AUDIT AND REVIEW OF CAPACITY ASSURANCE PROGRAM AND COLLECTED FEES

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
LEXINGTON, KENTUCKY

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LEXINGTON

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1.0 BACKGROUND

Lexington-Fayette Urban County Government (LFUCG) entered into a federal consent decree effective on January 3, 2011, to eliminate sanitary sewer overflows from their wastewater system. One requirement of the consent decree was to develop and implement a Capacity Assurance Program (CAP). The purpose of the CAP is to manage sewer system capacity while balancing the needs of developers, rate payers, and the environment.

The statutory authority to implement the CAP was approved on June 6, 2013, by the LFUCG Ordinance 063-2013. A condition of the ordinance was that a formal review and audit of the CAP and collection fees shall be performed every two years. In 2016 the program was audited covering the period June 2013 to June 2015. This audit will include the July 2015 to July 2017 period.

2.0 PROCESS

Prior to conducting the audit, several meetings were held with LFUCG staff and their consultant to learn about the existing process for managing CAP applications and to determine what changes had occurred since the last audit. Relevant reference documents were reviewed and key LFUCG staff who process the application were interviewed. For several applications, the step-by-step process from application submittal through final determination was followed.

Since the CAP program was implemented approximately 1,000 applications for connection have been received, with approximately 350 applications received since the 2016 audit. For this audit a total of 32 randomly selected applications were obtained and reviewed for the period of July 2015 to June 2017, presented in Appendix D. This sample included private and commercial applicants for single unit and multi-unit developments, new developments, redevelopments, and grandfathered applications.

A flowchart developed by the City was used to evaluate the step-by-step procedure for processing an application, presented in Attachment A. The attributes evaluated included:

- Was sufficient information obtained from the sewer capacity application?
- Was a Capacity Request correctly logged in to the CTIMS?
- Was a flowrate increase/decrease calculated?
- Was a location determined?
- Was adequate capacity determined?
- Was a certification issued?
- How were fees calculated, received, and deposited with LFUCG's accounts?

All application, supporting documentation, and findings are managed electronically in the Capacity Tracking Information Management System (CTIMS). Hard copies of most of the information are also retained. A portion of these records are available to the public at ctims.lexingtonky.gov.

3.0 CAPACITY CALCULATION AND ALLOCATION

The criteria for a property to be considered for sewer capacity is based on the balance in the banked credit system and the amount of flow the new source will generate. The banked credit system is similar to a bank account. If there is a positive balance in the account, and the proposed additional sewer capacity will not put the account into a negative area, then the sewer capacity application is approved. If there is a negative balance in the account, or the new sewer connection would cause a negative balance in the account, then the sewer capacity application is not approved until there is enough credit in the account to support the needed sewer capacity. If the building use is deemed an essential service, i.e. a health related facility as defined in legal terms by KRS 216B.015, or a public school then the building may be granted sewer capacity regardless of the capacity of the system, however this requires the approval of two City Commissioners, per the ordinance. Since the inception of the CAP, no capacity requests have been approved under the essential service provision of the ordinance.

Record keeping of tap applications for the purpose of temporary and permanent sewer allocation of credits are maintained. A review of records in CTIMS shows a consistent method of recording and tracking sewer credits for properties that have applied for sewer taps.

In general the records are kept for the purpose of issuing and tracking a sewer capacity requests. Once the required information is obtained, a determination letter is issued by LFUCG. There are three possible outcomes: 1) permanent allocation of sewer credits after a portion of the tap fee is paid, 2) temporary reservation for a short period of time after the administrative fee is paid, or 3) placed on a waiting list until sewer capacity becomes available.. Additionally, a ledger is maintained for each CAP bank that documents its transaction history, and a geographic boundary of grandfathered capacity requests is documented in the CTIMS. Plans and planning documents are also kept on file. All records are retained for a minimum of seven years.

The CAP process for award of capacity, deducting capacity from the credit banks, and notifying the sewer tap applicant has been studied and appears to be an objective and appropriate method for granting sewer use to new or redeveloped properties.

4.0 TECHNICAL REVIEW PROCESS VERSUS INTENT OF THE ORDINANCE

The technical review process to determine if the flow increase from a new or re-developed property will result in diminished capacity of the sewage collection and

treatment system to collect, transport and treat public sewage depends on the capacity in the existing system and the proposed flows.

The banked credit system is used to determine the present capacity allowed to be used in a region of the system. At the time of its implementation, the CAP was based on the premise that no area of the system could receive additional flow without infiltration and inflow or sewer improvement measures to restore capacity to the system. Some projects had already been performed prior to the implementation of the system, creating capacity in some credit banks.

New flow quantities introduced into the system are determined by a standardized method that is applied uniformly across the system. With this method new flow from development is subtracted from the capacity of the portion of the system in question in the CTIMS. If the system can accept the additional flow, the total excess capacity in that portion of the system, or bank, is adjusted down accordingly. From an engineering standpoint, this method of constantly evaluating the sewage system is valid, therefore the intent of the ordinance in regards to the technical review process to calculate flow increase versus adequate capacity of the system is being met.

5.0 CAP SOFTWARE

The CAP software referred to as CTIMS (Capacity Tracking Information Management System), does not directly calculate collection, transmission and treatment capacity. Rather the software that is utilized by the CAP calculates the remaining collection, transmission and treatment banked credits based on a baseline of capacity that has been established. The credits are adjusted in the CTIMS software as system flow as remedial measures projects or new sewer taps occur.

5.1 SOFTWARE INTEGRATION WITH TAP PERMITS AND APPLICATIONS

The CTIMS is integrated with LFUCG's approval of all tap permits, applications and reservations, and the wait list. Before a tap permit is issued, the Tap Desk verifies that there is an approved sewer capacity request on file in the CTIMS.

When an application is made, and a reservation fee paid, the CTIMS records this reservation so that the banked credits in the subject sewer bank are adjusted down. The wait list is also integrated with the CTIMS, so that when a project is put on the wait list, the CAP manager is alerted so remediation projects may be undertaken in that bank to allow the sewer tap to go forth.

5.2 APPLICATION OF MODELLING SOFTWARE

The hydraulic model is updated once a year by the CAP consultant. Yearly modeling updates include inputting improvements made to the physical assets of the system,

inputting newly constructed portions of the system and adjusting model calibration from the results of flow monitoring.

6.0 TAP APPLICATION, PERMITS AND RESERVATION TRACKING IN CTIMS

The CTIMS allows for sewer capacity requests and issued taps, permits and allocations/reservations to be tracked and updated as information is processed through the LFUCG and its CAP consultant. The tap desk, the CAP consultant, and other LFUCG staff have access and rights to update the CTIMS as changes in the system are made.

6.1 BANKED CREDITS

Banked credits are tracked through the CTIMS, allowing for additional capacity to be generated in areas of the system by removing inflow, infiltration, or sewage flow from buildings. Therefore, both additions and reductions of flow are incorporated into the CTIMS.

6.2 WAIT LIST

The wait list is continually updated for projects that cannot be issued a tap permit, and is viewable to the public. The process for managing the wait list consists of the LFUCG considering suspended capacity requests when prioritizing their annual I/I removal and collection system rehabilitation program. When a project is placed on the wait list, the CAP Manager is alerted so methods of earning credits in the affected cap bank can be considered, and the proposed project can tap on to the sanitary sewer system. Property owners placed on the wait list are issued a letter from LFUCG. There is no fee to be placed on the wait list. The list is prioritized by date placed on the list.

7.0 REDUCTION OF ONE HOUR PEAK FLOW

The process for removing sources of inflow and infiltration in the sanitary sewer system allows for credits to be obtained in return for sewer improvement efforts that can be targeted to existing sewer infrastructure and the removal of inflow sources. The credits that can be obtained from these endeavors are well documented in the CAP program documents available online. These measures include: replacement of vented manhole lids, repair of manhole defects, removal of inflow sources, rehabilitation of gravity sewers, repair of cleanout defects, or large scale comprehensive inflow and infiltration removal projects.

7.1 TRACKING PERMANENT REMOVAL OF CONNECTIONS

Permanently removed sewer connections earn credits based on the flow removed from the sanitary sewer system. Typically the city will become aware of these removed connections when the CAP application is submitted, as the applicant will list those

removed connections as a credit towards the total CAP credits needed for the project. Other instances where permanent removal of connections would occur include when the City buys property and removes flow generating structures from it, or when a redevelopment project occurs where existing structures are removed and not replaced with a flow generating structure, such as a parking garage. In these cases flow values will be returned to the bank system based on same method to predict new flow from a proposed development or by water usage records. Once added to the credit bank, the removal of that connection has been permanently accounted for.

8.0 BALANCE REQUESTS

The balance available in any particular credit bank is constantly being updated as new requests are being made for that bank. The CTIMS, being a real time and collaborative shared database, will immediately update the balance of sewer credits in a sewer shed once an input to the system has been made. The online version of the software allows for the available capacity of the sewer anywhere in the urban service area to be checked online. Therefore there is a system in place to immediately update the balance of credits in a sewer shed based on the CAP application. If a CAP application is placed on the waitlist then the CAP manager is notified by the CTIMS to identify potential opportunities within the bank to earn additional credits by implementing remediation projects.

9.0 TRACKING REPAIRS AND BANKED CREDITS

The CTIMS allows for tracking of repairs and banked credits. When a sewer improvement project is completed, the system is updated with an addition of credits to the appropriate bank. The system allows for comments to be made that describe the actions taken that lead to an increase in the banked credits. Once the system is updated with the credit bank quantities, those credits are available to be seen by any user. Earned credits based on improvement projects are typically input into the system on a monthly basis. Updating the system at monthly intervals in regards to the credits available in a bank is a reasonable frequency.

Since all the information pertaining to the sewer improvement projects and associated credits is stored in the CTIMS, the information is well documented and easily retrievable for reporting.

9.1 PUBLICATION OF CAPACITY CONDITIONS

Capacity conditions in the sewer system can be checked at any time via the Capacity Tracking IMS website, which is a GIS application that is available online and to the general public at ctims.lexingtonky.gov. The system provides a map user interface and address search functionality for use by the public accessing the site.

10.0 CAP APPLICATION CONSISTENCY

The application process for the CAP is consistent and objective in its approach and implementation. The application process follows the intent of the ordinance that created it, and seems a fair and reasonable method of assuring the public health is protected by preventing or eliminating sanitary sewer overflows while accounting for the needs of private developers and industry. The application process is simple, clear and not overly burdensome with unnecessary paperwork. The same determination process is used for any potential development with the exception that in very rare circumstances an essential services facility may have an alternate pathway for receiving capacity allocation. At this point in time, no essential service facilities have used the alternate pathway for receiving sewer allocation credits, and have all been approved in the normal manner.

11.0 CAP FEE CALCULATION CONSISTENCY

From the 2016 audit, it should be noted that of the 60 random CAP applications reviewed, three of these applications were made after July 1, 2015. This is important because the fee schedule for tap permits changed at that time. For the 2018 audit, the administrative fee and reservation fee were checked for all 32 of the random CAP applications.

Of the applications checked, all applied the $450.00 administrative fee correctly. Currently many of the calculations appear as handwritten notes written on a hardcopy of an email that is filed with the application. It is important to note that because of these software limitations, this is the only way for the personnel at the tap desk to record the tap fee calculation. ACCELA, a new software program being implemented in the CAP program and should address this issue. When handwritten notes are made on the applications, the user should date and initial the note.

12.0 TAP DESK RECORDS RETENTION

The Tap Desk keeps records for sewer tap applications for a period of seven years. Once that time period has been reached, the records are archived. Therefore, for most situations, there are adequate records kept on hand at the Tap Desk to research prior capacity reservations, reservation renewals, and refunds. In the few cases where the need for records to be examined after seven years had passed, the records could still be retrieved from archives.

13.0 CONCLUSIONS

The process of the Sanitary Sewer Capacity Assurance Program the LFUCG has developed has been examined for compliance with Ordinance 63-2013. The ordinance requires this evaluation to be performed independently every two years. Specific items of the ordinance that are of importance are:

- That a Sanitary Sewer Capacity Assurance Program be developed and implemented.
- That this program assures that the sanitary sewer system is adequate for future connections.
- That a Sanitary Sewer Capacity permit is required prior to any new sewer connection being allowed to tap on to the existing system.
- That staged capacity allocation for certain projects is allowed.
- That remodeling projects are exempt from the requirement of this permit.
- That there is an avenue for certain projects that are deemed essential services to be granted a permit without adequate capacity in the sanitary sewer system.
- That a fee of $450.00 is required to be paid by the sewer customer to request a capacity allocation.
- That a fee of $225.00 is required to extend an application beyond 12 months.
- That notification of the available sewer capacity be made to the applicant within ten days of the application's submittal.
- That an appeal process is available for applications that are not granted.
- That an audit and formal review of the system is performed every two years.
- That adequate sanitary sewer capacity exists prior to the issuance of a building permit.

It is our opinion based on information obtained through record research of 32 randomly selected applications, interviews with personnel, and examination of the CTIMS website that the process for assuring sewer capacity is in compliance with the intent of the ordinance.

APPENDIX A
CAPACITY CERTIFICATION AND BANKED CREDIT PROCESS FLOWCHART

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CAPACITY CERTIFICATION

1. CAPACITY REQUEST

Log Capacity Request into Capacity Tracking Information Management System (CTIMS).

2. CALCULATE FLOW INCREASE

Calculate proposed flow addition to sanitary sewer system and verify information accuracy, e.g. flow calculation worksheet.

3. DETERMINE LOCATION

Identify location of proposed flow addition connection to sewer system.

4. ADEQUATE CAPACITY

Is there Adequate Capacity in the gravity collection system, transmission system, and treatment system? Issue determination Letter: 1) permanent allocation, 2) temporary restoration, or 3) waiting list.

NO

YES

5A. FEE PAYMENT

Applicant pays a processing fee.

6A. ISSUE CERTIFICATION

Document decision in CTIMS and Issue Capacity Certification and reservation amount.

7A. ISSUE APPROVAL LETTER

DOWQ applies a 1 year capacity reservation.

8A. FINAL DEVELOPMENT PLAN

Applicant obtains FDP Approval and pays tap on fee

9A. PERMANENT ALLOCATION

DOWQ Issues a permanent allocation letter

BANKED CREDIT SYSTEM

5B. IDENTIFY CREDIT BANK

Identify applicable Credit Bank for proposed flow addition.

6B. ESSENTIAL SERVICE

Does proposed flow addition qualify as an Essential Service?

YES

NO

7B. ILLICIT CONNECTION

Is proposed flow addition an Illicit Connection?

YES

NO

8B. GRANDFATHERED

Is proposed flow addition included on the List of Future Authorized Connections?

YES

NO

9B. CREDIT AVAILABLE

Are there sufficient banked credits available to offset the proposed flow addition?

YES

NO

10B. WAITING LIST

Capacity Request delayed until credits become available (Return to #9B)

11B. ALLOCATED CREDITS

Subtract assigned credits from Credit Bank, document transaction in CTIMS, and Issue approval notification