STATE OF INDIANA

INDIANA UTILITY REGLATORY COMMISSION

IN THE MATTER OF THE PETITION OF THE TOWN OF WINFIELD, LAKE COUNTY, INDIANA, FOR APPROVAL OF A REGULATORY ORDINANCE ESTABLISHING A SERVICE TERRITORY FOR THE TOWN'S MUNICIPAL SEWER SYSTEM PURSUANT TO IND. CODE § 8-1.5-6 *ET SEQ.*	)	**CAUSE NO.: 45992**

THE CITY OF CROWN POINT, INDIANA'S SUBMISSION OF THE VERIFIED REBUTTAL TESTIMONY AND EXHIBITS OF ALBERT STONG, P.E.

Petitioner/Intervenor, the City of Crown Point, Indiana, by counsel, submits the Verified Rebuttal Testimony of and Exhibits of Albert Stong, P.E., in this Cause.

Respectfully submitted,

/s/ Mark W. Cooper
Mark W. Cooper, an Attorney for the
City of Crown Point

/s/ Robert M. Glennon
Robert M. Glennon, Attorney for
Crown Point, Indiana

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing has been served upon the following counsel of record by electronic mail this 26th day of September 2025:

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STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE PETITION OF THE TOWN OF WINFIELD, LAKE COUNTY, INDIANA, FOR APPROVAL OF A REGULATORY ORDINANCE ESTABLISHING A SERVICE TERRITORY FOR THE TOWN'S MUNICIPAL SEWER SYSTEM PURSUANT TO IND. CODE § 8-1.5-6 ET SEQ	**)))) CAUSE NO. 45992)))**

VERIFIED REBUTTAL TESTIMONY
of
ALBERT STONG, P.E.

On Behalf of Petitioner
The City of Crown Point, Indiana

Crown Point's Exhibit No. 8

INTRODUCTION

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A1. My name is Albert Stong, and my business address is 7256 Company Drive, Indianapolis, Indiana.

Q2. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A2. I am a Professional Engineer licensed in the State of Indiana and a Senior Project Manager for Commonwealth Engineers, Inc., where I have been employed for the past 28 years.

Q3. ARE YOU THE SAME ALBERT STONG WHO PRE-FILED DIRECT AND RESPONSIVE TESTIMONY IN THIS CAUSE?

A3. Yes.

Q4. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING?

A4. The purpose of my testimony is to respond to the responsive testimony of the Town of Winfield, Indiana's ("Winfield") witnesses Jeremy Lin, Zach Beaver, and Michael Duffy regarding engineering matters and certain other regulatory and service concerns on behalf of the City of Crown Point, Indiana ("Crown Point").

Q5. ARE YOU SPONSORING ANY ATTACHMENTS TO YOUR TESTIMONY?

A5. Yes, they are identified as follows:

Exhibit 8-1: United States Environmental Protection Agency ("EPA") Enforcement and Compliance History Online ("ECHO") Compliance Comparative Analysis

Exhibit 8-2: Crown Point Updated Growth Projections

SUMMARY OF CONCLUSION

Q6. PLEASE PROVIDE AN OVERVIEW OF YOUR REBUTTAL TESTIMONY.

A6. **OVERVIEW**

My rebuttal testimony on behalf of the City of Crown Point is in response to Winfield witnesses Jeremy Lin, Zach Beaver, and Michael Duffy. This testimony defends Crown Point's engineering plans, capacity, compliance timeline, and suitability to serve the Disputed Area,[1] and challenges Winfield's planning, cost efficiency, and operational record. The bottom line: the Commission should deny Winfield's request and grant Crown Point exclusive water and wastewater rights across the Crown Point Requested Territory,[2] including the Disputed Area.

ENGINEERING & CAPACITY

New SE WWTP and Schedule. Crown Point's program simultaneously satisfies the Indiana Department of Environmental Management's ("IDEM") 2007 Agreed Judgment and 2023 Agreed Order while enabling growth in the existing and expanded service areas. The new Southeast Wastewater Treatment Plant ("SE WWTP") is designed and in permitting, with bidding and construction planned to start in early 2026 based on the scheduled financing closing date. The Crown Point projects are on track for IDEM's two-year post-construction monitoring window beginning January 2028. Interim dates may shift while final completion remains on time as allowed by IDEM.

[1] The Disputed Area is the rural area in Lake County, Indiana in which both Winfield and Crown Point seek to provide wastewater service.
[2] "Crown Point Requested Territory" refers to the entire rural area in which Crown Point seeks to become the exclusive provider of water and wastewater service in this Cause and Cause No. 46035. The Crown Point Requested Territory is defined by Crown Point's Ordinance No. 2025-02-08.

Crown Point Is the More Efficient Provider. Locating the SE WWTP closer and at a downhill hydraulic point to the Disputed Area allows Crown Point to serve nearly the whole area with 1 mile of gravity sewer. Comparatively, Winfield's concepts of multiple "daisy-chained" lift stations and force mains over several miles that would require repeated expansions, odor control and chemical systems, pretreatment at the plant, and higher operations and maintenance ("O&M") and reliability risk (clogged pumps, power interruptions, valve/supervisory control and data acquisition ("SCADA") issues). Crown Point's service capital costs for gravity sewer are estimated at $4.6 million. Winfield's service capital costs for "daisy-chained" lift stations and force mains concept are estimated to be $24.9–$29.7 million. Crown Point's gravity sewer line has a far lower lifetime O&M compared to Winfield's lift stations. Crown Point's new SE WWTP batch-treatment design is better suited to variable flow from rapid development than Winfield's flow-through process.

Crown Point Has Existing Capacity. Winfield's claims that Crown Point lacks capacity or has "allocated all" of its existing plant are false. Using Monthly Reports of Operation ("MRO"), Winfield's 1.6 million gallon per day ("MGD") rated WWTP averages ~0.4 MGD, leaving ~1.2 MGD; Crown Point's 5.2 MGD rated WWTP averages ~4.0 MGD, also leaving ~1.2 MGD. Crown Point recently finished (March 2025) Phase 1 of 4 Improvements projects. The recently finished projects were focused on improvements at the existing WWTP improvements to address past performance contributors. Both Crown Point and Winfield sanitary utilities have records of effluent violations, but Winfield's separate-sewer, Class II plant (with fewer required samples) recorded more

effluent violations over the last five years than Crown Point's larger, more complex Class III combined-sewer plant.

Consistent with 20-Year Capacity Plan. The planning period (2025–2045) projects ~11.8 MGD average-day flow at buildout across Crown Point's existing and expanded territories. The existing 5.2 MGD plant carries the load until the SE WWTP's initial 2 MGD phase comes online (targeted late 2027). Subsequent phased expansions of the SE WWTP (ultimately to ~12 MGD) together with the existing plant can provide up to ~17.2 MGD average-day capacity—which is well above 20-year needs. The 2025 capacity memo Table 2 baseline was corrected in an updated analysis and there is no basis for a "sewer ban" assertion.

PLANNING & SERVICEABILITY

Winfield Has No Actual Plan. Winfield has not produced genuine utility master planning for serving areas beyond its corporate limits. Winfield's 2016 sanitary master plan covers only its current corporate limits and it does not serve any customers outside its corporate boundaries. Winfield's 2006 and 2023 comprehensive plans are land-use documents, not utility plans. By contrast, Crown Point's Combined Sewer Overflow ("CSO")-driven, multi-phase program integrates collection and treatment upgrades, growth projections, alternatives analysis, costs, and sequencing over 20 years. Winfield's submittals are incomplete, conceptual, and cost inflating.

Crown Point Is Ready to Serve the Developer and its EDUs – Winfield is Not. Winfield overstates the Edward J. Hein and LBL Development, LLC ("LBL" or "Developer") property's role: of 400 acres inside Winfield, only about 150 are developable (~440 homes across three subdivisions that don't overlap the Disputed Area). LBL also

plans to develop ~360 of 400 acres east of Winfield **in Crown Point**/undisputed areas (~1,976 EDUs). Comparatively, Developer is planning to contribute more than 4-fold the EDUs in Crown Point than in Winfield. Within the Disputed Area, Developer plans an additional ~2,981 EDUs. Winfield's Gibson Street Lift Station can accept only ~330 EDUs today — insufficient even for Winfield's in-Town Developer portion. This underscores the scale gap between Winfield's "serve in under a year" claim and the total requested service required.

With Crown Point, Customers Will Have One Water and Wastewater Utility. Having one provider for water and wastewater is efficient for coordination, construction, and billing. Winfield lacks a water utility and would rely on Indiana American Water Company, Inc. ("Indiana American") for water, creating segmented service and missed efficiencies (*e.g.*, concurrent excavation, installation, restoration of and for water and sewer lines).

REGULATORY & PERMITTING

Crown Point Is Complying with IDEM Requirements. Combined-sewer communities must adopt Long-Term Control Plans and enter agreed orders/judgments documenting projects and schedules; these are not "indictments" of operations, but the standard path for combined sewer overflow ("CSO") compliance. Crown Point submits quarterly updates and remains on track for the post-construction monitoring window beginning January 2028 and ending January 2030.

Antidegradation/National Pollutant Discharge Elimination System ("NPDES") Path. For the SE WWTP, the Antidegradation Demonstration was public-noticed August 30, 2024 through October 10, 2024 with no comments. The normal

antidegradation/NPDES sequence is: antidegradation review and notice, construction permit (submittal of plans/specifications), then NPDES draft/notice, and final issuance. Winfield's assertions about Crown Point's supposed "lack of approvals" reflect Winfield's misunderstanding the chronology; our firm has never been denied such permits and expects success here as well. Endangered-species concerns (e.g., a marsh wren reference), have been addressed. The United States Fish and Wildlife Service ("USFWS") Information for Planning and Consultation ("IPaC") review did not identify a threatened/endangered bird affecting the site, and IDEM's antidegradation notice drew no comments on that issue.

Crown Point Complies with the Commission's Main Extension Rules. On the hypothetical pre-plant 3,900-foot gravity line to serve an early user near U.S. 231, such extension would be done consistent with applicable main-extension rules. In any case, Developer has indicated service is not needed until 2028, after the SE WWTP is online.

Alleged "Denials" of Service. I rebut the idea that Crown Point "denied" connections, explaining examples where developers, after being shown needed improvements, chose not to proceed or to time later phases in alignment with the multi-phase program; prudent, collaborative decisions rather than blanket refusals.

COMPARATIVE COMPLIANCE & OPERATIONS

Violation History. Winfield's criticism of Crown Point's IDEM violations requires context: Crown Point's Class III CSO plant samples more frequently and treats a more variable/complex flow than Winfield's Class II separate-sewer plant. Even so, Winfield recorded more total and "significant/category I" effluent violations over the past five years than Crown Point. Past phosphorus exceedances were tied to COVID-era supply chain delays for disc filter replacements. The SE WWTP will carry stringent, staged phosphorus

limits designed to meet Total Maximum Daily Load ("TMDL") requirements (tightening as capacity expands).

TIMING, GROWTH, AND PRUDENCE

No "Premature" Expansion. Crown Point's treatment capacity expansion is not premature. The four-phase capital plan (>$200 million identified; >$100 million closed/allocated across phases 1–2; financing in place for phase 3 including the SE WWTP) is built to meet both CSO compliance and growth, spreading fixed costs across a larger base and supporting economic development. By contrast, Winfield's uphill, lift-station-driven scheme is uneconomic, operationally fragile, and developer-rejected.

Statutory arguments. While I am not an attorney, I observe that Indiana Code § 8-1-1.9-5 states that the statute obligates the Commission—not the utility—to conduct an informal review after a post-June 30, 2022 enforcement order; it does not impose new affirmative duties on Crown Point or bar its territorial requests. Crown Point has disclosed and addressed its IDEM orders throughout this case.

CONCLUSIONS

Crown Point is uniquely positioned to serve the Disputed Area more reliably and cost-effectively than Winfield. The Commission should deny Winfield's territorial claim and grant Crown Point exclusive authority over water and wastewater service in the Crown Point Requested Territory, including the Disputed Area.

RESPONSE TO WINFIELD TESTIMONY ON ENGINEERING MATTERS

Q7. MR. LIN CLAIMS WINFIELD WAS NOT ABLE TO DETERMINE IF THE CONSTRUCTION COMMENCEMENT DATE FOR THE SE WWTP, AS IDENTIFIED IN THE PER DOCUMENT, THE 2007 AGREED JUDGEMENT,

AND THE 2023 AGREED ORDER. IS CONSTRUCTION PROCEEDING ON TIME?

A7. Yes. The project is designed and being permitted. The project will bid and commence construction in early 2026 based upon the funding agency identified closing date on loan. The project will be completed in time to afford commencement of the 2-Year Post Construction Monitoring Period starting January 2028.

Q8. MR. LIN NOTES THE PROJECTS SET FORTH IN CROWN POINT'S PRELIMINARY ENGINEERING REPORT ("PER") WERE NECESSARY TO COMPLY WITH THE 2007 AGREED JUDGMENT AND 2023 AGREED ORDER (COLLECTIVELY, THE "IDEM ENFORCEMENT ORDERS") FROM IDEM. DO YOU AGREE?

A8. Mr. Lin is correct in part. We developed a project that not only affords compliance with the 2007 Agreed Judgement and 2023 Agreed Order, but also supports future growth potential within Crown Point's existing service area and the requested expansion to service area.

Q9. MR. LIN INDICATES HE IS NOT SURE CROWN POINT APPLIED FOR A CONSTRUCTION PERMIT FROM IDEM FOR THE NEW SE WWTP BY DECEMBER 2024 AS PROVIDED FOR IN THE PER, WHICH HE CLAIMS COULD POTENTIALLY AFFECT THE IDEM COMPLIANCE PLAN TO HAVE THE CONSTRUCTION COMPLETED BY DECEMBER 2027. IS THIS A VALID CONCERN?

A9. No. Crown Point provides quarterly updates on project schedule and status to the IDEM Office of Water Quality ("OWQ") Enforcement Section for Agreed Order ("AO") Case

No. 2022-28739-W and major milestone updates for Agreed Judgment 49D06-07-09-CC-040349 to the IDEM OWQ Permits Branch CSO Project Manager. It is not unusual for CSO Long Term Control Plan ("LTCP") or AO Compliance Plan ("CP") identified projects to have their interim schedule dates adjusted while maintaining final completion dates. Crown Point remains on schedule for project completion by the identified 2-Year Post Construction Monitoring Period starting January 2028.

Q10. MR. LIN DOES NOT VIEW THE FACT THAT CROWN POINT HAS BOTH WATER AND WASTEWATER UTILITIES PERSUASIVE AND ASSERTS TO DISTINGUISH WINFIELD AS INFERIOR BECAUSE ITS RESIDENTS PURCHASE WATER DIRECTLY FROM INDIANA-AMERICAN RATHER THAN ON A WHOLESALE BASIS SEEMS "SILLY." DO YOU AGREE THIS DISTINCTION IS "SILLY"?

A10. No. As a starting point, I would note that Crown Point's provision of both water and wastewater utilities simplifies billing, which benefits customers. Further, it is efficient (not silly) to have the capability to coordinate water and sewer service concurrently. Utility improvements projects can be streamlined for cost savings and service of both inter-related and required utilities are assured by having one service provider. For example, if a sewer line is required to be installed along a road, the road may require repair after completion. The same may occur if a water line is installed down a road. It is more efficient and cost-effective to mobilize one contractor, run both lines concurrently, and make one repair on anything damaged, and bring customers on-line concurrently with both water and sewer services.

Q11. MR. LIN ARGUES WINFIELD AND INDIANA AMERICAN WILL SERVE THE 400 ACRES OF THE DEVELOPER'S DEVELOPMENT[3] CURRENTLY WITHIN WINFIELD AND THEREFORE, IT MAKES THE MOST SENSE TO HAVE THE SAME PROVIDER THROUGHOUT THE DEVELOPMENT. HOW DO YOU RESPOND?

A11. This is not a valid reason to grant Winfield the territory, especially given that Developer is opposed to receiving water service in this manner and that Winfield has even failed to provide wastewater service to the Developer property within Winfield. It is noteworthy that Winfield seems to overstate the size and relevance of the Developer property within Winfield and its relationship with the other areas of development. Of the 400 acres owned by Developer within Winfield corporate limits, only 150 acres of Developer's property is actually available for development, as identified planned by Developer. It is my understanding that this area will contribute 440 homes once fully developed. This area is inclusive of three (3) separate and distinct subdivisions with no overlap into the Disputed Area. Additionally, Developer is also planning to develop some 400 acres east of Winfield both within Crown Point and undisputed service territory requested by Crown Point. Of these 400 acres, 360 acres is identified to be developed by the Developer. This area is identified for planning purposes to contribute approximately 1,976 EDUs worth of flow; more than 4-fold that in the smaller Developer area in Winfield. Applying Winfield's logic,

[3] "Development Area" and "Development" are used interchangeably, and both terms refer to a parcel of land owned or controlled by Developer and Edward J. Hein near Crown Point and Winfield on which Developer plans to build a master planned community comprising residential, commercial, and industrial properties. The Development Area includes land in both the Disputed Area and within the municipal boundaries of the Town of Winfield.

Crown Point in turn should serve the Disputed Territory since Crown Point is already serving the majority of Developer's land area.

Q12. MR. LIN ASSERTS THAT YOUR STATEMENT THAT THE LAKE MICHIGAN WATERSHED PREVENTS SEWER SERVICE BY WINFIELD IN THE DISPUTED AREA IS "SIMPLY WRONG." HOW DO YOU RESPOND?

A12. Mr. Lin should revisit my testimony. I did not state the Lake Michigan watershed prevents sewer service by Winfield in the disputed area. I did, however, indicate that one of many reasons Crown Point is better suited to serve the Disputed Area than Winfield is because Crown Point could provide both water and sewer services, whereas Winfield can only provide sewer services.

The Crown Point water and sewer utilities will install and repair water and sewer lines. The utilities will send bills to customers for service. Having both utilities under Crown Point clearly creates administrative efficiencies. Further, when invasive activities are required (i.e., digging) it is more desirable and cost effective for both utilities to be under Crown Point. Both water and sewer needs can be evaluated holistically. This approach will result in concurrent installation of needed utilities, when possible, which will better serve customer needs. This approach will also result in more economic projects. For instance, if Crown Point was providing both water and sewer services, Crown Point could internally coordinate timing of invasive projects so only one surface restoration is required (road repair, sidewalk replacement, etc.) versus two separate and potentially duplicative repairs when under two separate utilities.

Q13. MR. LIN CLAIMS WINFIELD HAS COMPREHENSIVE MASTER PLANS TO GUIDE IT IN BUILDING AND DEVELOPING A SEWER SYSTEM THAT CAN

READILY PROVIDE SERVICE IN DIFFERENT CONFIGURATIONS TO MEET ACTUAL DEVELOPMENT. BASED ON YOUR REVIEW OF WINFIELD'S TESTIMONY AND ATTACHMENTS IN THIS MATTER, ALONG WITH WINFIELD'S DISCOVERY RESPONSES, DO YOU AGREE?

A13. No. Winfield does not have a comprehensive Master Plan. Winfield's 2016 Sanitary Utility Master Plan provides no provisions for service outside of existing corporate limits. The only information provided by Winfield identifying concepts to serve areas outside of corporate limits is that which is provided as part of the Commission's process of testimony and discovery in this Cause. Based on what Winfield has provided to date in its testimony and attachments and in response to discovery requests, it is my view that Winfield's concepts are incomplete, obtuse, and closer to "wish lists" than anything Winfield has planned.

Winfield has provided 2006 and 2023 Comprehensive Plans and makes claims and innuendo that they are somehow akin to utility Master Planning. They are not. These documents are not intended to show, nor do they show, any plans for sanitary utility improvements. As stated previously, Comprehensive Plans identify vision of land use; they do not identify detailed improvements alternatives for utilities. The next step in the process would be to take this identified land use and translate it into a utility service area, identify anticipated growth, and determine utility demands and corresponding infrastructure improvements requirements and costs. Clearly this was not done by Winfield, as land use concept was identified in 2006, but the 2016 Sanitary Master Plan service area is limited to Winfield corporate limits.

Master Planning is a proactive rather than reactive approach to managing the wastewater utility. Master Planning ensures infrastructure investments are viable, cost-effective, and in the best interest of the utility and corresponding service area. Master Planning provides a long-term road map of future demands for flow conveyance and treatment requirements. Master Planning makes clear the investment requirements. Master Planning maximizes efficiency of project implementations. In short, Master Planning is an irreplaceable resource to aid in making decisions regarding capital improvements and projects prioritization. Winfield has no Master Plan.

Master Planning is required to obtain financing from agencies such as the United States Department of Agriculture ("USDA") Rural Development ("RD"), Indiana Finance Authority ("IFA") State Revolving Loan Fund ("SRF"), and Office of Community and Rural Affairs ("OCRA").

A Sanitary Master Plan is a plan for improvements that would be required based upon a 20-year projection of service area growth. Infrastructure such as sanitary sewers have a 75-year to 100-year useful life. Responsible utilities do not "knee-jerk" design based on isolated needs. If this were the case, every time a new subdivision was built, a small gravity sewer would be placed in the subdivision routed to a small lift station. That small lift station would have a force main routed directly to the WWTP or to another lift station that is upgraded to accommodate that flow and "daisy-chain" pump to treatment.

Q14. MR. LIN ARGUES THE LOCATION OF CROWN POINT'S PROPOSED WWTP DOESN'T NECESSARILY CREATE A MORE EFFICIENT MANNER OF SERVICE THAN WINFIELD'S WWTP. HOW DO YOU RESPOND?

A14. I disagree. Crown Point's new SE WWTP is located closer to the Disputed Area than Winfield's WWTP and, critically, provides a far more favorable downhill elevation connection point affording gravity sewers versus Winfield's need to pump up hill to its distant WWTP. A lesser distance of travel via gravity sewer is more efficient and cost effective. Furthermore, Crown Point's new SE WWTP will be constructed and operated regardless of who is awarded service of the Disputed Area, therefore, none of these additional utilities or costs are intended solely for the Disputed Area; rather the design is complementary and supportive of providing service to this area. Finally, the electric load at the SE WWTP will be so great that it likely will qualify for cost-free extensions of service.

Q15. MR. LIN ASSERTS THE PROPOSED CROWN POINT SE WWTP AND THE EXISTING WWTP WITH VIOLATION DEFICIENCIES WOULD NOT BE MORE EFFICIENT THAN THE EXISTING WINFIELD WWTP, WHICH CAN BE "EASILY EXPANDED" TO ACCOMMODATE ADDITIONAL FLOW FOR THE DISPUTED AREA, WHILE CROWN POINT WOULD NEED TO CONSTRUCT AN ENTIRELY NEW WWTP DUE TO THE LACK OF CAPACITY AND ISSUES WITH THEIR EXISTING FACILITY. DO YOU AGREE?

A15. No. First, Crown Point's existing WWTP is not capacity deficient. This is one of many of the false narratives Winfield has been attempting to weave. To be clear, Crown Point's existing WWTP has the same amount of available treatment capacity as Winfield based on MRO data:

- Winfield's WWTP is rated for 1.6 MGD, Winfield MROs identify 0.4 MGD average design flow at the WWTP, remaining capacity at Winfield's WWTP is 1.2 MGD.
- Crown Point WWTP is rated for 5.2 MGD, Crown Point MROs identify 4.0 MGD in dry weather average design flow, remaining capacity at Crown Point WWTP is 1.2 MGD.

Second, Crown Point's existing WWTP has undergone an approximately $30 million Improvements Project, which was completed in March of 2025, to address the issues which contributed to many of Crown Point's past historical violations identified in Crown Point's Agreed Order.

Third, all sanitary utilities, especially those with combined sewers, have a history of IDEM violations. Winfield, a non-CSO utility, has a poor IDEM violation history. Referencing **Exhibit 8-1**, a review of the past five (5) years of regulatory compliance for both Crown Point and Winfield facilities reveals Winfield had 57 effluent violations, over 40% more effluent violations over this period than Crown Point. It is also important to understand that Crown Point Operates a Class III WWTP, which treats a combined sewer system, whereas Winfield operates a Class II WWTP which treats a separate sanitary sewer system. Crown Point's Class III WWTP is larger and more complex than Winfield's Class II WWTP and has a greater water quality testing frequency. Crown Point, as a Class III facility, is required to test for several parameters (CBOD5, TSS, E. coli, and Ammonia-Nitrogen) 260 times annually, whereas Winfield as a Class II facility is required to test for the same parameters 156 times annually. The more complex and more frequently tested

Crown Point WWTP operated with fewer violations over that past five years than Winfield's more simplistic and less frequently tested facility.

Fourth, the State Judicial Agreement ("SJA") Crown Point has entered into is the mechanism IDEM requested of Crown Point to document the conclusions in its long-term control plan and commit to the identified improvements projects — similar to over 100 other combined sewer utilities across the State of Indiana — is therefore not an indictment on how well the facility is run.

Fifth, Crown Point is not constructing an entirely new WWTP because of current treatment capacity deficiencies and associated treatment needs of the Disputed Area. Crown Point is constructing a new WWTP due to comprehensive Master Planning, alternative projects identifications, and well thought out conclusions on the best means of achieving mandated CSO LTCP objectives while also providing project synergies to accept future customers both within Crown Point and throughout the requested expanded service area.

Sixth, Crown Point offers a more efficient means of treatment for the expansion of the service area than Winfield. Crown Point's new SE WWTP is a "batch" treatment system, whereas Winfield's existing WWTP is a flow-through treatment system. Batch treatment systems are better equipped to handle wide variations in flows — such as those realized through the rapidly developing Disputed Area.

Seventh, Crown Point's plan for collection and conveyance of flows is more efficient than Winfield's plan. Crown Point requires less than one mile of gravity sewer to service the entirety of the development within the Disputed Area by its new SE WWTP. Further, Crown Point has coordinated with the Developer to extend this line in a manner

that it will serve as a point of connection along US 231 to serve the entirety of the Disputed Area. Winfield's improvements concepts illustrate a requirement for a series of costly lift stations and force mains and corresponding costly capacity improvements to those lift stations and force mains as new users are added to the system.

Eighth, Winfield's improvement concepts involving "daisy-chained" lift stations and duplicative runs of force main are not just cost prohibitive to construct, but also far less cost efficient to operate and maintain.

Ninth, Crown Point's more efficient means of wastewater conveyance to treatment is more cost efficient from both capital improvements costs and ongoing operation and maintenance costs. Crown Point's gravity sewer is estimated to cost $4.6 million. Winfield's equivalent lift stations and force mains improvements are estimated to cost between $24.9 million and $29.7 million. The gravity sewers' annual O&M costs are minimal. Gravity sewer has a 75-year useful life, and on occasion it may requiring cleaning or limited repair. Many gravity sewers have been in operation for over 75 years without need for any such repairs. Conversely, lift stations' and force mains' annual O&M costs are much more significant. Lift stations' annual O&M costs typically include

(1) pump inspections;

(2) pump replacements;

(3) wet well cleaning;

(4) SCADA system maintenance;

(5) odor control facilities maintenance;

(6) chemical feed facilities maintenance;

(7) flow meter calibration;

(8) check valve and backflow prevention device maintenance;

(9) backup generator maintenance;

(10) electrical operational cost;

(11) cost of chemicals for odor control and hydrogen sulfide formation mitigation, and

(12) as-needed equipment replacement costs.

Tenth, Winfield's proposed phased-capacity, daisy-chain lift station system will result in the need for additional facilities to mitigate the corresponding detrimental impact on the raw sewage it is required to convey. These lift stations will require odor control and chemical feed facilities. A pretreatment facility is also likely required at the existing Winfield WWTP to deal with the anaerobic waste resulting from Winfield's ill-conceived concepts if implemented.

Eleventh, Winfield's lift station pumping alternative introduces unnecessary risks when compared to Crown Point's gravity sewer. Mechanical equipment fails; pumps clog, power supply can be lost during inclement weather, valves can stick, SCADA can go offline, etc. No such risks of failure are present with gravity sewers. Winfield's own 2006 Comprehensive Plan mentioned the prudency of considering a new WWTP south of the existing WWTP if expansion of its service area was desired to eliminate the costs and risks associated with lift stations. But instead of following their own recommendations and developing the concepts via Sanitary Master Planning, Winfield (1) failed to even consider the expanded service area in its 2016 Sanitary Master Plan and development of improvement alternatives, and (2) now proposes the very same type of system that was discouraged by their own Comprehensive Plan some 20 years prior.

Q16. MR. LIN DISAGREES WITH YOUR CONCLUSION THAT CROWN POINT IS THE ONLY UTILITY THAT HAS IDENTIFIED INFRASTRUCTURE CAPABLE OF RECEIVING FLOWS OF THE MAGNITUDE ANTICIPATED FOR THE DISPUTED AREA AND TRANSPORTING THIS FLOW FOR TREATMENT, ARGUING THAT: (1) CROWN POINT WILL HAVE TO BUILD INFRASTRUCTURE TO ACCOMMODATE THESE FLOWS (AND, MR. LIN ASSERTS, CROWN POINT HAS ALREADY ALLOCATED ALL THE AVAILABLE CAPACITY AT ITS EXISTING WWTP); AND (2) WINFIELD HAS SUFFICIENT TRANSMISSION AND TREATMENT CAPACITY TO SERVE THE DISPUTED AREA. HOW DO YOU RESPOND?

A16. Mr. Lin is incorrect. First, Crown Point has not already allocated all available capacity at its existing WWTP. Crown Point's existing WWTP has the same 1.2MGD of existing treatment capacity as Winfield's existing WWTP.

Second, Crown Point is building infrastructure to meet the terms outlined in its existing Agreed Judgement. These projects also provide flow conveyance and treatment capabilities to serve growth projected over 20 years within Crown Point's existing service area and throughout Crown Point's requested expansion to service area – including the Disputed Area. **Exhibit 5-2** presents updated flow projections demonstrating this capability is achieved.

Third, Winfield does not have sufficient capacity to serve the Disputed Area. Winfield has identified only 330 EDU pumping capacity from its existing Gibson Street Lift Station. This available capacity is insufficient to serve the Developer-identified 440 homes planned within Winfield corporate limits, let alone the additional 2,981 EDUs (total

3421 EDUs) identified required by Developer in the Disputed Area. It is also noteworthy that the 3,421 EDUs identified by Developer are not the only developments that will occur in the Disputed Area.

Crown Point's detailed Master Planning clearly illustrates Crown Point's capabilities to service 20-year growth in Crown Point and the entirety of the Crown Point requested expansion to service territory which includes the disputed area. Purportedly comparative information from Winfield includes:

1. An almost decade-old Sanitary Master Plan that does not consider wastewater service requirements outside of Winfield Corporate Limits.

2. Conclusions in that almost decade-old Sanitary Master Plan identifying a wastewater treatment capacity requirement for Winfield Corporate Limits alone of 1.8 MGD; which is more than Winfield's current WWTP rating of 1.6 MGD.

3. Poorly conceived and ill-defined improvements to Winfield's collection and conveyance system inclusive of "daisy-chained" lift stations and force mains to convey wastewater from the Winfield's requested expansion in service territory, including the disputed area, several miles to Winfield's existing WWTP.

To date, Winfield has not identified capability to service the Disputed Area. Winfield has not presented:

1. Updated flow projections for the entirety of the Winfield existing and requested service area for a 20-year planning period.

2. Identification of defined capacity conveyance and treatment requirements associated with the flow projections over the 20-year time frame.

3. Phased capacity improvements projects scopes and schedules to achieve 20-year need.

Q17. MESSRS. LIN AND DUFFY CONTEND WINFIELD CAN PROVIDE PROMPT SERVICE TO THE DISPUTED AREA IN LESS THAN A YEAR. DO YOU BELIEVE THAT IS POSSIBLE?

A17. No. As I will explain, Winfield cannot provide reasonable service to the Disputed Area in any period of time. Crown Point can promptly provide service with an approximate one mile long gravity sewer installed from the Disputed Area to Crown Point's new SE WWTP can be designed, permitted and installed within one year. The prompt provision of service to the Disputed Area is unlikely since the timeline and manner of improvement have already been coordinated between Developer and Crown Point. But, Crown Point can do so if necessary.

For Winfield to provide this same level of service, the following complex and costly improvements have been identified by Winfield as required: (1) install a lift station and force main in the Disputed Area to pump partial flow demand to Winfield's existing Gibson Street Lift Station; (2) improve the Gibson Street Lift Station by adding a pump and parallel force main routed to the 117th Avenue Lift Station; (3) perform some manner of phased pumping improvements projects in the Disputed Area to the new lift station to increase its pumping capacity to match the improved Gibson Street Lift Station's pumping capacity; (4) perform some manner of pumping improvements projects in the disputed area to pump remaining flows not conveyed by the improved Gibson Street Lift Station east to a Proposed Lift Station No. 1; (5) install a Proposed Lift Station No. 1 with capability for phased pumping capacity improvements and route the force main north and west to

Winfield's existing WWTP; and (6) perform periodic capacity improvements projects at both the lift station in the disputed area and Proposed Lift Station No. 1 involving redundant runs of force main until full buildout pumping capacity of the Development in the Disputed Area is achieved. Winfield's pumping system is a bad choice compared to Crown Point's gravity flow system.

Further, Proposed Lift Station No. 1 is identified by Winfield to be a "Regional" lift station that will serve the entirety of Winfield's requested expansion in service territory. Therefore, any design and corresponding capabilities for capacity improvements to Proposed Lift Station No. 1 will have to take the entirety of the service areas demand (less the Development) into account for additional capacity improvements capabilities.

Further, the Developer is planning to construct 440 EDUs in Winfield's existing corporate limits and 2,981 EDUs in the Disputed Area. Since Winfield's existing Gibson Street Lift Station is closest to the 440 EDUs in Winfield's existing corporate limits and since the existing Gibson Street Lift Station does not have capacity to accept the 440 EDUs planned in Winfield's corporate limits without pumping improvements being performed, it would appear prudent for Winfield to install yet another lift station and force main to serve the three subdivisions and corresponding 440 EDUs within its own corporate limits. It does not really matter how soon Winfield might arguably provide initial, limited capacity service for the Disputed Area, as its proposal to serve is costly, complex, introduces unnecessary risks, conceptual and flawed, and is a terrible choice.

RESPONSE TO WINFIELD TESTIMONY ON LONG-TERM PLANNING

Q18. MESSRS. BEAVER AND DUFFY ARGUE THAT IF THE DISPUTED AREA IS SERVED BY WINFIELD, THERE WILL STILL BE AMPLE AREA FOR CROWN

POINT TO SERVE WITHIN THE CROWN POINT REQUESTED TERRITORY, AND ADDITIONALLY ASSERT THAT CROWN POINT HAS EXHAUSTED ITS CAPACITY WITH THE ANTICIPATED GROWTH WITHIN ITS MUNICIPAL LIMITS. HOW DO YOU RESPOND?

A18. Winfield's argument regarding Crown Point having "ample area" to serve even if the Disputed Area is served by Winfield is irrelevant. Such an argument has zero bearing on whether Winfield should be granted the territory it has requested. Moreover, Winfield currently provides sanitary collection and conveyance capabilities to only 55% of the available service area within its own corporate limits and has a 732-acre septic community within its corporate limits that remains unsewered. Therefore, Winfield has ample opportunity to provide wastewater services within its existing Corporate Limits.

As illustrated in **Exhibit 8-2, Table II,** Crown Point's infrastructure improvements that were carefully planned over several years' time and are currently being implemented readily support Crown Point's ability to convey and treat in excess of the anticipated wastewater generated over this time. I repeat, Crown Point has not exhausted its capacity with anticipated growth within its municipal limits, and Crown Point is performing this work to ensure it does not exhaust this capacity. This is the difference between proper "planning" and Winfield's choice of monitoring flow and then reacting.

Q19. MR. BEAVER STATES CROWN POINT'S REQUEST TO SERVE THE DISPUTED AREA WOULD DISRUPT MORE THAN 20 YEARS OF PLANNING BY WINFIELD AND CROWN POINT HAS DONE NO MASTER PLANNING UNTIL RECENT YEARS CONCERNING THE DEVELOPMENT OF PROVISION OF SERVICE TO THE DISPUTED AREA. IS THAT ACCURATE?

A19. No. As noted above, based on what Winfield has provided to date in its testimony and attachments and in response to discovery requests, it is my view that Winfield has not planned to serve the Disputed Area for more than 20 years. If Winfield had planned to serve this area, those plans would be reflected in Winfield's 2016 Sanitary Master Plan, assembled some 10 years ago. The 2016 Sanitary Master Plan is limited to Winfield's existing service territory and identifies no anticipated need for sanitary service in the southwest quadrant of Winfield corporate limits. The Disputed Area is located south of the area in Winfield that was not planned to be sewered according to the Sanitary Master Plan. Winfield only identified anticipated land use for parts of these areas in their Comprehensive Planning. Winfield's identified anticipated land use, however, is not supported by the Developer's plans and not supported by utility master planning. The only utility information Winfield has provided to serve the requested expansion in service territory are the vague, cost prohibitive, and ill-conceived concepts presented over the course of this case.

Q20. MR. BEAVER TESTIFIES THAT WINFIELD HAS DEVELOPED A "RATHER STRAIGHT FORWARD PLAN TO PROVIDE SERVICE TO THE [LBL] DEVELOPMENT IN LESS THAN A YEAR," AND THAT THE PLAN AND COST HAVE BEEN PROVIDED TO DEVELOPER AS PART OF DISCOVERY. BASED ON YOUR REVIEW OF WINFIELD'S TESTIMONY, ATTACHMENTS, AND DISCOVERY RESPONSES, DO YOU AGREE?

A20. No. Winfield has identified the ability to accept 330 EDUs flow from the disputed territory at its existing Gibson Street Lift Station. Winfield has also identified the need for a lift station and force main in the disputed territory to receive this flow from LBL Development

and pump it to the Gibson Street Lift Station. This is where the supposed "rather straight forward plan" ends, and it doesn't efficiently address the actual situation and needs. The Developer is requesting 3,421 EDUs be served. 440 EDUs are located within Winfield's existing corporate limits, planned to be developed into three distinct subdivisions. The remaining 2,981 EDUs are located in the Disputed Area, consisting of a variety of separate developments. Winfield has not even identified knowledge of the required 440 EDUs and three subdivisions to be developed within its own Town, let alone the remaining 2,981 EDUs in the Disputed Area planned by Developer. A straightforward and logical plan would identify need both within existing service area and within the requested expansion to the service territory. A rather straightforward and logical plan would then include growth and flow projections and phased projects, scopes, costs, and timelines anticipated. A straightforward and logical plan would not dismiss the complexities associated with pumping flow from the disputed territory to the existing Gibson Street Lift Station and then "rerouting" flow to Proposed Lift Station No. 1. A straightforward and logical plan would not ignore development outside of Developer within the Disputed Area and requested expansion area and identify impact on scope of planned improvements for Proposed Lift Station No 1 – through which all this flow is to be routed. A straightforward and logical plan would not include numerous daisy-chained lift stations with required phased capacity improvements projects and corresponding redundant infrastructure. A straightforward and logical plan would not propose conveying flow five miles through force main, dealing with hydrogen sulfide generation and odors, and requiring pretreatment to make ready for processing through the existing WWTP. Winfield's supposed straightforward and logical plan is ill conceived, flawed, lacks necessary details, does not state costs, timelines, phased

improvements, and scopes, and includes projected costs that are best described as a story of fiction that will not see fruition.

Q21. MR. BEAVER STATES WINFIELD HAS SUFFICIENT CAPACITY TO PROVIDE SERVICE TO THE LBL DEVELOPMENT, AND THERE IS NO NEED FOR CROWN POINT TO SIZE ITS PLANT TO INCLUDE THE DISPUTED AREA. MR. BEAVER ARGUES CROWN POINT COULD REDUCE THE SIZE OF OR PHASE IN THE IMPROVEMENTS WITH THE HOPE OF REDUCING CROWN POINT'S CURRENT RATES TO A MORE ACCEPTABLE LEVEL, ESPECIALLY FOR OUT-OF-TOWN USERS. HOW DO YOU RESPOND?

A21. The four phases of improvements projects required of Crown Point in its Agreed Judgment are being performed to achieve the necessary level of control and compliance with its CSO LTCP, to accommodate anticipated growth within the City and requested expansion of its service territory. The project has many synergies. Cost savings measures have been incorporated into these projects through both (1) the four-phased approach of implementing the necessary projects, and (2) the phased approach taken in providing treatment capacity at the new SE WWTP. The initial SE WWTP will provide 2 MGD average design and 9.6 MGD peak treatment capacity. This project is required regardless of whether Crown Point serves the Disputed Area. The planned SE WWTP capacity improvements are staged. The next phase capacity improvements will bring the SE WWTP to a 7.2 MGD average design and 28.8 peak treatment capacity with a final phased improvements projecting bringing the new SE WWTP to 12 MGD average design and 48 MGD design and peak treatment capacity. There would be no reduction in scope of the four phases of improvements projects if the Disputed Area was not to be served by Crown Point, it would simply delay the

implementation of the next phased WWTP capacity improvements project due to diminished customer annual growth. But it would prevent fixed costs from being spread over a larger number of customers, reducing the possibility of a future rate decrease.

RESPONSE TO WINFIELD TESTIMONY ON REGULATORY AND SERVICE CONCERNS

Q22. MESSRS. BEAVER, LIN, AND DUFFY ARGUE CROWN POINT DOES NOT HAVE A GOOD TRACK RECORD PROVIDING SERVICE TO ITS CURRENT SERVICE TERRITORY, POINTING OUT THAT: (1) CROWN POINT HAS HAD A NUMBER OF VIOLATIONS OVER THE LAST TWO DECADES AND IS SUBJECT TO TWO DIFFERENT IDEM ENFORCEMENT ORDERS; AND (2) CROWN POINT HAS DENIED SERVICE TO THOUSANDS OF CUSTOMERS IN RECENT YEARS AND THERE IS A GREAT DEAL OF FUTURE ANTICIPATED FLOW FROM NEW DEVELOPMENT INSIDE THE CITY AND IMMEDIATELY ADJACENT TO THE CITY. HOW DO YOU RESPOND?

A22. As explained earlier when speaking to effluent violations, it is important to have proper context. Crown Point operates a Class III WWTP with combined storm and wastewater sewers. Crown Point's Class III WWTP is larger and more complex than Winfield's Class II WWTP. A Class III WWTP also requires increased frequency of water quality testing when compared to the more simplistic systems such as Winfield's Class II WWTP. Specifically, Crown Point is required to test for several parameters 260 times annually, whereas Winfield is required to test for the same parameters 156 times annually. CSO flows can vary widely between dry weather conditions and wet weather conditions. Stormwater is a major contributor to wet weather flows. The combination of stormwater with wastewater also impacts temperature of the wastewater. The wide flow variations and the

temperature differentials of waste stream require higher expertise to manage and treat. All WWTPs experience upset from time to time, which can result in a violation of effluent quality. Whenever Crown Point experienced a violation, it was reported as required, the cause was identified, and the contributing causes were rectified. It would be reasonable for Crown Point's WWTP, which is more complex, more challenging to operate, and more frequently tested to experience a greater number of effluent violations in comparison to Winfield's Class II WWTP, which is more simplistic to operate and receives less challenging waste streams to treat from its separate sanitary sewers. Unfortunately, as I explained earlier, over the last five years Winfield has experienced over 40% more effluent violations than Crown Point (**See Exhibit 8-1**). Winfield has also had 50% more "Significant/Category I Noncompliance Effluent Violations" than Crown Point over this same time frame.

Second, regarding enforcement orders, combined sewer communities like Crown Point are mandated by IDEM to assemble a Combined Sewer Overflow Long Term Control Plan. This LTCP outlines how the utility will contain and treating flows that result from a design storm event; Crown Point's being a 10-year 1-hour storm. IDEM requires the utility to enter into an agreement to ensure the plans are implemented, which is precisely the case for Crown Point's Agreed Judgment. Over 100 other utilities across the State of Indiana have combined sewers, were required to assemble LTCPs, and required to enter into agreement to ensure plan implementation. This is not an indicator of substandard facilities operations. This is a requirement for all CSO utilities. The Agreed Order is linked to the CSO LTCP Agreed Judgment and outlines improvements Crown Point identified required to optimize its utility system.

Third, Winfield distorts Crown Point's supposed "denied" connections. Appendix V of the City of Crown Point's Wastewater Utility PER presents a table indicating 1.17 MGD of potential development flow was "rejected or fallen through". This consists of three distinct developments:

1. Ryland Homes
2. Hidden Lakes
3. Mississippi Pkwy PH II.

This table also clearly indicates both Ryland Homes and Hidden Lakes were outside City limits at the time of requested service. The Engineer identified the required gravity sewer necessary to convey flow from Ryland Homes. It was reviewed and discussed with the developer and deemed cost prohibitive by the developer (i.e., fell through). Similarly, lift station improvements were identified and discussed for the Hidden Lakes development, required to accommodate service. This developer chose not to proceed. The Mississippi Parkway request was a two-fold request. Phase 1 was approved given anticipated timing of development and need for service. Phase 2 was not anticipated to be constructed until after the City's Four-Phase Wastewater Utility Improvements Projects were completed. The City and developer discussed this timing, and it was agreed they would wait on this application until after these facilities were in place, which would readily afford wastewater utility service. Rather than denials of service, these are instances where Crown Point intelligently and cooperatively with full information worked with developers to make the best decisions regarding possible extension of sewer service. For Winfield to paint it otherwise is just distortion.

Q23. MR. BEAVER TESTIFIES THAT, ACCORDING TO TESTIMONY PROVIDED BY YOU AT A MARCH 3, 2025 CROWN POINT CITY COUNCIL PUBLIC HEARING, CROWN POINT HAS ALLOCATED ALL EXISTING CAPACITY IN ITS WASTEWATER TREATMENT PLANT TO SERVE WITHIN ITS MUNICIPAL BOUNDARIES. DO YOU AGREE?

A23. No, I do not agree. I remember this meeting and context. I identified that Crown Point will perform four phases of Wastewater Utility Improvements Projects. These projects are required to achieve LTCP compliance. These projects also have the benefit of accommodating wastewater flow conveyance and treatment needs identified for 20-year projected development within Crown Point's existing service area and throughout Crown Point's requested expansion to service area. I noted that regardless of expansion in service territory or acceptance or lack thereof of new customers, these projects are still required to achieve LTCP Compliance.

Yet, again, Crown Point has 1.2 MGD dry weather biological treatment capacity at its existing WWTP. Crown Point's updated growth projections analysis (**Exhibit 8-2**) identifies 0.43 MGD of approved development wastewater flow remains to be built and brought on-line. If you assume all approved developments are built and produce IAC projected flows, the WWTP's available treatment capacity (1.2 MGD) would be reduced to 0.77 MGD. Crown Point has NOT allocated all existing capacity to treat wastewater flows.

Q24. MR. DUFFY STATES THAT, AT YOUR AUGUST 7, 2025 DEPOSITION, YOU STATED THAT CROWN POINT WILL EXCEED ITS CURRENT PERMITS IN

IDEM REGULATIONS UNTIL CROWN POINT COMPLETES THE FOUR PHASES OF THE IDEM-REQUIRED IMPROVEMENTS. DO YOU AGREE?

A24. No. As stated above, Crown Point's wastewater utility has adequate dry weather wastewater conveyance and treatment capabilities to serve all existing and approved customers. Since Crown Point operates a Combined Sewer System (CSS), like over 100 other utilities in the State of Indiana, it is also required by its Agreed Judgment to contain and treat flow up to those resulting from a theoretical 10-year 1-hour storm event. This requirement is identified in the Agreed Judgement to be demonstrated over a compliance period starting in January 2028 and ending in January 2030. Mr. Duffy is confusing this requirement with current performance. All CSO communities with approved LTCPs exceed design storm management requirements until the projects are completed.

Q25. MR. LIN STATES CROWN POINT IS EXPECTING OVER 12.24 MILLION GALLONS PER DAY ("MGD"), THAT CROWN POINT'S EXISTING PLANT IS ONLY RATED FOR 5.2 MGD, AND THE NEW PLANT, IF AND WHEN IT IS COMPLETED, WILL ONLY HAVE AN ADDITIONAL 2.4 MGD OF CAPACITY. AS A RESULT, MR. LIN ARGUES CROWN POINT DOES NOT HAVE THE CAPACITY TO SERVE THESE FLOWS AT THIS TIME OR AT ANY TIME IN THE NEAR FUTURE. HOW DO YOU RESPOND?

A25. Mr. Lin is incorrect. Crown Point has existing capacity to serve existing flows and those anticipated. Crown Point has planned and is implementing improvement projects to maintain this capability for the next 20 years. **Exhibit 8-2 Table IV** illustrates anticipated wastewater flows over a 20-year planning period for the entirety of Crown Point's existing service area and Crown Point's requested expansion to service territory.

Conservative growth projections are incorporated into the first five years of flow projections in Exhibit 5-2. This exhibit illustrates:

1. Crown Point is currently anticipating 11.82 MGD of wastewater design average flow in the year 2045 (Planning Period is 2025 through 2045).
2. Crown Point's existing 5.2 MGD WWTP has sufficient capacity to accommodate flows until the new SE WWTP is brought on-line at the end of 2027.
3. The new SE WWTP will provide a treatment capacity sufficient to accommodate anticipated through 2033.
4. A future WWTP capacity improvements project will increase the new SE WWTP capacity to 7.4 MGD.
5. Crown Point will perform and bring on-line the WWTP capacity improvements project when necessary, so it is on-line and operational affording a total treatment capability between the two WWTPs of 12.6 MGD.
6. The 12.6 MGD total treatment capacity exceeds projected 20-year treatment needs of 11.82 MGD.
7. The ultimate build-out of the new SE WWTP affords a 12 MGD WWTP design average flow treatment capability resulting in a total of 17.2 MGD treatment capability between the two WWTPs.

Crown Point's well-thought-out and thorough planning and corresponding implementation of identified utility improvements projects clearly ensure Crown Point's capabilities to accommodate anticipated flows and flexibility to consider the unanticipated.

Q26. MR. LIN TESTIFIES THAT, ACCORDING TO TABLE 2 OF THE MARCH 21, 2025 WASTEWATER CAPACITY MEMORANDUM ATTACHED TO THE PER (THE "2025 WASTEWATER CAPACITY MEMORANDUM"), CROWN POINT COULD BE ON A SEWER BAN AS EARLY AS 2026. DO YOU AGREE?

A26. No, I do not agree. As stated in my testimony, Table 2 baseline flows for 2025 were in error. Please reference **Exhibit 8-2, Table IV,** for corrected and updated average wastewater flows for the 20-year planning period of 2025 through 2045 for the entirety of Crown Point existing and requested expansion of service territory.

Crown Point owns and operates a Combined Sewer System, and IDEM utilizes an alternative approach to determining capacity by separating wet and dry weather capacity. In other words, Crown Point is expected to have high flows during wet weather events as it is a CSO community, and this will not prohibit new connections.

Q27. RELATEDLY, MR. LIN STATES THE 2025 WASTEWATER CAPACITY MEMORANDUM DOES NOT APPEAR TO INCLUDE ANY FLOWS FROM THE DISPUTED AREA, AND THAT IF CROWN POINT HAD INCLUDED THE FLOWS FROM THE DISPUTED AREA, THE CAPACITY SHORTFALL WOULD BE EVEN GREATER. HOW DO YOU RESPOND?

A27. The updated growth projection analysis presented as **Exhibit 8-2** addresses this concern and is inclusive of the flows from both within Crown Point existing corporate limits and those within the requested expansion to service territory for a 20-year planning period. There is no shortfall. The project will provide ample wastewater treatment capability.

Q28. MR. LIN ARGUES CROWN POINT SHOULD NOT BE EXPANDING ITS SERVICE TERRITORY UNTIL IT HAS SATISFIED ALL OF THE

REQUIREMENTS OF THE COMMISSION AND IDEM, INCLUDING CONSTRUCTION OF THE NEW FACILITIES NECESSARY TO DIVERT FLOWS FROM CROWN POINT TO THE WWTP. HOW DO YOU RESPOND?

A28. Crown Point is required by IDEM to construct all four (4) phases of utility improvement projects and demonstrate the utilities' capability to contain and treat wet weather flows that result from storm events of intensities up to and including 10-year 1-hour storm event. The demonstration period is to commence in January 2028. Crown Point has agreed to make sewer service available to Developer in mid-2028. My firm and I have worked on hundreds of similar wastewater improvement projects. I have no doubt the four Phases of projects will be completed timely and will provide the necessary wastewater conveyance and treatment capabilities.

Crown Point is not on a sewer ban. Crown Point currently has remaining dry weather treatment capacity and can approve new connections based on this available capacity. Crown Point's well-planned and prudently timed implementation of improvements will maintain compliance with IDEM mandates to contain and treat wet weather flows resulting from the 10-year 1-hour design storm. Crown Point's expansion of service area and acceptance of 359 new customers on failed septic systems has addressed an acute risk to human health and the environment. These septic communities are in process of being sewered and flows conveyed to Crown Point for treatment. Several of the communities' flows are already being treated with the remainder anticipated in the next few years as their collection and conveyance systems are completed.

Crown Point's Four Phases of Wastewater Utility Improvements Projects allow Crown Point to accommodate anticipated requirements for wastewater service both within

its existing planning area and throughout the requested expansion in service territory over the 20-year planning period for anticipated flows while maintaining compliance with IDEM requirements.

Crown Point's Agreed Judgement does not state Crown Point should stop accepting flows and new customers. Crown Point's Agreed Judgment identifies agreed-upon improvements and timeline for completion which Crown Point will achieve. As stated previously, there are over 100 communities in Indiana alone with similar agreements and timelines for achieving compliance with IDEM requirements for combined sewer systems. If all these communities in Indiana and across the country followed Mr. Lin's advice and ceased committing to new business and developers' flows that are accepted by regulation and supported by approved planning, economic development progress and the provision of health and environment supporting sanitary sewer service would be stymied. Where would Mr. Lin suggest people live and businesses and industry expand?

Q29. MR. LIN TESTIFIES CROWN POINT STATED IN ITS TESTIMONY AND IN DISCOVERY THAT IT HAS ALL ANTIDEGRADATION APPROVALS FOR THE PROPOSED WWTP, BUT THAT COUNSEL FOR WINFIELD CONTACTED IDEM, WHO STATED THE ANTIDEGRADATION PROCESS IS NOT COMPLETED. HOW DO YOU RESPOND?

A29. Mr. Lin misunderstands Crown Point's Discovery Responses. The Antidegradation Demonstration process is required for a new NPDES discharge, including for the proposed SE WWTP. The first step is to prepare and submit the Antidegradation Demonstration to IDEM for review. Following IDEM review and any necessary subsequent revisions/resubmittal to IDEM, the Antidegradation Demonstration will be publicly

noticed by IDEM OWQ for 30 days. Once this occurs and if no interested parties have requested a public hearing, the application can proceed with construction permitting where the Wastewater Treatment Facility Construction Permit application, plans, and specifications would be submitted to IDEM OWQ. Then a construction permit for the new WWTP is obtained, the NPDES application can be submitted to IDEM OWQ for processing and issuance of the Draft NPDES permit, which would include a 30-day comment period. After any public comments are obtained and IDEM revised the permit as necessary, then a Final NPDES permit will be issued.

This same process has been followed for the SE WWTP, whereby the Antidegradation Demonstration was publicly noticed on August 30, 2024 and that public notice period ended October 3, 2024 with NO public comments received. My previous testimony is correct in that this step of the process has been completed. The information provided to IDEM to complete the antidegradation demonstration and meet the 327 IAC requirement was deemed sufficient by IDEM to proceed with Construction and NPDES permitting. The next step in the process is to submit the engineering design documents, which would be the Wastewater Treatment Facility Construction Permit application, plans, and specifications to IDEM OWQ and obtain approval. Once the construction permit is obtained, the NPDES application will be submitted to IDEM OWQ. My firm and I have gone through this process many times and have never been denied. Mr. Lin apparently lacks the understanding of the required chronology for obtaining approval of an NPDES permit for a new WWTP. Mr. Lin's testimony is misleading and incorrect.

Q30. IN RELATION TO THE ANTIDEGRADATION APPROVALS DISCUSSED IN THE PRIOR QUESTION, MR. LIN STATES CROWN POINT'S LACK OF

CANDOR AND TRANSPARENCY IN RESPONDING TO DISCOVERY CONCERNS HIM IN RELATION TO THIS ISSUE AND IN RELATION TO CROWN POINT'S TERRITORY. HOW DO YOU RESPOND?

A30. Mr. Lin is clearly not familiar with the Antidegradation Demonstration process required in advance of obtaining a Construction Permit and NPDES Permit, which has caused him to misunderstand Discovery Responses and mistakenly believe they were less than transparent. My response to the prior question describes in detail the fully transparent discovery process in which Crown Point has participated. All of the other "concerns" raised by Mr. Lin are fully explained in my testimony. Again, it appears that Mr. Lin did not understand. Crown Point Witness Guerrettaz addresses Crown Point's rates and charges.

Q31. MR. BEAVER TESTIFIES WINFIELD DOES NOT AGREE WITH YOUR ASSERTION THAT IF DEVELOPER NEEDS SERVICE BEFORE THE NEW WWTP IS COMPLETED, 3,900 LINEAR FEET OF GRAVITY SEWER COULD BE EXTENDED BY CROWN POINT FROM ITS EXISTING GRAVITY SEWER SYSTEM TO PROMPTLY SERVE THE DISPUTED AREA IF NECESSARY, AS IT IS WINFIELD'S UNDERSTANDING THAT CROWN POINT ALREADY HAS ALLOCATED ANY REMAINING CAPACITY AT ITS EXISTING PLANT. HOW DO YOU RESPOND?

A31. What does or does not satisfy the Paragraph 6.1 of the Donation Agreement is a legal question beyond the scope of my testimony. Crown Point has previously explained that any initial development in the Disputed Area would be just east of Crown Point on U.S. 231 for a customer like a restaurant or strip shopping / business office center. If such early

service were needed it could be connected by a 3,900 foot gravity line and use currently available capacity at the current WWTP.

Q32. MR. BEAVER FURTHER ASSERTS THAT CROWN POINT'S PROPOSAL TO EXTEND 3,900 LINEAR FEET OF GRAVITY SEVER TO THE LBL DEVELOPMENT IF NEEDED APPEARS TO PRIORITIZE DEVELOPER TO THE DETRIMENT OF CROWN POINT'S EXISTING CUSTOMERS. IS THAT ACCURATE?

A32. Mr. Lin's assertion is totally baseless and incorrect speculation. The background of the hypothetical 3,900-foot line extension is that Winfield raised a question as to how Crown Point could serve the Disputed Area if the need arose prior to completion of its Four-Phase Improvements Project. Winfield stated it could extend service through its existing Gibson Street Lift Station and extension of a line from it some 4,000 lineal feet south to the border of the Disputed Area. In response, I identified similar capability through the extension of a 3,900 linear feet of gravity sewer to the southeast to the border of the disputed area. Should this need arise, the capability to serve exists as I indicated and terms for providing this hypothetical service would not in any way be discriminatory or unfair to Crown Point customers.

Q33. MR. BEAVER ARGUES IF CROWN POINT EXTENDS 3,900 FEET OF GRAVITY SEWER TO THE LBL DEVELOPMENT IF DEVELOPER NEEDS SERVICE ON A TEMPORARY BASIS BEFORE THE PROPOSED WWTP IS COMPLETED, IT WOULD VIOLATE THE MAIN EXTENSION RULES. DO YOU AGREE?

A33. No. Neither I nor Crown Point have ever said a line extension will be extended for free. My understanding is there are statutes and main extension rules that apply to sewer and

water utilities. All sewer and water utilities, including Crown Point's, comply with them. Further, it should be noted that Crown Point does not anticipate needing to extend service in this manner, as Crown Point and Developer anticipate that the proposed SE WWTP will be completed in advance of the time the Developer is ready for and requires service.

Q34. MR. LIN STATES THE EXISTENCE OF AN ENDANGERED SPECIES BIRD (THE MARSH WREN) WITHIN 2 MILES OF THE PROPOSED SE WWTP CAUSES CONCERNS FOR ULTIMATE APPROVAL OF THE ANTIDEGRADATION PERMIT APPLICATION. HAS CROWN POINT CONSIDERED THIS ISSUE IN RELATION TO THE ANTIDEGRADATION PERMIT APPLICATION?

A34. This matter was fully put to rest, or should have been, in Crown Point's discovery responses to Winfield. As stated in the past, this alleged concern over an endangered Wren species was vetted by Crown Point's Engineer over the normal course of planning and design and determined to be a non-issue. The US Fish and Wildlife's IPaC report does not list any threatened or endangered bird species occurring in the project location or that may be affected by the project. The Antidegradation Demonstration was reviewed by IDEM OWQ and met the required conditions necessary to proceed with Construction and NPDES Permitting as evidenced by the public notice from August 30, 2024 to October 3, 2024 whereby no public or governmental comments were received on the Marsh Wren or any matter pertaining to the Antidegradation Demonstration. Moreover, the SE WWTP is not being built atop a marsh or wetland, nor will it disturb a marsh of wetland. This is just another Winfield-created obstruction.

Q35. MR. LIN FURTHER ASSERTS HE HAS NOT SEEN PROOF THAT CROWN POINT HAS COMPLIED WITH THE DECEMBER 3, 2021 LETTER FROM THE INDIANA DEPARTMENT OF NATURAL RESOURCES ("DNR") REGARDING THREATENED OR ENDANGERED SPECIES, SPECIFICALLY THE MARSH WREN BIRD. HOW DO YOU RESPOND?

A35. I don't know what Mr. Lin has seen or not seen. As discussed in the previous answer this matter was fully explained to Winfield in discovery. Crown Point's Engineers have fully vetted any possible implications of endangered species for the multiple potential WWTP locations in the due course of planning. There is no endangered species issue. I have included **Exhibit 5-3** from the United Stated Department of the Interior Fish and Wildlife Service for sake of documentation.

Q36. MR. LIN STATES SOME OF THE CAPITAL IMPROVEMENTS IDENTIFIED ON PAGES 13-14 OF YOUR TESTIMONY WERE REQUIRED AS PART OF THE 2007 AGREED JUDGEMENT, AND THAT CROWN POINT DID NOT VOLUNTARILY MAKE THESE IMPROVEMENTS. DO YOU AGREE?

A36. All CSO communities were mandated to achieve compliance for an identified design storm event. Compliance is achieved when wet weather flows that are generated up to and including those resulting from the design storm event are contained and treated within the combined sewer system (i.e., no CSO). Crown Point performed extensive planning and modeling to identify the most cost-effective approach to meet IDEM's mandate. To state Crown Point did not voluntarily make these improvements is like stating Winfield did not voluntarily design its WWTP to ensure effluent water quality. IDEM identifies requirements, and communities identify how they will achieve those requirements. Crown

Point voluntarily entered into the State Judicial Agreement to document the agreed upon plan and schedule.

Q37. MR. LIN TESTIFIES THE 2007 AGREED JUDGEMENT IS STILL IN EFFECT TODAY, AND THAT SINCE THE 2007 AGREED JUDGEMENT, CROWN POINT HAS EXPERIENCED SEVERAL OTHER WWTP VIOLATIONS. DO YOU AGREE?

A37. The Agreed Judgement is in effect because Crown Point has not reached the end of its SJA-identified implementation and post-construction monitoring time frame, which is January 2030. Until the agreed-upon time frames are reached, Crown Point and the over 100 other combined sewer utilities in Indiana will have their various agreements with IDEM in effect.

Crown Point and Winfield wastewater effluent violations for the past five years are presented in my **Exhibit 8-1** and have been extensively addressed above. Comparing Crown Point to Winfield, Crown Point operates a more complex WWTP, with a more difficult waste to treat (combined sewage) and samples effluent quality far more frequently. These factors all contribute to the potential for Crown Point to record effluent violations. However, **Exhibit 8-1** illustrates that, over the past five years, Winfield has experienced many more violations than Crown Point. WWTP violations are unfortunately not uncommon for any utility including Winfield. Mr. Lin's statement in this regard is not relevant and is an attempt at mischaracterization of Crown Point's utilities competency and capabilities.

Q38. MR. LIN ASSERTS "THE FACT IDEM HAD TO GET INVOLVED WITH CROWN POINT, BEYOND MERELY SENDING WARNING LETTERS AND ATTEMPTING TO RESOLVE THE ISSUES INFORMALLY, IS INDICATIVE OF

A UTILITY THAT IS NOT BEING PROACTIVE AND FAILED TO PROMPTLY RESOLVE AN ISSUE BROUGHT TO ITS ATTENTION." HOW DO YOU RESPOND?

A38. Mr. Lin is wrong. Crown Point has both an Agreed Order and State Agreed Judgment in place, whereby the remedies for each are called Compliance Plans and are identical. The State Judicial Agreement is how IDEM describes and documents the improvements required by the Utility to meet compliance with its CSO LTCP. No combined sewer utility can simply enter into informal agreement with IDEM on how they will achieve compliance with their CSO LTCP requirements. All combined sewer utilities must enter into agreements such as these to document improvements and specify a completion date.

Q39. MR. LIN EXPRESSES CONCERN THAT SOME OF THE DEFICIENCIES CROWN POINT IS ATTEMPTING TO ADDRESS DATE BACK TO 2003 AND WERE MEMORIALIZED IN THE 2007 AGREED JUDGEMENT. HOW DO YOU RESPOND?

A39. Mr. Lin's concern does not take into account the standard CSO LTCP compliance processes. LTCPs have various implementation schedules which typically span decades to afford compliance in a manner to protect the environment and to maintain a semblance of fiscal prudence with respect to the timeline. The remaining improvements will achieve compliance with the mandate to contain and treat wet weather events up to and including those that result from the 10-year, 1-hour design storm. Crown Point along with all other combined sewer utilities were not required to fully contain wet weather events without having a CSO discharge during large precipitation and/or snow melt conditions but rather adhere to level of CSO capture at remaining outfalls and wet weather treatment agreed to

by IDEM. Crown Point's four-phase plan addresses the IDEM-CSO capture requirements and the City's future growth needs.

Q40. MR. LIN ASSERTS "DUE TO THE DOCUMENTED HISTORY OF THE EXISTING CROWN POINT WWTP, A NEW WWTP MIGHT ONLY COMPLICATE THE ISSUE." DO YOU AGREE?

A40. No. The new WWTP is part of a comprehensive approach to achieve compliance with its CSO LTCP and provides the necessary facilities to support anticipated growth both within the City and throughout the requested expansion to planning area. Crown Point's documented effluent violations over the last five years are less than those which have been committed by Winfield. This is the case even with Crown Point's operation of a far more complex system that has a higher frequency of sampling. The new WWTP does not complicate the issues; it is integral in resolving the issues.

Q41. MR. LIN EXPRESSED CERTAIN CONCERNS REGARDING THE EXISTING CROWN POINT WWTP'S HISTORY OF EFFLUENT PHOSPHORUS VIOLATIONS OVER SEVERAL YEARS, GIVEN THAT CROWN POINT IS NOW PROPOSING TO DISCHARGE EVEN MORE WASTEWATER EFFLUENT INTO A TMDL RESTRICTED STREAM. MR. LIN ADDITIONALLY NOTES THE PER DOES NOT GIVE ANY INFORMATION THAT FUTURE PHOSPHORUS EFFLUENT VIOLATIONS WILL BE AVOIDED. HOW DO YOU RESPOND?

A41. As for the existing WWTP phosphorus compliance, Mr. Lin's statements are narrow and misleading. Mr. Lin is either unaware or simply does not consider that the cause of a majority of the phosphorus violations were due to Crown Point's inability to obtain disc filter replacements as a result of COVID-19 supply chain issues. The purpose of a disc

filter is to polish effluent and remove phosphorus. The inability to obtain disc replacements directly impacted the City's ability to consistently achieve phosphorus effluent limitation compliance. Mr. Lin's statements do not accurately reflect Crown Point's proposed SE WWTP phosphorus effluent limits to achieve TMDL compliance, which will be a 0.6 MG/l monthly average at 2 MGD (initial phase), 0.34 MG/L mo. average at a future 8 MGD, and 0.31 MG/L at a future 11 MGD. Mr. Lin could have found this information which was included in App. J of the Antidegradation Demonstration.

Q42. IN COMPARISON TO CROWN POINT, MR. LIN STATES THE IDEM PRELIMINARY EFFLUENT LIMITATIONS DETERMINATION FOR WINFIELD DETERMINED THAT THE PROPOSED WWTP EXPANSION TO 4.0 MGD WOULD NOT RESULT IN A SIGNIFICANT LOWERING OF WATER QUALITY, MEANING THE ANTIDEGRADATION STANDARDS AND IMPLEMENTATION PROCEDURES DO NOT APPLY. HOW DO YOU RESPOND?

A42. Mr. Lin's statement conflates the regulatory requirements associated with Winfield's WWTP expansion with Crown Point's proposed new SE WWTP discharge. Any new discharge of treated effluent to IDEM standards, including Crown Point's SE WWTP requires an Antidegradation Assessment. Existing discharge locations such as Crown Point's existing WWTP and Winfield's WWTP do not. The fact that the Winfield expansion Preliminary Effluent Limitation determination does not result in significant lowering of water quality and does not require an Antidegradation Assessment is not surprising and is typical based on our experience for WWTP expansions

The fact is that Crown Point has followed the required Antidegradation Assessment process in coordination with IDEM for a new discharge location. The public notice is complete, no comments were received, and the city may now proceed with the construction permit and NPDES permit process.

Q43. MR. LIN TESTIFIES THAT ACCORDING TO THE IDEM VIRTUAL FILING CABINET, CROWN POINT HAS NOT APPLIED FOR EITHER THE CONSTRUCTION PERMIT OR NPDES PERMIT REQUIRED FOR ITS PROPOSED SE WWTP, AND THAT "UNTIL THE NPDES PERMIT IS ISSUED, IT IS SPECULATIVE AND DANGEROUS TO ASSUME THAT THE PROPOSED PLANT WILL BE APPROVED." HOW DO YOU RESPOND?

A43. Crown Point has applied for its construction permit and will coordinate with IDEM to ensure approval. The process of the application is proceeding within typical timelines. Over the past 28 years, I have applied for approval to build many dozens of WWTPs, and my firm has processed hundreds of such applications, with a 100% success rate for receiving requested construction permits. Once the Construction Permit is obtained, the City will proceed with the NPDES permitting process and work with IDEM to resolve any public comments that may arise. My firm and I have a similar success rate with NPDES permits. I am also confident the NPDES permitting process will be successful.

Q44. MR. BEAVER ARGUES CROWN POINT'S REQUEST TO SERVE THE DISPUTED AREA IS PREMATURE AND INAPPROPRIATE UNTIL CROWN POINT FULLY COMPLIES WITH CERTAIN STATUTORY AND REGULATORY REQUIREMENTS. HOW DO YOU RESPOND?

A44. It is not premature. Crown Point has planned for the growth and to meet the need for service. We have planned to meet Developer's unsatisfied needs for service. Crown Point will enhance economic development in all of its requested expansion area including the Disputed Area. It may be premature for a community such as Winfield that takes the wait and see approach watching flows without any comprehensive utility planning to dictate what improvements are prudent and when improvements are performed. However, it is not premature for a community like Crown Point that performs comprehensive planning and modeling to support its requests. Crown Point's Four Phases of Improvements Projects meet the requirements set forth in its SJA and provide necessary flow conveyance and treatment capabilities for future growth throughout the existing and requested expansion to service territory.

Q45. MR. BEAVER NOTES CROWN POINT'S PETITION DOES NOT INDICATE THE STATUS OF CROWN POINT'S COMPLIANCE WITH THE IDEM ENFORCEMENT ORDERS AND INDIANA CODE § 8-1-1.9-5. WAS CROWN POINT UNDER ANY OBLIGATION TO NOTE THESE PROCEEDINGS IN ITS PETITION IN CAUSE NO. 46035?

A45. Crown Point has not tried to hide or deny its IDEM compliance orders and agreements. Crown Point addressed the IDEM enforcement orders to which Mr. Beaver is referring in its verified prefiled testimony. Moreover, my testimony in this case has detailed their contents, requirements, and Crown Point's compliance with them. Mr. Guerrettaz has testified that Crown Point is financially able to complete the four-phase improvement project without and additional rate increase. I do not see what an informal review would do or accomplish beyond what Crown Point has already filed in this case. As a result, in

my plan English non lawyer view, the intent of Ind. Code § 8-1.5-6-9(b)(3), namely, to assure the Commission is provided with the information listed, has been satisfied.

Again, while I am not an attorney, it is also my understanding that Mr. Beaver has mischaracterized the operation of Ind. Code § 8-1-1.9-5. Contrary to Mr. Beaver's assertion on page 12 of his responsive testimony that "Indiana Code § 8-1-1.9-5 requires Crown Point to submit to an investigation before the Commission when it is subject to an Agreed Order issued after June 30, 2022,"[4] the statute creates an obligation for the *Commission*, not the utility, to conduct certain actions upon the issuance of the first IDEM enforcement order issued to a wastewater utility after June 30, 2022. Specifically, Ind. Code § 8-1-1.9-5(e)(1), in relevant part, states that "upon the issuance of the first enforcement order with respect to the… wastewater utility, the *commission* shall" (A) perform an informal review, using such procedures as the commission may choose, regarding the rates and charges of the wastewater utility, and (B) determine whether all elements of an adequate asset management program are in place with respect to the wastewater utility's collection and treatment system. Ind. Code § 8-1-1.9-5(e)(1) (emphasis added). The provision to which Mr. Beaver refers creates no affirmative obligation for Crown Point to act after the first IDEM Agreed Order issued after June 30, 2022. Rather, it only establishes that the Commission shall perform the "informal review" required under Section 5(e)(1) of the statute. The commission is free to conduct an informal review of any utility based on public documents such as annual reports.

[4] Winfield Exh. No. 23, Prefiled Responsive Testimony and Exhibits of Zachary Beaver, p. 12, lines 3-5.

Q46. MR. BEAVER ARGUES "UNTIL CROWN POINT ACTUALLY FINANCES AND CONSTRUCTS" THE IMPROVEMENTS REQUIRED UNDER THE IDEM ENFORCEMENT ORDERS, "ITS REQUEST TO TRIPLE THE SIZE OF ITS SERVICE TERRITORY IS PREMATURE AND SHOULD BE STAYED OR DENIED." HOW DO YOU RESPOND?

A46. He is incorrect. Crown Point's request to expand service area is an integral part of its four-phased Improvements Projects. Crown Point has identified over $200 million in utility improvements to achieve not only compliance with its IDEM approved Long-Term Control Plan but also provide necessary wastewater conveyance and treatment facilities supportive of anticipated growth both within its existing service area and throughout Crown Point's requested expansion to service area. Over $100 million of financing has been closed and expended or allocated for the completion of Phase 1 improvements and current construction of Phase 2 improvements. Financing has been arranged and rate increases implemented in support of Phase 3 improvements, which includes the new SE WWTP. Mr. Beaver fails to recognize that Crown Point has accomplished the financing to satisfy the current portion of its IDEM requirements and build its new SE WWTP. Crown Point is clearly able to serve its proposed expansion area.

Winfield argues Crown Point's rates which have been set to pay for the four Phases of its environmental compliance and growth accommodating improvement project are too high. And then at the same time suggests that Crown Point's request for the very expansion area that will supply the customer growth which will spread fixed cost recovery over many more customers and put downward pressure on rates be delayed. All while Winfield's uncompetitive, terribly costly, economic development destroying, developer rejected,

poorly planned, uphill daisy chained lift station forced main system to a WWTP over five miles away would move forward. In my opinion this is not a case of Winfield having legitimate opposition to Crown Point's request. It is a case of Winfield raising any and all arguments it can put on paper to try to delay or block Crown Point from serving the Disputed Area.

CONCLUSION

Q47. IN SUMMARY, WHAT ACTIONS DO YOU RECOMMEND THE COMMISSION TAKE?

A47. The Commission should deny Winfield's request to be the exclusive service provider in the Winfield Requested Territory, including the Disputed Area, and grant Crown Point's requests in this Cause and Cause No. 46035 to be the exclusive provider of wastewater and water utility services in the Crown Point Requested Territory, including the Disputed Area.

Q48. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A48. Yes, it does.

VERIFICATION

The undersigned affirms under the penalties for perjury that the foregoing testimony is true to the best of his knowledge, information and belief.

Albert Stong, P.E., 10201336

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Exhibit 8-1
Analysis

SUBJECT: **City of Crown Point and Town of Winfield EPA ECHO Compliance History Summary**

ATTACHMENTS:

- **Table 1 – Crown Point Effluent Violation Summary**
- **Table 2 – Winfield Effluent Violation Summary**

Background

The purpose of this memo is to compare the past five (5) years of regulatory compliance for both the City of Crown Point's and Town of Winfield's Wastewater Treatment Plants (WWTP). The recent compliance history of both facilities was analyzed using the United States Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) website that records information about wastewater treatment facilities, including their compliance history. In particular, this memo summarizes the compliance of each facility with their National Pollutant Discharge Elimination System (NPDES) Permit effluent limitations over the analyzed time period. These NPDES permit numbers are IN0025763 for the Crown Point WWTP, and IN0058343 for the Winfield WWTP.

EPA ECHO tracks a facility's compliance with the provisions of their NPDES Permit, including the limitations of pollutants in the effluent. As previously mentioned, the past five (5) years of effluent limit compliance for each WWTP were analyzed in order to provide a comparison of their compliance issues. Terms such as "Violation identified" and "Significant noncompliance" are used to describe the facility's history in regard to compliance with the law. In many cases, these terms reflect determinations made by EPA or states when conducting inspections or reviewing facility self-reports.

The NPDES program uses the term Significant Noncompliance (SNC). Most SNC designations are based on an automated mathematical analysis of Discharge Monitoring Reports (DMRs) that facilities with NPDES Permits, including Crown Point and Winfield WWTPs, are required to submit on a monthly basis. This designation considers the amount, duration, and frequency of discharges in comparison to permit levels. In some cases, a facility can be manually designated as SNC.

EPA ECHO Analysis

City of Crown Point WWTP (IN0025763)

Effluent data from September 2020 through July 2025 was available on EPA ECHO for this facility at the time of writing this memo. All violations from this time period are noted in **Table 1 – Crown Point Effluent Violation Summary**. This table includes the month and year of the violation, the parameter/pollutant and the limit that was violated (concentration, loading, etc.), how much the limit was exceeded by in terms of percentage, and the description and severity of the violation. **Table 1** is sorted by Parameter/Pollutant rather than in chronological order.

In total, there were forty (40) violations over this time period, ten (10) of which were "Significant/Category I Noncompliance Effluent Violations". Category I SNC for effluent violations refers to effluent violations of average limits of the "Technical Review Criteria" and chronic violations. The remaining violations were "Non-reportable noncompliance effluent violations". These are violations that do not meet the criteria for significant noncompliance and may not require formal reporting to the regulatory agency. Of the violations that qualified as SNC, three (3) were for Total Suspended Solids (TSS), three (3) were for Nitrogen-Ammonia, and four (4) were for Phosphorus. The average exceedance percentage of effluent limits when violations did occur was 110.08%.

Town of Winfield WWTP (IN0058343)

Effluent data from September 2020 through July 2025 was available on EPA ECHO for this facility at the time of writing this memo. All violations from this time period are noted in **Table 2 – Winfield Effluent Violation Summary**. This table includes the month and year of the violation, the parameter/pollutant and the relevant limit that was violated (concentration, loading, etc.), how much the limit was exceeded by in terms of percentage, and the description and severity of the violation. **Table 2** is sorted by Parameter/Pollutant rather than in chronological order.

In total there were fifty-seven (57) violations over this time period, fifteen (15) of which were "Significant/Category I Noncompliance Effluent Violations". Category I SNC for effluent violations refers to effluent violations of average limits of the "Technical Review Criteria" and chronic violations. The remaining violations were "Non-reportable noncompliance effluent violations". These are violations that do not meet the criteria for significant noncompliance and may not

require formal reporting to the regulatory agency. Of the violations that qualified as SNC, thirteen (13) were for Nitrogen-Ammonia, and two (2) were for Phosphorus. The average exceedance percentage of effluent limits when violations did occur was 233.84%.

Conclusion

A comparison of effluent violation frequency and magnitude can give a general indication of the performance of the facility and the effectiveness of the operation. Both facilities had instances of effluent limit violations, including those resulting in significant noncompliance, over the analyzed time period. Winfield WWTP had seventeen (17) more total violations than Crown Point WWTP and had five (5) more instances of Category I SNC effluent violations than Crown Point WWTP. Additionally, the average limit exceedance percentage for Crown Point WWTP was 110.08%, and that value for Winfield WWTP was 233.84%. Compared to the Crown Point WWTP, the Winfield WWTP had more total effluent violations, more effluent violations resulting in a SNC designation, and a higher magnitude of effluent limit exceedance when those violations did occur.

Table 1 – Crown Point Effluent Violation Summary

Date	Parameter	Limit Violated	Limit Value	Reported Value	Exceedance Percentage (%)	Violation Description	Violation Severity
Dec 2020	TSS	Weekly avg conc	15 mg/l	31.8 mg/l	112	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Apr 2021	TSS	Weekly avg quantity	1014 lb/d	10467.7 lb/d	932	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Apr 2021	TSS	Weekly avg conc	15 mg/l	27 mg/l	80	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Jun 2021	TSS	Weekly avg conc	15 mg/l	26.6 mg/l	77	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Jun 2021	TSS	Monthly avg conc	10 mg/l	14.5 mg/l	45	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Aug 2021	TSS	Weekly avg conc	15 mg/l	16.8 mg/l	12	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Aug 2021	TSS	Monthly avg conc	10 mg/l	11.1 mg/l	11	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Apr 2022	TSS	Weekly avg conc	15 mg/l	19 mg/l	27	DMR Numeric Violation	Non-reportable noncompliance effluent violation
May 2022	TSS	Monthly avg conc	10 mg/l	10.3 mg/l	3	DMR Numeric Violation	Non-reportable noncompliance effluent violation
May 2022	TSS	Weekly avg conc	15 mg/l	22 mg/l	47	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
July 2022	TSS	Weekly avg quantity	1014 lb/d	1340 lb/d	32	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
July 2022	TSS	Monthly avg conc	10 mg/l	21 mg/l	110	DMR Numeric Violation	Non-reportable noncompliance effluent violation
July 2022	TSS	Weekly avg conc	15 mg/l	55 mg/l	267	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Jan 2024	TSS	Weekly avg conc	15 mg/l	18.2 mg/l	21	DMR Numeric Violation	Non-reportable noncompliance effluent violation

Feb 2024	TSS	Weekly avg conc	15 mg/l	20.2 mg/l	35	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Mar 2024	TSS	Monthly avg conc	10 mg/l	15.1 mg/l	41	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Mar 2024	TSS	Weekly avg quantity	1014 lb/d	1355 lb/d	34	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Mar 2024	TSS	W avg conc	15 mg/l	32.4 mg/l	116	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Apr 2024	TSS	Weekly avg quantity	1014 lb/d	1201 lb/d	18	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Apr 2024	TSS	Weekly avg conc	15 mg/l	24 mg/l	60	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Jan 2021	N-Ammonia	Monthly avg conc	1.6 mg/l	1.6 mg/l	13	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Feb 2021	N-Ammonia	Daily max conc	3.6 mg/l	4.2 mg/l	17	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Feb 2021	N-Ammonia	Monthly avg conc	1.6 mg/l	2.4 mg/l	50	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Mar 2021	N-Ammonia	Daily max conc	3.6 mg/l	9.5 mg/l	164	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Mar 2021	N-Ammonia	Monthly avg conc	1.6 mg/l	2.8 mg/l	75	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Mar 2021	N-Ammonia	Daily max quantity	243 lb/d	438 lb/d	80	DMR Numeric Violation	Non-reportable noncompliance effluent violation
May 2022	N-Ammonia	Monthly avg conc	1.4 mg/l	1.5 mg/l	7	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Jun 2022	N-Ammonia	Monthly avg conc	1.4 mg/l	2.1 mg/l	50	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Apr 2025	N-Ammonia	Monthly avg conc	1.6 mg/l	1.7 mg/l	6	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Jun 2025	N-Ammonia	Daily max conc	3.2 mg/l	3.5 mg/l	9	DMR Numeric Violation	Non-reportable noncompliance effluent violation

Jun 2021	Phosphorus	Monthly avg conc	1 mg/l	1.4 mg/l	40	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
July 2021	Phosphorus	Monthly avg conc	1 mg/l	1.1 mg/l	10	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Aug 2021	Phosphorus	Monthly avg conc	1 mg/l	1.19 mg/l	19	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Sep 2021	Phosphorus	Monthly avg conc	1 mg/l	1.2 mg/l	20	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Jun 2021	E. coli	Daily max conc	235 CFU/100 ml	1223 CFU/100 ml	420	DMR Numeric Violation	Non-reportable noncompliance effluent violation
May 2022	E. coli	Daily max conc	235 CFU/100 ml	272 CFU/100 ml	16	DMR Numeric Violation	Non-reportable noncompliance effluent violation
July 2024	E. coli	Daily max conc	235 CFU/100 ml	866.4 CFU/100 ml	269	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Sep 2024	E. coli	Daily max conc	235 CFU/100 ml	2420 CFU/100 ml	930	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Oct 2024	E. coli	Daily max conc	235 CFU/100 ml	529.8 CFU/100 ml	125	DMR Numeric Violation	Non-reportable noncompliance effluent violation
Jun 2021	Phosphorus total % removal	Percent removal	65%	63.90%	3	DMR Numeric Violation	Non-reportable noncompliance effluent violation

Table 2 – Winfield Effluent Violation Summary

Date	Parameter	Limit Violated	Limit Value	Reported Value	Exceedance Percentage (%)	Violation Description	Violation Severity
Jun 2023	TSS	Weekly avg conc	18 mg/l	21.83 mg/l	21	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jan 2021	N-Ammonia	Daily max quantity	12 lb/d	40.54 lb/d	238	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jan 2021	N-Ammonia	Monthly avg conc	1.6 mg/l	6.55 mg/l	309	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Jan 2021	N-Ammonia	Monthly avg quantity	5.3 lb/d	19.15 lb/d	261	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Jan 2021	N-Ammonia	Daily max conc	3.6 mg/l	14.7 mg/l	308	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Feb 2021	N-Ammonia	Daily max conc	3.6 mg/l	6.67 mg/l	85	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Feb 2021	N-Ammonia	Monthly avg quantity	5.3 lb/d	7.25 lb/d	37	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Feb 2021	N-Ammonia	Monthly avg conc	1.6 mg/l	2.42 mg/l	51	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Feb 2021	N-Ammonia	Daily max quantity	12 lb/d	22.6 lb/d	88	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2021	N-Ammonia	Daily max quantity	12 lb/d	13.6 lb/d	13	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2021	N-Ammonia	Daily max conc	3.6 mg/l	5.66 mg/l	57	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Dec 2021	N-Ammonia	Daily max conc	3.6 mg/l	15.9 mg/l	342	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Dec 2021	N-Ammonia	Monthly avg conc	1.6 mg/l	2.25 mg/l	41	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Dec 2021	N-Ammonia	Daily max quantity	12 lb/d	27.51 lb/d	129	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation

Jan 2022	N-Ammonia	Daily max quantity	12 lb/d	29.43 lb/d	145	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jan 2022	N-Ammonia	Monthly avg conc	1.6 mg/l	7.21 mg/l	351	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Jan 2022	N-Ammonia	Monthly avg quantity	5.3 lb/d	11.38 lb/d	115	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Jan 2022	N-Ammonia	Daily max conc	3.6 mg/l	26.2 mg/l	628	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Feb 2022	N-Ammonia	Daily max conc	3.6 mg/l	9.84 mg/l	173	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Feb 2022	N-Ammonia	Monthly avg conc	1.6 mg/l	4.43 mg/l	177	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Feb 2022	N-Ammonia	Monthly avg quantity	5.3 lb/d	18.23 lb/d	244	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Feb 2022	N-Ammonia	Daily max quantity	12 lb/d	43.92 lb/d	266	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2022	N-Ammonia	Daily max quantity	12 lb/d	144.23 lb/d	1102	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2022	N-Ammonia	Monthly avg quantity	5.3 lb/d	30.86 lb/d	482	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
Mar 2022	N-Ammonia	Daily max conc	3.6 mg/l	40.1 mg/l	1014	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2022	N-Ammonia	Monthly avg conc	1.6 mg/l	9.53 mg/l	496	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
May 2022	N-Ammonia	Daily max quantity	9.7 lb/d	100.13 lb/d	932	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2022	N-Ammonia	Daily max conc	2.9 mg/l	21.3 mg/l	634	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2022	N-Ammonia	Monthly avg conc	1.3 mg/l	4.61 mg/l	255	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
May 2022	N-Ammonia	Monthly avg quantity	4.3 lb/d	13.47 lb/d	213	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation

Mar 2024	N-Ammonia	Daily max quantity	24 lb/d	69.15 lb/d	188	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2024	N-Ammonia	Monthly avg conc	1.6 mg/l	4.514 mg/l	182	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2024	N-Ammonia	Monthly avg quantity	10.7 lb/d	14.68 lb/d	37	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2024	N-Ammonia	Daily max conc	3.6 mg/l	20.3 mg/l	464	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2025	N-Ammonia	Monthly avg conc	1.3 mg/l	1.59 mg/l	22	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2025	N-Ammonia	Daily max conc	2.9 mg/l	17.7 mg/l	510	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2025	N-Ammonia	Daily max quantity	19.4 lb/d	72.66 lb/d	275	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jun 2025	N-Ammonia	Daily max conc	2.9 mg/l	3.02 mg/l	4	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Mar 2021	Phosphorus	Monthly avg conc	1 mg/l	1.14 mg/l	14	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Feb 2022	Phosphorus	Monthly avg conc	1 mg/l	1.18 mg/l	18	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Apr 2022	Phosphorus	Monthly avg conc	1 mg/l	1.1 mg/l	10	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2022	Phosphorus	Monthly avg conc	1 mg/l	1.17 mg/l	17	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
July 2023	Phosphorus	Monthly avg conc	1 mg/l	1.33 mg/l	33	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Apr 2024	Phosphorus	Monthly avg conc	1 mg/l	1.556 mg/l	56	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
May 2024	Phosphorus	Monthly avg conc	1 mg/l	1.6121 mg/l	61	DMR Numeric Violation	Significant/Category I Noncompliance Effluent Violation
May 2025	Phosphorus	Monthly avg conc	1 mg/l	1.42 mg/l	42	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation

July 2025	Phosphorus	Monthly avg conc	1 mg/l	1.2 mg/l	20	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2022	E. coli	Daily max conc	235 CFU/100 ml	579 CFU/100 ml	146	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jun 2022	E. coli	Daily max conc	235 CFU/100 ml	548 CFU/100 ml	133	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Apr 2023	E. coli	Daily max conc	235 CFU/100 ml	2420 CFU/100 ml	930	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Apr 2024	E. coli	Daily max conc	235 CFU/100 ml	276 CFU/100 ml	17	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jun 2024	E. coli	Daily max conc	235 CFU/100 ml	1553 CFU/100 ml	561	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jun 2025	E. coli	Daily max conc	235 CFU/100 ml	416 CFU/100 ml	77	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
May 2022	CBOD5	Weekly avg conc	15 mg/l	16.4 mg/l	9	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Jan 2022	Phosphorus % Removal	% Removed	75	62	52	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation
Apr 2024	Phosphorus % Removal	% Removed	75	72.4	10	DMR Numeric Violation	Non-Reportable Noncompliance Effluent Violation

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Exhibit 8-2 Analysis

DATE: **9-18-2025**

SUBJECT: Crown Point – Updated Growth Projections

Background

The last comprehensive assembly documenting anticipating growth and corresponding demand for water and wastewater service occurred in March of 2022. At the time, the Engineer and City reviewed all permit requests and identified:

1. Approved developments that were completed and corresponding water and wastewater demands reflected in Monthly Reports of Operations (MROs).

2. Approved developments that were yet to commence or in the process of construction. The locations were identified, provided on a map to illustrate location, and corresponding outstanding Equivalent Dwelling Units (EDUs) were tabulated. The City categorized construction time frames for these approved but yet to be completed developments as either 5 years or 20 years to completion. Remaining EDUs development were then distributed linearly over the categorical time frames.

   &

3. Approved developments that the City indicated were no longer anticipated to occur as originally planned. These approved but deemed defunct developments were then recategorized as either anticipated future developments or eliminated from growth projections altogether – as directed by the City.

Next, locations within the City that were anticipated to be developed (inclusive of the above noted removals) were identified, a map was assembled to illustrate these location and corresponding anticipated full build-out EDUs were correlated to the anticipated developments. The City identified anticipated types of developments. Growth of these developments were distributed linearly over the 20-year planning period.

Locations anticipated to be developed outside the City but within the City's planned water and wastewater service area were then identified. The same process of mapping locations, identifying and tabulating anticipated EDUs and distributing EDU growth was quantified linearly over an identified 20 year planning period was performed.

Finally, the large expansion service territory to the south of the City (identified in 2022 planning) was assigned growth projections. This area was identified as prime for residential development. Overall acreage was identified; a housing density of 2.5 homes/acre was assigned, a 20-year buildout of 20% of this area was utilized, and EDU growth for this area over the 20-year planning period.

All of the above growth projections were then incorporated into utility planning. Demands were applied on a per EDU basis using one of the following two methods:

1. The Indiana Administrative Code (IAC) Title 327 provides usage per single family home for projecting both water and wastewater demand. A single family home in this sense is equivalent to a domestic unit as used when tabulating EDUs. For water demand projection, IAC Article 8-3.3 outlines a usage of 500 gallons per day (GPD) per EDU. Wastewater demand has an equivalent flow of 310 GPD per EDU as defined in IAC Article 3-6-11. The IAC code outlines peaking factors of 2.5 and 4 for water and wastewater respectively. These values were used to determine peak day for this method.

2. A typical residential usage for water and wastewater billing purposes is generally a 5,000 gallons per month per EDU for water and 4,000 gallons per month per EDU for wastewater. This equates to a daily water demand of 166.67 GPD per EDU and daily wastewater flow of 133.33 GPD per EDU. The water usage is very close to the City's current demand per EDU based on review of individual water meters. Since wastewater is billed off water usage, the same correlation can not readily be drawn for actual wastewater treatment demands. The City provided a Customer Base Analysis from June of 2024 to June of 2025 that indicated an average daily water demand of 161.67 GPD per residential customer. To determine peak day demands, a peaking factor of 2.3 was used for water demands as this number was determined to be Crown Point's actual peaking factor between average day and peak day demands as determined by the City's influent meter SCADA data, MRO data, and INAW monthly bills. For wastewater the IAC value of 4 is utilized to determine peak day flows.

The City's water and sewer master planning was updated utilizing these growth projections. Corresponding improvements projects were considered and selected.

The City maintains both water and sanitary system models. These growth projections were incorporated into the models. The models reflected necessary improvements projects and timelines for implementation of projects to remain supportive of anticipated growth. As future

requests for utility service were made, those requests were evaluated on the above IAC denoted EDU flow basis within the models. This afforded a means for assessing each utilities capabilities and corresponding needs associated with new customer requests.

Purpose

The above March 2022 growth projections were routinely updated based upon theoretical growth for subsequent years as needed. The updates consisted of utilizing the analysis revision years projected flow as baseline and maintaining all categorical anticipated users. This manner of update is conservative as flows realized overtime would likely result from completion of projects of anticipated future users – so essentially theoretical flow was double counted. 3-1/2 years have passed since the time of the initial inventory and assemblies which established theoretical growth and corresponding flows. Actual water demand and wastewater treatment flows have deviated from the growth projections over this time – which is normal. Service area and corresponding utility needs have also been updated. The intent of this assembly is to provide an updated snapshot of existing conditions and current growth and flow projections through a process similar to that performed in 2022 as of the August 2025 assembly date.

Approach

First, 2024 baseline demands for wastewater treatment were established through review of Monthly Reports of Operations. Since Crown Point has a Combined Sewer system, a refinement to the 2022 analysis was incorporated. Dry weather flow analysis was performed and the maximum 30-day average flow was determined and is being utilized as the baseline for wastewater flow in 2024. Water demand baseline was established by utilizing SCADA data from the City's influent water meter.

Wastewater Treatment Requirements

The 2022 evaluation utilized a baseline wastewater flow of 4.0MGD (design average flow) as the launching point for growth and flow projections. In 2022, two (2) growth scenarios were examined: (1) in city growth only, and (2) full-service area growth. The wastewater projected flows from 2022 identified 2025 baseline flows for these two (2) growth scenarios of 4.16MGD (in city) and 4.40 MGD (full-service area) respectively.

MROs were reviewed and the 30-day maximum average dry weather flow for 2024 was identified: 3.93MGD. This 30-day maximum average dry weather flow is utilized as the current 2024 baseline value which will then be projected based on anticipated growth through the 20-year planning period of 2025 through 2045.

Water Demand Requirements

The 2022 demand projection identified the current 2024 flow based on the MRO designated usage at the time plus the specific identified growth areas from the City at the time. The average daily demand was projected to be 3,768,480 GPD. However, this is contrary to current conditions. 2024 influent meter daily usage averaged 3,090,846. This will be used as the current baseline value.

Second, the most current service area inclusive of corporate limits and the City's planned expansions in service area to the west, south, and east were utilized to create growth projections in a similar fashion to that performed in the March 2022 assembly. This included:

1. Elimination of growth areas quantified in 2022 that have been fully developed and are both contributing flows to the wastewater system and corresponding water demands from the water system.
2. Quantification of approved but to be developed areas, remaining EDUs, and anticipated construction time frames; 5-year or 20-year linear growth.
3. Elimination or recategorization of approved developments with status changes.
4. Identification of anticipated future developments (although no permit has been solicited as of the date of this assembly). This is performed both within corporate limits and outside corporate limits but within the new service area.

Appendix A - Figures, Figure 1 – Crown Point Service Area, presents the City of Crown Point corporate limits and the expanded water and sewer utility service area.

Approved Yet to be Developed

Appendix A – Figures, Figure 2 – Approved Construction Yet to be Fully Developed, presents locations of the approved developments and correlates them by labels to **Appendix B – Tables, Table 1 – Approved Construction Yet to be Fully Developed**. **Table 1** lists the development, the approved EDUs, the remaining EDUs to be developed, the water demand and wastewater treatment demand associated with the remaining EDUs to be developed are summed in this table to identify full build-out demand for both water and wastewater. The rate of growth/flow contribution/flow demand is also identified through application of the assigned 5-year and 20-year anticipated growth rates for the planning period of 2025 through 2045. Demands were applied per EDU as previously discussed using typical billing practices per EDU and IAC outlined demands per EDU.

Anticipated Developments (within Corporate Limits)

Appendix A – Figures, Figure 3 – Anticipated Developments (within Corporate Limits), presents a figure illustrating Crown Point corporate limits, locations of anticipated developments and correlates the anticipated developments by labels to **Appendix B – Tables, Table 2 –Anticipated Developments (within Corporate Limits)**.

To determine EDUs and corresponding flows for these areas where only a development type is identified or assumed the following procedures were employed:

1. **Developable Acres**: First the total acreage for the identified area was identified. It was then examined to determine of the total acreage identified how many acres are developable. This was done by identifying parcels likely to be bought by developers and subtracting out undevelopable land. Developable and undevelopable land was determined by utilizing the Lake County GIS. The regulated drains, lake and wetlands, watersheds, best available floodplain, and FEMA DFIRM layers were turned on. Any acreage that was shown in these layers was deemed undevelopable and subtracted out of the total acreage. For rivers, streams, creeks, and ditches, 100-foot swathes following the waterbodies was subtracted out of the total acreage. **Appendix C – Lake**

County GIS shows a snapshot of the layers active that were used in this analysis. Total and developable acreage information is presented in **Appendix B – Tables – Table 2**. If acreage was not included for the growth area, expected EDUs were provided to the Engineer by the City.

2. **Residential Area**: Total developable acres were multiplied by a 2.5 homes/acre housing density to obtain EDUs. Some residential growth areas are shown in existing housing sub-divisions. Empty lots remain in these subdivisions that the City anticipates being built over the planning period; however, these sub-divisions were submitted upon before the current catalog of the approved developments discussed in the previous section and are therefore shown as growth areas not approved developments.

3. **Commercial Area**: Commercial demand is dependent upon type of commercial development. For sake of planning, it was assumed that future commercial development will mimic historical commercial development within the city. The last 3-years of approved commercial developments along with their corresponding acreage and water and wastewater flow demands were tallied in **Appendix B – Tables, Table 3 – Commercial Growth & Flow Projections**. For capacity analysis reviews, water and wastewater demands follow developer provided demands. Under average day conditions, these are shown as the same flow demands. Developers submit expected demands based on IAC guidelines. To back EDUs out of provided flows, each provided flow (water) was divided by 500 GPD per EDU, the IAC guideline for average day flow demand. The total EDUs from this analysis were summed and then divided by the total acres of the submitted developments to determine an EDU per acre for commercial growth areas. This information was then applied to areas of anticipated commercial development developable acres to identify anticipated EDUs and water and wastewater flows.

4. **Industrial Area**: Industrial development water and wastewater demands are also dependent upon type of industrial development. For sake of planning, industrial demands per acre for EDUs and flows were developed in the same manner as that identified above for commercial demand. This information is presented in **Appendix B – Tables – Table 4 – Industrial Growth & Flow Projections**. This information was then applied to areas of anticipated industrial development developable acres to identify anticipated EDUs and water and wastewater flows.

Growth and corresponding flows for anticipated developments within corporate limits are identified in **Appendix B – Tables – Table 2**. Flows were determined using both IAC and industry guidelines as previously described for residential developments. For commercial and industrial developments, the **Appendix B – Tables – Table 3 & 4** EDUs per acre were utilized.

<u>Anticipated Developments (outside Corporate Limits but Within Service Area)</u>

Appendix A – Figures, Figure 4 – Anticipated Developments (outside Corporate Limits but Within Service Area), presents a figure illustrating Crown Point corporate limits, the expanded water and wastewater service area, and the anticipated developments outside of corporate limits but within the expanded service area. The Great Lakes Drainage Basin divider line is also included in this figure. Labels for these areas are provided on the figure to correlate location to **Appendix B – Tables, Table 5 – Anticipated Developments (outside Corporate Limits but Within Service Area).** Developments are categorized either being within or outside to Great Lakes Drainage Basin.

The growth and flow projection methodology employed above for Anticipated Developments within Crown Point corporate limits is utilized herein to generate the information for anticipated developments outside corporate limits but within the service area. Wastewater flow generated is summed and presented in the table. Water demand is sub-totaled by category (within the drainage basin or outside the drainage basin) and the sum total is also presented.

Western Expansion Area

To the west, outside City limits but within the service area, the City has committed to providing wastewater service to 359 EDUs via the City of Crown Point – Lake County Interlocal Agreement. For sake of conservatism, we will assume none of the 359 EDUs are currently contributing wastewater flow in the base 2024 maximum 30-day usage wastewater baseline flow and that a linear growth in flow will occur starting in 2025 over a 3-year time frame, namely:

- 2025: 120 EDUs
- 2026: 120 EDUs
- 2027: 119 EDUs.

These demands are incorporated into **Appendix A – Figures – Figure 4** presented growth areas, 42-44, 46, 49, part of 47, 50-51, 53, and 55. The growth areas previously mentioned have a total number of 600 EDUs when summed. For analysis purposes, 359 of the projected 600 EDUs will be shown to develop over the next 3 years. These 359 EDUs represent the specific subdivisions that were agreed upon within the Interlocal Agreement. The remainder 241 EDUs are a product of additional septic customers in the area that may be added when City sewer becomes available or additional land for residential development and are projected developed over the 20-year planning period starting in 2028.

For water, there are currently no requests of record for water service by these customers. It will be assumed the 600 EDUs identified for provided wastewater service will present a linear demand for water service over the 20-year planning period (i.e. 600/18 per year growth in water demand EDUs) with demand starting in 2028.

Southern Expansion Area

To the south, outside City limits but within the service area, the City has identified a number of potential growth areas and identified the region as a whole as prime land for residential development. This has been planned on since the previous iteration of growth

projections as it was estimated that 20% of this area would develop over the 20-year growth period through 2042. The City has indicated that this remains expected once utilities are expanded to this area. The total expansion area has a potential full build out of 13,025 EDUs. It is estimated that 20% growth will occur over the planning period (2025-2045) resulting in a 2,605 growth in EDUs.

Eastern Expansion Area

To the east, outside City limits but within the service area, the City has committed to providing water and sewer service to the LBL Development. Latest information provided for this development identifies an anticipated 2981 residential EDUs developing at a rate of 160 to 170 EDUs on average per year. The customers cannot be served until the city's new SE WWTP is brought on-line in 2028. For sake of conservatism, and to capture the entire development within the 2025 through 2045 planning period, we will assume 167 homes per year are brought online starting in 2028 until the entire 2981 EDUs are distributed within the 2025 through 2045 planning period and all homes present both water and sewer demand.

Additionally, 205 acres have been identified from the LBL for industrial development within Crown Point's existing corporate limits - shown as growth area 74 on **Appendix A – Figures – Figure 3**. Another 195 acres owned by LBL were identified within the City's petitioned service area were identified for industrial development as well – shown as growth area 32 on **Appendix A – Figures –Figure 4.** Only 155 acres of area 32 have been identified as developable. These areas contribute 1,126 and 851 EDUs respectively. These EDUs have been shown to develop at the same rate as the rest of growth areas in **Appendix B – Tables – Tables 2 & 5**.

Undefined Development

Both corporate limits and the expanded service area have the potential to experience development unforeseen by the City at the time of this assembly.

Corporate Limits

The City has experienced in recent years an approximate 500 EDU growth rate. **Appendix B – Tables – Tables 1 & 2** were examined for anticipated growth over the 20-year planning period of 2025 through 2045. For any planning year reflecting a growth rate within corporate limits that is less than the current annual average growth of 500 EDUs, **Appendix B – Tables – Table 6 Undefined Development Corporate Limits** reflects the corresponding number of EDUs in the Corporate Limit Growth Column to achieve 500 EDUs and the corresponding flow demands for water and wastewater based upon the industry standard and IAC guidelines.

Western Expansion Area

This area is rural in nature. Homes have developed overtime that are on septic. The septic systems have failed thus necessitating a sewer collection and conveyance system for the existing communities.

With the addition of sewers, the area will become more attractive to develop. To determine development potential for this area, Developable acres within the Western Expansion Area that have not been capture in the above analyses were identified (**See Appendix A – Figures, Figure 5 – Developable Acreage Expansion Area**). To determine full build-out potential, a 2.5 homes per acre population density was applied to these developable acres (**See Appendix B – Tables – Table 7 Undefined Development Western Expansion Area**). This projection of potential home developments plus the previously identified developments in this expansion area represents full build-out potential (also identified on **Appendix B – Tables – Table 7**). The developable acres are labeled in **Appendix A – Figures – Figure 5** and correlated to **Appendix B – Tables – Table 7**.

For Lake County, historical census information identifies an anemic increase in population from 2000 to 2010 of 2.4% and even lower growth rate from 2010 to 2020 of 0.5%. Conversely, Crown Point growth over these same time periods are reported to be 37.9% and 24.1% respectively. For sake of conservatism, it is assumed these areas once sewered will have a growth potential similar to that of Crown Point. An approximate 3% annual growth rate for the western expansion area is applied to the 359 customers that Crown Point will be servicing to achieve a planning level development rate for the undefined developments of 10 homes per year.

This growth is applied starting in 2028 and continues through the planning period ending in 2045. As shown in **Table 7**, these 1,263 homes correlate to 22% of the anticipated total build out of the areas 5,718 homes potential. Industry standard and IAC guideline demands per EDU were applied to both the potential EDUs and the realized EDUs to identify both full build-out flow demands (water and sewer) along with planning period flow demands. Since the Great Lakes Drainage basin is relevant to this area, water demand is sub-totaled for demand within the basin and demand outside the basin and then totaled.

Southern Expansion Area

The Southern Expansion Area has been identified by the City as prime for housing development. As was the case with the western expansion in service territory, the Southern Expansion in Service Territory was examined to identify developable acres (**See Appendix A – Figures, Figure 5 – Developable Acreage Expansion Area**). Again, a population density of 2.5 homes per acre was applied along with corresponding per EDU flows (industry standard and IAC guidelines applied). These developable acres along with the previously identified anticipated developments within this southern expansion area represent full build-out potential for this area **(See Appendix B – Tables – Table 8 Undefined Development Southern Expansion Area).** Planning period EDUs and flows were developed by evaluation of the growth areas as well as the 20% of the total developable area described in **Appendix A – Figures – Figure 5**.

This approach results in a total development of the southern expansion area (inclusive of defined developments) of 2,605 EDUs. Full development of the area is 13,025 EDUs.

Since the Great Lakes Drainage basin is relevant to this area, water demand is sub-totaled for demand within the basin and demand outside the basin and then totaled.

Eastern Expansion Area

The eastern expansion area is largely defined by LBL Development and the City identified anticipated areas of development. For the remaining area, commercial development is anticipated along the US 231 corridor (shown as growth area 69 on **Appendix A – Figures – Figure 4**) and the remaining developable acres, identified in **Appendix A – Figures – Figure 5 – Developable Acreage Expansion Area** and **Appendix B – Tables – Table 9 Undefined Development Eastern Expansion Area.**

It is assumed the commercial acreage (growth area 29) will develop linearly based on historical commercial development parameters from 2030 through the end of the planning period, 2045. It is also assumed the remainder of the developable acres will contribute 100 homes per year starting in 2030 and continuing through the end of the planning period of 2045. As illustrated in **Appendix B – Tables – Table 9**, full build-out EDUs for this area is 10,263, inclusive of the defined areas of development. Additionally, as shown in **Appendix B – Tables – Table 9**, planning period build-out EDUs for this area, also inclusive of the defined areas of development, is 7,513. Therefore, the projected growth for this area results in a 73% build-out by the end of the 2045 planning period.

Since the Great Lakes Drainage basin is relevant to this area, water demand is sub-totaled for demand within the basin and demand outside the basin and then totaled.

Results

Given the above outlined analyses, the following **Tables Ⅰ, Ⅱ,** and **Ⅲ** below present growth projections and corresponding anticipated additional water and sewer demands occurring and created over the 2025 through 2045 Planning Period (20-years).

Table Ⅰ – Growth Projections (EDUs)
2025 – 2045 Planning Period

Category	EDUs
Approved yet to be Developed	1,376
Anticipated Developments (with Corporate Limits)	5,525
Sub-Total	**6,902**
Anticipated Developments (outside Corporate Limits)	---
Western Service Area	1,093
Southern Service Area	5,535
Eastern Service Area	6,013
Sub-Total	**12,641**
Undefined Developments	---
Crown Point Corporate Limits	3,098
Western Service Area	170
Southern Service Area[1]	0
Eastern Service Area	1,500
Sub-Total	**4,768**
TOTAL	**24,311**

[1]Included in Anticipated Developments Calculations

Table Ⅱ – Growth in Wastewater Demands
2025 – 2045 Planning Period

Category	Flow (MGD)	
	Industry Std.	**IAC**
Approved yet to be Developed	0.18	0.43
Anticipated Developments (with Corporate Limits)	0.89	2.06
Growth In Corporate Limits Sub-Total	**1.07**	**2.49**
Anticipated Developments (outside Corporate Limits)	---	---
Western Service Area	0.15	0.34
Southern Service Area	0.74	1.72
Eastern Service Area	0.80	1.86
Sub-Total	**1.69**	**3.92**
Undefined Developments	---	---
Crown Point Corporate Limits	0.41	0.96
Western Service Area	0.02	0.05
Southern Service Area	0.00	0.00
Eastern Service Area	0.20	0.47
Sub-Total	**0.64**	**1.48**
TOTAL	**3.39**	**7.89**

Table Ⅲ – Growth in Water Demands
2025 – 2045 Planning Period

Category	Demand (MGD)	
	Industry Std.	**IAC**
Approved yet to be Developed	0.23	0.69
Anticipated Developments (with Corporate Limits)	1.11	3.33
Sub-Total	**1.34**	**4.01**
Anticipated Developments (outside Corporate Limits)	---	---
Western Service Area	0.18	0.55
Southern Service Area	0.92	2.77
Eastern Service Area	1.00	3.01
Sub-Total	**2.11**	**6.32**
Undefined Developments	---	---
Crown Point Corporate Limits	0.52	1.55
Western Service Area	0.03	0.09
Southern Service Area	0.00	0.00
Eastern Service Area	0.25	0.75
Sub-Total	**0.79**	**2.38**
TOTAL	**4.24**	**12.72**

The following **Table Ⅳ** presents wastewater and water flows/demands established through a 2024 baseline flow / demand and projected over the 2025 - 2045 Planning Period.

Table Ⅳ – Average Wastewater Flow & Water Demand

Year	Wastewater Flow (MGD)		Water Demand (MGD)		Notes
	Industry Std	IAC	Industry Std	IAC	
2024	3.93	3.93	3.09	3.09	Baseline Year; 30-day Maximum Average Dry Weather Flow
2025	4.06	4.24	3.26	3.59	
2026	4.20	4.55	3.42	4.09	
2027	4.33	4.85	3.59	4.58	
2028	4.48	5.21	3.78	5.16	Western County Residents Added, LDL Construction Begins
2029	4.63	5.56	3.97	5.72	
2030	4.80	5.94	4.17	6.34	5-Year Approved Growth Complete, Eastern Commercial Construction Begins
2031	4.96	6.34	4.38	6.97	
2032	5.13	6.73	4.59	7.60	
2033	5.30	7.12	4.81	8.23	
2034	5.47	7.51	5.02	8.86	
2035	5.64	7.90	5.23	9.50	
2036	5.81	8.29	5.44	10.13	
2037	5.97	8.68	5.65	10.76	
2038	6.14	9.08	5.86	11.39	
2039	6.31	9.47	6.07	12.02	
2040	6.48	9.86	6.28	12.65	
2041	6.65	10.25	6.49	13.28	
2042	6.82	10.64	6.70	13.92	
2043	6.98	11.03	6.91	14.55	
2044	7.15	11.42	7.12	15.18	
2045	7.32	11.82	7.33	15.81	

The following **Table Ⅴ** presents wastewater and water peak demands. The above flow projections were utilized and a peaking factor of 4 applied for wastewater and 2.3 and 2.5 for water for industry standards or IAC guidelines. The 2.3 was derived from the actual peaking factor in Crown Point between average day flows and the peak day flows.

Table V – Peak Wastewater Flow & Peak Water Demand

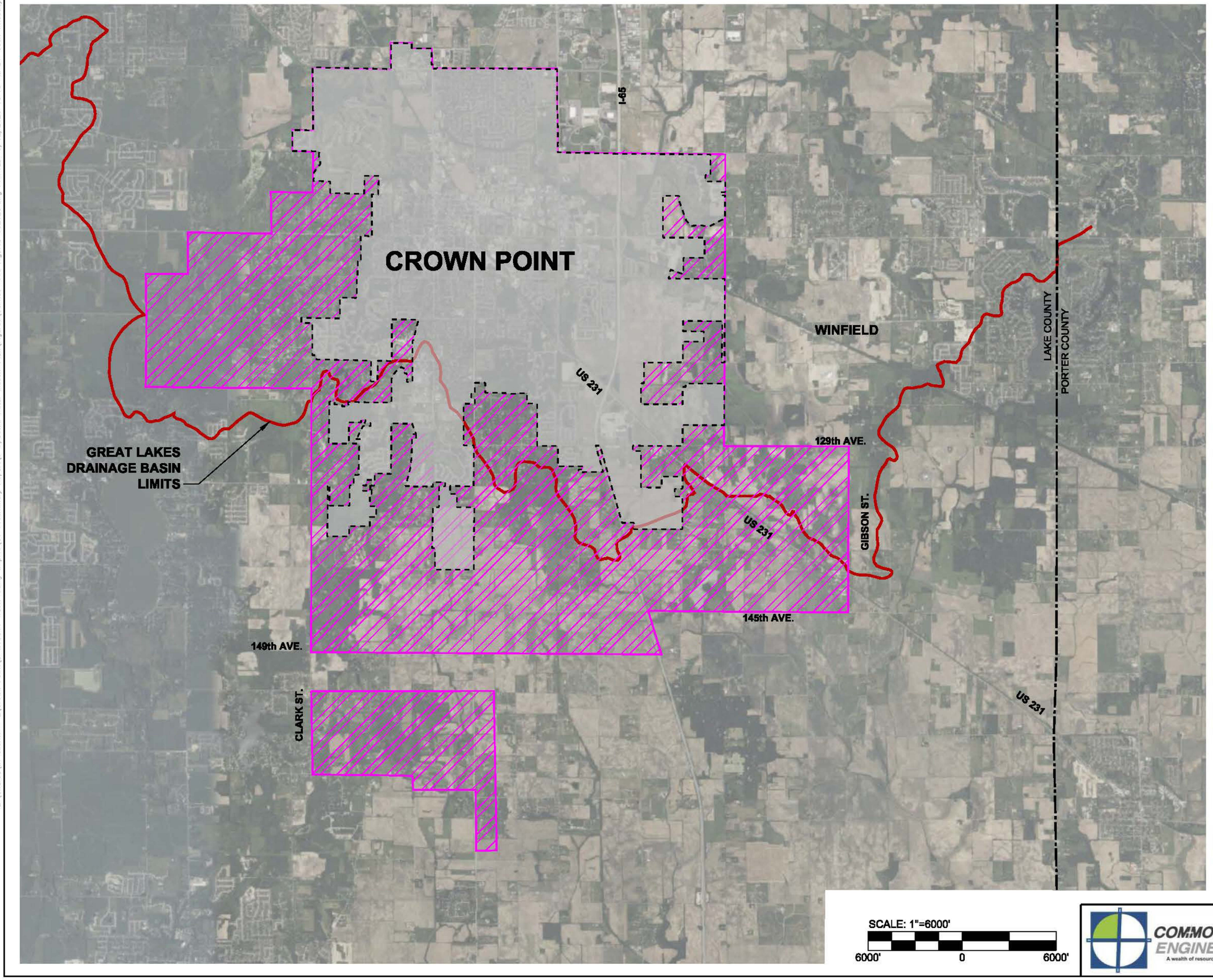
Year	Wastewater Flow (MGD)		Water Demand (MGD)	
	Industry Std	IAC	Industry Std	IAC
2025	16.25	16.95	7.11	7.73
2026	16.78	18.19	7.49	8.97
2027	17.31	19.42	7.87	10.21
2028	17.93	20.86	8.25	11.46
2029	18.53	22.25	8.70	12.91
2030	19.19	23.78	9.13	14.31
2031	19.86	25.34	9.60	15.85
2032	20.53	26.91	10.08	17.43
2033	21.21	28.47	10.57	19.01
2034	21.88	30.04	11.05	20.58
2035	22.55	31.61	11.54	22.16
2036	23.23	33.17	12.02	23.74
2037	23.90	34.74	12.50	25.32
2038	24.57	36.30	12.99	26.90
2039	25.25	37.87	13.47	28.48
2040	25.92	39.43	13.96	30.05
2041	26.59	41.00	14.44	31.63
2042	27.27	42.56	14.92	33.21
2043	27.94	44.13	15.41	34.79
2044	28.61	45.70	15.89	36.37
2045	29.29	47.26	16.38	37.94

Table VI present EDUs and corresponding water and wastewater anticipated demands at the end of the 2025 – 2045 planning period compared to the projected ultimate build-out potential for both Corporate Limits and expanded service territory. Flows are shown as Industry Standard / IAC Guideline.

Table VI – Planning Period Recognized versus Ultimate Build-Out Potential EDUs, Wastewater Flow, Water Demand

Category	2045 Planning Period Value (Flows in MGD)		Ultimate Build-Out Potential		% Build Out
	Industry Std	IAC	Industry Std	IAC	
Within Corporate Limits					
EDUs					
Approved Dev.	1376		1376		100%
Anticipated Dev.	5525		5525		100%
Unclass. Growth	3098		3098		100%
Total	10000		10000		100%
Avg. WW Flow					
Approved Dev.	0.18	0.43	0.18	0.43	100%
Anticipated Dev.	0.89	2.06	0.89	2.06	100%
Unclass. Growth	0.41	0.96	0.41	0.96	100%
Total	1.48	3.45	1.48	3.45	100%
Avg. Water Demand					
Approved Dev.	0.23	0.69	0.23	0.69	100%
Anticipated Dev.	1.11	3.33	1.11	3.33	100%
Unclass. Growth	0.52	1.55	0.52	1.55	100%
Total	1.85	5.56	1.85	5.56	100%
Expansion Area					
EDUs					
Western Area	1263		5718		22%
Southern Area	5535		15955		35%
Eastern Area	7513		10263		73%
Total	14311		31936		45%
Avg WW Flow					
Western Area	0.17	0.39	0.76	1.77	22%
Southern Area	0.74	1.72	2.12	4.93	35%
Eastern Area	1.00	2.33	1.37	3.18	73%
Total	1.91	4.44	4.25	9.89	45%
Avg Water Demand					
Western Area	0.21	0.63	0.95	2.86	22%
Southern Area	0.92	2.77	2.65	7.96	35%
Eastern Area	1.25	3.76	1.71	5.13	73%
Total	2.39	7.16	5.32	15.95	45%
Totals					
EDUs	**24311**		**41936**		**58%**
Avg. WW Flow	**3.39**	**7.89**	**5.74**	**13.34**	**59%**
Avg. Water Demand	**4.24**	**12.72**	**7.17**	**21.51**	**59%**

Appendix A – Figures



SCALE: 1"=6000'

6000' 0 6000'

COMMONWEALTH ENGINEERS, INC.
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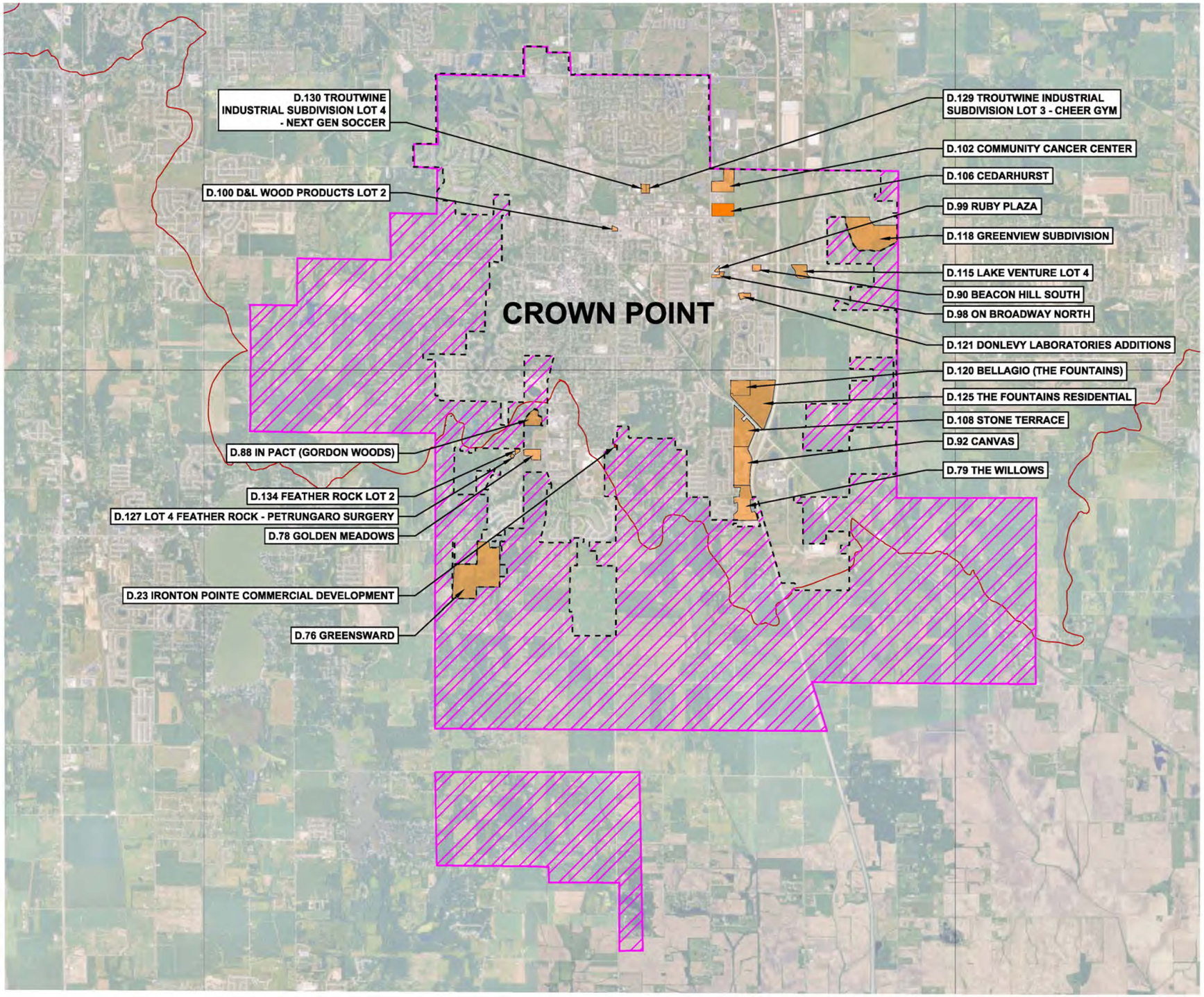
CITY OF CROWN POINT
LAKE COUNTY, INDIANA

FIGURE 1

CROWN POINT SERVICE AREA

Z:\Shared\IN Clients A-L\Crown Point\D W18011 Water Utility Improv\03 Preliminary Report\e Updated Water Master Plan\Figures\Service Area Figures 082525.dwg PRINTED: 9/12/2025 10:18 AM BY: Josh Wheatley



LEGEND

- EXISTING SERVICE AREA
- GREAT LAKES DRAINAGE BASIN LIMITS
- PETITIONED SERVICE AREA
- APPROVED CONSTRUCTION YET TO BE FULLY DEVELOPED

SCALE: 1"=6000'

6000' 0 6000'

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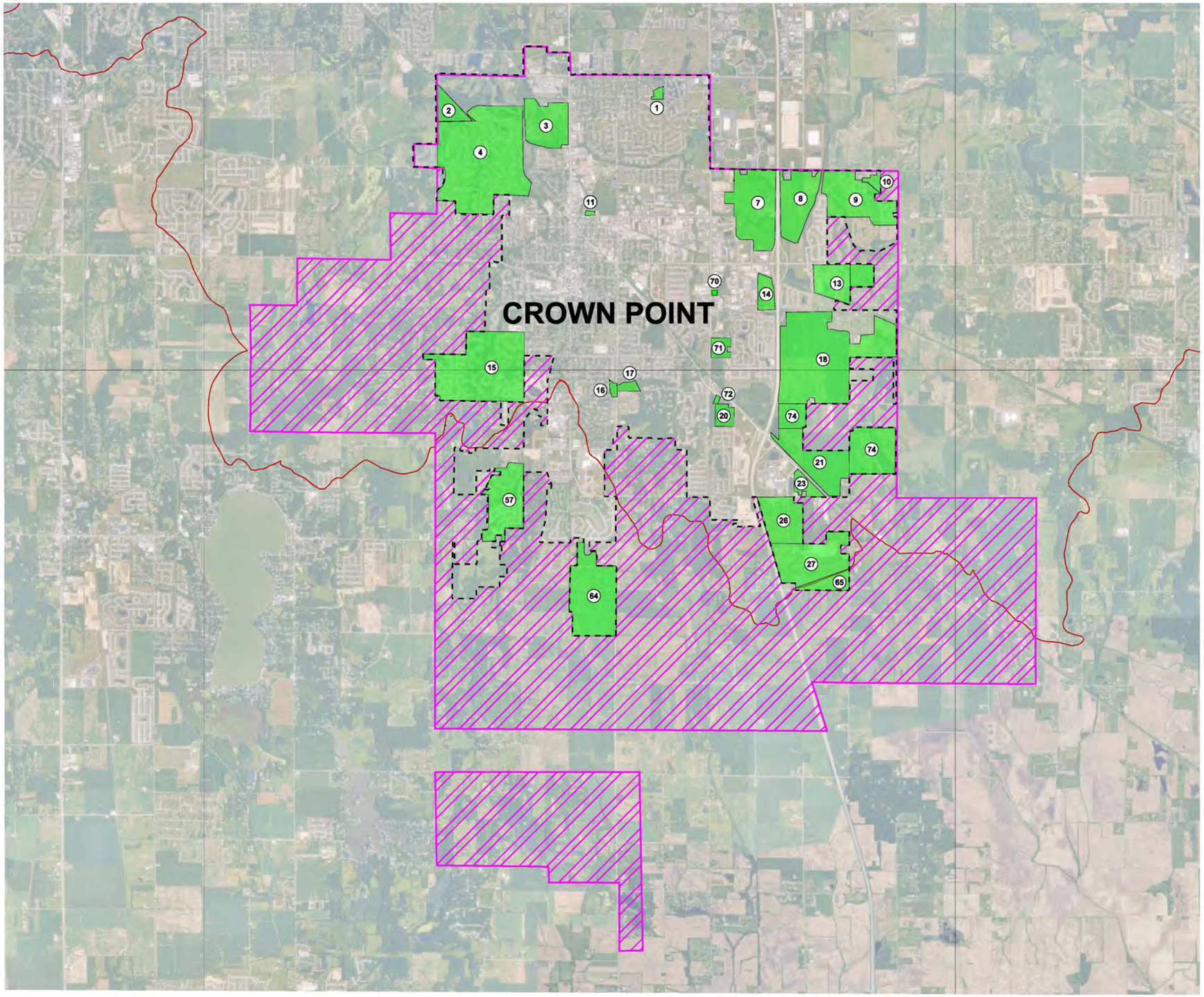
LAKE COUNTY, INDIANA

FIGURE 2

APPROVED CONSTRUCTION YET TO BE FULLY DEVELOPED



LEGEND

- EXISTING SERVICE AREA
- GREAT LAKES DRAINAGE BASIN LIMITS
- PETITIONED SERVICE AREA
- (#) ANTICIPATED DEVELOPMENTS WITHIN SERVICE AREA

SCALE: 1"=6000'

6000' 0 6000'

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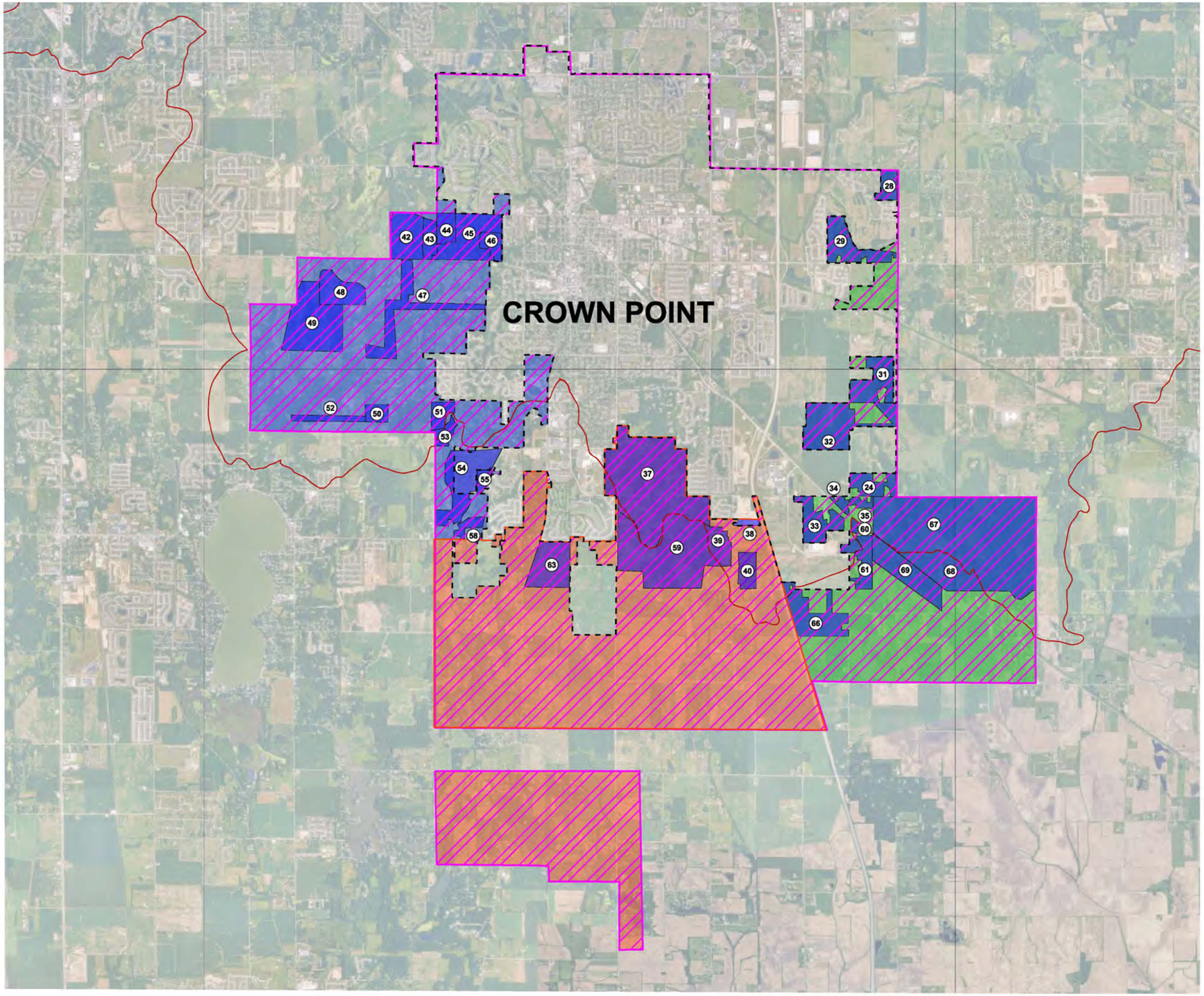
CITY OF CROWN POINT
LAKE COUNTY, INDIANA

FIGURE 3

ANTICIPATED DEVELOPMENT WITHIN SERVICE AREA



LEGEND

- EXISTING SERVICE AREA
- GREAT LAKES DRAINAGE BASIN LIMITS
- PETITIONED SERVICE AREA
- ANTICIPATED DEVELOPMENTS OUTSIDE SERVICE AREA
- WESTERN GROWTH AREA
- SOUTHERN GROWTH AREA
- EASTERN GROWTH AREA

SCALE: 1"=6000'

6000' 0 6000'

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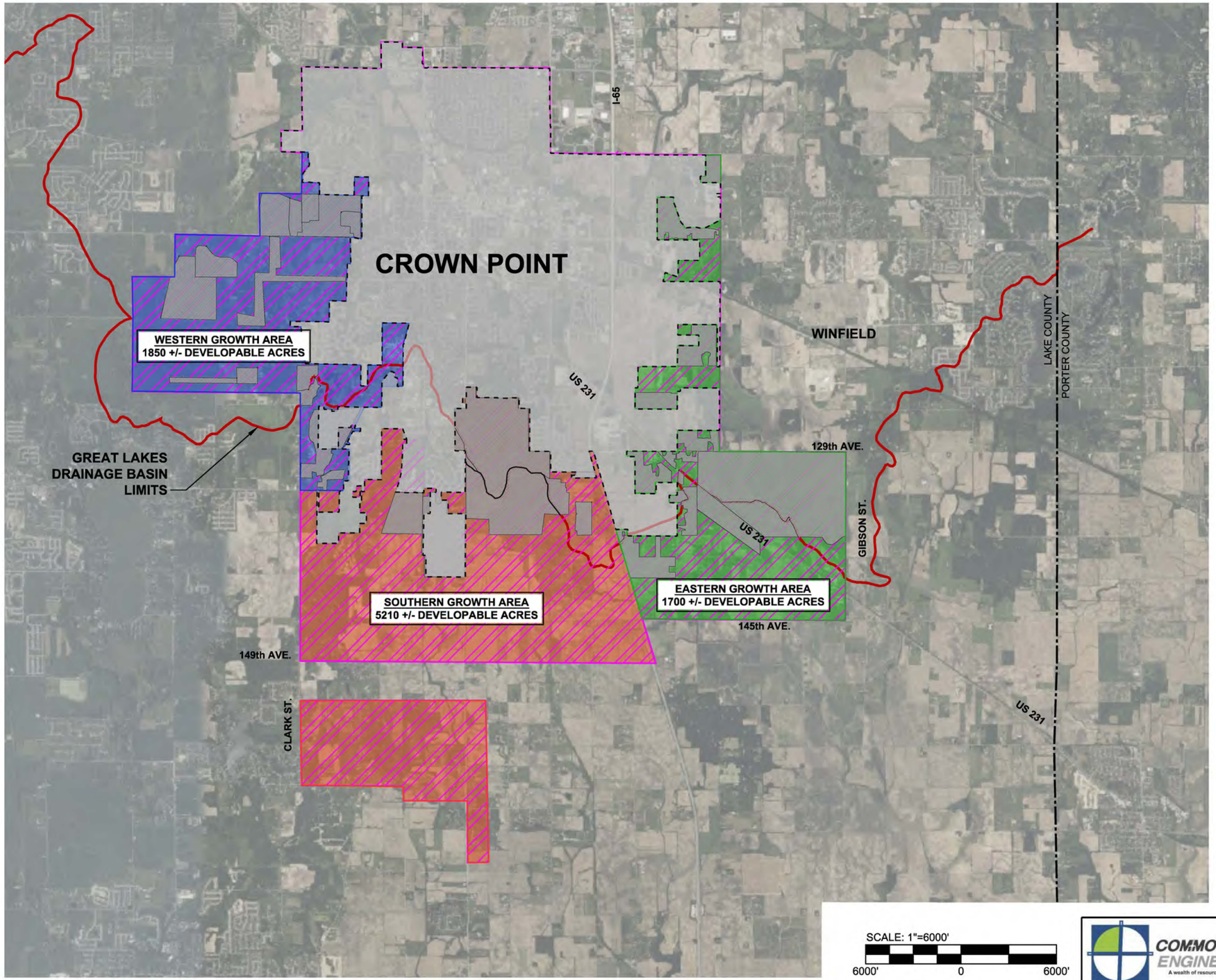
CITY OF CROWN POINT
LAKE COUNTY, INDIANA

FIGURE 4

ANTICIPATED DEVELOPMENT OUTSIDE SERVICE AREA



LEGEND

- EXISTING SERVICE AREA
- PETITIONED SERVICE AREA
- AREAS OF ANTICIPATED DEVELOPMENTS

SCALE: 1"=6000'

6000' 0 6000'

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CITY OF CROWN POINT
LAKE COUNTY, INDIANA

FIGURE 5

UNDEFINED DEVELOPMENT EXPANSION AREA

Appendix B – Tables

Table 1
Approved Construction Yet to be Fully Developed

Area No.	Approved Development	Approved EDUs	Remaining EDUs	Industry Standard (GPD)		IAC Guideline (GPD)		Growth Rate		Notes
				Water	WW	Water	WW	5 Years	20 Years	
D.63	Ironton Pointe Commercial Development	55	21	3575	2860	10726	6650	X		2 of 6 Lots Undeveloped
D.76	Greensward	54	54	9000	7200	27000	16740		X	Previously Smith Farms, presenting for approval at end of year, 54 homes
D.78	Golden Meadows	28	28	4667	3733	14000	8680	X		28 Lots, currently under construction
D.79	The Willows	227	182	30267	24213	90800	56296	X		20% of the 227 lots complete
D.88	In Pact (Gordon Woods)	7	6	1000	800	3000	1860		X	1 of 7 estate houses built
D.90	Beacon Hill South	182	24	4032	3226	12097	7500	X		1 Lot (Lot 3) Remaining (Resturant)
D.92	Canvas	178	178	29667	23733	89000	55180	X		176 Single family homes and 2 clubhouses
D.98	On Broadway North	9	9	1529	1223	4587	2844	X		Two two-story office building
D.99	Ruby Plaza	2	4	602	482	1806	1120		X	Car wash done, commercial building yet to be built
D.100	D&L Wood Products Lot 2	4	4	603	482	1808	1121	X		Warehouse
D.102	Community Cancer Center	69	46	7699	6159	23097	14320	X		2 Lots owned by Munster Medical to be built on, assumed same demand as cancer center
D.106	Cedarhurst	54	54	8978	7183	26935	16700	X		Assisted living facility
D.108	Stone Terrace	44	44	7277	5822	21832	13536		X	12 Commercial Lots
D.115	Lake Venture Lot 4	133	133	22151	17720	66452	41200		X	3 Resturants, 2 hotels, 3 retail buildings, 1 extra building
D.118	Greenview Subdivision	199	199	33167	26533	99500	61690		X	199 additional homes
D.120	Bellagio (The Fountains)	198	198	33000	26400	99000	61380		X	198 townhomes
D.121	DonLevy Laboratories Additions	11	11	1774	1419	5323	3300	X		Single building addition
D.125	The Fountains (Residential)	177	177	29500	23600	88500	54870		X	176 homes and a clubhouse
D.127	Lot 4 Feather Rock - Petrungaro Surgery	0.48	0.48	81	65	242	150	X		1 Building
D.129	Troutwine Industrial Subivision Lot 3 - Cheer Gym	0.84	0.84	140	112	419	260	X		Athletic Facility
D.130	Troutwine Industrial Subivision Lot 4 - Next Gen Soccer	0.48	0.48	81	65	242	150	X		Athletic Facility
D.134	Feather Rock Lot 2	4	4	625	500	1876	1163	X		Two suite office building
	Total Approved Developments Average Day Flow (GPD)			**229414**	**183531**	**688242**	**426710**			
	Total Approved Developments Average Day Flow (MGD)			**0.23**	**0.18**	**0.69**	**0.43**			
	Total Approved Developments Peak Flow (MGD)			**0.53**	**0.73**	**1.72**	**1.71**			
	Total Approved Developments Average Day Flow 5 Year Growth Rate (MGD)			**0.09**	**0.07**	**0.28**	**0.17**			
	Total Approved Developments Average Day Flow 20 Year Growth Rate (MGD)			**0.14**	**0.11**	**0.41**	**0.25**			

	Usage Per EDU (GPD)		Peaking Factor (Water)	Peaking Factor (WW)
	Water	WW		
Industry Standard	**166.67**	**133.33**	**2.3**	**4**
IAC Guidleine	**500**	**310**	**2.5**	**4**

Table 2

Anticipated Developments Within Coporate Limits

Growth Area No.	Development		Acres	Developable Acres	EDUs	Industry Standard (GPD)		IAC Guideline (GPD)	
						Water	WW	Water	WW
1	Fieldstone Crossing Townhomes	Residential	-	-	55	9167	7333	27500	17050
2	Growth Area No. 2	Residential	51.6	1.69	4	704	563	2113	1310
3	Growth Area No. 3	Commercial	139	79.7	201	33483	26787	100450	62279
4	Whitehawk	Residential	-		9	1500	1200	4500	2790
7	Growth Area No. 7	Commercial	228	147.4	371	61905	49524	185714	115142
8	Growth Area No. 8	Residential	155	133.1	333	55458	44367	166375	103153
9	Summertree	Residential	-	-	151	25167	20133	75500	46810
10	Growth Area No. 10	Residential	13.6	6	15	2517	2013	7550	4681
11	Growth Area No. 11	Business Mall (Commercial)	2.9	2.9	7	1218	975	3655	2266
13	Heather Ridge Subdivision	Residential	-	-	23	3833	3067	11500	7130
14	Growth Area No. 14	Residential	40.2	39.5	99	16442	13153	49325	30582
15	Ellendale	Residential	-	-	24	4000	3200	12000	7440
16	Growth Area No. 16	Residential Well Conversion	-	-	16	2667	2133	8000	4960
17	Growth Area No. 17	Residential Well Conversion	-	-	15	2500	2000	7500	4650
18	Growth Area No. 18	Mixed Use Business Park	510	506.6	1286	214261	171408	642782	398525
20	Growth Area No. 20	Residential	28.7	28.7	72	11958	9567	35875	22243
21	Growth Area No. 21	Residential	171	171	428	71250	57000	213750	132525
23	Growth Area No. 23	Commercial	32.3	31.8	80	13372	10698	40117	24873
26	Mississippi Parkway Phase 1	Commercial	-	-	113	18875	15100	56625	35108
27	Growth Area No. 27	Commercial	165	147.7	372	62064	49651	186192	115439
30	The Orchards	Residential	-	-	53	8833	7067	26500	16430
57	Cooper Creek	Residential	-	-	9	1500	1200	4500	2790
64	Former Ryland Homes	Residenmtial	-	-	1540	256667	205333	770000	477400
65	Growth Area No. 65	Commercial	86	85.8	216	36063	28850	108189	67077
70	Growth Area 70 (Former Goodwill)	Commercial	2.8	2.8	7	1176	941	3529	2188
71	Cathedral Woods	Residential	-	-	6	1000	800	3000	1860
72	111 E. State Rd 8 (LTF Eye Clinic)	Commercial	-	-	20	3333	2667	10000	6200
74	LDL / Hein Development Partnership	Industrial	205	205	1126	187653	150122	562958	349034
				Total Growth Areas Average Day Flow (GPD)		**1108566**	**886853**	**3325699**	**2061933**
				Total Growth Areas Average Day Flow (MGD)		**1.11**	**0.89**	**3.33**	**2.06**
				Total Growth Areas Peak Flow (MGD)		**2.55**	**3.55**	**8.31**	**8.25**

	Usage Per EDU (GPD)		Peaking Factor (Water)	Peaking Factor (WW)
	Water	WW		
Industry Standard	**166.67**	**133.33**	**2.3**	**4**
IAC Guidleine	**500**	**310**	**2.5**	**4**

	EDUs Per Acre
Residential	**2.5**
Commercial	**2.52**
Industrial	**5.49**

Table 3
Commercial Growth & Flow Projections

Development	Date	Description	Acreage	Water/Wastewater ADF (GPD)	EDUs (Flow/500 GPD IAC Rec. for Water)
Beacon Hill South (Includes McDonald's)	7/12/2022	5 lots - 1 McDonald's, 4 fast food resta	16.42	56320	112.64
Two Hearts	11/1/2022	1 Assisted Living Home (16 beds)	0.98	1600	3.20
Ruby Plaza	2/8/2023	1 Commercial Lot, 1 Car Wash	5.05	21714	43.43
D&L	2/8/2023	1 Commercial unit	1.6	600	1.20
On Broadway North	2/8/2023	2 Office Buildings	2.71	2844	5.69
Caliber Collision	3/2/2023	1 Office Building	1.87	240	0.48
Community Cancer Center	3/24/2023	1 Medical Building	8.99	7140	14.28
Solon Robinson Elementary School	4/20/2023	Elementary School Additions	8.31	12108	24.22
Cedarhurst	7/6/2023	1 Assisted Living Facility	10.08	16700	33.40
Warhorse North	8/2/2023	8 Buildings	26.36	33250	66.50
Stone Terrace	8/3/2023	12 Commercial Lots	35.36	13536	27.07
Levin Tire	8/14/2023	1 Building	1.38	11700	23.40
Gold Nest	8/14/2023	3 Duplex Residential Lots, 1 Commerci	2.03611	900	1.80
Ambulatory Surgery Center	10/31/2023	1 Surgery Center	9.41	675	1.35
Lake Ventures Lot 4	12/4/2023	9 Lots: 3 Retail, 4 Restaurants (1 Assur	37.31	41200	82.40
Goodwill	1/26/2024	1 Professional Office/Retail Building	2.97	70	0.14
LTF Eye Clinic	3/6/2024	1 Eye Clinic	1.83	960	1.92
DonLevy Labs	4/16/2024	1 Lab Building Addition	4.48	3300	6.60
Taco Bell	6/4/2024	1 restaurant, 52 seats	0.88	1820	3.64
Buona Beef	6/10/2024	1 resturant, 138 seats	1.29	4830	9.66
Petrungaro Plastic Surgery	8/16/2024	1 Outpatient Surgical Center	0.97	150	0.30
Cheer Gym	6/17/2025	Athletic Field	1.15	260	0.52
Next Gen Soccer	6/17/2025	Athletic Field	1.15	150	0.30
Feather Rock Lot 2	8/14/2025	15 employees in office building	1.78	300	0.60
		Total Flow/EDU per Total Acreage		**1260**	**2.52**

Table 4
Industrial Growth & Flow Projections

Development	Date	Description	Acreage	ADF (GPD)	EDUs (Flow/500 GPD IAC Rec. for Water)
Point65	7/12/2022	2 Industrial Warehouses	58	3040	6.08
Mississippi Parkway Cold Storage	5/26/2023	1 Industrial Warehouse	39.81	2560	5.12
Venture One	9/5/2023	4 industrial warehouses (2 light, 2 hea	137.77	754500	1509
Haven Development	6/4/2024	1 Light Industrial Warehouse	0.26	200	0.4
Saxum	4/30/2024	1 Industrial Warehouse	25.7	7760	15.52
Annexation Areas #1 (129th Ave and MS Pkwy)	7/30/2025	Commercial-Industrial, 2 Buildings	74.96	350330.4	700.6608
Annexation Areas #2 (129th Ave and MS Pkwy)	7/30/2025	Commercial-Industrial, 1 Building	6.4	16128	32.256
Annexation Areas #3 (129th Ave and MS Pkwy)	7/30/2025	Commercial-Industrial, 3 Buildings	139.02	188899.2	377.7984
		Total Flow/EDU per Total Acreage		**2746**	**5.49**

Table 5

Anticiptated Developments Outside Coporate Limits but Within Service Area

Growth Area No.	Development	Type of Development	Acres	Developable Acres	EDUs	Industry Standard (GPD)		IAC Guideline (GPD)		Expansion Area	Notes
						Water	WW	Water	WW		
Developments Within Great Lakes Drainage Basin											
24	Growth Area No. 24	Residential	57	48.9	122	20363	16290	61088	37874	Eastern	
28	Growth Area No. 28	Residential	36.7	23.09	58	9621	7697	28863	17895	Eastern	
29	Growth Area No. 29	Residential	106	75.35	188	31396	25117	94188	58396	Eastern	
31	Growth Area No. 31	Mixed Use Business Park	111	44.56	112	18720	14976	56161	34820	Eastern	
32	LDL / Hein Development Partnership	Industrial	195	155	851	141884	113507	425651	263904	Eastern	
33	Growth Area No. 33 (Annexation Area 1)	Industrial	95.3	85.7	471	78448	62758	235344	145913	Eastern	
34	Growth Area No. 34	Residential	13.3	10.4	26	4325	3460	12975	8045	Eastern	
35	Growth Area No. 35	Commercial	14.4	11.32	29	4756	3805	14267	8846	Eastern	
36	Growth Area No. 36 (Annexation Area 2)	Industrial	11.8	11.8	65	10801	8641	32404	20091	Eastern	
37	Growth Area No. 37	Residential Well Conversion	-	-	250	41667	33333	125000	77500	Southern	
38	Growth Area No. 38	Residential	-	-	25	4167	3333	12500	7750	Southern	
39	Growth Area No. 39	Residential	28.3	27.9	70	11608	9287	34825	21592	Southern	
40	Growth Area No. 40	Residential	47.6	47.6	119	19833	15867	59500	36890	Southern	
41	Growth Area No. 41 (Annexation Area 3)	Industrial	7.5	7.5	41	6838	5470	20514	12718	Eastern	
42	West Point Acres	Residential Well Conversion	-	-	30	5000	4000	15000	9300	Western	Develop for WW by 2027, develop for Water by 2045
43	Greenhill Ranches	Residential Well Conversion	-	-	35	5833	4667	17500	10850	Western	Develop for WW by 2027, develop for Water by 2045
44	Oak Heights	Residential Well Conversion	-	-	77	12833	10267	38500	23870	Western	Develop for WW by 2027, develop for Water by 2045
45	Growth Area No. 45	Residential Well Conversion	-	-	40	6667	5333	20000	12400	Western	
46	West Lawn	Residential Well Conversion	-	-	68	11333	9067	34000	21080	Western	Develop for WW by 2027, develop for Water by 2045
47	Oakwood Hills	Residential Well Conversion	-	-	70	11667	9333	35000	21700	Western	Develop for WW by 2027, develop for Water by 2045
48	Growth Area No. 48	Residential	88.7	79.4	199	33092	26473	99275	61551	Western	
49	Beaver Dam Estates	Residential Well Conversion	-	-	92	15333	12267	46000	28520	Western	Develop for WW by 2027, develop for Water by 2045
50	Sleepy Hallow	Residential Well Conversion	-	-	55	9167	7333	27500	17050	Western	Develop for WW by 2027, develop for Water by 2045
51	Buckhill	Residential Well Conversion	-	-	60	10000	8000	30000	18600	Western	Develop for WW by 2027, develop for Water by 2045
52	Growth Area No. 52	Residential	32.7	30.6	77	12763	10210	38288	23738	Western	
67	LDL / Hein Development Partnership	Residential	-	-	2617	436167	348933	1308500	811270	Eastern	Begin developing in 2028 and finish by 2045
					Sub-Total Growth Areas Average Day Flow (GPD)	**974281**	**779424**	**2922842**	**1812162**		
					Sub-Total Growth Areas Average Day Flow (MGD)	**0.97**	**0.78**	**2.92**	**1.81**		
					Sub-Total Growth Areas Peak Flow (MGD)	**2.24**	**3.12**	**7.31**	**7.25**		
Developments Outside Great Lakes Drainage Basin											
53	Buckhill	Residential Well Conversion	-	-	30	5000	4000	15000	9300	Western	Develop for WW by 2027, develop for Water by 2045
54	Growth Area No. 54 (Hidden Lakes)	Residential	-	-	160	26667	21333	80000	49600	Western	
55	Lawndale	Residential Well Conversion	-	-	60	10000	8000	30000	18600	Western	Develop for WW by 2027, develop for Water by 2045
58	Growth Area No. 58	Residential	23.4	16.3	41	6788	5430	20363	12625	Western	
59	Growth Area No. 59	Residential	394	326	815	135813	108650	407438	252611	Southern	
60	Growth Area No. 60	Residential	6.7	6.7	17	2800	2240	8400	5208	Eastern	
61	Growth Area No. 61	Residential	62.6	61.7	154	25688	20550	77063	47779	Eastern	
63	Growth Area No. 63	Residential Well Conversion	-	-	70	11667	9333	35000	21700	Southern	
66	Annexation Area 3	Industrial	127.0	127.0	698	116253	93002	348759	216231	Eastern	
68	LDL / Hein Development Partnership	Residential	-	-	364	60667	48533	182000	112840	Eastern	Begin developing in 2028 and finish by 2045
69	Growth Area 69	Commercial	109.0	96	242	40327	32262	120982	75009	Eastern	Begin developing in 2030 and finish by 2045
73	Southern Growth Region	Residential	5759	1042	2605	434167	347333	1302500	807550	Southern	Only 20% of the total 7505 acreage projected to be built in next 20 years
					Sub-Total Growth Areas Average Day Flow (GPD)	**875834**	**700668**	**2627503**	**1629052**		
					Sub-Total Growth Areas Average Day Flow (MGD)	**0.88**	**0.70**	**2.63**	**1.63**		
					Sub-Total Growth Areas Peak Flow (MGD)	**2.01**	**2.80**	**6.57**	**6.52**		
					Total Growth Areas Average Day Flow (GPD)	**1850115**	**1480092**	**5550345**	**3441214**		
					Total Growth Areas Average Day Flow (MGD)	**1.85**	**1.48**	**5.55**	**3.44**		
					Total Growth Areas Peak Flow (MGD)	**4.26**	**5.92**	**13.88**	**13.76**		

	Usage Per EDU (GPD)		Peaking Factor (Water)	Peaking Factor (WW)
	Water	WW		
Industry Standard	**166.67**	**133.33**	**2.3**	**4**
IAC Guidleine	**500**	**310**	**2.5**	**4**

	EDUs Per Acre
Residential	**2.5**
Commercial	**2.52**
Industrial	**5.49**

Table 6

Undefinded Development Coporate Limits

	EDUs	Industry Standard (GPD)		IAC Guideline (GPD)	
		Water	WW	Water	WW
Additional EDUs from 2025 to 2030	353	58797	47037	176391	109362
Additional EDUs from 2030 to 2045	2745	457542	366034	1372627	851029
Total City Undefinded Devlopement	**3098**	**516339**	**413071**	**1549017**	**960391**

	Usage Per EDU (GPD)		Peaking Factor (Water)
	Water	WW	
Industry Standard	**166.67**	**133.33**	**2.3**
IAC Guidleine	**500**	**310**	**2.5**

	Total EDUs	EDU Rate Per Year		
Approved Development EDUs per 5-Year Growth	562	112		
Approved Development EDUs per 20-Year Growth	814	41		
Anticipated Development EDUs In City 20-Year Growth	5525	276	**Add. Und. EDUs/Yr**	**Total EDUs/Yr**
2025-2030 EDU Growth Rate		**429**	**71**	**500**
2030-2045 Growth Rate		**317**	**183**	**500**

Table 7

Undefined Development Western Expansion Area

Full Build-Out								
Growth Area No.	Development	Type of Development	Developable Acres	EDUs	Industry Standard (GPD)		IAC Guideline (GPD)	
					Water	WW	Water	WW
Developments Within the Great Lakes Drainage Basin								
89% of Western Undefined Development		Residential	1647	4116	686042	548833	2058125	1276038
42	West Point Acres	Residential Well Conversion	-	30	5000	4000	15000	9300
43	Greenhill Ranches	Residential Well Conversion	-	35	5833	4667	17500	10850
44	Oak Heights	Residential Well Conversion	-	77	12833	10267	38500	23870
45	Growth Area No. 45	Residential Well Conversion	-	40	6667	5333	20000	12400
46	West Lawn	Residential Well Conversion	-	68	11333	9067	34000	21080
47	Oakwood Hills	Residential Well Conversion	-	70	11667	9333	35000	21700
48	Growth Area No. 48	Residential	79.4	199	33092	26473	99275	61551
49	Beaver Dam Estates	Residential Well Conversion	-	92	15333	12267	46000	28520
50	Sleepy Hallow	Residential Well Conversion	-	55	9167	7333	27500	17050
51	Buckhill	Residential Well Conversion	-	60	10000	8000	30000	18600
52	Growth Area No. 52	Residential	30.6	77	12763	10210	38288	23738
			Full Build-Out Sub-Totals	4918	819729	655783	2459188	1524696
Developments Outside the Great Lakes Drainage Basin								
11% Western Undefined Development		Residential	203.5	509	84792	67833	254375	157713
53	Buckhill	Residential Well Conversion	-	30	5000	4000	15000	9300
54	Growth Area No. 54 (Hidden Lakes)	Residential	-	160	26667	21333	80000	49600
55	Lawndale	Residential Well Conversion	-	60	10000	8000	30000	18600
58	Growth Area No. 58	Residential	16.3	41	6788	5430	20363	12625
			Full Build-Out Sub-Totals	799	133246	106597	399738	247837
			Full Build-Out Totals	**5718**	**952975**	**762380**	**2858925**	**1772534**
2025 to 2045 Planning Totals								
Developments Within the Great Lakes Drainage Basin								
			2025 to 2028 Totals	276	46000	36800	138000	85560
			Remainder of Growth Area Growth	526	87688	70150	263063	163099
			89% of Undefined Development Growth of 10 EDUs/Year Starting in 2028	151	25217	20173	75650	46903
			Planning Period Sub-Totals	953	158904	127123	476713	295562
Developments Outside the Great Lakes Drainage Basin								
			2025 to 2028 Totals	83	13833	11067	41500	25730
			Remainder of Growth Area Growth	208	34621	27697	103863	64395
			11% of Undefined Development Growth of 10 EDUs/Year Starting in 2028	19	3117	2493	9350	5797
			Planning Period Sub-Totals	309	51571	41257	154713	95922
			Planning Period Totals	**1263**	**210475**	**168380**	**631425**	**391484**
			Percent of Full Build-out	**22%**				

Table 8

Undefined Development Southern Expansion Area

Full Build-Out								
Growth Area No.	Development	Type of Development	Developable Acres	EDUs	Industry Standard (GPD)		IAC Guideline (GPD)	
					Water	WW	Water	WW
Developments Within the Great Lakes Drainage Basin								
	5% of Southern Undefined Development	Residential	260.5	651	108542	86833	325625	201888
37	Growth Area No. 37	Residential Well Conversion	-	250	41667	33333	125000	77500
38	Growth Area No. 38	Residential	-	25	4167	3333	12500	7750
39	Growth Area No. 39	Residential	28	70	11608	9287	34825	21592
40	Growth Area No. 40	Residential	48	119	19833	15867	59500	36890
41	Growth Area No. 41 (Annexation Area 3	Industrial	7	41	6838	5470	20514	12718
		Full Build-Out Sub-Totals		1156	185817	148653	557450	345619
Developments Outside the Great Lakes Drainage Basin								
	95% of Southern Undefined Development	Residential	4949.5	12374	2062292	1649833	6186875	3835863
59	Growth Area No. 59	Residential	326	815	135813	108650	407438	252611
63	Growth Area No. 63	Residential Well Conversion	-	70	11667	9333	35000	21700
64	Former Ryland Homes	Residenmtial	-	1540	256667	205333	770000	477400
		Full Build-Out Sub-Totals		14799	2466438	1973150	7399313	4587574
		Full Build-Out Totals		**15955**	**2652254**	**2121803**	**7956763**	**4933193**
2025 to 2045 Planning Totals								
Developments Within the Great Lakes Drainage Basin								
	5% of 20% Southern Undefined Development	Residential	52.1	130	21708	17367	65125	40378
37	Growth Area No. 37	Residential Well Conversion	-	250	41667	33333	125000	77500
38	Growth Area No. 38	Residential	-	25	4167	3333	12500	7750
39	Growth Area No. 39	Residential	28	70	11608	9287	34825	21592
40	Growth Area No. 40	Residential	47.6	119	19833	15867	59500	36890
41	Growth Area No. 41 (Annexation Area 3	Industrial	7.47	41	6838	5470	20514	12718
		Planning Period Sub-Totals		635	105821	84657	317464	196827
Developments Outside the Great Lakes Drainage Basin								
	95% of the 20% Southern Undefined Development	Residential	989.9	2475	412458	329967	1237375	767173
59	Growth Area No. 59	Residential	326	815	135813	108650	407438	252611
63	Growth Area No. 63	Residential Well Conversion	-	70	11667	9333	35000	21700
64	Former Ryland Homes	Residenmtial	-	1540	256667	205333	770000	477400
		Planning Period Sub-Totals		4900	816604	653283	2449813	1518884
		Planning Period Totals		**5535**	**922425**	**737940**	**2767276**	**1715711**
		Percent of Full Build-out		**35%**				

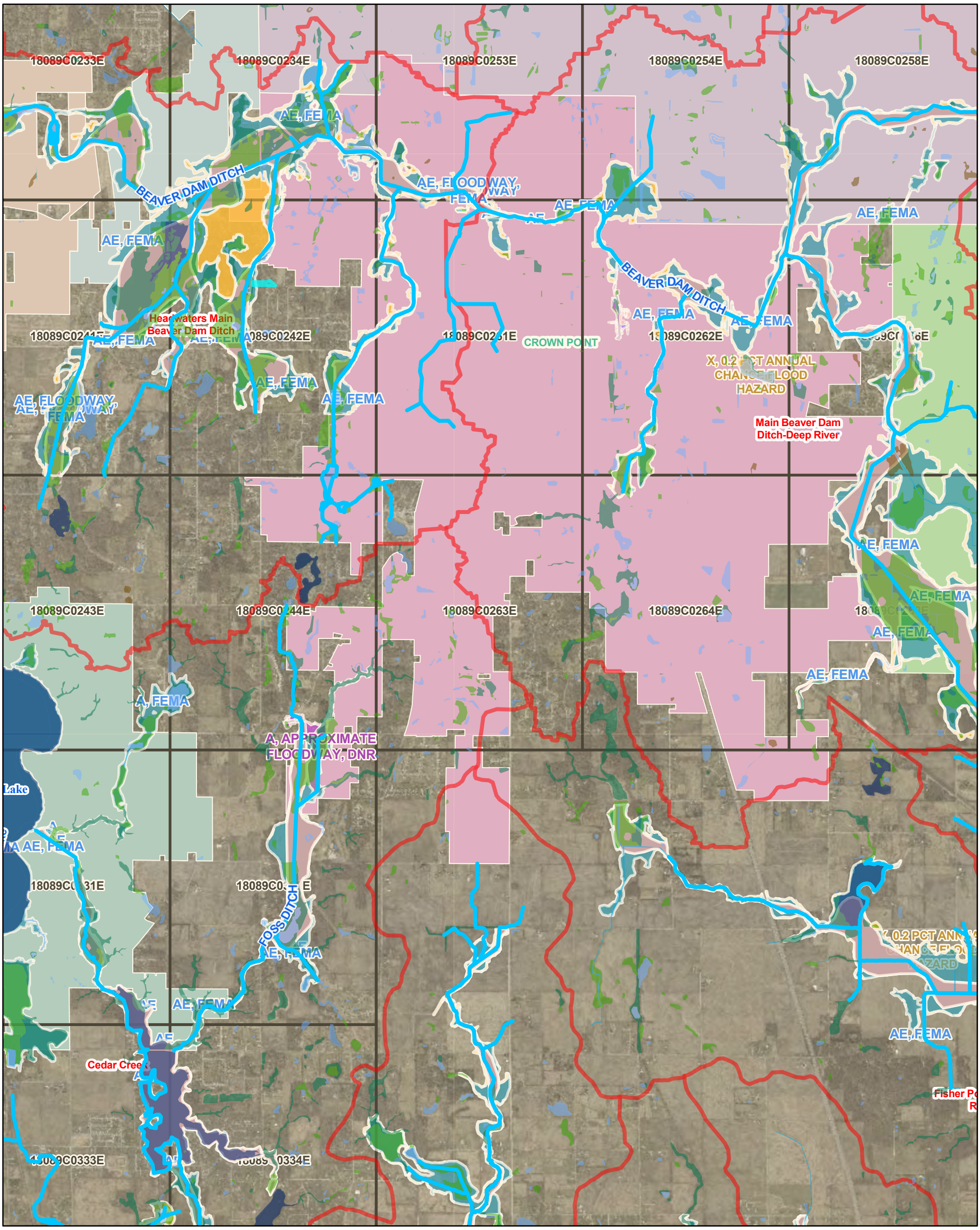
Table 9

Undefined Development Eastern Expansion Area

Full Build-Out								
Growth Area No.	Development	Type of Development	Acres	EDUs	Industry Standard (GPD)		IAC Guideline (GPD)	
					Water	WW	Water	WW
Developments Within the Great Lakes Drainage Basin								
	27% of Eastern Undefined Development	Residential	459	1148	191250	153000	573750	355725
24	Growth Area No. 24	Residential	57	122	20363	16290	61088	37874
28	Growth Area No. 28	Residential	36.7	58	9621	7697	28863	17895
29	Growth Area No. 29	Residential	106	188	31396	25117	94188	58396
31	Growth Area No. 31	Mixed Use Business Park	111	112	18720	14976	56161	34820
32	LDL / Hein Development Partnership	Industrial	195	851	141884	113507	425651	263904
33	Growth Area No. 33 (Annexation Area 1)	Industrial	95.3	471	78448	62758	235344	145913
34	Growth Area No. 34	Residential	13.3	26	4325	3460	12975	8045
35	Growth Area No. 35	Commercial	14.4	29	4756	3805	14267	8846
36	Growth Area No. 36 (Annexation Area 2)	Industrial	11.8	65	10801	8641	32404	20091
67	LDL / Hein Development Partnership	Residential	-	2617	436167	348933	1308500	811270
			Full Build-Out Sub-Totals	5686	947730	758184	2843190	1762778
Developments Outside the Great Lakes Drainage Basin								
	73% of Eastern Undefined Development	Residential	1241	3103	517083	413667	1551250	961775
60	Growth Area No. 60	Residential	6.72	17	2800	2240	8400	5208
61	Growth Area No. 61	Residential	62.6	154	25688	20550	77063	47779
66	Annexation Area 3	Industrial	127	698	116253	93002	348759	216231
68	LDL / Hein Development Partnership	Residential	-	364	60667	48533	182000	112840
69	Growth Area 69	Commercial	109	242	40327	32262	120982	75009
			Full Build-Out Sub-Totals	4577	762818	610254	2288453	1418841
			Full Build-Out Totals	**10263**	**1710548**	**1368438**	**5131644**	**3181619**
2025 to 2045 Planning Totals								
Developments Within the Great Lakes Drainage Basin								
	27% of the 100 Homes per Year Starting in 2030	Residential	-	405	67500	54000	202500	125550
24	Growth Area No. 24	Residential	57	122	20363	16290	61088	37874
28	Growth Area No. 28	Residential	36.7	58	9621	7697	28863	17895
29	Growth Area No. 29	Residential	106	188	31396	25117	94188	58396
31	Growth Area No. 31	Mixed Use Business Park	111	112	18720	14976	56161	34820
32	LDL / Hein Development Partnership	Industrial	195	851	141884	113507	425651	263904
33	Growth Area No. 33 (Annexation Area 1)	Industrial	95.3	471	78448	62758	235344	145913
34	Growth Area No. 34	Residential	13.3	26	4325	3460	12975	8045
35	Growth Area No. 35	Commercial	14.4	29	4756	3805	14267	8846
36	Growth Area No. 36 (Annexation Area 2)	Industrial	11.8	65	10801	8641	32404	20091
67	LDL / Hein Development Partnership	Residential	-	2617	436167	348933	1308500	811270
			Planning Period Sub-Totals	4944	823980	659184	2471940	1532603
Developments Outside the Great Lakes Drainage Basin								
	73% of the 100 Homes per Year Starting in 2030	Residential	-	1095	182500	146000	547500	339450
60	Growth Area No. 60	Residential	6.72	17	2800	2240	8400	5208
61	Growth Area No. 61	Residential	62.6	154	25688	20550	77063	47779
66	Annexation Area 3	Industrial	127	698	116253	93002	348759	216231
68	LDL / Hein Development Partnership	Residential	-	364	60667	48533	182000	112840
69	Growth Area 69	Commercial	109	242	40327	32262	120982	75009
			Planning Period Sub-Totals	2569	428234	342588	1284703	796516
			Planning Period Totals	**7513**	**1252215**	**1001772**	**3756644**	**2329119**
			Percent of Full Build-out	**73%**				

Appendix C – Lake County GIS

Lake County GIS Undevelopable Acreage Layers



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