



**CUSTOMER INFORMATION
FOR
LOW PRESSURE SEWER SYSTEMS**

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FREQUENTLY ASKED QUESTIONS REGARDING LOW-PRESSURE SEWER SYSTEMS

The following frequently asked questions are provided to assist ECUA's customers in understanding the concept of Low Pressure Sewer Systems and the requirements for using such a system. *Prior to initiating service, a customer must complete the Homeowner Acknowledgement Form (see Page 7).* Any billing or service questions should be directed to ECUA Customer Service at 476-0480, and any technical questions should be directed to ECUA Engineering at 969-3310.

What is a Low Pressure Sewer System?

Low Pressure Sewer Systems consists of small diameter force mains into which individual, private grinder or effluent type pump stations manifold. Connecting to a pressure sewer requires a wet well (or holding tank) and a pump, collectively known as a "pump station". Grinder pump stations consist of a prefabricated wet well, which is buried in the ground and collects the sewage and houses the pump, and a control panel. As mentioned above, each residence would need a small grinder pump station to collect wastewater from the home, grind it up, and then pump it into the pressure sewer line. Figure 1 shows a diagram of a typical system.

Most pump stations require a dedicated 20 amp electrical service. An alarm light is usually mounted on the wall of the house; the light flashes if for some reason the pumps fail to operate. A small pressure pipe would be needed to connect the grinder pump station to the pressure sewer main.

The individual service line must have an in-line check valve and a gate valve at the point of connection to the common force main in addition to any valves required at the pump. The in-line check valve and gate valve are typically placed in a valve box at the property line.

Why Low Pressure instead of a Gravity System?

Certain areas exhibit conditions that are not favorable for the installation and operation of conventional onsite sewage disposal systems or conventional gravity sewage collection systems. In order to provide these areas with sewer service, an alternative wastewater collection technology is more feasible. A low-pressure sewer system is an acceptable alternative technology. In general, gravity sewers are preferable to pressure sewers. However costs and conditions often make gravity sewers not feasible.

How do I size my Private Pump station?

Design information is available for the common force main that ECUA operates and maintains. The services of a professional (engineer or plumber) should be obtained to design the on-site pump station and service line. *It is imperative that your*

plumber/contractor take note of the design conditions. Selecting a pump that is sized properly is critical to the operation of your system.

What Pumps are Eligible for the Reimbursement Program?

To be eligible for the reimbursement program, ECUA is recommending semi-positive displacement type pumps. These pumps should be capable of delivering approximately 9 GPM against a rated total dynamic head of 138 feet (60 PSIG) and 11 gpm against a rated total dynamic head of 92 feet (40 psig). At zero head, the output shall be 15 GPM minimum. The pumps shall be capable of operating at negative total dynamic head without overloading the motors. Pumps that meet these specifications include the Hydromatic HPD200, Environment One “gatorgrinder”, or approved equivalent.

What is the Customer’s Ownership Responsibility?

ECUA operates and maintains the common force main into which individual service lines discharge. Each pump station owner is responsible for permitting, constructing, operating and maintaining their pump facility and the service line connecting it to the Low Pressure Sewer System. Refer to Figure 1 for a diagram of a typical connection. The valve box at the property line is the limit of the customer’s responsibility.

Construction and installation of all components of the individual pump station and connecting force main up the connection to the common force main shall be the responsibility of the customer. All on-site improvements, including the associated pumping facility and serve line, shall be constructed in accordance with local building codes. Individual connections to the common force main shall be made with ECUA present.

Residential - Connection of individual residential systems may be allowed upon payment of appropriate fees and charges without further review by the ECUA Engineering Department. *If a service line is not available from the ECUA pressure main, ECUA Customer Service will provide a quote for an ECUA crew to make the tap, run the service line to the property line, and install a gate valve with box at the property line.*

Commercial - Connection of systems serving commercial facilities shall require approval of the ECUA Engineering Department in accordance with ECUA’s requirements for approval of extensions to the ECUA system, and in accordance with the Memorandum of Agreement between ECUA and the Florida Department of Environmental Protection as latest revised.

What is required to connect my house to the new sewer system?

Typically, a customer will contact one or more plumbers to get proposals for the work to connect the house and the new system. The plumber should include the cost to install

the grinder station, run the pressure service line from the station to the connection point at the property line, and to abandon (pump out and fill with dirt) the existing septic tank. An abbreviated list of plumbers who are familiar with this type of work is included on Page 6.

How is my monthly sewer charge determined? How much will my monthly bill be?

Monthly sewer service charges are based on water usage. ECUA sets the monthly rates for residential customers based on the average amount of water used during three winter months. Winter averaging, as it is called, is meant to reflect the fact that metered water usage in winter months does not typically include lawn watering, car washing, and other activities where water is not returned to the sewer system.

ECUA's average residential customer uses approximately 6178 gallons of water in an average winter month. This translates to a monthly sewer charge of \$23.64 based on current rates. This amount could vary significantly depending on actual water usage.

What is the cost for a homeowner to connect to a pressure system?

Out of pocket costs for customers connecting to the sewer system will vary depending on circumstances. The grinder pump stations are available for purchase in a package, which may range from less than \$1,300 to over \$2,000. Total installation costs, including the grinder station, plumbing work, electrical work, and septic tank abandonment could vary from \$2,500 to \$5,000.

In addition, grinder pump stations have operation and maintenance costs. While the pumps require electricity to run, usage is typically in the range of 30 to 60 minutes per month. Typical yearly electrical costs may range from \$6.00 to \$10.00. Pumps wear out over time and will require repair or replacement. These costs will vary depending on the pump selected. Some people may choose to purchase an annual maintenance contract from a plumber or other authorized grinder pump system repair agency. These annual maintenance contracts may vary from \$100 to \$150 per year.

What will happen to my pump during power outages?

One basic concern with pressure sewers in our area is the fact that pumps will not work in power outages such as may be experienced during and after a hurricane. Use of bath and kitchen facilities in these periods could result in sewage backups. As with any electrically powered device, the pump could be powered by an emergency generator if necessary.

The proposed grinder pump stations will have limited excess holding capacity to provide wastewater storage during most electrical power outages. Please keep in mind that when power outages are experienced, the average consumption of water significantly decreases.

How much power will the pump use?

Monthly power consumption of a grinder pump station is substantially less than that of most other major appliances. This is comparable to the cost associated with the operation of a 100-watt light bulb or small refrigerator.

When should I call ECUA/How will know if there is a problem with my pump?

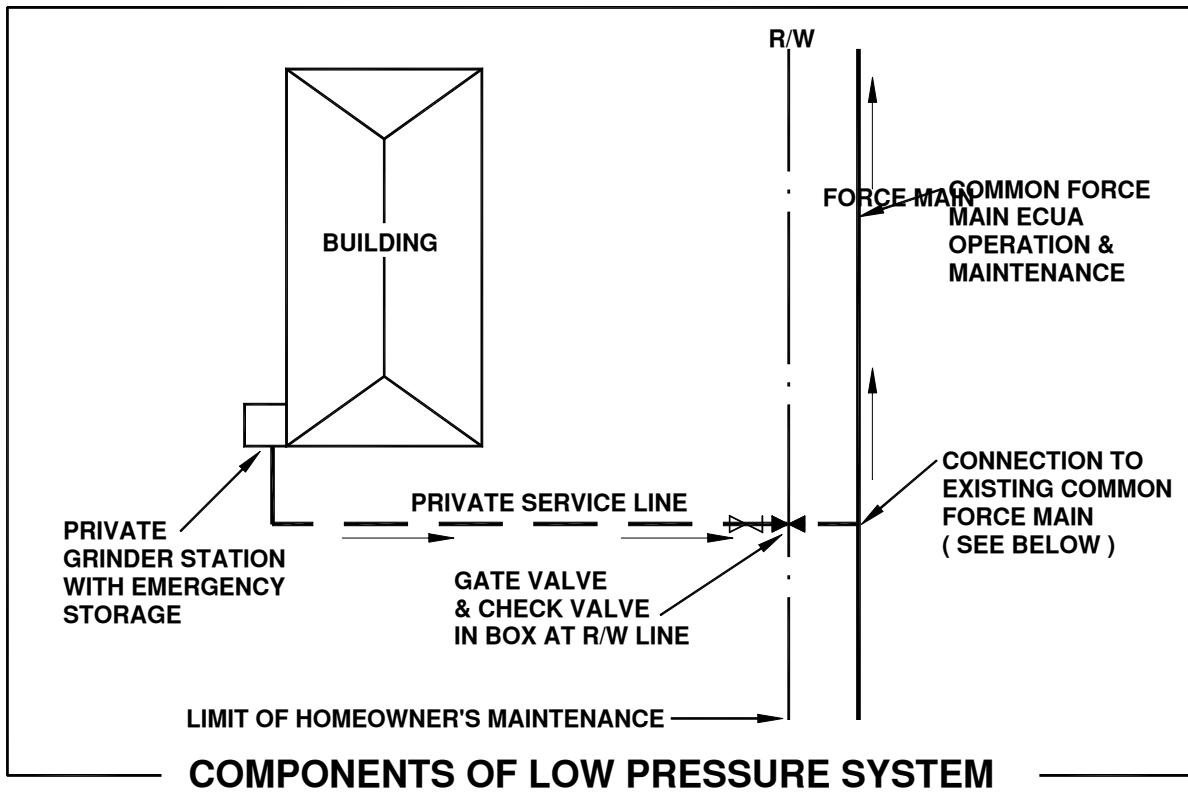
All pumps will be equipped with an audio and visual alarm. The alarm is part of a small panel, which is typically located on the side of the home in a place visible from the street.

ECUA should be contacted at 476-5110 if the problem appears to be in the common force main located in the right-of-way or in the portion of the service line between the main and the valve box.

What type of power will be required for the installation of the pump?

A 20 amp, 220-volt single phase, two pole circuit is required for the installation of the pump. The pump installation contractor will determine if your power supply is adequate.

FIGURE 1



RESIDENTIAL - ECUA CUSTOMER SERVICE WILL PROVIDE QUOTE FOR ECUA TO TAP FORCE MAIN AND PROVIDE GATE VALVE & BOX AT R/W LINE

COMMERCIAL - TAP MADE BY OWNER'S CONTRACTOR WITH ECUA PRESENT, APPROVAL AND PERMITTING FROM ECUA ENGINEERING DEPARTMENT NECESSARY.

Installers

The following is a list of possible licensed plumbers/contractor that are familiar with installation of private lift stations. This list is in no way comprehensive; rather, it is intended as a starting point for a homeowner to obtain price quotes for the installation of a private lift station. Other qualified plumbers/contractors are certainly encouraged to be contacted.

Boyd Plumbing
James Boyd
968-0711

Innerarity Plumbing
Joe Grow
492-0230

Roto-Rooter
Al Cheney
477-7349

Downs Plumbing
Larry Downs
453-6954

Gulf Breeze Plumbing
936-7225