Kendall County Planning, Building and Zoning Committee of the Kendall County Board has reviewed the testimony presented at the aforementioned public hearing and has considered the Findings of Fact and Recommendation of the Yorkville Planning and Zoning Commission, and has forwarded to the Kendall County Board a recommendation of approval of the requested variances; and

WHEREAS, the Kendall County Board has considered the recommendation of the Planning, Building and Zoning Committee and the Findings of Fact and Recommendation of the Yorkville Planning and Zoning Commission, and has determined that said petition is in conformance with the provisions and intent of the Kendall County Stormwater Management Ordinance; and

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NOW, THEREFORE, BE IT ORDAINED, BY THE COUNTY BOARD OF KENDALL COUNTY, ILLINOIS, as follows:

1. The Findings of Fact and Recommendation of the Yorkville Planning and Zoning Commission included in Exhibit B is hereby accepted and the Findings of Fact set forth therein are hereby adopted as the Findings of Fact and Conclusions of this Kendall County Board.

2. The Kendall County Board hereby grants approval of Petitioner's petition for variances to Sections 203.1.b and 403 of the Kendall County Stormwater Management Ordinance on the condition that the subject property be developed substantially in accordance as outlined in Exhibit B.

IN WITNESS OF, this ordinance has been enacted by a majority vote of the Kendall County Board and is effective this 15th day of February, 2022.

Attest:

Kendall County Clerk
Debbie Gillette

Kendall County Board Chairman
Scott R. Gryder

COUNTY CLERK
OFFICIAL
SEAL
KENDALL COUNTY, ILLINOIS

EXHIBIT A

LEGAL DESCRIPTION - WEST SITE

THAT PART OF THE NORTH HALF OF SECTION 32, TOWNSHIP 37 NORTH, RANGE 7, EAST OF THE THIRD

PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON STAKE ON THE CENTERLINE OF RIVER ROAD, WHICH MONUMENTS THE WEST LINE OF A TRACT OF LAND CONVEYED TO THE STATE OF ILLINOIS BY DEED FROM CLARENCE S. WILLIAMS AND MARY E. WILLIAMS, RECORDED IN BOOK 76, PAGE 350;

THENCE NORTH 70°13'29" WEST ALONG SAID CENTERLINE, 985.57 FEET;

THENCE NORTHWESTERLY ALONG SAID CENTERLINE, BEING ALONG A TANGENTIAL CURVE TO THE LEFT,

HAVING A RADIUS OF 1850.0 FEET, AN ARC DISTANCE OF 493.61 FEET;

THENCE NORTH 85°30'44" WEST ALONG SAID CENTERLINE, 70.82 FEET;

THENCE SOUTH 04°29'16" WEST, 409.56 FEET TO THE NORTHERLY BANK OF THE FOX RIVER;

THENCE EASTERLY ALONG SAID NORTHERLY BANK, TO THE SAID WEST LINE OF THE TRACT CONVEYED TO THE STATE OF ILLINOIS;

THENCE NORTHERLY ALONG SAID WEST LINE, 625.0 FEET TO THE POINT OF BEGINNING, IN BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS.

Exhibit B

Yorkville Bristol Sanitary District

Variance Request

YBSD
YORKVILLE-BRISTOL
SANITARY DISTRICT

Prepared by:

BAXTER & WOODMAN
Consulting Engineers

www.baxterwoodman.com

August 9, 2021

Yorkville Bristol Sanitary District
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LIST OF EXHIBITS

1. INTRODUCTION

The Yorkville-Bristol Sanitary District (YBSD) and the United City of Yorkville have been working together for the last 15-years to ensure that west side property is available for the wastewater treatment facility to serve the ultimate facility planning area (FPA) population. In 2005, YBSD completed a Facility Planning Report that demonstrated the need for additional space for the wastewater treatment facility to serve the potential future facility planning area population.

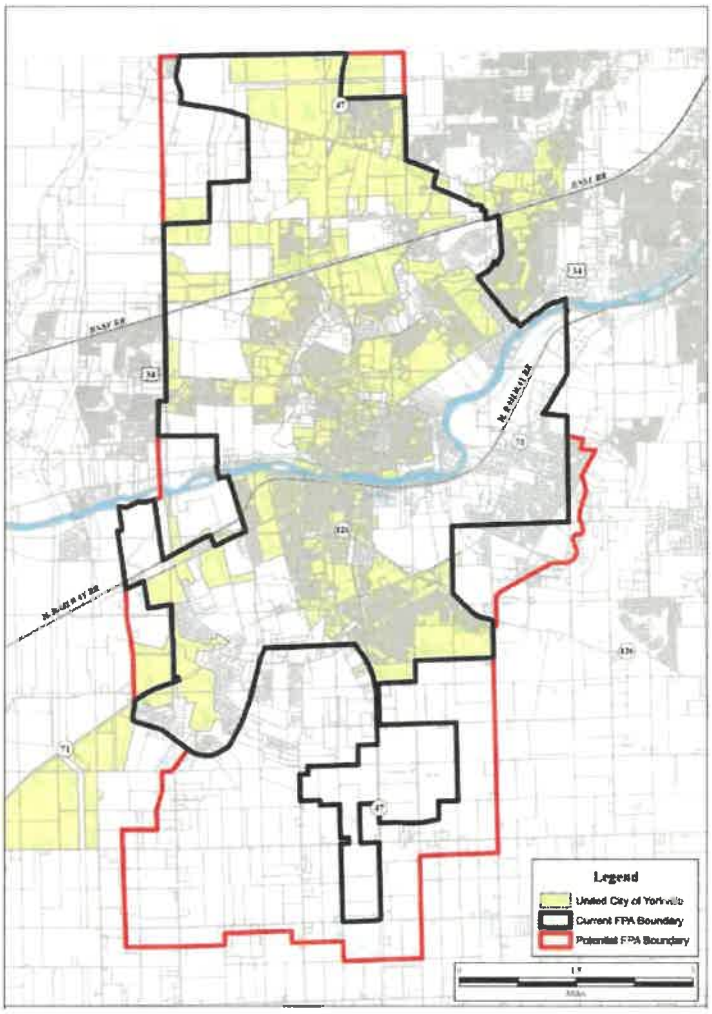
In 2006, YBSD prepared an annexation agreement that annexed the west side property into the United City of Yorkville, Kendall County, Illinois. The United City of Yorkville City Council unanimously approved the annexation, Ordinance No. 2006-43. YBSD also rezoned the west side property to A-1 with special use for sanitary water treatment facilities. The City Council followed the recommendation from the Plan Commission and unanimously approved Ordinance No. 2006-44. These two ordinances provided the space and zoning required to provide the wastewater treatment capacity for the potential future FPA population on a single site.

In 2014, YBSD completed a Phosphorus Removal Feasibility Report to determine the costs, treatment processes and space required to meet future effluent phosphorus limits. This report further reinforced the need for the west side property.

In 2018, YBSD completed a wetland delineation of the west side property to determine the sensitive environmental areas and the areas that could be used for wastewater treatment.

YBSD is currently completing the stormwater permitting and regulatory requirements that are needed to allow the west side property to be utilized for wastewater treatment. YBSD also just completed the preliminary design of the 1st phase of improvements that would be located on the west side property.

YBSD's mission is to provide wastewater treatment services for residents within its facility planning area, namely, the United City of Yorkville, Illinois, the county seat of Kendall County. The Facility Planning Reports, Annexation Ordinance, Rezoning Ordinance and wetland delineation were completed to allow wastewater treat of the potential future facility planning area population at a single site on the west side of Blackberry Creek. The YBSD FPA encompasses the United City of Yorkville and portions of the unincorporated areas of Bristol and Kendall Townships within Kendall County. The current and future potential FPA boundaries are shown below.



Providing wastewater treatment for YBSD's ultimate facility planning area population will require development of nearly the entire project site, and the required stormwater detention facilities and compensatory storage cannot be provided onsite without significantly reducing the footprint available for treatment facilities. The reduction of footprint for wastewater treatment facilities will reduce total population that can be served from the west side property. The reduced area would not be able to accommodate the potential future FPA population. As such, the YBSD is requesting variances from the Kendall County Stormwater Management Ordinance, as adopted by the United City of Yorkville, and from the City of Yorkville's Landscaping Ordinance in accordance with Article 9 of the Kendall County Stormwater Management Ordinance.

- Kendall County Stormwater Management Ordinance (Section 203 and Section 403), as adopted by United City of Yorkville – Ordinance No. 2012-56
- United City of Yorkville Landscape Ordinance (Section 8-12-2.H) – Ordinance No. 2009-42

2. ORDINANCE REQUIREMENTS

2.1 Stormwater Detention Requirements for Kendall County

Section 203 of the Kendall County Stormwater Management Ordinance, as adopted by the City of Yorkville, requires stormwater detention for non-residential developments on properties of contiguous ownership that are equal to or greater than three (3) acres and resulting in more than 45,000 square feet of development or 32,000 square feet of impervious area. The planned improvements, consisting of approximately 641,000 square feet of development and 440,000 square feet of new impervious area, exceed both of these thresholds, and therefore Ordinance site runoff storage requirements are applicable. Stormwater storage volume must be provided such that the 100-year, 24-hour release rate does not exceed 0.15 cubic feet per second (cfs) per acre of hydrologic disturbance, and the 2-year, 24-hour release rate does not exceed 0.04 cfs per acre.

2.2 Compensatory Storage Requirements for Kendall County

Section 403 of the Ordinance requires that hydraulically equivalent compensatory storage be provided for fills within the regulatory floodplain. The total compensatory storage volume must be equal to or greater than the flood fringe storage volume displaced. To the greatest extent practicable, storage volume displaced below the 10-year existing flood profile must be replaced below the proposed 10-year flood profile, and storage displaced between the existing 10- and 100-year flood profiles but be replaced between the proposed 10- and 100-year flood profiles.

2.3 Tree Preservation and Replacement Standards for the United City of Yorkville

Compensatory storage and stormwater detention requirements will necessitate significant tree removal. Per Section 8-12-2.H of the United City of Yorkville's Code of Ordinances, tree removal should be avoided within floodplains, filling near valuable trees should be minimal, and removal requirements include replacement according to **Table 1.**

Table 1: Tree Replacement Standards, Landscaping Ordinance for the City of Yorkville

Caliper (inches) of tree to be removed	Number of replacement trees
30 or greater	6
13-29	5
8-12	4
4-7	2

3. VARIANCE REQUESTS

The variance requests are organized according to the variance standards as described in Section 904 of the Kendall County Stormwater Ordinance as adopted by the United City of Yorkville.

3.1 Stormwater Detention

Request 1: Waiver of United City of Yorkville and Kendall County site runoff storage requirements (Section 203.1.b. of the Kendall County Stormwater Management Ordinance, as adopted by the United City of Yorkville (excerpt of Ordinance included in Exhibit 1))

	Section 904 Standard	Justification
a.	The variance will not increase the probability of flood damage or create an additional threat to the public health, safety or welfare.	Stormwater runoff from the proposed development area discharges directly to the Fox River and Blackberry Creek, with no downstream properties impacted prior to discharge into these waterways. The proposed development area is significantly smaller than the total watershed areas tributary to the Fox River and Blackberry Creek (**Exhibits 3-5**). Therefore, the timing of peak stormwater discharges from the YBSD's property is unlikely to coincide with the highest flows and flood elevations along these waterways.
b.	The variance requested is the minimum relief necessary to accomplish the objectives of the development without compromising the objectives of Section 102 of this Ordinance.	The proposed improvements are for treatment facilities that are essential and critical infrastructure. Maximizing the onsite treatment capacity is necessary to accommodate the needs of the City and surrounding communities for future growth and development. Providing detention would prevent the YBSD from achieving the full buildout for treating the projected flows to the facility. Furthermore, the orientation of the YBSD property is such that there is significant waterway frontage, with grades naturally flowing to the Fox River and Blackberry Creek. Draining all site stormwater runoff to detention facilities may be difficult or impossible to achieve while providing a suitable treatment facility plan. Other counties in Illinois have detention exemptions for such developments. For example, the Will County Stormwater Management Ordinance (55.020 (C)(2)) provides an exemption for properties that meet the minimum river frontage requirement (**Exhibit 7**). With over 1,500 feet of river frontage and

		less than 20 acres of proposed development, this project site would easily qualify for Will County's detention exemption thresholds.
c.	The variance will not result in a reduction of water quality benefits as compared to compliance with ordinance requirements.	The development will incorporate best management practices (BMPs), such as vegetative swales, buffer strips, and sediment traps, to treat direct discharges to the Fox River and Blackberry Creek. These BMPs will mitigate potential reduction of water quality benefits.
d.	The variance is not requested solely for the purpose of reducing site runoff storage requirements.	The variance is requested to allow for full buildout capacity of the treatment facilities to accommodate the needs of the community's projected growth. The reduction of site runoff storage requirements is incidental to this goal.
e.	The variance shall not cause conveyance of stormwater from the project to increase peak discharges beyond design capacity of existing offsite conveyance facilities for any storm event from the 2-year to the 100-year recurrence frequency.	The development would directly discharge to major natural waterways, as opposed to designed stormwater conveyance systems with defined capacities. There are no intermediate properties between the development and the Fox River or Blackberry Creek. Additionally, the proposed development area is significantly smaller than the total watershed areas tributary to the Fox River and Blackberry Creek (**Exhibits 3-5**). Therefore, the timing of peak stormwater discharges from the YBSD's property is unlikely to coincide with the highest flows and flood elevations along these waterways.
f.	The variance shall seek to preserve valuable environmental and biological resources including but not limited to stands of native trees, existing wetlands and natural floodplain storage.	With the variance, the YBSD will be able to achieve full buildout capacity at this property. The variance will also prevent the need for expanding the development area for treatment facilities to include the property immediately adjacent to the Fox River, which would require the removal of valuable riparian vegetation and critical habitat for the endangered Indiana bat (Myotis sodalis) (**see Exhibit 10** for report from U.S. Fish and Wildlife Service).

3.2 Compensatory Storage

Request 2: Waiver of United City of Yorkville and Kendall County compensatory storage requirements (Section 403.a. of the Kendall County Stormwater Management Ordinance, as adopted by the United City of Yorkville (excerpt of Ordinance included in Exhibit 1))

	Section 904 Standard	Justification
a.	The variance will not increase the probability of flood damage or create an additional threat to the public health, safety or welfare.	There are no structures impacted by the regulatory floodplain along the Fox River in the area immediately downstream of the proposed improvements (**Exhibit 6**). The minor loss of flood storage resulting from proposed floodplain fill is small relative to the total flood storage of the Fox River and will not impact any downstream structures during a 100-year flood. Furthermore, a dam is located upstream of the project limits, just upstream of Bridge Street. This dam provides some hydraulic control of flood profiles, creates upstream flood storage, and reduces the impacts of proposed floodplain fills within the project limits. Hydraulic modeling demonstrates that the proposed improvements meet the applicable regulatory standards of the IDNR Part 3700 requirements for floodway construction, without the inclusion of compensatory storage. Requirements for compensatory storage are local standards above and beyond the state's requirements, which are intended to preserve the conveyance capacity of the waterway. Preliminary modeling results and model input/output files are provided as **Exhibit 8**.
b.	The variance requested is the minimum relief necessary to accomplish the objectives of the development without compromising the objectives of Section 102 of this Ordinance.	The proposed improvements are for treatment facilities that are essential and critical infrastructure. Maximizing the onsite treatment capacity is necessary to accommodate the needs of the City and surrounding communities for future growth and development. Providing onsite compensatory storage would prevent the YBSD from achieving the full buildout for treating the projected flows to the facility. Offsite compensatory storage was explored and is discussed further below. These options all have major feasibility concerns or negative impacts, such as requiring additional tree removal and/or additional loss of usable land.

c.	The variance will not result in a reduction of water quality benefits as compared to compliance with ordinance requirements.	The presence or absence of compensatory storage would not have an effect on water quality. Even so, the development will incorporate best management practices (BMPs), such as vegetative swales, buffer strips, and sediment traps.
d.	The variance is not requested solely for the purpose of reducing site runoff storage requirements.	This variance is unrelated to site runoff storage requirements.
e.	The variance shall not cause conveyance of stormwater from the project to increase peak discharges beyond design capacity of existing offsite conveyance facilities for any storm event from the 2-year to the 100-year recurrence frequency.	This variance will not impact conveyance of stormwater from the project.
f.	The variance shall seek to preserve valuable environmental and biological resources including but not limited to stands of native trees, existing wetlands and natural floodplain storage.	With the variance, the YBSD will be able to achieve full buildout capacity at this property, which would save environmental and biological resources. The variance will also prevent the need for development of the YBSD property immediately adjacent to the Fox River, which would require the removal of valuable riparian vegetation, critical habitat for the endangered Indiana bat (Myotis sodalis) (**Exhibit 10**), and would have adverse wetland and impacts. Wetland and habitat impacts could be obstacles to obtaining permits through the U.S. Army Corps of Engineers and IDNR.
	Article 4 Variance Standards	
a.	Variances shall not be issued by the permitting agency within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.	Hydraulic modeling demonstrates that the proposed improvements meet the applicable regulatory standards of the IDNR Part 3700 requirements for floodway construction, without the inclusion of compensatory storage. Preliminary modeling results indicate no increase in flood levels, rounded to the nearest tenth of a foot, and are provided as **Exhibit 8**.
b.	Variances may be issued by the permitting agency for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structure constructed below the base flood level, in conformance with the following procedures of this section;...	Not applicable; this development is greater than one-half acre.

3.3 Tree Preservation and Replacement

Request 3: Waiver of United City of Yorkville tree replacement requirements (Sections H.1.b.i.1,3 and H.2.a-d of the United City of Yorkville's Landscaping Ordinance (excerpt of Ordinance included in Exhibit 2))

	Section 904 Standard	Justification
a.	The variance will not increase the probability of flood damage or create an additional threat to the public health, safety or welfare.	This variance will not impact flooding or any other threat to public health, safety or welfare.
b.	The variance requested is the minimum relief necessary to accomplish the objectives of the development without compromising the objectives of Section 102 of this Ordinance.	The proposed improvements are for treatment facilities that are essential and critical infrastructure. Maximizing the onsite treatment capacity is necessary to accommodate the needs of the City and surrounding communities for future growth and development. Replacing trees onsite according to the standard laid out in the City's Landscaping Ordinance (preliminary estimate of 1,500 replacement trees) is not possible if the facility is to provide the projected treatment capacity for the community.
c.	The variance will not result in a reduction of water quality benefits as compared to compliance with ordinance requirements.	This variance will not impact water quality.
d.	The variance is not requested solely for the purpose of reducing site runoff storage requirements.	This variance is unrelated to site runoff storage requirements.
e.	The variance shall not cause conveyance of stormwater from the project to increase peak discharges beyond design capacity of existing offsite conveyance facilities for any storm event from the 2-year to the 100-year recurrence frequency.	This variance will not impact conveyance of stormwater from the project.
f.	The variance shall seek to preserve valuable environmental and biological resources including but not limited to stands of native trees, existing wetlands and natural floodplain storage.	While it is not possible to replace all of the removed trees onsite according to the City's ordinance (regardless of the detention and compensatory storage variances), the YBSD aims to preserve the trees along the banks of the Fox River and Blackberry Creek, which is made possible by the waiving of the stormwater requirements as discussed above. Avoiding offsite compensatory storage will also limit the extent of tree removal necessary.

4. OFFSITE COMPENSATORY STORAGE

Four offsite locations were considered for compensatory storage. These locations were initially chosen based on their proximity and current use (undeveloped or mostly open space). They are not owned by the YBSD and their use would be contingent upon purchase or easement from the property owners. The construction schedule for the facility expansion would be delayed if offsite compensatory storage is provided, as the compensatory storage would need to be provided prior to development of the YBSD property; thus, property acquisition, permitting, and offsite excavation could delay construction significantly. The four locations are briefly described below, along with burdens and detrimental impacts associated with construction at these locations. A map of the sites is included as **Exhibit 9**.

- The Youth Camp property directly adjacent to the project site consists of a low-lying area and a slope heading north up to River Road. This location would require extensive tree removal, a large quantity of excavation, and the construction of a very large retaining wall (~30' high).

- A large bump-out is located on the south bank of the Fox River, located approximately half a mile downstream from the Blackberry Creek confluence. This location is heavily forested and a massive quantity of excavation would be necessary due to the high elevations.

- Crawford Park, owned the United City of Yorkville, is located on the south bank of the Fox River approximately one mile downstream from the Blackberry Creek confluence. It is not forested and would require limited tree removal. Utilizing this area for compensatory storage, however, would prevent the City from raising the grade in the future or using this land for any other purposes.

- Approximately 1.8 miles downstream from the Blackberry Creek confluence, there is a farm located on the north bank of the Fox River. Extensive tree removal would not be necessary for this property, but the loss of active farmland is not a desirable outcome.

5. CONCLUSION

The District understands that as effluent limits and sludge disposal regulations become more stringent, additional space for future processes to maintain compliance will be of utmost importance. Some constituents are on the regulatory horizon, but others are unknown at this time. This increases the importance of maximizing contiguous land to accommodate future process. The above variance requests are necessary to provide the onsite treatment facilities that meet future regulatory requirements, as well as accommodate anticipated growth and development within the City of Yorkville.

Exhibit 1: Excerpts from Kendall County Stormwater Ordinance, as adopted by the United City of Yorkville

Sec. 203 Site Runoff Storage Requirements

203.1 Applicability of Site Runoff Storage Requirements
All developments shall comply with the site runoff storage requirements provided in Section 203 of this Ordinance in which:

a. Single family - detached land use property consisting of five or more residential structures having an average lot size of three acres or less;

b. A non-residential land use or a residential land use other than single family - detached property of contiguous ownership equal to or greater than three acres and:

    1. resulting in more than 45,000 square feet of development, or;

    2. resulting in more than 32,000 square feet of impervious surface area

Request for waiver of 203.1.b.

Sections 203.2 - 202.11 would be rendered null by waiver of 203.1.b.

203.2 Release Rate

Sufficient excess runoff / flood storage volume shall be provided so that the proposed project will not discharge at a rate greater than 0.15 cfs/acre of disturbance for a rainfall event with a 100-year recurrence frequency. Additionally, sufficient excess runoff / flood storage volume shall be provided so that the proposed project will not discharge at a rate greater than 0.04 cfs/acre of disturbance for a rainfall event with a 2-year recurrence frequency. The area of hydrologic disturbance for the entire project shall be used to calculate the site runoff storage volume requirements.

203.3 Design Methods

Event hydrograph routing methods shall be used to calculate runoff storage volume requirements for stormwater management basins with total tributary areas greater than five acres. The hydrograph routing shall be HEC-1, (SCS methodology), HEC-HMS, TR-20, or TR-55 tabular method or as otherwise approved by the Administrator. Event hydrograph methods shall incorporate the following assumptions:

a. Antecedent moisture condition = 2; and

b. Appropriate Huff rainfall distribution; and

c. 24-hour duration storm with a 1% probability (100-year frequency) of occurrence in any one year as specified by Illinois State Water Survey Bulletin 71 isohyetal rainfall data.

Runoff storage volume requirements for stormwater management basins with total tributary areas equal to or less than five acres may utilize the *% Impervious to unit Area Detention* nomograph developed by NIPC (now known as CMAP) depicted in Table 203.

203.4 Existing Release Rate Less Than Allowable

For sites where the undeveloped release rate is less than the maximum release rate in Section 203.2, the developed release rate and corresponding site runoff storage volume requirement shall be based on the existing undeveloped release rate for the development.

203.5 Downstream Water Surface Elevations
All hydrologic and hydraulic computations must utilize appropriate assumptions for downstream water surface elevations, from low flow through the base flood elevation, considering the likelihood of concurrent flood events.

203.6 Extended Detention Requirement
The requirements of this section will apply only when the outfall from a stormwater management basin is proposed to connect to an off-site agricultural drain tile system. The first 0.75 inches of runoff from a rainfall event over the hydraulically connected impervious area of the development shall be stored below the elevation of the primary gravity outlet (extended detention) of the stormwater management basin. The facility may be designed to allow for evapotranspiration or infiltration of this volume into a subsurface drainage system and shall not be conveyed through a direct positive connection to downstream areas.

The hydraulically connected impervious area used in the calculation of required extended detention volume may be reduced by the Administrator if the soils are prepared to maximize infiltration and deep rooted grasses or other plants selected for their ability to promote infiltration or water absorption are planted in areas appropriately dedicated. The reduction in hydraulically connected impervious area used in the calculation shall be equal to the area of the development meeting the above soils/native planting requirement.

Subsurface drainage systems may be designed as a component of the extended detention portion of the stormwater management basin to assist in infiltration in accordance with the following criteria:

a. The extended detention volume shall be discharged at a rate no greater than that required to empty the calculated extended detention volume within 5 days of the storm event and at a rate no less than that required to empty the calculated extended detention volume within 30 days of the storm event.

b. No subsurface drainage pipe shall be located within 10 feet of drainage pipes directly connected to the stormwater management basin.

c. For purposes of meeting the maximum subsurface drainage discharge requirements, flow control orifices and weirs may be used.

d. All design extended detention volume shall be provided above the seasonal high ground water table or the invert elevation of the groundwater control system.

e. Farm field tile shall not be considered a subsurface drainage system.

203.7 Stormwater Management Basin Design Requirements
Stormwater management basins shall be designed and constructed with the following characteristics:

a. The stormwater management basin shall provide 1 (one) foot of freeboard above the design high water elevation or BFE.

b. The stormwater management basin shall be located on the site and designed such that they are accessible by motorized maintenance equipment necessary for regular and long term maintenance operations. The route to the basin shall be formalized with an access easement and that the surface of such route shall be easily traversable by maintenance equipment / operations as determined by the Administrator.

c. All site runoff storage volume shall be provided above the seasonal high groundwater table or above the invert of the groundwater control system.

d. Stormwater management basins shall facilitate sedimentation and catchment of floating material. Unless specifically approved by the Administrator, impervious low-flow ditches shall not be used in stormwater management basins. Stormwater management basins shall maximize the normal flow distance between stormwater management basin inlets and outlets, to the extent possible

e. Stormwater management basins shall reduce impacts of stormwater runoff on water quality by incorporating best management practices.

f. Stormwater management basins shall be designed with an emergency overflow weir capable of passing the inflow from the critical duration base flood event under developed conditions. The predicted emergency water surface elevation shall be below the top of embankment for any other portion of the stormwater management basin. The weir design shall provide appropriate erosion control measures.

g. Stormwater management basins with single pipe outlets shall have a minimum inside diameter of 12 inches. If design release rates necessitate a smaller outlet, flow control devices such as perforated risers, or flow control orifices shall be used.

h. Stormwater management basins intended to support potential fish habitat with a permanent pool, shall be at least ten feet deep over 25 percent of the bottom area.

i. Stormwater management basins shall have a maximum side slope of four to one.

j. Stormwater management basins with a permanent pool shall have a safety shelf at least eight feet wide a maximum of two feet below the normal water pool.

k. Stormwater management basins shall have a maximum drawdown time of 72 hours for a 24-hour duration rainfall event with 100-year recurrence frequency.

j. All stormwater management basins shall comply with IDNR dam safety requirements where applicable.

203.8 Site Runoff Storage Volume Within The Regulatory Floodplain

Stormwater management basins and other facilities to satisfy site runoff storage volume requirements located within the regulatory floodplain shall:

a. Conform to all applicable requirements specified in Article 4 of this Ordinance; and

b. Store the required amount of site runoff to meet the release rate requirement under all stream flow and backwater conditions in the receiving stream up to the 10-year flood elevation; and

c. Site runoff storage volume provided by enlarging existing regulatory floodplain storage without providing a flow control device regulating discharge (on-stream detention) will be allowed only as a variance. The applicant must demonstrate that flood damages are not increased and the development will not increase flood flows for both the 2-year and 100-year floods on the stream with developed conditions on the site; and

d. The Administrator may approve designs which can be shown by detailed hydrologic and hydraulic analysis to provide a net watershed benefit in flood control not otherwise realized by strict application of the requirements in a through c above.

203.9 Site Runoff Storage Volume Within The Regulatory Floodway

Stormwater management basins and other facilities to satisfy site runoff storage volume requirements located within the regulatory floodway shall:

a. Meet the requirements for locating stormwater management basins in the regulatory floodplain; and

b. Be evaluated by performing hydrologic and hydraulic analysis consistent with the standards and requirements for any adopted watershed plans; and

c. Provide a net watershed benefit in flood control.

203.10 Site Runoff Storage Volume - Channel Impoundment

Flow control structures constructed across any channel to impound water to meet site runoff storage requirements shall be prohibited on any perennial stream unless part of a public flood control project with a net watershed benefit in flood control. Those streams appearing as blue on a USGS Quadrangle map shall be assumed perennial unless better data is obtained. All cross-stream flow control structures for the purpose of impounding water to provide site runoff storage in all cases on perennial and intermittent streams must demonstrate that they will not cause short term or long-term stream channel instability.

203.11 Off-Site Stormwater Management Basins

Stormwater management basins and other facilities to satisfy site runoff storage volume requirements may be located off-site if the following conditions are met:

a. The off-site stormwater management basin meets all of the requirements of this Article 2; and

b. Adequate storage capacity in the off-site facility is dedicated to the development; and

c. The development includes means to convey stormwater to the off-site stormwater management basin.

Sec. 403 Compensatory Storage Volume Standards

The following standards apply within the regulatory floodplain: Request for waiver of 403.a

a. Hydraulically equivalent compensatory storage volume will be required for development in a riverine regulatory floodplain and shall be at least equal to the regulatory floodplain flood storage volume displaced. To the greatest extent practicable storage volume displaced below the existing 10-year frequency flood elevation must be replaced below the proposed 10-year frequency flood elevation. To the greatest extent practicable storage volume displaced above the 10-year existing frequency flood elevation must be replaced above the proposed 10-year frequency flood elevation.

b. Compensatory storage volume for development in a non-riverine regulatory floodplain area that is also adjacent to a lake shall be equal to the storage volume displaced.

c. Compensatory storage volume requirements for development in a non-riverine Regulatory Floodplain that is not adjacent to a lake shall be replaced in accordance with the requirements for the loss of depressional storage in Section 201.6.

d. Compensatory storage areas shall be designed to drain freely and openly to the channel and shall be located adjacent to the development. This standard does not apply to non-riverine Regulatory Floodplain.

e. A recorded covenant or easement running with the land is required to maintain the compensatory storage volume in areas modified to provide compensatory storage volume.

Sections 403.d. - 403.e. would be rendered null by waiver of 403.a.

Exhibit 2: Excerpts from United City of Yorkville Code of Ordinances, Section 8-12-2 (Landscaping Ordinance)

H. Tree Preservation: The following standards shall apply to all lots which are five (5) acres or greater in area. No live tree(s) with a four inch (4") DBH (diameter at breast height) may be removed without first submitting an application for tree removal and receiving approval from the City. Failure to apply and submit a tree preservation and removal plan will result in a monetary fine per tree removed without authorization (as stated on the application form.)

1. Tree Removal Permit: The application for a tree removal shall be made to the Building Department. This application must be submitted and approved prior to the Site Grading Plan permit issuance. If no mass grading is required for construction, the tree removal application must be submitted and approved prior to any site re-development involving tree removal. The application shall include:

a. Tree Preservation and Removal Plan. The plan shall include:

i. A tree survey showing the location of all trees four inches (4") in caliper or greater within 100 feet of any tree proposed to be removed, including a description of the tree(s), botanical name, common name, caliper size and general condition or health of the tree(s). The survey shall be completed by an International Society of Aboriculture Certified Arborist or Illinois Department of Natural Resources Consultant Forester, or other qualified professional as approved in writing by the City Planner.

ii. Delineation of trees to be removed and trees to be preserved.

iii. Details and specifications or procedures to be used to protect trees being preserved.

iv. Location, size and name of replacement trees.

b. Tree Preservation and Removal Guidelines:

i. Every reasonable effort shall be made to retain existing trees shown on the tree survey through the integration of those trees into the site plan and landscape plan for a proposed development.

Request for waiver of H.1.b.i.1.

1. Critical areas, such as floodplains, steep slopes, and wetlands, should be left in their natural condition or only partially cleared.

2. Roadways, storage areas, and parking lots should be located away from valuable tree stands.

Request for waiver of H.1.b.i.3.

3. Cutting and filling in the vicinity of valuable trees should be minimal.

4. If more than one-third of the tree's root system is to be affected by construction, the tree should be part of the removal plan and replaced with the appropriate number of trees.

ii. Pre-construction protection measures:

1. A temporary six foot (6') orange construction safety fence, rigid wood, or chain link fence must surround the periphery of the tree dripline as a construction barrier prior to the start of any site work.

a. Fence type may be designated by the City depending on the value of the tree and the location to construction traffic.

b. This fence must be in place before any site work begins and remain in place until all construction has been completed or final occupancy permit has been issued, whichever is latest.

c. A warning sign shall be placed on the fence stating the following: **Warning: This fence shall not be relocated or removed without written authorization from the City of Yorkville.**

iii. If construction limits encroach within the dripline of the tree the following procedures will be required:

1. Trunk wrapping from the base of the tree to a height of ten feet (10'). Clear indication of trees to be wrapped and detail showing materials should be included as part of the landscape plans. No boards shall be nailed to the trunk of a tree.

2. In the event that underground utility lines are proposed within five feet (5') of the trunk of a tree, then auguring or boring of the utility line will be required by the City. This must be clearly indicated on the plans.

3. Root trimming should occur by hand, not with machinery, and exposed root systems should be protected to maintain moisture levels. During construction, any root accidentally damaged (exposed) should immediately be cleanly cut and protected.

4. If excavation must occur within the dripline of a tree, an excavation trench shall be saw cut for a minimum depth of two feet as near to the intended trench as possible. All root pruning must be completed prior to any excavation activity near the tree.

iv. Construction procedures:

1. During the mass grading of the site, a Certified Arborist or Consultant Forester must be on-site during the mass grading to ensure that proper protection methods are being followed.

2. Grading and construction equipment shall be prohibited from encroaching within the dripline of a tree.

3. Any soil that is located or stockpiled within the critical root zone of the tree will result in the loss of tree protection credit(s) and will require that the job be stopped until a revised Landscape Plan is approved.

4. Crushed limestone and other material detrimental to trees shall not be stored or dumped within the drip line of any tree nor at any higher location where drainage toward the tree could conceivably affect the health of the tree.

5. Any preserved trees damaged during construction should be repaired. Damage should be analyzed by a Certified Arborist, Consultant Forester, or approved qualified professional, and a repair plan should be submitted to the City for approval.

6. If the tree begins to show signs of stress (i.e. leaf dieback, wilting, etc.), additional measures may be required by the City such as fertilizing or watering to aid the tree in survival.

v. Tree Preservation protection measures must be checked by the City of Yorkville before the permit for development will be released. Periodic inspections will occur during construction.

vi. Failure to provide adequate tree protection will result in the loss of tree protection credits and will require that the job be stopped until a revised Landscape Plan is approved.

Request for waiver of H.2.

2. Tree Replacement Standards:

a. Any tree approved for removal shall be replaced with new trees in accordance with the following schedule:

Caliper (Inches) of tree to be removed	Number of Replacement Trees
30 or greater	6
13-29	5
8-12	4
4-7	2

b. In the event that a tree identified to be preserved is removed or damaged, such tree shall be replaced as follows:

Caliper (Inches) of tree to be removed	Number of Replacement Trees
30 or greater	12
13-29	10
8-12	8
4-7	4

c. All replacement trees shall have a minimum caliper of two and one-half inches (2 ½") and shall consist of the shade tree varieties listed under Permitted Plantings.

d. If the tree(s) approved for removal is (are) dead from natural causes prior to the date of the tree removal permit, then no replacement tree(s) are required for them.

3. Approval Criteria: The City shall approve a tree removal application if one or more of the following conditions exist:

   a. The tree to be removed poses a safety hazard to persons or property.

   b. The tree is substantially diseased or weakened by age, storm, fire or other injury.

   c. The tree removal is in accordance with good forestry practice such as when a parcel of land will only support a certain number of healthy trees which is less than the number of existing trees on the parcel.

   d. The tree removal is of a nuisance tree listed under Section 3 General Standards, #7.

   e. The tree removal is part of an approved overall landscape plan.

4. Failure to Replace Trees: If replacement trees, which are required by the approved tree removal permit, are not planted within the time frame set out by the tree removal permit, the City may, at its option, replace the trees. All costs associated with purchasing and planting the replacement trees shall be charged to the owner or other person or entity causing the removal of the trees.

Exhibit 3: Fox River Tributary Drainage Area

Table 7 - Summary of Discharges (continued)

Flooding Source and Location	*Drainage Area (square miles)*	*Peak Discharges (cubic feet per second)* 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Fox River					
At Dayton (USGS gage No. 05552500)	2,642	22,132	36,274	41,893	58,357
At Bridge Street	2,138	15,327	23,899	27,412	36,894
About 900 feet upstream of Bridge Street	1,804	10,580	15,221	17,697	22,615
At Aurora (USGS gage No. 05551500)	1,705	8,572	12,791	14,368	18,697
Harvey Creek					
300 feet downstream of Sandy Bluff Road	3.46	381	525	595	983
600 feet downstream of Griswold Springs Road	3.36	367	506	569	924
2,000 feet upstream of Griswold Springs Road	2.41	291	387	442	638
At Dayton Street	1.41	183	248	291	379
Middle Aux Sable Creek					
Just downstream of Caton Farm Road	15.9	1,252	2,144	2,767	3,481
Just downstream of Wheeler Road	14.0	1,241	2,124	2,741	3,448
Upstream of Wheeler Road	12.9	1,237	2,117	2,731	3,435
North Arm Saratoga Creek					
About 150 feet downstream from farm bridge	0.7	80	*	143	*
At Joliet Road	0.66	79	*	140	*
About 700 feet upstream of Galena Street	0.42	59	*	106	*
Tributary 1 to West Aux Sable Creek Tributary B					
Just downstream of the intersection of Caton Farm Road and Brisbin Road	2.1	446	743	947	1,179
Waubansee Creek					
At confluence with Fox River	29.6	*	*	2,007	*
At U.S Route 25	29.5	*	*	1,979	*
At U.S. Route 34	29.2	*	*	1,940	*
At U.S. Route 30	18.7	774	1,170	1,447	2,700
At Elgin Joliet and Eastern Railroad	17.4	734	1,108	1,373	2,500

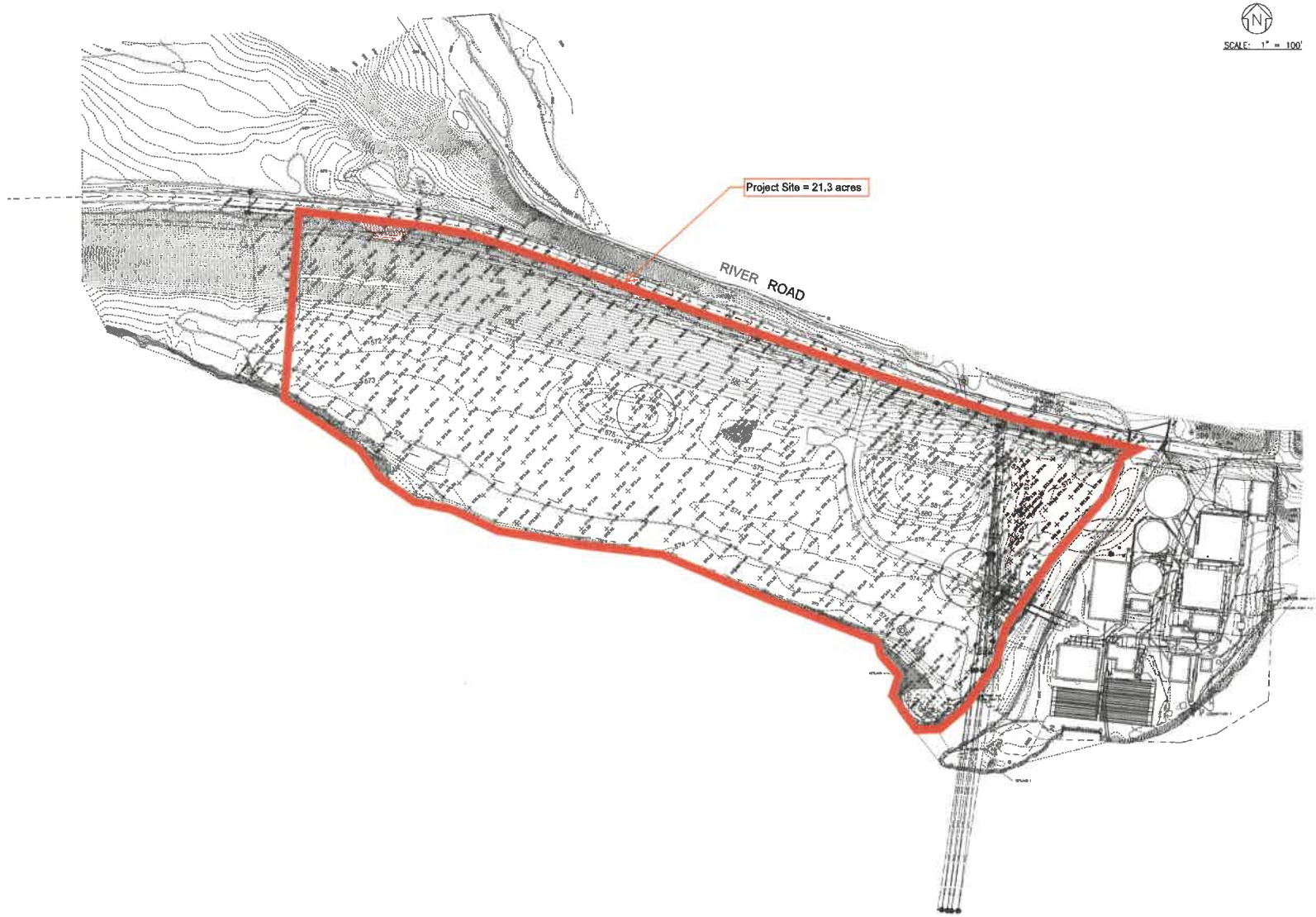
*Data not available

Exhibit 2: Fox River Tributary Drainage Area

Exhibit 4: Blackberry Creek Tributary Drainage Area

Table 7. Summary of Discharges

Flooding Source and Location	*Drainage Area (square miles)*	*Peak Discharges (cubic feet per second)* 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Aux Sable Creek					
Downstream of Bell Road	107.9	6,162	10,618	13,754	17,360
Downstream of US Highway 52	99.1	5,902	10,167	13,168	16,617
Just downstream of East Aux Sable Creek confluence	98.6	5,886	10,139	13,131	16,570
Downstream of McKanna Road	64.9	3,134	5,422	7,038	7,038
Just downstream of the convergence of Middle Aux Sable Creek and West Aux Sable Creek	63.8	3,054	5,285	6,861	8,676
Blackberry Creek					
Just downstream of Route 34	69.0	1,381	2,303	2,771	4,053
Just downstream of Route 47	67.5	1,366	2,284	2,749	4,026
Approximately 7,200 feet upstream of Route 47	65.2	1,349	2,260	2,721	3,991
Just downstream of Route 30	59.6	1,316	2,229	2,692	3,968
Clear Creek					
At confluence with Fox River	6.7	1,055	1,484	1,772	2,474
About 3,300 feet upstream of confluence with Fox River	6.4	1,003	1,413	1,701	2,371
About 2,000 feet downstream of Crimmin Road	3.9	677	994	1,181	1,676
At Crimmin Road	3.5	614	902	1,071	1,520
About 3,700 feet upstream of Crimmin Road	3.3	560	822	968	1,375
About 1,250 downstream of confluence with Dave-Bob Creek	2.87	495	726	855	1,214
At Chicago Road	2.53	408	590	718	1,003
At Main Street	2.01	311	435	538	759
About 1,000 feet upstream of State Route 71	1.6	231	381	462	670
Dave-Bob Creek					
At confluence with Clear Creek	0.3	65	100	115	145
At Unnamed Tributary	0.17	40	65	75	95
East Aux Sable Creek					
Just downstream of the confluence of East Aux Sable Creek Tributary A	33.7	2,871	4,908	6,330	7,960
Upstream of the confluence of East Aux Sable Creek Tributary B	27.8	2,533	4,328	5,581	7,015



SCALE: 1" = 100'

BAXTER & WOODMAN

CONSULTANTS

MILESTONE

REVISIONS

NO.	DATE	DESCRIPTION

* - REFER TO EQUIPMENT MANUFACTURER'S SHOP DRAWING

PLAN SHEET DESIGNATION

COVER
G - GENERAL
H - HAZARDOUS MATERIALS
O - CIVIL
L - LANDSCAPE
S - STRUCTURAL
A - ARCHITECTURAL
I - INSTRUMENTATION
Q - EQUIPMENT
F - FIRE PROTECTION
P - PLUMBING
M - MECHANICAL
E - ELECTRICAL
T - TELECOMMUNICATIONS
R - RESOURCE

PROJECT NO. 201643

SCALE: 1" = 100'
DATE: 1/18/21
DESIGNED BY:
DRAWN BY:
CHECKED BY:

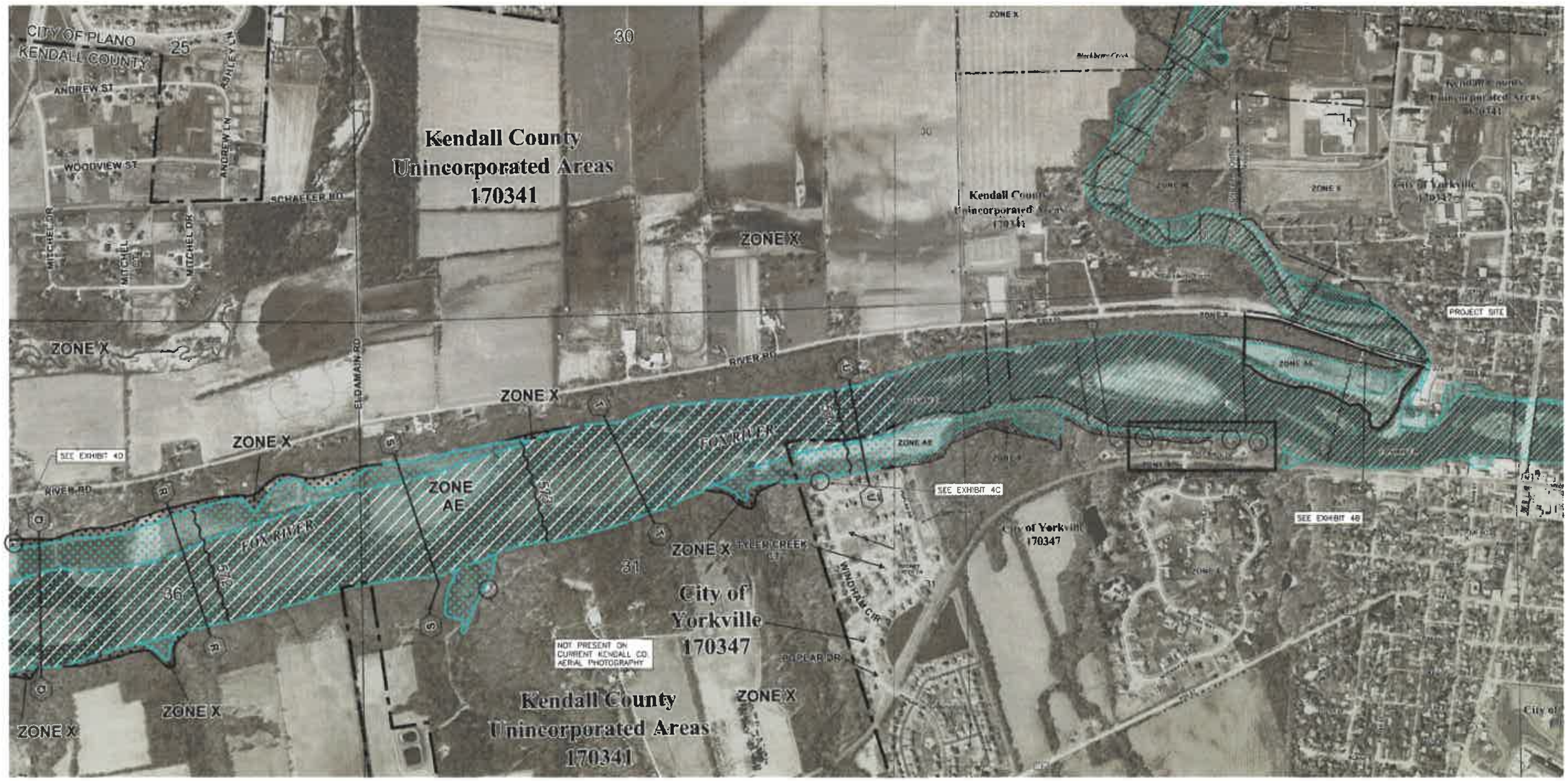
CLIENT

YORKVILLE-BRISTOL SANITARY DISTRICT

SHEET TITLE

Exhibit 5: Project Area

OF



LEGEND

○ DOWNSTREAM STRUCTURES MAPPED WITHIN REGULATORY FLOODPLAIN

BAXTER & WOODMAN	CONSULTANTS	REVISED – / REVISED – / REVISED – / REVISED –	YORKVILLE-BRISTOL SANITARY DISTRICT SOLIDS HANDLING IMPROVEMENT	EXHIBIT 6A: DOWNSTREAM STRUCTURES	DESIGNED – PDS / DRAWN – ABN / CHECKED – PDS / DATE – 8/6/2021	TOTAL SHEETS 1	SHEET NO. 1
				SCALE: AS NOTED PROJECT NO: 201643.40			

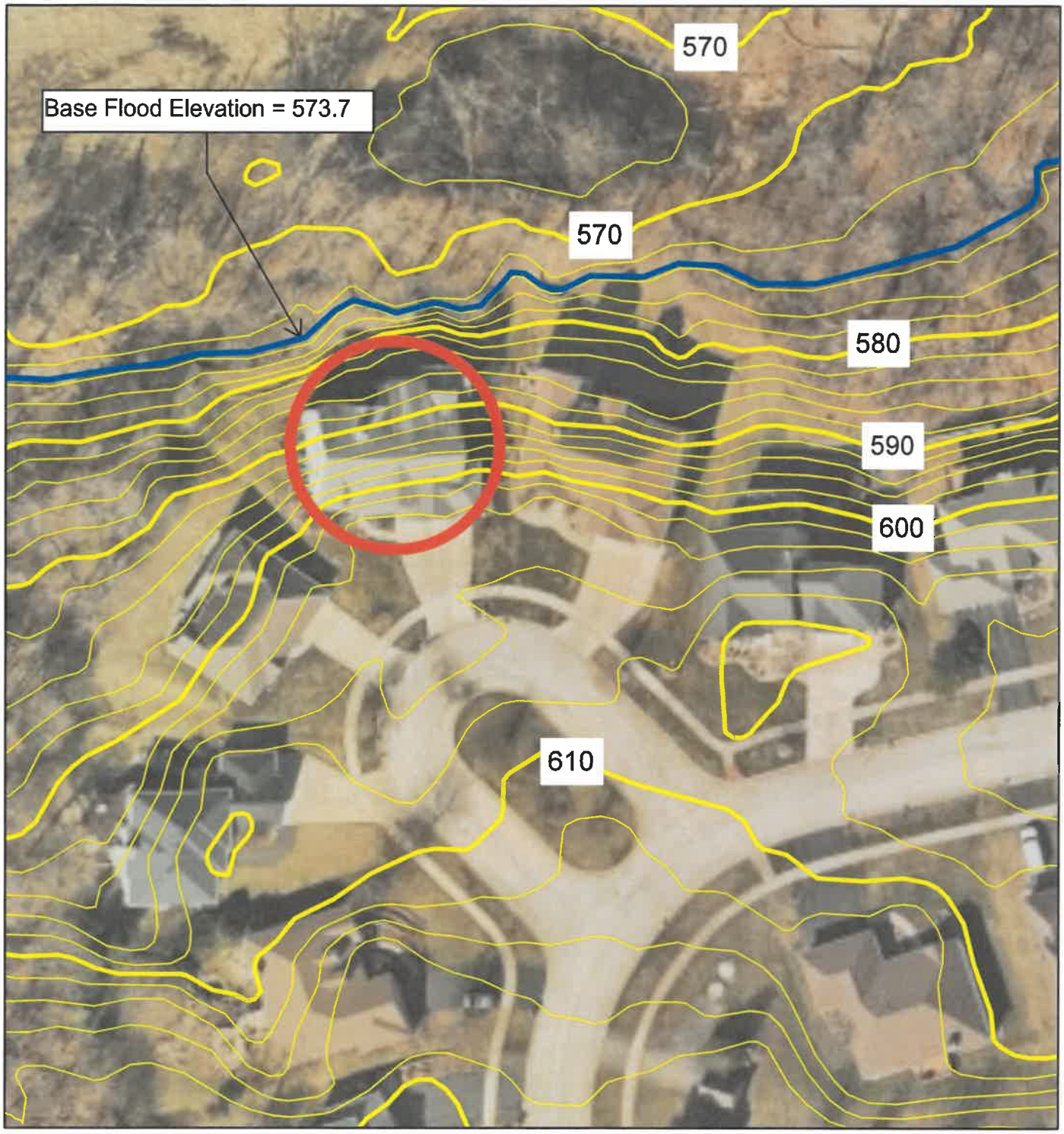
Kendall County Web GIS

August 5, 2021
2010 Contours
Contour
Index Contour

Exhibit 6B: Downstream Structures

1:1,200
0 0.01 0.02 0.04 mi
0 0.02 0.04 0.07 km

Kendall County Web GIS



August 5, 2021

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0 0.01 0.01 0.03 km

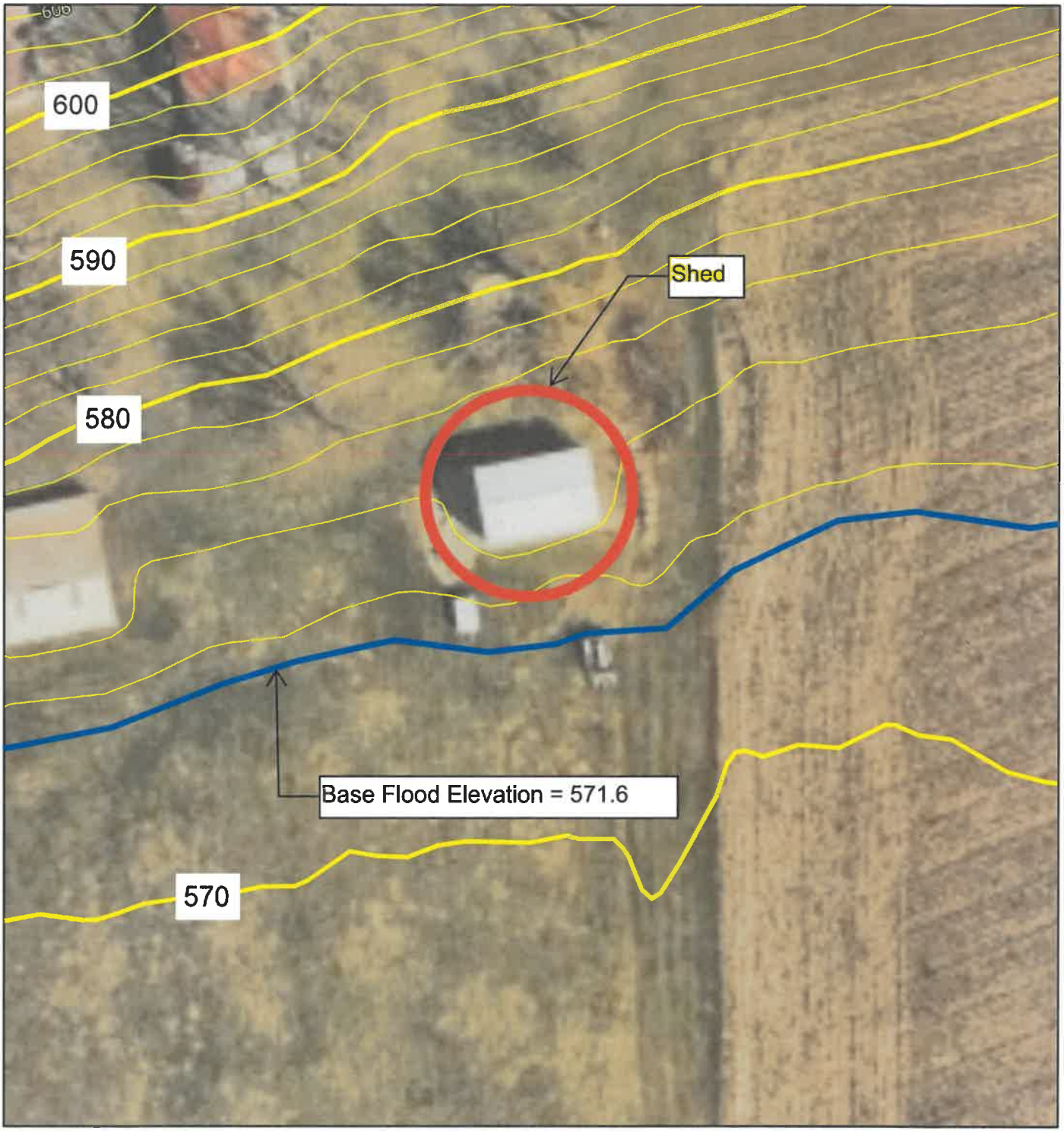
2010 Contours

Contour

Index Contour

Exhibit 6C: Downstream Structures

Kendall County Web GIS



August 5, 2021

1:720

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0 0.01 0.01 0.02 km

2010 Contours

Contour

Index Contour

Exhibit 6D: Downstream Structures

Exhibit 7: Will County Detention Exemptions

§ 55.020 GENERAL INFORMATION.

(A) *Other applicable regulations.* All developments shall meet the requirements specified for general stormwater development (§ 55.020), site runoff (§ 55.022), sediment and erosion control (§§ 55.035 through 55.047), performance security and maintenance (§§ 55.200 through 55.203).

(B) *Applicability of site runoff storage requirements (detention).*

(1) All developments shall comply with the site runoff storage requirements provided in §55.023 of this subchapter in which:

(a) More than two single-family structures or one two-family structure are to be constructed on a site five or more acres in size;

(b) Multi-family or nonresidential land use is to be constructed on a site more than one acre in size;

(c) Existing multi-family or nonresidential land uses on a site one acre or more in size, on which new development after the effective date of this chapter in the aggregate exceeds 25,000 square feet;

(d) Roadway developments in rights-of-way under the ownership or control of a unit of local governments when the contiguous area of new roadway construction (excluding previously paved areas) exceeds two acres; and

(e) The developer of a commercial or industrial redevelopment may request that a fee-in-lieu of detention be approved provided that all of the following are demonstrated to the sole satisfaction of the Administrator:

1. The drainage plan will not increase existing flood damages; and
2. The drainage plan provides a net benefit in water quality compared to the existing development.

(2) The Administrator shall determine the appropriate fee to be collected as defined in §55.215, and his or her decision in the matter shall be considered final.

(C) *Exemptions from site runoff storage requirements (detention).* Site run-off storage is not required under the following circumstances:

(1) Direct discharge industrial sites; and/or

(2) Non-industrial direct discharge sites 160 acres or less having the following minimum river frontage:

Site Area	***Required Frontage***
0—2 acres	50 feet
Up to 5 acres	100 feet
Up to 10 acres	150 feet
Up to 40 acres	200 feet
Up to 80 acres	350 feet
Up to 160 acres	500 feet

(Res. 02-441, passed 10-17-2002; Res. 02-495, passed 11-21-2002; Res. 04-87, passed 3-17-2004)

Exhibit 8: HEC-RAS Model Results

Table 1: Fox River HEC-RAS Model Results: 100-Year Floodplain Elevations

HEC-RAS Cross Section	Location	Existing 100-Year Elevation	Proposed 100-Year Elevation	Change (ft)
35.841	DS site limits	575.64	575.64	0.00
35.938		575.76	757.75	-0.01
36.050		575.85	575.85	0.00
36.068		575.94	575.96	0.02
36.151	FEMA Sect. W	576.01	576.04	0.03
36.201	US site limits	576.16	576.20	0.04
36.358		576.70	576.74	0.04
36.368	DS of Bridge St.	576.87	576.91	0.04
36.391	FEMA Sect. X	577.10	577.14	0.04

Table 2: Fox River HEC-RAS Model Results: 100-Year Channel Velocities

HEC-RAS Cross Section	Location	Existing 100-Year Velocity (ft/s)	Proposed 100-Year Velocity (ft/s)	Change (%)
35.841	DS site limits	3.17	3.22	1.6
35.938		3.24	3.43	5.9
36.050		3.31	3.44	3.9
36.068		3.18	3.30	3.8
36.151	FEMA Sect. W	4.67	4.79	2.6
36.201	US site limits	4.88	4.88	0.0
36.358		4.87	4.85	-0.4
36.368	DS of Bridge St.	4.00	3.97	-0.7
36.391	FEMA Sect. X	3.33	3.35	0.6

Table 3: Blackberry Creek HEC-RAS Model Results: 100-Year Floodplain Elevations

HEC-RAS Cross Section	Location	Existing 100-Year Elevation	Proposed 100-Year Elevation	Change (ft)
0	Fox River Confluence	573.36	573.36	0.00
275	FEMA Sect. A	574.17	574.18	0.01
558		576.84	576.84	0.00
676		576.84	576.84	0.00
702	DS of River Rd.	576.89	576.88	-0.01
732	US of River Rd.	577.43	577.42	-0.01
1115	FEMA Sect. B	580.73	580.73	0.00

Table 4: Blackberry Creek HEC-RAS Model Results: 100-Year Channel Velocities

HEC-RAS Cross Section	Location	Existing 100-Year Velocity (ft/s)	Proposed 100-Year Velocity (ft/s)	Change (%)
0	Fox River Confluence	5.22	5.22	0.00
275	FEMA Sect. A	11.42	11.46	0.35
558		4.80	4.80	0.00
676		6.48	6.48	0.00
702	DS of River Rd.	6.65	6.65	0.00
732	US of River Rd.	3.83	3.83	0.00
1115	FEMA Sect. B	8.93	8.93	0.00

COMPENSATORY STORAGE - POTENTIAL OFFSITE LOCATIONS

SOLIDS HANDLING IMPROVEMENTS

Yorkville-Bristol Sanitary District

EXHIBIT 9

Exhibit 10: USFW Report

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Kendall County, Illinois

Local office

Illinois-Iowa Ecological Services Field Office

(309) 757-5800
(309) 757-5807

Illinois & Iowa Ecological Services Field Office
1511 47th Ave
Moline, IL 61265-7022

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Indiana Bat Myotis sodalis Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Rusty Patched Bumble Bee Bombus affinis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9383	Endangered

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid Platanthera leucophaea Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/601	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink Dolichonyx oryzivorus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Dunlin Calidris alpina arcticola This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere
Henslow's Sparrow Ammodramus henslowii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31

King Rail Rallus elegans This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Least Bittern Ixobrychus exilis This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6175	Breeds Aug 16 to Oct 31
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Ruddy Turnstone Arenaria interpres morinella This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Variance Schedule	Days to Complete	Day	Date
B&W meet with YBSD to Review Approach and Prepare	7	Wed	7/14/2021
District Board Approves the Variance Approach		Mon	8/9/2021
1. Informal Meeting with City staff and Engineering (EEI)		**Mon**	**8/9/2021**
2. City provides initial staff comments on whether they will support variances	14	Mon	8/23/2021
3. City staff engages County for County Ordinance variances, if applicable	21	Mon	8/30/2021
4. Meeting with City & County Staff to finalize formal variance request	50	Tue	10/12/2021
5. Formal Variance Submittal		**Fri**	**10/15/2021**
6. Plan Council	**25**	Tue	**11/9/2021**
a. City staff and Engineering (EEI)			
7. Economic Development Committee (4 people)		Tue	**12/7/2021**
8. Public Notice Deadline	**21**	Tue	**12/28/2021**
9. Planning and Zoning Commission (Public Hearing)		Wed	**1/12/2022**
Approval process – City:			
10. Planning and Zoning provides Positive or Negative recommendation to City Council	12	Mon	1/24/2022
11. City Council Approval		Tue	**1/25/2022**
a. If positive recommendation received from Planning and Zoning, majority needed for approval			
b. If negative recommendation received from Planning and Zoning, super majority needed for approval			
Approval process – County:			
10. Planning and Zoning provides recommendations to County Board and Director.	0	Tue	1/25/2022
11. County Board grants variance, grants modified variance, or denies variance within 45 days of receiving written recommendations	**45**	**Fri**	**3/11/2022**