

Charlotte-Mecklenburg Utilities

Water Treatment Division
5200 Brookshire Boulevard
Charlotte, NC 28216

Memo

To: Temporary Water Service Customer
From: Charlotte-Mecklenburg Utilities
Date: August 09

**APPLICATION FOR USE OF PUBLIC FIRE HYDRANT
FOR
TEMPORARY WATER SERVICE PERMIT (VEHICLE MOUNTED ASSEMBLIES)**

Greetings

This handout was created to answer your questions regarding the acquisition of a fire hydrant permit. In applying for and receiving a Temporary Water Service Permit, you agree to report your monthly usage by faxing your meter readings to – **704- 632-8352** (or emailing to **jwebster@ci.charlotte.nc.us**) by the 5th of the following month. Your water usage fax sheets will be sent to you after inspection.

The issue of not being billed for water obtained outside of CMU jurisdiction, makes it is necessary to keep a vehicle log sheet for each permit. The log sheets must be maintained with the correct meter readings and location (Jurisdiction) where water was obtained and paid for. You will need documentation for water purchased from other jurisdictions if requested to substantiate reports during random audits that are performed. All meter readings must be accounted for.

When you have not used water in Mecklenburg County from Charlotte-Mecklenburg Utilities Fire Hydrants, a “no usage” month must be reported and faxed in with current and previous readings along with jurisdiction water usage to confirm no usage. Every effort should be made to submit your readings as requested to avoid jeopardizing your permit status. Contact me if I can be of any assistance to you.

**Complete the application. Prepare equipment and have inspection ready (meter and air gap).
Then you must contact me for your inspection and permit (decal).**

Respectfully,

Charlotte-Mecklenburg Utilities
Jim Webster
O 704-399-2426 x296
M 704-634-5283
F 704-632-8352,
Email: jwebster@ci.charlotte.nc.us

Definitions and information

Air-gap separation: An unobstructed vertical distance through-the atmosphere between the lowest opening from any pipe or faucet supplying water from any source to a tank, plumbing fixture or other device and the flood level rim of the receptacle. **An approved air-gap separation shall be at least double the nominal pipe size of the supply pipe.** In no case shall the air-gap separation be less than one (1) inch. An approved air-gap separation is an effective method to prevent backflow and shall be considered as a backflow-prevention assembly

Certified tester: An individual person who has proven his/her competency to test, repair and overhaul backflow-prevention assemblies of all types and to prepare reports on such assemblies as evidenced by the successful completion of a training program approved by the director.

Human Consumption: Defined to include drinking, bathing, showering, cooking, dishwashing, and maintaining oral hygiene.

Reduced-pressure principle assembly: An approved, properly functioning assembly containing two (2), independently acting check valves with a hydraulically operating, mechanically independent pressure-differential relief valve located between the check valves and at the same time below the first check valve. The assembly must include properly located test cocks and tightly closing shutoff valves at each end of the assembly. This assembly is designed to protect against a high hazard, and must be one listed on CMU list of approved RP's.

Installation and testing of backflow-prevention assemblies

Reference: Sec.23-102

Each backflow-prevention assembly required by this article must be functioning properly when installed. Each customer must test, maintain and repair each required backflow-prevention assembly, which is part of the customer's private water system. Such test(s) as may be prescribed by the director must be conducted by a certified tester immediately after the installation of each backflow-prevention assembly and on an annual basis thereafter. In addition, upon completing the repair of any backflow-prevention assembly, such assembly must be tested. Such test(s) must be approved by the director and must be made by a certified tester. Each customer must maintain a complete, written record of every repair and test of a required backflow-prevention assembly, which is part of such customer's private water system for at least seven (7) years. Such customer must send a copy of the record for each test or repair to the CMU within (30) thirty-days after the completion of each test or repair. Such records must be maintained on forms approved by the CMU.

HYDRANT PROGRAM CHARGES

INITIAL INSPECTION FEE	\$32.00
MONTHLY PERMIT FEE	\$ 3.00 PER PERMIT
WATER USAGE CHARGE	\$ 2.04 Ccf USED

Ccf Equivalent = 100 cubic feet
1 Ccf = 748 gallons

FIRE HYDRANT ACCESS AGREEMENT

VEHICLE MOUNTED ASSEMBLIES

The Fire Hydrant Access Program was established to provide the private/commercial customer authorized access to the public hydrants of Charlotte Mecklenburg Utilities (CMU). Water obtained from fire hydrants is NOT potable water; NOT SUITABLE FOR HUMAN CONSUMPTION.

This authorization specifically excludes private fire hydrants and public hydrants that have been deemed unsuitable for all but emergency fire department use. Applicant must read and agree to the following provisions.

1) DESIGN SPECIFICATION

- a) Applicant must comply with all relevant Charlotte-Mecklenburg Code and CMU Backflow requirements
- b) Applicant must purchase and permanently mount CMU approved meter with strainer to vehicle in horizontal position with register facing up
- c) Tank fill line must incorporate an approved Reduced Pressure Principle Backflow Assembly (RP) or Air Gap to protect water system.
- d) The meter and backflow prevention must be hard piped or use approved hose with permanent band clamps
- e) Drain lines from tank can not have quick release hose coupling or treaded nipple.
- f) Required equipment must be fully functional and accurate. Testing, repair and maintenance of equipment are the owner's responsibility and are to be paid for by owner.
- g) Malfunctioning equipment must be repaired promptly
 - Meter must be repaired or replaced within three (3) days or permit is suspended
 - Malfunctioning backflow assemblies must be repaired before equipment is connected to hydrant to obtain water.
 - Notify CMU of any meter or register changes within one (1) day via fax or Email
 - CMU reserves the right to inspect and flow test meters and backflow prevention assemblies randomly

2) FIRE HYDRANT PERMIT DECAL

- a) Applicant's vehicle will be inspected by CMU agent to verify compliance and issue Fire Hydrant Access Permit for approved vehicles. Permit Decal will then be placed on vehicle in a highly visible location by the agent. Permit is valid only for the specific vehicle and equipment inspected.
- b) Modification to the (RP) backflow assembly or air gap, meter or piping must be inspected and approved. Failure to obtain inspection after alteration within three working days voids Fire Hydrant Access Permit. Operation of fire hydrant without a valid Fire Hydrant Access Permit is prohibited and punishable by civil fine.
- c) The Permit Decal is the property of CMU. Permit Decal must be surrendered to CMU when agreement is canceled by either CMU or the applicant. Permit Decals are valid until CMU implements a color change of the decal that will require all decals to be replaced.
- d) The permit is valid exclusively to the owner of the vehicle when it was submitted for inspection.

3) BILLING

- a) All water obtained from fire hydrants must flow through meter and air gap or Reduced Pressure Principle Backflow Prevention Assembly.
- b) CMU will provide each permit holder with an approved usage report form. A usage report is to be generated by the Customer for each permit issued and faxed or Emailed to CMU by the 5th day of each month accounting for all meter readings, usage and jurisdiction information for the previous month.
- c) To deduct water that is obtained from outside of CMU's jurisdiction a vehicle log must kept. The log will contain accurate entries for date, location, jurisdiction and meter readings. Retain log sheets and receipts from other water providers for the prior eighteen months to substantiate usage report deductions during random audits that are preformed by CMU.
- d) A month with no usage must be reported just like a month with usage; the previous month's ending meter reading and current month's readings will be the same validating no usage.
- e) Failure to submit a usage report by the 5th of the month can jeopardize permits validity. A revoked permit will be assessed the appropriate fees and be billed to the Customer
- f) The Customer agrees to pay for the water used at the prevailing rate and the monthly permit charge for each reporting period. Billing is subject to the same rules and regulations as provided by the Charlotte City Code. Failure to pay the amount due will be reported as delinquent when appropriate and permit revoked.
- g) Worksite Meter Failure; maintain accurate bulk water record. Example - 6 loads at 2200 GAL/LOAD, add to monthly usage report. Corrective action must be taken to repair meter, refer section 1. g).
- h) CMU reserves the right to require meters to be read by a CMU representative at a specified location.

4) LIABILITY

- a) PROCEDURE FOR THE OPERATION OF PUBLIC FIRE HYDRANTS is a document distributed by CMU Backflow that describes the proper technique to use when operating a fire hydrant. This document must accompany any vehicle with a Fire Hydrant Permit Decal at all times. The Customer agrees to assume responsibility for damage to any fire hydrant used and/or damage to the connecting water system caused by improper operation of the hydrant.
- b) The Customer agrees to assume liability for personal/personnel safety when operating or using a public fire hydrant. The Customer is responsible for any property damage at or near the hydrant due to using the hydrant.

5) LIMITATIONS

- a) CMU reserves the right to limit use of specific hydrants.
- b) Water usage may be suspended or restricted during periods subject to freezing temperatures, mandatory/voluntary water conservation or due to any other event/phenomenon CMU considers significant enough to restrict use of fire hydrants.
- c) The Fire Hydrant Access Permit is issued exclusively for use to the applicant that the permit was granted to. Use of permit cannot be granted to any other individual or company.
- d) Failure to comply with any stipulation of this agreement by the Customer will be cause to revoke the permit.
- e) Any false statements or misrepresentations made during: the application process; condition, purpose or activity pursued by customer; water usage reports will result in an immediate revocation of permit.
- f) A civil penalty may be issued for a violation of any provision of this agreement.

PROCEDURE FOR THE OPERATION OF PUBLIC FIRE HYDRANT

NEVER use hydrants if any kind of device is attached to them

(1) **Note: hoses used to obtain water from hydrants cannot be use for transferring no other liquids.**

(2) Only operate with an approved fire hydrant wrench. The operating nut on the top of the fire hydrant is a brass five-sided nut (1-1/4" pentagon) and will be damaged if operated with anything other than a fire hydrant wrench. If you damage the nut, you will be billed for the repairs.

(3) **Check the remaining nozzle caps** to assure they are snug on the nozzles and will not blow off under pressure.

(4) All city fire hydrants open by turning the operating mechanism in a clock-wise manner. Check the direction of the arrow stamped on the bonnet.

(5) In no cases will hydrant hoses be allowed to traverse areas exposed to vehicular traffic.

(6) **The hydrant must be fully open.** If the fire hydrant is opened less than full open, there is a danger that the fire hydrant could blow off the end of the lateral because the weep holes will not be completely closed which will allow water under pressure to erode the area around the fire hydrant.

(7) If hose is left on hydrant to maintain a continuous flow of water, you must have a CMU approved In-Line Spring Loaded Check Valve at hydrant (prior to your hose connection), to prevent water in hose to return into hydrant.

(8) **You cannot throttle the flow of water using the fire hydrant.**

(9) After filling the tank, close the fire hydrant per the following steps.

(10) It is very important that the fire hydrant be closed very slowly counter clock-wise. The way to assure that you are closing it slowly enough would be to take your hand completely off the wrench and count to five between turns. The reason for closing the fire hydrant slowly is to reduce water hammer in the distribution system, which can cause broken water mains and services. If you do cause this type of damage, you will be billed for the cost of making the necessary repairs.

(11) When closing hydrants, do not apply extra leverage to operating wrench if hydrant valve fails to close entirely. An obstruction may be under the hydrant valve and further forcing of the hydrant would unnecessarily damage the rubber valve seats. Open and close hydrants several times to flush obstruction off seats. If after doing this, the hydrant does not close entirely, notify the Water Distribution Dispatcher at # **704-336-2564.**

(12) **Remove hose and wrench** from the fire hydrant.

(13) **Replace all caps** and tighten on the fire hydrant before leaving. If caps are left off, debris can possibly get into the fire hydrant. This debris can cause problems when fighting fires; also may damage your own equipment if you use the fire hydrant again.

Note: this procedure must be with the permitted vehicle at all times

EL PROCEDIMIENTO PARA EL FUNCIONAMIENTO DE BOCA DE AGUA DE FUEGO PÚBLICA

NUNCA use las bocas de agua si cualquier amable de dispositivo se ata a ellos

- (1) **La nota: las mangas obtenían el agua de las bocas de agua no puede ser ningún uso por no transferir otros líquidos.**
- (2) Sólo opere con un tirón de boca de agua de fuego aceptado. La nuez que opera en la cima de la boca de agua de fuego es un latón cinco-estaba al lado de la nuez y se dañará si operó con algo de otra manera que un tirón de boca de agua de fuego. Si usted daña la nuez, usted se cargará en cuenta para las reparaciones.
- (3) **El cheque las gorras** de la boquilla restantes para asegurar ellos son cómodos en las boquillas y no soplarán fuera de bajo la presión.
- (4) Todas las bocas de agua de fuego de ciudad abren volviéndose el mecanismo que opera de una manera reloj-sabia. Verifique la dirección de la flecha estampada en el gorro.
- (5) En ningún caso las mangas de la boca de agua se permitirán a areas atravesado expuestas al tráfico vehicular.
- (6) **La boca de agua debe ser totalmente abra.** Si la boca de agua de fuego se abre menos de abatane abierto, hay un peligro de que la boca de agua de fuego podría soplar fuera del extremo el lateral porque el llore no se cerrarán los agujeros completamente qué permitirá el agua bajo la presión corroer el área alrededor de la boca de agua de fuego.
- (7) Si la manga se sale en la boca de agua para mantener un flujo continuo de agua, usted debe tener un CMU aprobado Primavera del En-línea Cargó la Válvula del Cheque a la boca de agua (prior a su conexión de la manga), para prevenir el agua en la manga volver en la boca de agua.
- (8) **Usted no puede ahogarse el flujo de agua que usa la boca de agua de fuego.**
- (9) Después de llenar el tanque, cierre la boca de agua de fuego por los pasos siguientes.
- (10) Es muy importante que la boca de agua de fuego se cierre muy lentamente el contador reloj-sabio. La manera de asegurar que usted está cerrándolo bastante despacio sería tomar su mano completamente fuera del tirón y contra hasta cinco entre los giros. La razón por cerrar la boca de agua de fuego despacio es reducir el martillo de agua en el sistema de la distribución que puede causar mains de agua rotos y servicios. Si usted causa este tipo de daño, usted se cargará en cuenta para el costo de hacer las reparaciones necesarias.
- (11) Al cerrar las bocas de agua, no aplica la influencia extra al tirón que opera si la válvula de la boca de agua falla completamente al cierre. Una obstrucción puede estar bajo la válvula de la boca de agua y forzando más allá de la boca de agua dañarían los asientos de válvula de caucho innecesariamente. Abra y las bocas de agua íntimas varios tiempos para vaciar la obstrucción fuera de los asientos. Si después de hacer esto, la boca de agua no cierra completamente, notifique al Distribuidor de Distribución de Agua a **#704-336-2564.**
- (12) **Quite la manga y tire de de la boca** de agua de fuego.
- (13) **Reemplace todas las gorras** y apriétese en la boca de agua de fuego antes de salir. Si las gorras se salen fuera de, las ruinas posiblemente pueden entrar en la boca de agua de fuego. Este ruinas pueden causar los problemas cuando los fuegos luchadores; también puede dañar su propio equipo si usted usa la boca de agua de fuego de nuevo.

La nota: este procedimiento debe estar en todo momento con el vehículo permitido

CHARLOTTE-MECKLENBURG UTILITIES

Vehicle #

67

Permit #

9998

Company name:

Sample Sheet / 123456-311112

Meter Serial #

12345677

Date	Sub-Division or Location	Jurisdiction	Meter reading start	Meter reading end	Gallons or ccf used or # of loads
6/1/2002	1 Green Place	ME	4000	-	
	2 "	ME		-	
6/7/2002	3 Green Place	ME		4250	250
	4			-	
6/9/2002	5 Orange Tree	CC	4250	4300	50
	6			-	
6/10/2002	7 Green Place	ME	4300	-	
	8 "	ME		-	
6/18/2002	9 Green Place	ME		4400	100
	10			-	
6/19/2002	11 Blue Circle	CC	4400	-	
	12 "	CC		-	
6/23/2002	13 Blue Circle	CC		4950	550
	14			-	
6/25/2002	15 Longwood	ME	4950	-	
	16 "	ME		-	
6/27/2002	17 Longwood	ME		5050	100
	18			-	
6/28/2002	19 Green Place	ME	5050	5075	25
	20			-	
6/29/2002	21 Bayridge	ME	5075	5100	25
	22			-	
	23			-	
	24			-	
	25			-	

fax to 704-632-8352 before the 5th day each month

1100

AN (anson) - BM (belmont) - CC (city of concord) - CG (china grove) - CW (carolina water) - DA (dallas) - FM (fort mill) - GA (gaston) - HA (harrisburg) - HI (hickory) - IR (iredell) - KA (kannapolis) - KR (krammerton) - LA (lancaster) - LI (lincoln) - ME (mecklenburg) - MH (mount holly) - MR (city of monroe) - MV (mooreville) - OT (other) - RH (rock hill) - SB (salisbury) - ST (stanley) - SV (statesville) - UN (union) - YO (york)

Note: 1 ccf = 748 gals

Rev1 - 7/1/00

Charlotte-Mecklenburg Utilities Approved Vehicle Meters

NOTES: ALL METERS MUST HAVE A STRAINER

Equipment 500 gals and greater must use a 2-1/2in or 3in meter
 Equipment less than 1200 gals must have inline valve after meter
 There also may be special provisions to adhere to, inline check valve at hydrant, etc.

Brand	Model	Size	Coupling	Distributor	Contact
AMCO-Elister	HT4000 Fire Hydrant Meter / stainless screen	3-0/0	Threaded	HD Supply 901 Crafters Ln, Pineville, NC	704 394 5305
Badger	Recordall Turbo 450 Fire Hydrant Meter / stainless screen	3-0/0	Threaded	Catawba Industrial Rubber Co. 4629 Dwight Evans Rd, Charlotte, NC	Tom Walker 704 523 8163
Badger	Recordall Turbo 200 meter w/integral strainer	2-0/0	Flange	Carolina Meter & Supply, Inc.	910 270 2885
Badger	Recordall Turbo 450 meter w/integral strainer	3-0/0	Flange	265 Sloop Point Loop Road	800 628 7515
Badger	Recordall Turbo 450 Fire Hydrant Meter / stainless screen	3-0/0	Threaded	P.O. Box 400 Hampstead, NC 28443-0400	Website: www.carolinameter.com Email: info@carolinameter.com
Hendey	FHC / CAFHM / strainer built-in	2-1/2	Threaded	Turn key fabrication available, air gap and uses CMU approved meters	
Hendey	FHS / strainer built-in	3-0/0	Threaded	H&H Farm Machine Company Brian	
Hendey	FHP / strainer built-in	3-0/0	Threaded	7305 Brett Haigler Road	704 753 4919
Hendey	PMT meter / PMS strainer	3-0/0	Threaded	Indian Trail, NC	
Hendey	HPM / strainer built-in	3-0/0	Threaded		
Hersey	Horizon / strainer built-in	2-0/0	Flange	Mainline Supply Company	888 609 7878
Hersey	Horizon / must purchase strainer separate	3-0/0	Flange	7325 Old Statesville Road	704 921 3004
Hersey	HM 3" fire hydrant meter / must purchase strainer separate	3-0/0	Threaded	Charlotte, NC 28269 Mainline Supply Company, Rock Hill SC	803 985 8888
Master Meter	MMT-S Turbine / strainer built-in	2-0/0	Flange	Consolidated Pipe & Supply	704 373 1880
Master Meter	MMT-S Turbine / strainer built-in	3-0/0	Flange	201 E 16th St	800 489 1880
Master Meter	3" Fire Hydrant Meter w/ SS internal strainer	3-0/0	Threaded	Charlotte, NC 28206	
Senus	W-120 DRS / strainer built-in	1-1/2	Flange	Ferguson Waterworks	803 775 7355
Senus	W-160 DRS / strainer built-in	2-0/0	Flange	Sumter, SC	
Senus	W-350 DRS / strainer built-in	3-0/0	Flange	800-726-0086	
Senus	125-W Fire Hydrant Meter w/ SS internal strainer	3-0/0	Threaded		

NOTE: NEPTUNE METERS, IF METER NEEDS TO BE REPLACE YOU MUST REPLACE WITH ONE FROM THE ABOVE LIST

Consider winter when installing meter, to prevent freezing water needs to drain

INSTALL METERS HORIZONTALLY

Inlet pipe with **45° angle cut beneficial** (heel longer than throat) to help with water flow

AIR-GAP - Is the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of the receptacle.

An approved **air-gap** separation shall be at least double the nominal pipe size of the **supply pipe**. In no case shall the air-gap separation be less than one (1) inch. An approved air-gap separation is an effective method to prevent backflow and shall be considered as a backflow-prevention assembly

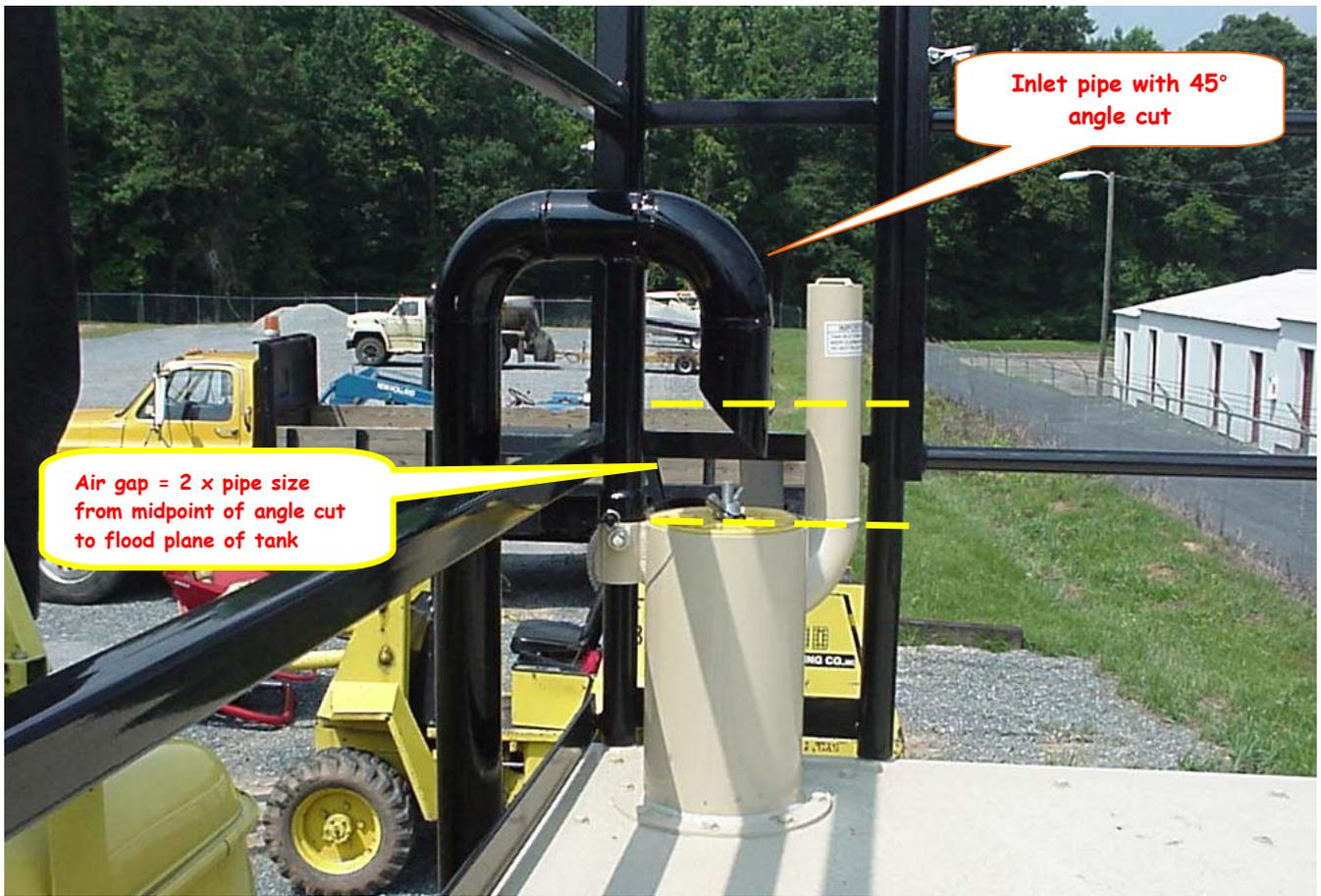


REGISTER FACING UP

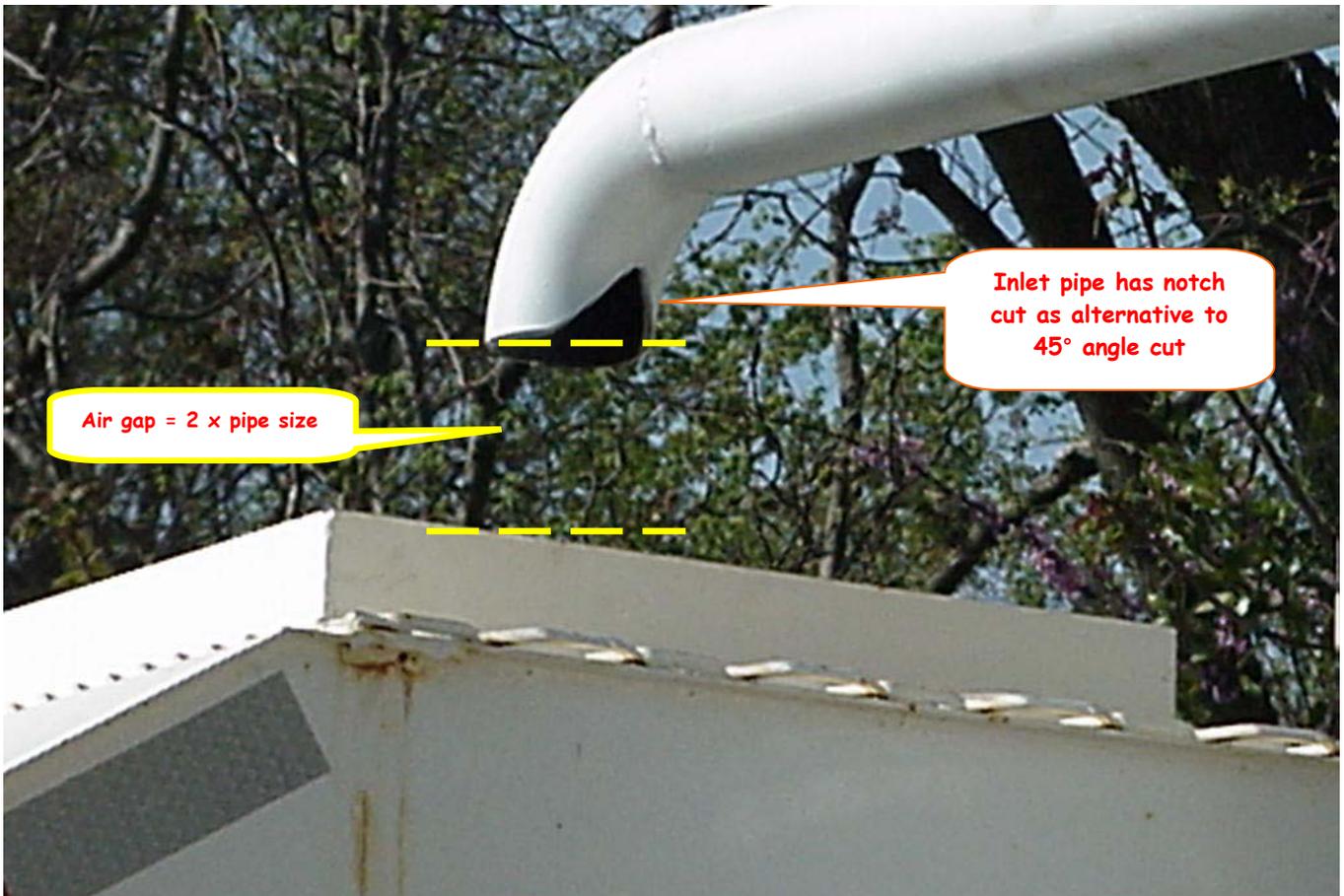
Permanently mount the **approved meter with strainer** (see list) to the vehicle. Piping must be "hard-piped" or approved hose (multi-purpose water suction hose) with center punch clamps or equivalent (**NO HOSE CLAMPS**).

No quick disconnects between meter and air gap in supply pipe. All water obtained from fire hydrant must pass thru approved meter and air gap or RP.

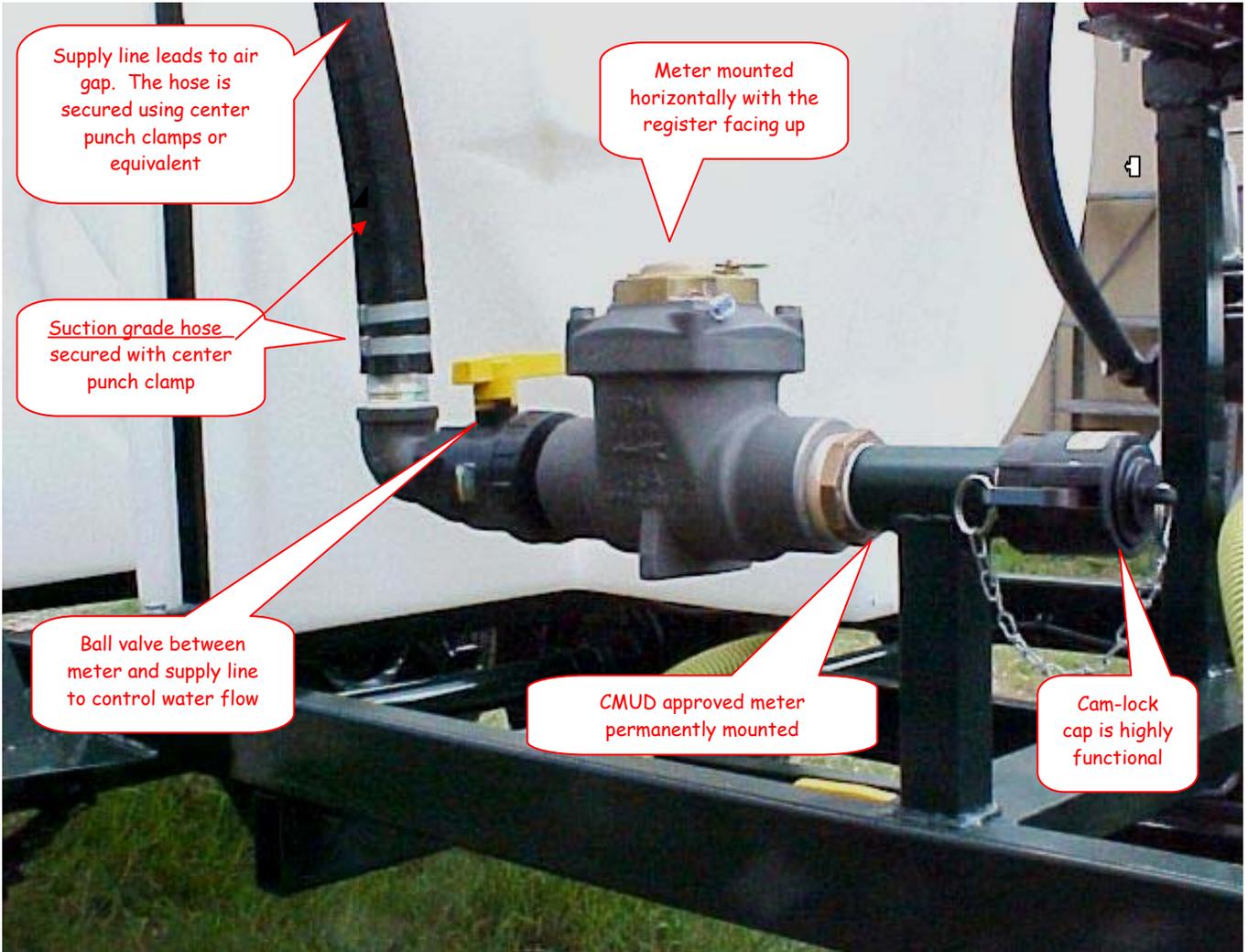
Equipment with less than 1200-gallon capacity must have inline **ball valve** after meter depending on meter size.



2in pipe = 4in air gap minimum 3in pipe = 6in air gap minimum



Design Guidelines



EQUIPMENT MUST BE INSPECTED AND HAVE A PERMIT DECAL ISSUED BEFORE USING ANY HYDRANT IN THE CMUD DISTRIBUTION SYSTEM. USE IS LIMITED TO THE APPROVED HYDRANTS.

HYDRANT WATER IS NON-POTABLE

CCF METER



You read and report this
meter as

00940

Reading = 940 ccf's

One ccf = 748 gallons

Hydrants Off Limits to permit holders

Changing Hydrant Colors not allowed—each color has different meaning



Pictured here is a hydrant with a pressure gauge which will monitor system pressure at times during the day. When gauges are connected like this, the Fire

Hydrant must not be used unless a fire warrants its use. Please refrain from using these hydrants until the data collector is removed. If you need information on this activity please contact Mr. Barry Delzell with the Utilities Engineering Division at 704-399-2221.



Blue Hydrants are not available for use by the Fire Department, citizens, or contractors. Only Charlotte-Mecklenburg Utilities staff is permitted to use

these hydrants.

Hydrants with “out of service” rings on them also must not be used. A hydrant with this ring may pose a significant risk if operated. These hydrants will be on a schedule for repair. If you have a question about why any particular hydrant has this designation contact the Utilities Operations Division at 704-336-2564 and speak with any available case worker.



Hydrants as pictured here must not be used unless a fire warrants its use. The color red is a code to all utility and Fire personnel, that if operated, the

system in this area will be significantly affected. All use of this hydrant must be restricted to fire protection only. If you have question about why any particular hydrant has this designation contact the Utilities Operations Division at 704-336-2564 and speak with any available case worker.



Purple hydrants are usually facing away from the street. Reclaimed water instead of drinkable / potable water flows through that pipe and is not to be used for fire

fighting or commercial use. Reclaimed water is water that was cleaned at a wastewater treatment plant and is being used for irrigation.

Hydrants with “out of service” rings on them also must not be used. A hydrant with this ring may pose a significant risk if operated. These hydrants will be on a schedule for repair. If you have a question about why any particular hydrant has this designation contact the Utilities Operations Division at 704-336-2564 and speak with any available case worker.



Charlotte-Mecklenburg Utilities provides temporary water service for construction. When you see connections like these, DON'T USE HYDRANT. They

will be under pressure and turning them off will effect the customers water use activity which in some cases could cause



Private Hydrants are not for the use of any customer or contractor. These hydrants are only for fire protection and may be painted completely RED or have various colors for the top and caps. These colors indicate they are private and shouldn't be use by contractors. Each color represents certain conditions the fire department needs to be aware of in the event they are responding to a fire.

damage. These hydrants are only operated by utilities personnel. In the event of a fire the connections are made so the fire department can get quick access when needed.



Backflow Prevention

Protecting Safe Drinking Water

