

APPENDICES

- Appendix A Domestic Meter Selection Guidelines
- Appendix B Extension Policy

This page intentionally left blank

APPENDIX A
DOMESTIC METER SELECTION GUIDELINES

This page intentionally left blank.

This page intentionally left blank



CHARLOTTE WATER DOMESTIC METER ASSEMBLY SELECTION GUIDELINES

****doesn't account for head loss****

The following calculation methods shall be used to calculate domestic water demand flow:

- **Residential Developments (Single Family/Multi-Family)**
 - IAPMO (International Association of Plumbing and Mechanical Officials) Water Demand Calculator
- **Commercial Developments**
 - AWWA M-22 Manual

The following table shall be completed and included on all plan submittals including 1.5” and larger domestic water services:

<u>Domestic Water Demand Calculation Results:</u>			
	<u>Demand Flow (gpm)</u>	<u>Corresponding Meter</u> (CLT Water Meter Chart)	<u>Proposed Meter</u>
Meter - 1			
Meter - 2			
Meter - 3			

New Service Connection and System Development fees may be referenced in the “Service Connections” section of the Charlotte Water Website.

Backflow requirements may be referenced in the “Backflow Prevention” section of the Charlotte Water Website.

- Service line head loss from water main through backflow may be referenced in **AWWA M-22 – Third Edition – Figure 5-2.**
- Steps for determining pipe, meter and other fitting sizes may be referenced in **AWWA M-22 – Third Edition – Figure 5-3.**

Split service allowances:

- Split services are not allowed on 1-inch and larger short side services. Short side services 1-inch and larger shall connect directly to the public water main.
- Split services are not allowed from dedicated domestic service lines 1-inch and larger.
 - This includes, but not limited to, ultrasonic meters intended and sized for domestic use only.
- Split services are are allowed from combination fire/domestic service lines and dedicated fire lines.
 - This includes, but not limited to, ultrasonic meters intended and sized for both, domestic and fire use.

***Fire protection demand determinations are outside the scope of these guidelines and should be calculated appropriately by the design Engineer.*



***Service lines/meter locations subject to City Code/State requirements and CLT Water design standards and specifications.*

Select Meter in below chart that achieves calculated domestic demand flow per methods indicated above. Calculated demand flow shall not exceed selected maximum rate for continuous operations (gpm).

DOMESTIC RESIDENTIAL/COMMERCIAL

DESIGN FOR:

<u>Meter Size/Type</u>	<u>Safe Maximum Operating Capacity (gpm) (AWWA)</u>	<u>Maximum Rate for Continuous Operations (gpm) (AWWA/Manufacture Specs)</u>
4-inch FMCT w/1-inch	700	*15
6-inch FMCT w/1.5-inch	1600	*35
8-inch FMCT w/2-inch	2800	*40
10-inch FMCT w/2-inch	4400	*45
12-inch FMCT w/2-inch	4400	*45
1.5-inch Positive Displacement	**100	50
2-inch Positive Displacement	**160	80
3-inch Compound (Class II)	***350	175
4-inch Compound (Class II)	***600	300
3-inch Ultrasonic	500	500
6-inch Compound (Class II)	***1350	675
4-inch Ultrasonic	880	880
8-inch Compound (Class II)	***1600	900
6-inch Ultrasonic	1400	1400
8-inch Ultrasonic	2800	2800
10-inch Ultrasonic	4500	4500
12-inch Ultrasonic	5500	5500

* FMCT Crossover Point

** Operation at this flow rate should not exceed 10 percent of usage, or 2 hr in a 24-hr period

*** Safe maximum operating capacity is the maximum flow rate for intermittent service and should not exceed 33 percent usage (8hr/day)

- **1.5-inch minimum required for 6 or more multi-family units**
- **1-inch minimum required for 3 – 5 multi-family units (single parcel, i.e. triplex/quadrplex)**
- **5/8" may serve up to 2 units (single parcel, i.e. duplex)**



Domestic Meter Sizing Examples:

Multi-Family Residential (Use Latest Version [IAPMO Water Demand Calculator](#)):

40 Unit Complex with 40 2-Bath

2 Bath Units (40)

Fixture	Count
Combination Bath/Shower	80
Faucet, Lavatory	80
Water Closet, Gravity Tank	80
Dishwasher	40
Faucet, Kitchen Sink	40
Clothes Washer	40

- Peak Domestic Demand: **32.7 gpm**
 - Minimum Meter Size Options:
 - Dedicated Domestic Only (cannot split services)
 - 1.5-inch
 - Dedicated Fire
 - Fire line appropriately sized to meet fire flow demand
 - Domestic/Fire Combination (can split services)
Note: Plumbing requires individual backflow preventers at private fire hydrants
 - Ultrasonic sized to meet fire flow demand
 - 6-inch or larger FMCT sized to meet fire flow demand



120 Unit Complex with 40 1-Bath, 40 2-Bath and 40 3-Bath

1 Bath Units (40)

Fixture	Count
Combination Bath/Shower	40
Faucet, Lavatory	40
Water Closet, Gravity Tank	40
Dishwasher	40
Faucet, Kitchen Sink	40
Clothes Washer	40

2 Bath Units (40)

Fixture	Count
Combination Bath/Shower	80
Faucet, Lavatory	80
Water Closet, Gravity Tank	80
Dishwasher	40
Faucet, Kitchen Sink	40
Clothes Washer	40

3 Bath Units (40)

Fixture	Count
Combination Bath/Shower	120
Faucet, Lavatory	120
Water Closet, Gravity Tank	120
Dishwasher	40
Faucet, Kitchen Sink	40
Clothes Washer	40

Total Units Served by meter

Fixture	Count
Combination Bath/Shower	240
Faucet, Lavatory	240
Water Closet, Gravity Tank	240
Dishwasher	120
Faucet, Kitchen Sink	120
Clothes Washer	120

- Peak Domestic Demand: **60.9 gpm**
 - Minimum Meter Size Options:
 - Dedicated Domestic Only (cannot split services)
 - 1.5-inch
 - Dedicated Fire
 - Fire line appropriately sized to meet fire flow demand
 - Domestic/Fire Combination (can split services)
 - Note: Plumbing requires individual backflow preventers at private fire hydrants
 - Ultrasonic sized to meet fire flow demand



500 Unit Complex with 200 2-Bath and 300 3-Bath

2 Bath Units (200)

Fixture	Count
Combination Bath/Shower	400
Faucet, Lavatory	400
Water Closet, Gravity Tank	400
Dishwasher	200
Faucet, Kitchen Sink	200
Clothes Washer	200

3 Bath Units (300)

Fixture	Count
Combination Bath/Shower	900
Faucet, Lavatory	900
Water Closet, Gravity Tank	900
Dishwasher	300
Faucet, Kitchen Sink	300
Clothes Washer	300

Total Units Served by meter

Fixture	Count
Combination Bath/Shower	1300
Faucet, Lavatory	1300
Water Closet, Gravity Tank	1300
Dishwasher	500
Faucet, Kitchen Sink	500
Clothes Washer	500

- Peak Domestic Demand: **177.3 gpm**
 - Minimum Meter Size Options:
 - Dedicated Domestic Only (cannot split services)
 - 3-inch Ultrasonic
 - 3-inch Compound
 - Dedicated Fire
 - Fire line appropriately sized to meet fire flow demand
 - Domestic/Fire Combination (can split services)
 - Note: Plumbing requires individual backflow preventers at private fire hydrants
 - Ultrasonic sized to meet fire flow demand
 - 3-inch Ultrasonic (minimum per domestic needs)



Commercial (Reference Latest Edition [AWWA – M22 Manual](#)):

- Peak Domestic Demand: **700 gpm**
 - Minimum Meter Size Options:
 - Dedicated Domestic (cannot split services)
 - 4-inch Ultrasonic
 - 6-inch Compound
 - Dedicated Fire
 - Fire line appropriately sized to meet fire flow demand
 - Domestic/Fire Combination (can split services)
Note: Plumbing requires individual backflow preventers at private fire hydrants
 - Ultrasonic sized to meet fire flow demand
 - 4-inch Ultrasonic (minimum per domestic needs)

REQUENTLY ASKED QUESTIONS

What is the purpose of domestic meter sizing guidelines?

- Starting July 1, 2021, Charlotte Water will offer ultrasonic meter installations for water services between 3 and 12-inches. Ultrasonic meters offer domestic and domestic/fire combination services through one single measuring device (no bypass meter). Charlotte Water’s Customer Service Team piloted a program for the replacement of aging large meter services as well as targeted replacements of FMCT’s that were being incorrectly used to supply domestic water through the fire-side service with ultrasonic meters. These ultrasonic meters provide increased accuracy in water demands and associated billing and are now ready for new water service installations. Because of the variety of meters now available, Charlotte Water Staff has provided guidance for those involved in sizing meters following the recommendations of AWWA standards. For questions regarding the guidance, please, reach out to Charlotte Water’s New Services Team: CLTWaterNewServices@charlottenc.gov.

Why are maximum continuous operational rates so low for FMCT meters?

- The FMCT flow rates indicated in the chart are the points in which the crossover between the small meter and large meter begins. The crossover range increases incrementally for each FMCT. Meter reading accuracy is decreased by up to 15% when flow rates are within this crossover range.

What is an Ultrasonic Meter?

- A combination domestic/fire rated meter with a single body assembly. It’s extremely accurate with all-digital technology and no moving parts or crossover.

APPENDIX B EXTENSION POLICY

This page intentionally left blank.

This page intentionally left blank

III. CHARLOTTE-MECKLENBURG UTILITIES EXTENSION POLICY

A. PURPOSE

The purpose of this policy ("Policy") is to establish the method to be used for the orderly and financially sound extension of the public water and sewer system. This Policy is applicable to the entire Charlotte-Mecklenburg Utilities ("Utilities") service area. All extensions of water and sewer mains shall be dependent on adequate capacity within the existing system, approved funding for Utilities' participation and receipt of all required permits and approvals.

B. FACILITIES PROVIDED BY UTILITIES

Utilities will provide certain basic components of the water and sewer system. These components include treatment facilities, water pumping stations, major and/or regional wastewater lift stations, water storage tanks, wastewater interceptor and trunk mains, and major water transmission mains. The purpose of these facilities is to treat, store, and convey water and wastewater throughout the service area. These facilities will be constructed and/or improved according to a Capital Improvements Program ("CIP") which is reviewed and approved annually by the Charlotte City Council.

Utilities administers several programs described later in this Policy intended to provide smaller water and sewer mains along publicly maintained streets where individual customers may connect to receive service. Water or sewer mains may be constructed along existing, publicly maintained streets within the Utilities service area. *Publicly maintained streets* shall mean NC DOT SR numbered roads, NC or US numbered highways, or municipal streets which are eligible for Powell Bill Funds (For purposes of this Policy, all references to "street" shall be construed to refer to "publicly maintained street," unless otherwise expressly provided). In areas where there are existing, public utilities in streets which do not satisfy this definition and extensions are requested, Utilities shall review each such request on a case-by-case basis taking into consideration the merits of each case, among other factors.

This Policy is intended to provide water and sewer service connections within publicly maintained streets when this is feasible. Except as noted in section III(D)(3), when this is not feasible, water mains or sewer mains and associated service connections may be located within access/water/sewer easements when Utilities determines that the criteria set forth below are satisfied. (The portion of this Policy providing for water or sewer lines in access/water/sewer easements is not a separate or independent extension policy. It is intended to apply only as an alternative to other portions of this Policy which provide for the extension of water or sewer lines within publicly maintained streets. Compliance with all other provisions of the applicable extension policy is required.)

- No suitable publicly maintained street exists or is proposed for construction where the proposed water and/or sewer system can be located and no other practical, acceptable means of providing public water and sewer service to residents exists as determined by Utilities.
- The access/water/sewer easement width is at least 40' plus additional temporary construction easement as needed and is determined by Utilities to be suitable for the construction, re-construction, operation and maintenance of the proposed water and/or sewer system.

- The access/water/sewer easement is in a location and alignment that is most likely to be used as a publicly maintained street should one be built in the future;
- The access/water/sewer easement is donated to Utilities cleared of trees, shrubs, structures, wells, septic systems and any other known obstacles that could conflict with or prevent the design, construction, re-construction, operation, and/or maintenance of the proposed water and/or sewer system and is provided at no cost to Utilities. Otherwise, the grantor(s) of the access/water/sewer easement must agree to pay the full costs to clear the easement and remove the obstacles. Utilities should not be subjected to any costs for the design, construction, re-construction, operation or maintenance of the water or sewer lines in access/water/sewer easements that would not be expected if the lines were to be placed in a publicly maintained street.
- In the event conditions in the access/water/sewer easement are discovered at any time during the project that will result in unreasonable or unusual cost increases, environmental impact, or disruption to the public Utilities may terminate the project without further obligation to provide service.
- Utilities is required only to restore travel surfaces and ground conditions within the access/water/sewer easement and any temporary construction easement to a condition similar to that existing prior to construction/re-construction of the proposed water and/or sewer system and is not required to improve or expand pavement, structures, drainage facilities, or landscaping features at any time during or after the construction of the proposed water and/or sewer system. If work of this type is required by applicable law or to allow water and/or sewer construction, re-construction, operation, and maintenance, the easement grantor(s) must agree to be responsible for the costs of this work.;
- The access/water/sewer easement must expressly provide that public access to the access/water/sewer easement can only be restricted in a manner that is substantially similar to restrictions to the use of publicly maintained streets.
- The access/water/sewer easement grantor(s) must agree to keep the access/water/sewer easement free from structures, fences, gates, barricades, wells, septic systems, trees landscaping, or other conditions or obstacles that could impede or limit vehicular or equipment access required to construct, re-construct, operate or maintain the installed water and/or sewer system.
- The access/water/sewer easement must provide access to water and/or sewer service for multiple, individually owned parcels of land that will have individually metered services.
- Utilities may not be subjected to any requirements or restrictions for the design, construction, re-construction, operation or maintenance of the water and/or sewer system within the access/water/sewer easement that are not typical and customary in publicly maintained streets.
- Waiver and release of liability is provided to Utilities against claims for damages that result from the design, construction, re-construction, operation, or maintenance of the proposed water and/or sewer system in the access/water/sewer easement and any overlying or adjacent travel surfaces, paved or unpaved, or any other features within the easement including damage that may occur from heavy equipment used to construct, re-construct, operate or maintain the water and sewer system;
- Utilities will not be financially responsible for the removal or relocation of the water or sewer mains, services, or appurtenances as may be needed for future changes in land use, roadway construction (including changes in horizontal and/or vertical alignment), regrading the access/water/sewer easement or adjacent lands, or other activity that may conflict with Utilities' continued rights to re-construct, operate and maintain said water or sewer facilities.

- No other utilities, piping or cables, underground or overhead, public or private, will be permitted within the access/water/sewer easement except with prior, written approval by Utilities.
- Public water and sewer facilities constructed within an access/water/sewer easement are owned by the City of Charlotte and subject to the same ordinances, regulations, and policies as other water and sewer facilities.
- The access/water/sewer easement will be in form and substance acceptable to Utilities and shall contain such provisions as Utilities determines are reasonably necessary or convenient to provide for the implementation of this Policy.
- The property subject to the access/water/sewer easement must be the primary vehicular access for all property subject to the easement, provided that this requirement can be waived by Utilities for a parcel that has alternative access but provides necessary access to one or more other parcels

Water or sewer service will not be extended to property located beyond Mecklenburg County without the express approval of the Director of Utilities. Utilities is under no obligation to provide water or sewer service to property located outside Mecklenburg County, except as expressly approved by the Director. Utilities may refuse to extend services to property located outside Mecklenburg County or may choose to provide water or sewer services to such property under such terms and conditions as may be approved by the Director of Utilities.

C. EXTENSION OF SERVICE REQUIRED BY ANNEXATION

All cities or towns must meet certain service requirements for newly annexed areas as prescribed by state law. Since Utilities is a part of Charlotte city government, Charlotte is required to extend major water and sewer facilities to involuntarily annexed areas so that involuntarily annexed property owners can secure water and sewer service as required by applicable law.

The major lines extended as part of involuntary annexation provide water lines for basic fire protection and installation of interceptor, trunk sewer mains, or common force mains required to extend sewer service to each publicly maintained (at the effective date of the involuntary annexation) street for sewer lines. Street main extensions are not provided under this Policy as part of involuntary annexation except as expressly required by law. In addition, water or sewer facilities will not be extended upon involuntary annexation to serve all or any portion of a residential subdivision subject to covenants, conditions, or other restrictions recorded in the Mecklenburg County Public Registry to the effect that sewer service in such subdivision is to be provided exclusively by means (including, but not limited to, septic tank systems) other than sewer service from a governmental authority (including Utilities) or public utility.

D. PROGRAMS FOR EXTENSION OF SERVICE

1. General Provisions

Upon completion and final acceptance by Utilities of all facilities constructed under this Policy, such facilities will become the property of the City of Charlotte ("City") and the City will be responsible for their operation and maintenance.

Utilities funds shall not be used for construction of any Facility which does not offer the reasonable expectation of being feasible unless such Facility is required to fulfill statutory requirements or to maintain service to existing customers. Feasibility is determined based

on the following: the construction of the Facility is expected to generate revenue; service level Improvement; and/or environmental benefits which are in a favorable proportion to the total cost of the project.

All construction of water and sewer facilities must be performed by utility contractors properly licensed in North Carolina and approved by Utilities

All contracts for extension of mains are subject to approval by Charlotte City Council or by the Charlotte City Manager or his designee where allowed by law. All extensions are subject to review approval, and regulation by local, state and/or federal agencies as required by law.

The size, depth, and location of the mains extended will be determined or approved by Utilities based on prevailing industry standards and normal service requirements. In the event facilities designed in this manner will not satisfy the applicant's needs the applicant may withdraw the application. If the application is withdrawn, the applicant forfeits costs incurred by Utilities up to the date of withdrawal..

This Policy is intended to provide sewer mains that are capable of serving the ground floor of most buildings when the ground floor is approximately at street level and where the distance from the structure to the street, topography, other utilities, structures, natural features or other conditions does not make gravity service unfeasible. Utilities does not guarantee that any customer, and particularly customers who have basements or buildings substantially lower than the street, can be served without pumping by the property owner.

This Policy is intended to provide that the water pumping and distribution system be designed and operated to provide flow rates and pressures that meet standard fire protection requirements at the time the water mains are designed and constructed for existing land uses and construction methods. In the event that higher flow rates or pressures are required due to changes in land use, differing construction types, changes in fire code requirements, or other circumstances, Utilities will endeavor to work with the customer to satisfy the new requirements. While each case will be evaluated on its individual merits and public benefits, it may become necessary for the customer to bear some or all of the costs incurred to satisfy the higher level of service.

This Policy is intended to provide for the construction of water and sewer mains sized to provide long term service as described in the CIP. If an extension is requested which conflicts with or is in the same location as a project identified in the CIP or needs assessment, Utilities shall decide whether to extend the facility as described in the CIP/Needs Assessment or a smaller or temporary main. The decision shall be made with the following considerations:

- Funding availability from other sources
- Impact of expenditure on appropriated funds for this program
- Physical space and/or constraints of installation
- Quality of service
- Time required to provide requested service
- Other considerations unique to the circumstances

Installed facilities that are smaller than those identified in the CIP or the Needs Assessment or that are smaller than required for long term service shall be funded solely

by the applicant with no opportunity or consideration for reimbursement from Utilities. However, in all cases, Utilities retains the discretion to require appropriately sized mains be extended to serve the area. Except as otherwise expressly authorized by this Policy, this Policy shall not be construed to authorize refunding the additional cost of mains larger than those needed for the applicant's site.

The applicant must complete an application for service and pay all applicable charges at the time an extension of the system is requested except when the extension is being made exclusively under the provisions of a Reimbursable Program or is being donated to Utilities. An applicant for an extension may not cancel an application for service or extension request once the applicable fees have been paid. Neither connection fees, capacity charges, nor the applicant's share of 50/50 extensions are refundable.

2. Reimbursable Programs

Capital facilities which are normally provided by Utilities (described in section II) but are not in place may be financed by a customer in order to expedite the construction of such facilities. Upon completion and final acceptance of the Facility, the customer will be reimbursed for eligible costs of the project according to the procedures and schedules described below.

If a customer wishes to expedite a project which is included in the Charlotte City Council approved CIP, a 5-Year Reimbursement Program is available. If a customer wishes to expedite construction of facilities which are not included in the CIP but which would normally be provided by Utilities, a 15-Year Reimbursement Program is available. To utilize either of these programs, the customer is required to enter into a contract with the City of Charlotte. This contract provides that Utilities will design, either with staff or by consultant, the requested Facility, acquire any necessary rights of way and permits and construct the facility either with City staff or through public bids in accordance with North Carolina General Statutes. The customer is required to pay a deposit at the time he or she executes the contract. The deposit amount should be sufficient to pay the cost of design and right of way acquisition and shall be established by Utilities. When the construction cost is determined, either from public bids or from Utilities work order, the customer is required to make available to Utilities the balance of funds to construct the project. The customer may make cash payment to Utilities or utilize an approved letter of credit (See section VI).

Under the 5-Year Reimbursement Program, the contracting customer is reimbursed all of the eligible funds he has deposited for the project. The amount reimbursed will not include any interest, carrying charges, financing costs, or other funds other than the actual face value amounts deposited by the customer. The customer will receive 20% of the eligible deposited amount in each of five annual payments. The first annual payment will be made one year from the date Utilities accepts the total project as complete and available for activation.

The customer will be required to pay any acreage fees which are applicable, including those resulting from his project. Acreage fees are not eligible for reimbursement.

Under the 15-Year Reimbursement Program the contracting customer is not guaranteed total reimbursement of eligible deposited funds. The reimbursement payments are made annually beginning one year from the date Utilities activates the total project. The Utilities

activation date begins the 15 year reimbursement period. The amount of each annual reimbursement payment will be the sum of collected acreage fees attributable to the project and 35% of sewer or water user fees which result directly from the project and are collected that year. The acreage fee is equal to the total actual cost of the project divided by the area which Utilities expressly designates at the time the contract is established to be ultimately tributary to the line. Acreage fees are applicable only to wastewater facilities. See section VII-B of this document for information on application of acreage fees to wastewater lift stations.

User fees are the periodic charges to customers for actual service received. User fees do not include connection charges or other one-time charges which are made in order to establish service. Reimbursable user fees on water mains will be based only on customers who have service connections directly off the main extended under the 15-Year reimbursement program and customers on donated mains which connect to that main. If the reimbursable main is extended through any method other than donation, user fees from the new extension will not be reimbursed to the original customer. If donated mains connect a reimbursable water main to an existing main, Utilities will determine the area on which to base user fee reimbursement based on an engineering judgment of the water flow direction under normal circumstances. Reimbursable user fees on sewer mains will be based on service connections directly to the reimbursable main and on service connections on donated sewer mains which connect to that main. If the reimbursable main is extended through any method other than donation, user fees from the new extension will not be reimbursed to the original customer. Annual payments to the customer will continue for 15 years or until the actual eligible face value amount deposited by the customer has been repaid, whichever occurs first.

3. Street Main Extension Program

This Street Main Extension Program (“Street Main Extension”) provides for Utilities funded extension of water and sewer mains to serve existing single family residential dwellings or existing vacant lots which are zoned for single family residential construction and that are not regulated through the subdivision development process. Application of the Street Main Extension is subject to availability of funds and other qualifications described below. Applications are accepted and projects initiated on a first come, first served basis.

This Street Main Extension is only available to renters or owners of qualifying residential dwellings or vacant lots. It is not available to child-care facilities, retail establishments, medical buildings, churches, non-profit organizations, other governmental units, commercial buildings, industrial facilities, or any new construction or new development which is not single family residential in nature.

The Street Main Extension is not intended to be used to change the manner whereby an existing customer receives water or sewer service.

Extensions under this Street Main Extension must average at least one applicant per 1000 feet of main.

To ensure fair and equitable use of available funds, Utilities may, at its discretion, limit projects to a maximum of 1000 feet. An applicant can apply for water and sewer extensions simultaneously provided that funds are available and all requirements are satisfied for each extension.

In the event the applicant is determined to require an extension greater than 1000', the portion of the main in excess of the 1000' maximum can be offered under the 50/50 program provided that funds are available in that program and that the applicant meets all requirements of both programs at the time application is made, including the applicants share of the 50/50 cost.

Extensions of mains greater than 1000' for documented public health hazards can be made in combination with this program; for example, this program can be combined with the health hazard program to increase the distance a main is extended to 2000'. The first 1000' will be funded under the Health Hazard Elimination program. See section IV-E.

This program is applicable to low-pressure sewer systems only in zones designated by Utilities to be served in this manner where such systems are previously established.

This program may be combined with 5-year or 15-year reimbursable programs or other extension programs provided that the applicant satisfies all requirements for such programs at the time of application. This option requires the same applicant to apply for both programs simultaneously.

In the event that the funds appropriated for any fiscal year are not adequate to satisfy the requests received by Utilities, City Council may, at its discretion, appropriate additional funds to this program. If adequate funds are not available when an application is made for an extension, the customer will be offered any other available, funded, programs for which the required extension will qualify. If no other programs are available, or if the customer declines to use another program, the customer will be required to reapply when/if additional funds are appropriated.

Funds from this program can be used for planning, design, inspection, construction, and any other necessary expense directly related to the administration and implementation of this program.

If an extension requested under this program is of such a short length that mobilization costs are excessively high and/or the termination of the requested extension is not at an advantageous location, Utilities may at its discretion, continue the extension beyond the distance requested by the applicant. Funding will be from this program.

Procedures for initiating and utilizing this program are described in section G below.

4. 50/50 Extension Program

This program provides for shared funding of water and sewer street main extensions. Under this program, Utilities will fund 50% of the cost of eligible extensions when one or more customers provide the other 50%. Application of this program is subject to availability of funds and other qualifications described below.

The basis for determining the project cost will be the average cost per foot actually incurred during the previous fiscal year for similarly-sized projects.

An applicant can apply for water and sewer extensions simultaneously provided that funds are available and all requirements are met for each extension.

This program is applicable to low-pressure sewer systems only in zones designated by Utilities to be served in this manner where such systems are herein established.

This program may be combined with 5-year or 15-year reimbursable programs or other extension programs provided that the applicant satisfies all requirements for such programs at the time of application.

This program is available for the extension of mains requested by applicants which do not qualify under the provisions of the street main extension program or when funds are not available in that program. The applicant is responsible for determining whether other property owners who could utilize the extension will participate in funding the applicant share. Utilities will not consider the application complete until funds sufficient to cover 50% of the estimated cost are received.

Procedures for initiating and utilizing this program are described in Section G below.

5. Extension Program to Eliminate Public Health Hazards

This program provides for Utilities funding of water and sewer street main extensions for the purpose of providing access to public utilities when the system in place has failed and is resulting in a public safety, environmental or health risk to the occupant and/or the general public.

The applicant will be required to pay applicable connection fees and capacity charges at the time the extension request is made.

The maximum length for extension of mains under this program is 1000 feet.

To ensure fair and equitable use of available funds, subsequent applications for extension of uncompleted mains which will result in a project greater than 1000' funded under this program will not be accepted until the originally requested main is available for use. An applicant can apply for water and sewer extensions simultaneously provided that funds are available and all requirements are met for each extension.

This program is applicable to low-pressure sewer systems only in zones designated by Utilities to be served in this manner where such systems are previously established.

This program may be combined with 5-year or 15-year reimbursable programs or other extension programs provided that the applicant satisfies all requirements for such programs at the time of application and pays all applicable fees.

This program is only available to existing residential dwellings.

The applicant must furnish evidence from County Health officials that a health hazard exists in order to qualify for this program. Failure of mechanical equipment does not constitute a health hazard. Dry wells or unused septic tanks do not constitute a health hazard. This program cannot be used for new construction or when a mobile home or other structure is moved onto a new site. Homes which are not occupied or are not eligible for a certificate of occupancy for any reason other than lack of sanitary sewer service are not eligible for this program. Utilities shall have the authority to determine if the intent of this paragraph is met.

Revenues from user charges can be used to finance bond programs or to fund this program directly. Charlotte City Council shall establish the funding level of this program annually with approval of the Capital Improvement Program and/or operating budget.

Procedures for initiating and utilizing this program are described in Section G below.

6. Applicant Funded Non-Reimbursable Extension Program

This program allows the applicant to fund 100% of the cost of water or sewer extensions which are to be constructed by Utilities forces or by contracts administered by Utilities. This program is applicable to extensions which do not qualify for any other extension programs under this Policy, if an applicant chooses this program in lieu of another, or in the event funds are not available from Utilities for other programs.

This program is applicable to low-pressure sewer systems only in zones designated by Utilities to be served in this manner.

Each applicant is required to pay connection and capacity charges in addition to the applicants cost of the extension.

Procedures for initiating and utilizing this program are described in section G below.

7. Extension of Facilities by other Public Agencies

Any extensions requested by other City departments or by other governmental units within the Utilities service area may be (but are not required to be) processed within the same guidelines as though an individual customer had applied. Previously approved agreements with Mecklenburg County, Davidson, Cornelius, Huntersville, Pineville, Matthews, and Mint Hill created other financing options which these governments may utilize.

8. Extension of Service For New Development

Utilities will not participate in the cost of street main extensions which are required strictly for subdivision of land. All such projects will be financed wholly by the developer of the land. Utilities will agree by contract to own and maintain water distribution and wastewater collection systems if these systems are designed and constructed in accordance with prevailing Utilities standards and specifications and if the existing Utilities system has adequate capacity to sustain the new development. Such contract agreements must be obtained prior to construction of the system.

Utilities has the sole discretion in approving main sizes to meet development and system needs. When larger mains are required for system needs, no portion of the additional cost is eligible for reimbursement from Utilities except for extensions constructed under the 5-Year and 15-Year Reimbursable programs.

Capacity charges are required for each service installed.

Under no circumstances shall construction begin prior to approval of the contract, issuance of all required permits, and proper notification of Utilities. Notification requirements are detailed in the contract.

If the new development contains drainage patterns that will need to be utilized to provide sanitary sewer service to existing streets, roads, or other property, Utilities will require that the owner of the property being developed record permanent rights of ways for such facilities.

E. SERVICE CONNECTIONS

1. General Provisions

All customers desiring water or sewer service are required to make formal application for each service and to pay all applicable fees and/or charges at the time application is made.

Water services larger than 1-inch cannot be installed without payment of a meter deposit and an application to Utilities designating the party who is financially responsible for water used from that service.

A 3/4" or 1" water service connection consists of the connection to a public water main of a service line, a meter box, and stubbed connection point for the applicant's private plumber to connect to. Larger water service connections consist of the connection to a public water main of a service line, a meter box or vault, piping to the property line, and a valve at the property line.

In-ground irrigation systems installed after July 1, 2009, are required by state statute to be separately metered. Utilities offers customers two options for metering residential irrigation systems.

- **Separate service option** – A new, separate service is installed consisting of the connection to a public water main of a service line, a meter box, and stubbed connection point where the applicant's private plumber or irrigation contractor may connect. An approved backflow prevention device must be installed by the customer on the customer's side of the irrigation meter.
- **Split service option** – A new service line is connected from the existing service line on the Utilities' side of the water meter. The new service line will be connected to a separate, dedicated irrigation meter and stubbed connection point where the customer's private plumber or irrigation contractor may connect. An approved backflow prevention device must be installed by the customer on the customer's side of the irrigation meter.

Utilities does not guarantee minimum water pressure or flow rates will be available to operate irrigation and/or plumbing fixtures. The customer should carefully consider the impacts that a split service option may have on available water pressure and flow rates.

A sewer service (or lateral) connection consists of the connection to a public sewer main or manhole of a service line which is extended to the street right of way line or to the sewer right of way line if the public sewer main is not at the street. The applicant is responsible for the cost of connecting their private plumbing system at that point.

All water and sewer service connections shall be constructed in accordance with the Code of Ordinances of the City of Charlotte and with all applicable building and plumbing codes.

Sanitary sewer service connections will be installed at a depth that is practical and alleviates the need for extensive or unusual construction or safety methods. Utilities does not guarantee that the depth of all sewer service connections will allow gravity flow connections. If pumping is required, the pumping equipment and installation is the responsibility of the customer and must be completed in accordance with all applicable regulations and ordinances.

Commercial, industrial, fire line, or irrigation services will be subject to requirements of the City and Utilities including industrial waste and/or backflow provisions.

2. Fees/Charges

Customers applying for a new water or sewer service or extension are subject to one or more of the charges shown below.

- a. Connection Charge - This charge is based on the average actual cost incurred by Utilities to construct similar size service connections during the previous fiscal year.
- b. Capacity Charge - This charge is to recover from new customers a portion of the incremental cost of providing capacity in the treatment facilities, transmission mains, major outfalls and sewer trunks which have been constructed to allow for new development and expansion of the system. This charge is calculated each year based on the actual book value for these facilities as shown in the City's General Ledger and the system treatment capacity reflected in that value. Dividing the book value by the system treatment capacity yields a system cost per gallon per day. This cost per gallon is multiplied by the average daily consumption of residential customers to obtain the capacity charge for water and sewer separately for customers with 3/4" water services. This charge is then multiplied by the relative capacity of other meter sizes to determine the capacity charge for other size meters. The sewer charge is also based on the relative capacity of the water meter. Wastewater only customers will pay a capacity charge based on the capacity of their private water supply, except that all single family, residential wastewater only customers will pay the same capacity charge as a 3/4" meter customer. Capacity charges apply to separate irrigation meters and to split service irrigation meters and are calculated using methodology similar to that for residential water service connections.
- c. Meter deposit - This is a security deposit which varies according to both water meter size and the nature of the customer (i.e; restaurant, warehouse, etc.). Meter deposits are not required of single family residential customers.
- d. Discounts available - If a customer applies for water or sewer service in conjunction with a water or sewer extension and the service can be installed on the extension as it is constructed then the connection fee will be discounted 10%. No discount or reductions apply to capacity charges. Utilities will establish a time period prior to the beginning of construction during which other eligible customers may receive the 10% connection fee discount.
- e. Acreage fees - Acreage fees are not charged to an individual applying for service to a single, single-family residential dwelling on a lot of 1 acre or less.

Any other type of applicant will be required to pay any acreage fees if they are applicable to their site. Utilities will determine and advise the applicant of the liability for acreage fees and such fees will be paid prior to the work being undertaken. Utilities will not pay acreage fees for any extensions which are made with Utilities funds, nor will acreage fees be assessed for costs of extensions funded solely with Utilities funds.

- f. Sewer deposit - A sewer deposit is required when application is made for sewer only service; i.e., the applicant receives water service from a private well, community water system, or source other than Utilities. This is a security deposit similar to the meter deposit required for water service. Sewer deposits are not required of single family residential customers.

The following chart defines when each of the different charges is applicable:

{PRIVATE } SERVICE	TYPE	CONNECTION FEE	CAPACITY FEE	DEPOSIT*
New service not installed as part of donated system		Yes Paid at time of application	Yes Paid at time of application	Yes Paid at time of application
New service installed by developer as part of donated system		No	Yes	Yes
Replacement service of same size		Yes Paid at time of application	No	No
Replacement service of larger size		Yes Paid at time of application	Partial - difference between sizes paid with application	Yes
Replacement service of smaller size		Yes Paid at time of application	No No refund of previous charges	No
Fire Line		Yes Paid at time of application	Yes Paid at time of application	Yes
Irrigation Service		Yes Paid at time of application	Yes Paid at time of application	Yes
Partial tap completion ("Paving tap")		Partial based on estimated cost to complete the tap	Yes Paid at time of application	Yes
Fire Hydrant Meter		No	No	Yes

* Note: Deposits do not apply to residential customers

F. LETTER OF CREDIT FOR REIMBURSABLE PROGRAM FINANCING

Customers who are utilizing reimbursable programs to expedite projects may use Letters of Credit as a financing method in lieu of cash payment to Utilities. This method can only be used for projects estimated to cost \$100,000 or more. The customer may elect to render to the City a non-recourse, commercial letter of credit from a bank insured by the Federal Deposit Insurance Corporation and having full-service banking facilities in Mecklenburg County in lieu of advancing other funds sufficient to pay for the entire project. Said letter of credit shall unequivocally guarantee payment by said bank to the City at such times and in such amounts as the City shall determine is reasonably necessary or convenient to have the necessary funds on hand for retainage and payments to any contractor awarded the contract to construct the extension requested by the Customer. If such an alternative is selected by the Customer, the following conditions shall apply:

1. This financing alternative must be selected, including the designation of the bank to be used, at the time a Customer requests a contract with the City for an extension.
2. A form provided by City must be used as the letter of credit, with a schedule of payment incorporated therein which is approved by the Director of Utilities. If the Customer proposes to use any variation of the form, the Customer will be required to pay the City's reasonable attorney fees in retaining experienced private counsel to review and advise the City and Utilities on the terms of the proposed letter of credit, and any related documents, and to recommend such changes, alterations or additions thereto as may be in the best interests of the City and Utilities. The City shall have the sole discretion in the selection of said counsel. The Customer shall be required to advance the estimate of such fees, as determined by the City, at the time this financing alternative is selected. Any excess funds advanced by the Customer for attorney fees shall be refunded. If the estimate of attorney fees is insufficient, the Customer shall advance the additional amount required prior to approval by the City of the extension contract. The form and contents of a Customer-proposed letter of credit and any related documents shall be approved by the City Council and shall contain such provisions as the City Council shall determine to be necessary to protect the interests of the City and Utilities. Said proposed letter of credit shall also incorporate a schedule of payment approved by the Director of Utilities. If the Customer does not accept any changes required by the City Council and if the attached form is not acceptable to the Customer, the financing alternative set forth in this sub-section shall no longer apply.
3. The City Manager is authorized to approve changes to the form letter of credit and to the estimated cost of projects qualifying for this alternative financing plan.
4. The Finance Director may refuse to accept a letter of credit from any bank: that has refused or failed for any reason to honor a draft on any letter of credit issued to the City; or if the Finance Director determines in his/her sole and absolute discretion that it is not in the City's best interests to accept a letter of credit from such bank for any reason. By seeking to use this alternative financing plan, a customer and any bank issuing or proposing to issue a letter of credit hereunder agree and acknowledge that: acceptance of a letter of credit is within the City's sole and absolute discretion; no customer is entitled in any manner to use this alternative financing plan as a matter of right; and neither the City nor any employee, officer or agent thereof shall be liable for any damage, loss, injury or claim

of any kind whatsoever arising out of the City's failure or refusal to accept an issued or proposed letter of credit, regardless of the circumstances under which such failure or refusal occurs.

G. INITIATION/UTILIZATION OF EXTENSION PROGRAMS

A customer seeking to obtain water and/or sewer service must follow the procedure outlined below.

1. Request water and/or sewer service from Utilities . The request should identify the specific property to be served, the type of service requested (i.e., single or multi-family residential, irrigation, commercial, institutional, industrial, etc.), and any special capacity requirements or other specialized needs .
2. If necessary, Utilities will study the availability of the service requested and will respond to the customer with information about costs, schedule, or other issues within a reasonable period of time.
3. The Customer formally initiates application for service by paying applicable extension costs and/or connection and capacity charges.
4. Utilities shall complete design and construction including acquisition of permits, encroachments, and/or rights of way. The expected time for completion of extensions of minor (less than 1000' of 8" or smaller) mains along existing streets is less than 180 days from the receipt of the customer's complete payment. It is recognized, however, that there may be instances when, due to workload or inability to obtain permits, encroachments, or rights of way, or other reasons additional time may be required. In no event is a projected schedule binding upon Utilities or the City of Charlotte.

The projected schedule for completion of larger extensions will be determined prior to undertaking the extension. The projected schedule is established as a goal and is not binding upon Utilities or the City of Charlotte.

H. WASTEWATER LIFT STATIONS

It is Utilities' policy to minimize the need for wastewater lift stations and to limit their construction within the system. The basis for this policy is that lift stations can cause disproportionate expense to provide service to a limited customer base and that failure of lift stations poses significant environmental risks.

It is recognized, however, that there are situations where lift stations are a feasible solution for providing service. Utilities will consider on a case by case basis requests to accept new lift stations in the situations described below.

1. The lift station can be eliminated by a project or combination of projects, all of which are included for funding in the approved 5-Year CIP.
2. The lift station can be eliminated by a project being done under a reimbursable program and the funds have actually previously been made available to Utilities for construction.

3. The new development is in an area designated by Utilities for service by low pressure sewer systems and the proposed lift station size and location is in accordance with the "Lake Area Sewer Study (1990)" plan.
4. The proposed lift station is at an appropriate location and has adequate capacity or expansion capacity to serve as a permanent or long term facility and gravity service is cost prohibitive or not possible due to other circumstances. Approved locations typically require the ability to serve multiple parcels of land and are not single site lift stations.
5. The construction of the proposed lift station would include elimination of one or more existing lift stations or treatment plants.
6. The construction of the proposed lift station would facilitate significant progress toward achievement of land use goals and strategies described by current, officially approved planning documents and no other reasonable options are available for service.

In all cases, the receiving system must have available transportation and treatment capacity to carry the proposed lift station discharge. Any upgrades required will be the responsibilities of the applicant requesting the lift station.

Construction of a wastewater lift station may require the customer to pay acreage fees. Acreage fees will be charged for the actual basin in which the lift station is located and for the basin which receives the discharged flow from the lift station. In either case, acreage fees are applicable only when sewer mains downstream of the lift station or its discharge point have been constructed through a reimbursable program and the contract has not been paid in full. Acreage fees will be charged to an applicant constructing a lift station when sewer mains further downstream within the same basin as the lift station are not actually receiving the applicant's flow but would be if the applicant would have constructed an extension of these mains instead of constructing the lift station.

I. OTHER CONSIDERATIONS

1. Acquisition of Other Systems

Utilities will, as the opportunity arises, consider the acquisition of other water/sewer systems which can be incorporated into the Utilities system.

2. No Guarantee of Level of Service

Utilities does not warrant nor guarantee that the capacity, volume, pressure, or quantity of service provided will be adequate to meet the needs of any customer other than typical single family residential service. The customer is responsible for judging the adequacy of service for their intents and purposes prior to applying for service from Utilities.

The current level of service provided in any part of the water or sewer system which may be above that required to provide normal, domestic service is not guaranteed for any time in the future.

Utilities accepts customers on a first come, first served basis. Completion of studies or cost estimates for provision of service do not constitute any obligation or intent of Utilities to reserve capacity. The applicant's request for or receipt of such studies does not guarantee the applicant's ability to secure water or sewer service.

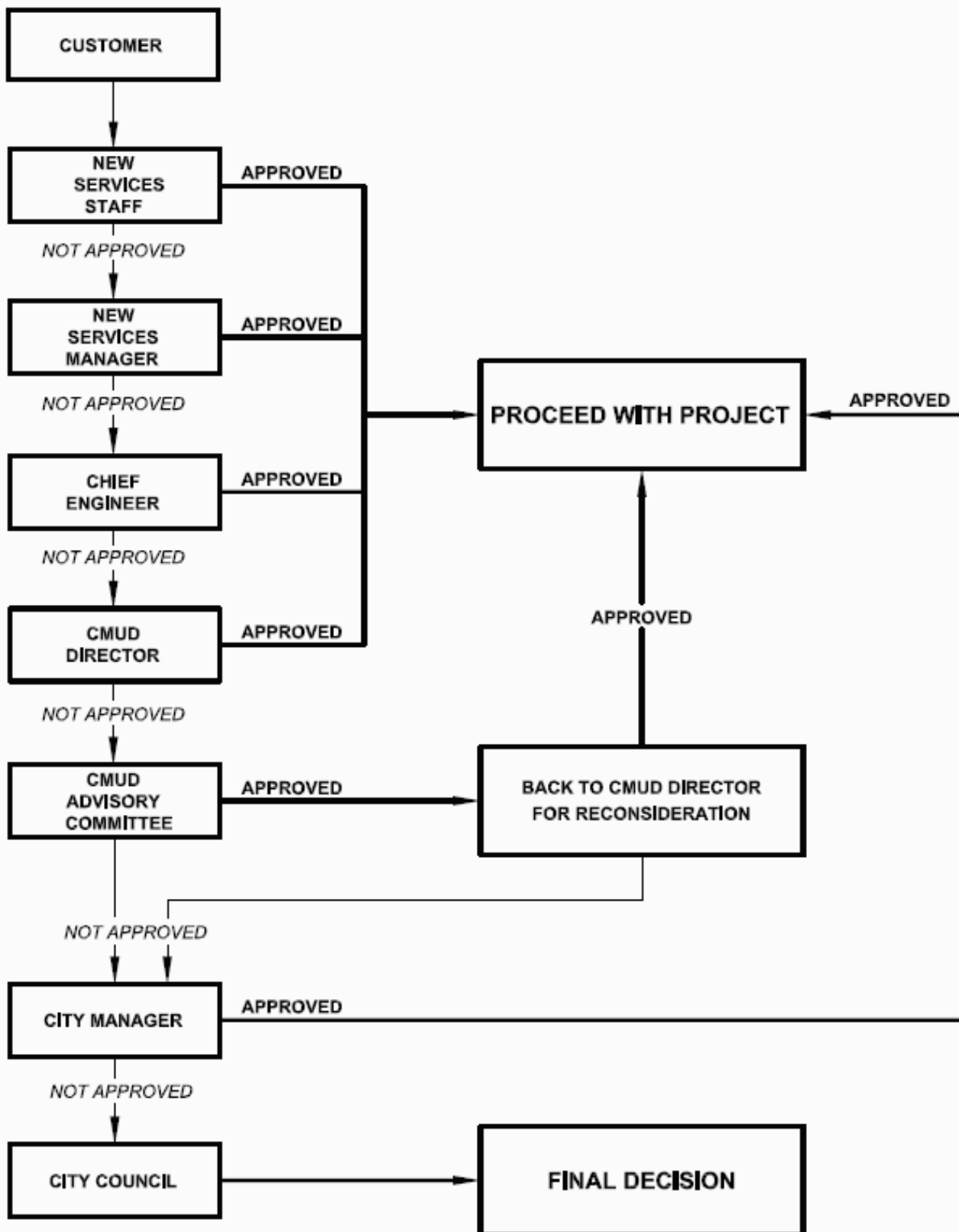
3. Financial Assistance

- a. The financial assistance program as approved by the City Council as part of this Policy and in effect on January 1, 2010 shall remain in effect until and unless revised by Utilities as authorized in subsection (b) of this section.
- b. Utilities is authorized to revise the financial assistance program from time to time and to administer said program for qualified property owners to assist with the cost of connecting to the system. Utilities shall give notice of a revision to said program to the City Council and to the Utilities Advisory Committee at least 10 days in advance of the effective date of such revision. Further approval by the City Council or the Committee is not required for such revisions to take effect. Without limiting the foregoing, Utilities shall have the right to establish and modify the qualifying criteria for any applicable financial assistance. Property owners qualifying for financial assistance are not guaranteed assistance. A copy of the financial assistance program shall be maintained and made available for public inspection and copying in the office of the Director of Utilities and in the office of the City Clerk for the City of Charlotte.

4. Process for Appeal

This policy has been approved by the Utilities Advisory Committee and adopted by the Charlotte City Council for implementation by Utilities and the City Manager. It is City Council's intent that Utilities apply the provisions of this policy equitably to all customers and potential customers. It is recognized that there may be situations where disagreements may develop concerning equitable treatment. In those cases, the customer may pursue the appeal process outlined on the attached chart. The burden is on the customer to demonstrate inequitable application of this Policy.

CHARLOTTE - MECKLENBURG UTILITIES EXTENSION POLICY APPEAL PROCESS



J. DEFINITIONS

Access/water/sewer easement - A permanent easement signed by the owners of all property subject to such easement that provides for: continuous and unrestricted, public vehicular and pedestrian access to the properties subject to said easement; and the construction, re-construction, operation, maintenance and repair of one or more water and/or sewer lines and associated facilities.

Acresage fee - An amount calculated by dividing the total cost of a wastewater project by the number of acres of property which the project has the potential to serve. The number of acres includes all property upstream of the facility and/or which is planned to be pumped to a location where it will be tributary to the project. Acresage fees are only calculated for projects which are completed under a reimbursable program.

Activation - Placing into service a new water or sewer main or other facility. Activation may precede final acceptance.

Backflow - The flow of any substance from a customer's property back into the water distribution system. Backflow can result from improper connection of pressurized equipment to the plumbing system or from accidental pressure drops in the public water system which can be caused by pipe breaks or other equipment failure. Backflow of contaminated water into the public system can create a hazardous situation to other customers.

Capital Improvements Program - A budget plan for provision of infrastructure and other capital needs for the community. This plan is compiled annually and adopted by Charlotte City Council.

CIP - Acronym for Capital Improvements Program.

Utilities forces - Employees of the Charlotte-Mecklenburg Utility Department.

Common force main - In a low pressure sewer system, a pressurized sewer pipe provided for individual customers to connect the discharge lines from their privately owned grinder pumps.

Developer - An individual, firm, or corporation which is improving property or is causing property to be improved by the provision of streets, buildings, or other infrastructure or by the assembly or subdivision of property.

Domestic service - Provision of potable water for the purposes of consumption and hygiene for an individual or family and the collection of wastewater generated from these uses.

Drainage pattern - A ditch, creek, berm, depression or other feature along which water, if present, would accumulate and flow naturally downhill.

Eligible costs - In the context of the reimbursable program for extensions, this is the total actual cost of the portions of the project which qualify for reimbursement.

Encroachment - Agreement with the NC DOT or railroad to place water or sewer facilities within their right of way.

Extension - A new or proposed water or sewer main.

Final acceptance - Documented agreement between Utilities and the contractor or developer of a project that the work is satisfactorily completed and that there are no outstanding claims or deficiencies. Completion of the project may also involve submittal of maps, affidavits, tax statements, or other documents that are required by contractual agreement.

Fire line - A water service requested and installed for the purpose of providing enhanced fire protection to an individual property.

Fire Protection - Provision of adequately sized water mains, water volumes, and fire hydrants at suitable intervals to allow use by fire departments in fighting fires. The level of protection varies with land use and development type.

Gravity sewer system - The normal type of wastewater collection system that relies on the natural, downhill flow of wastewater through pipes constructed along drainage patterns and creeks to a wastewater treatment facility.

Industrial waste - Non-domestic liquid wastes, including but not limited to, process or operational wastewater, groundwater remediation discharges, contaminated storm water or surface water remediation discharges, and any other non-domestic liquid waste from industrial or commercial establishments.

Interceptor - A larger sewer pipe usually constructed along a major creek which collects wastewater flow discharged from trunk mains. Interceptors are sometimes also referred to as "outfalls".

Irrigation service - A water service requested and installed for the purpose of irrigating lawns or property. Water provided through such a service does not return to the wastewater collection system.

Lake Area Sewer Study (1990) - A study completed by an Engineering consultant under contract with Utilities which establishes a plan for provision of wastewater collection from property which naturally drains toward one of the major lakes in the Utilities service area. This study was completed in 1990.

Licensed utility contractor - An individual, firm, or corporation which is licensed by the North Carolina Licensing Board for General Contractors to perform public utility and/or unclassified construction projects which have a contract value not exceeding their license limitation.

Low pressure sewer system - A type of wastewater collection system which utilizes individual pumping by each property owner into a common force main. This type of system is utilized along waterfront property where natural drainage patterns have been disrupted by the creation of a large lake.

Needs Assessment - A planning document formally prepared by each City department every two years which identifies infrastructure and capital needs of the community which are projected for the upcoming 10 year period.

New construction or development - The establishment or substantial improvement of streets, buildings, useable property, or infrastructure where such facilities did not exist or were not suitable for the newly intended purposes.

Permits - Documentation of permission by Federal, State, and/or local agencies which have regulatory jurisdiction over the construction and operation of water and/or wastewater utilities to expand or modify the public water and/or sewer system.

Public water and/or sewer system - The water and/or sewer pipes, storage facilities, pumping stations, lift stations, treatment facilities and appurtenances that are owned by the City of Charlotte and operated and maintained by Utilities.

Residential dwelling - A room or combination of rooms designed for year-round habitation, containing a bathroom and kitchen facilities, and designed for or used as a permanent residence by at least one family.

Right of Way - A non-possessory interest in the land of another for the purpose of constructing, reconstructing, operating and maintaining water and/or sewer facilities.

Street main - A water or sewer pipe installed along a street, road, or highway primarily for the purpose of providing water or sewer service to the property along that street

Subdivision - All divisions of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose, whether immediate or future, of sale, or building development of any type.

Temporary construction easement – A temporary right in a specific tract of land for which Utilities has entered into an agreement with the owner that grants Utilities the right to use the land for a limited period of time in order to provide space needed to construct water and sewer facilities.

Total cost of project - The total cost of completing a project including planning, design, surveying, drafting, inspection, administration, acquisition of rights of ways, legal services, environmental studies, permits, construction and all other costs necessarily incurred between project initiation and final acceptance.

Transmission main - A water pipe constructed primarily for the movement of water from one area to another. Transmission mains are usually, but not always, 12" or greater in diameter. Transmission mains usually supply water to smaller street mains.

Treatment facility - A plant designed and constructed for the purpose of removing pollutants and/or other impurities from wastewater or from raw water.

Tributary - A stream or pipe which flows by gravity or is pumped into another stream or pipe.

Trunk main - A sewer pipe constructed along a drainage pattern or minor creek to collect flows discharged from sewer street mains.

User fee - Charges which are collected for normal provision of water and/or sewer service. User fees do not include onetime charges such as connection or capacity charges, nor late fees, turn on/off fees or other similar charges.

Utilities – Charlotte-Mecklenburg Utilities. Where action is required or contemplated by Utilities in this Policy, *Utilities* shall refer to the Director or his designee.