

## Low Pressure Systems – Frequently Asked Questions

1. When is a Public Works Agreement (PWA) required?

A PWA is required any time there is work associated with connection to or extension of a public Low Pressure Sewer (LPS) system. Connection of an individual private system to a gravity service clean-out does not require a PWA.

2. Is there one PWA process for all applications?

No. There are generally three types of PWAs. A PWA for a main line extension, one for a proposed individual system and one when an existing system impacted by development

3. What is the PWA Letter Process?

A PWA Letter Agreement is required if the electric panel box is impacted by exterior renovations. This also includes impacts to the existing line of sight between the system and the electric panel box.

4. Are EDU Worksheets and SWAMP Requests required for LPS systems?

EDU Worksheets are required for all commercial projects, and a SWAMP Request with EDU Worksheet is required for all projects whose projected flows are equal to or greater than 5 Equivalent Dwelling Units (EDU, 250 gallons per day) of discharge.

5. How are LPS extension reviews handled?

LPS extension reviews that are not associated with a subdivision or site development plan application are conducted with the associated grading permit or building permit/standard grading plan application. This review is conducted outside the standard review process and is conducted under separate cover.

6. At which stage in the development process are proposed individual system PWA agreements executed?

Proposed individual systems PWAs are processed with the building permit application review.

7. What is the process if the easement is impacted by development?

When an existing grinder or tank easement is impacted by any proposed development the individual system is replaced and relocated to the road right-of-way and property line with a new easement. This is done with a PWA at building permit.

8. When is the Letter Agreement executed?

When an existing system electric panel box is impacted a PWA Letter Agreement (which is a basic agreement), is executed with the building permit.

9. Are commercial and residential LPS systems the same?

No. Individual residential systems are in easements on the property/right-of-way line and are public. If the residential system is not on the property/right-of-way line it is private. All commercial LPS are private.

10. When is a grinder pump justified?

When gravity service to the finished first floor elevation cannot be achieved a grinder is an option. A grinder cannot be used to simply service a basement. Private ejector pumps are used for this purpose.

11. When is a sewer study required?

A Sewer Study is required when a development project proposes the extension of sewer by any method other than gravity. The study should include a report prepared by a registered professional engineer with a complete study for the entire drainage area to the extension, discussing sewerage alternatives. The report, at a minimum, must examine alternatives in the following order of preference:

- Gravity collection system with gravity sewer house connections.
- Gravity collection system with gravity sewer house connections and central sewage pumping station for sewage transport to existing or proposed collection system.
- Gravity collection system with gravity sewer house connections and isolated (minimal) grinder pumps to serve unusual properties with difficult topographic constraints.
- Low pressure sewer system with Environment One Grinder Pumps.
- Other systems as appropriate.

12. Are Grinder Pump Systems and Mayo Tank Systems the same?

Grinder Pumps are self-contained units and always have a pump. Mayo tanks are similar to septic systems. Liquid and solid are separate, and only the liquid is discharged to County Sewer collection system with a pump or may be gravity fed.

13. What if there is gravity and LPS service available to serve the property?

Gravity service is always the method of service and its use is considered first in all instances.

14. Is there anything special about LPS connections to gravity manholes and mains?

Yes. LPS effluent contains no solids and is more corrosive to concrete. Special consideration is given to this and when extending a main to a manhole, it and the two downstream manholes are required to have protective coating. When a residential connection is to a main or a manhole no coating is required. Commercial connections exceeding typical effluent rate for a SFD (250 gallons per day) require manhole coating the same as an extension would. In-place coating of existing structures and fabricated unit coating are different processes and materials.

15. If a new manhole is being installed as part of the development plan and a LPS connects the manhole shall be PVC lined. Are Grinder Pump and Mayo Plans and PWA packages the same?

No. Each have distinct application, plan and processing requirements.

16. What is required for a PWA LPS extension application?

- Full public paper sheets on public letterhead to be signed by a review engineer and Engineering manager with appropriate checklist. Two paper copies are required with application
- A cost estimate based upon the line item cost list.
- Eight and one half inch by eleven inch paper easement plats and narrative descriptions with checklists (unless easements are described on a subdivision plat).
- A traffic control plan with appropriate details and notes.

17. What is required for an individual residential Grinder Plan applications?

- Plan paper sheet(s), 2 site plans with appropriate notes, details and schedule.
- A traffic control plan with appropriate details and notes.
- A cost estimate based upon the line item list.
- An eight and one half inch by eleven inch paper easement plats and narrative descriptions with checklists (unless easements are described on a subdivision plat).
- Easements are to be 20' X 20'
- No duplex grinder systems serving two residential properties are allowed. Any dwelling with more than 4000 sf. of habitable area requires a duplex grinder. The duplex grinder shall be privately owned.
- All grinders are manufactured by E-One, model # DH071-124.
- Maximum depth of grinder shall be no more than 10-feet.
- Grinder pumps are classified under the sewerage disposal code as septic tanks and applicable setback requirements apply. Measurements are from the easement lines.

18. What is required for a commercial Grinder Plan Applications?

- Plan sheet(s), 2 site plans with appropriate notes and details.
- A cost estimate based upon the line item list.
- An oil/grit separator is required for all commercial properties.
- A duplex E-one system is required. Based upon demand and submission of appropriate design data a lift station may be allowed.
- A traffic control plan with appropriate details and notes.
- No easements are required
- Grinder pumps are classified under the sewerage disposal code as septic tanks and applicable setback requirements apply. Measurements are from the tank edges.

19. What is required for gravity and pressure Residential Mayo tank system applications?

- Plan sheet(s), 3 site plans with appropriate notes and details and 3 traffic control plans with notes and details.
- Two cost estimate based upon the line item list.
- Eight and one half inch by eleven inch paper easement plat(s) and narrative description(s) with checklists (unless easements are described on a subdivision plat).
- 20' X 20' easements are required.

- Any dwelling with more than 4000 sf. of habitable area requires two Mayo tanks. Both tanks shall be private.
- Mayo tanks are classified under the sewerage disposal code as septic tanks and applicable setback requirements apply and are measured from the easement lines.

20. What is required for Commercial Gravity and Pressure Mayo Tanks system applications?

- Plan sheet(s), 3 site plans with appropriate notes and details and 3 traffic control plans with notes.
- Two cost estimate based upon the line item list.
- No easements are required.
- An oil/grit separator is required for all commercial properties.
- Analysis of projected flow is required to determine the required tank capacity.
- Mayo tanks are classified under the sewerage disposal code as septic tanks and applicable setback requirements apply and are measured from the tank edges.