

Installation References

This section introduces developers and municipalities who have turned to a gravity-independent, low pressure (LPS) sewer system powered by Environment One grinder pumps as a better alternative to conventional gravity sewers.

Whether you are a developer building a new community, or a municipal engineer looking for a low-cost solution to a failed septic system, the E/One grinder pump station should be at the heart of your low pressure sewer system. As these references will attest, E/One grinder pumps deliver safe, reliable performance over a wide variety of operating conditions.



New Development



Municipality

400+ Unit Sites

Environment One has a long list of successful installations of systems that have more than 500 units. The following list includes new developments that have chosen LPS systems, municipalities using E/One stations to retrofit an existing system, and combinations of both.

Weatherby Lake, MO

Tel: (816)741-5545

Contact: George Lowman,
Director of Public Works



Units installed: **600+**

Installation start date: 1977

Weatherby Lake is home to one of the oldest and most outstanding low pressure sewer systems in the country. The yearly operating and maintenance cost averages \$34.10 per pump. The city adds \$5.00 per month to each sewer bill to cover all operating and maintenance costs that relate to the pumps and pressure sewer system.

Holiday Shores, IL

Tel: (618) 656-4933

Contact: Joe Urban

Units installed: **1000+**

Installation start date: 1990



Begun in 1990, the Holiday Shores project was installed in four phases, starting with the area nearest to the treatment lagoon. The project originally called for 683 stations, but by the time start-up was complete had grown to approximately 1100. An estimated 30 to 40 new homes are added to the system each year.

Clark Township, MI

Tel: (906) 484-2026

Contact person: James Landreville

Units installed: **690**

Installation start date: 1991



Clark Township is located in Michigan's upper peninsula. A low pressure sewer system was installed to serve a portion of the township bordering on Lake Huron. The area is rather remote; equipment reliability and low maintenance were major factors for selecting E/One. Extreme cold and a deep frost during the winter of 1993 created some problems with improperly buried sewer lines, but the grinder pump station installation was relatively unaffected.

Bloomington, GA

Tel: (912) 748-0268

Contact person: Ernie Grizzard

Units Installed: **1000+**

Installation start date: 1983



High ground water and close proximity to the Atlantic Ocean make a gravity system too costly for this middle- and low-income community. After 18 years of operating with E/One units, the mean time between service calls in Bloomington is 10.4 years; the yearly operation and maintenance cost is less than \$20 per pump.

Fairfield Bay, AR

Tel: (501) 884-3333

Contact person: John Tyer

Units Installed: **600**

Installation start date: 1977



Dramatic elevation changes, several lakes and a rocky terrain highlight this golf course community. Total buildout for the development is approximately 1,000 units; the average operation and maintenance cost is approximately \$21 per pump.

Fairfield Glade, TN

Tel: (931) 484-3780

Contact person: Barry Field



Units Installed: **2700+**

Installation start date: 1975

In 1975, the developers of this lakefront/golf course community chose E/One as their low pressure sewer system solution to a hilly terrain. Fairfield Glade operates at a running average of \$36 per pump per year.

Monticello, VA

Tel: (804) 589-8264

Contact: Otis Collier, Operations Director



Units Installed: **400+**

Installation start date: 1975

This ongoing development in the Virginia mountains features both primary and secondary residences. The terrain is rolling and very rocky.

Bosque Farms, NM

Tel: (505) 220-2828

Contact: Kurt Moffatt



Units installed: 1550

Installation start date: 1998

Hamburg Township

Tel: (810) 231-1000

Contact: Mark Holbrook



Units installed: 2200+

Installation start date: 1989

Horseshoe Bay, TX

Tel: (830) 598-8741

Contact: Jeff Koska, Utilities Director



Units installed: **3000+**

Installation start date: Early 1970's

In the early 1970's, E/One supplied the grinder pump stations for the initial phase of the Horseshoe Bay low pressure sewer system. During project start-up, E/One learned that the contractor had installed the units improperly — indoor units were installed outdoors without

proper consideration for venting of the pressure switch controls, which resulted in unit failures. Attempts to resolve this issue were unsuccessful and E/One suffered from the negative publicity.

E/One began the difficult task of rebuilding this relationship in 1993. This task was made somewhat easier by the fact that Lake LBJ MUD was looking for help in reducing the extremely high O&M costs associated with centrifugal (Hydromatic) grinder pumps. Problems that the district experienced were consistent with centrifugal systems — burned-out motors, jamming and air binding, start and run capacitor failure within the control panels, grease buildup on floats, and float switch failure.

In February 1995, the Lake LBJ MUD Board of Directors approved the recommendations submitted by Dick Cook, General Manager, Lake LBJ MUD, and Jeff Koska, Utilities Supervisor Lake LBJ MUD, to replace the non-repairable centrifugal units with the E/One AMGP unit. The board also approved the recommendation that as of June 1, 1995, the district would standardize on the E/One GP 2010-58 unit for all new construction.

Lumberton, TX

Telephone: (409) 755-1559

Contact: Robb Starr

Units installed: **500**

Installation start date: 1996 continues to present

Includes providing sewer service to areas previously unserviceable due to flat terrain. LPSS was an ideal choice for this community due to the fact that the WWTP was at near hydraulic capacity when the wet weather factor of 5 was applied to the current influent flow value. Any additional flow from a gravity system could not be allowed because of concern for wet weather inflow. Using LPSS, wet weather I&I is not a concern therefore additional flow can be allowed without the 5x factor applied for capacity allocation. With LPSS Lumberton MUD was able to add additional revenue base of approximately 400 units before expansion at the WWTP was required.

Rancho Palos Verdes, Ca

Tel: (310) 544-5252

Contact person: Ron Dragoo, City Engineer

Units Installed: **65**

Installation date: 2000

Jurisdiction, LA County Sanitation

Citrus Heights, Ca

Tel: (858) 762-4007

Contact person: Ron Dragoo, City Engineer

Units Installed: 25

Installation date: 2002

Jurisdiction, City of San Diego



AMGP Premium Upgrade References

Brentwood, TN

Telephone: (615) 371-0080

Contact: John Grissom or Richard Rigsby

Units installed: 3500 centrifugal grinder pumps, Hydromatic and Myers

Installation start date: 1989-1990; AMGP upgrades began in 1998

Total E/One units: **400+**

In 1999, Brentwood standardized on E/One for all new construction and sewer extensions.

Lake LBJ Municipal Utility District (MUD)

Telephone: (830) 589-8741

Contact: Jackie Wright

Units installed: 3000 Hydromatic centrifugal grinder pumps

Installation start date: Late 1970's or early 1980's; AMGP upgrades began in 1997

Total E/One units: **700+**

In 1998, Lake LBJ MUD standardized on E/One for all new construction and sewer extensions.

Lake Tapawingo, MO

Telephone:

Contact:

Units installed: 365 Myers centrifugal grinder pumps

Installation start date: 1984; AMGP upgrades began in 1996

Total E/One units: **365**

Lavergne, TN

Telephone: (615) 793-3768

Contact: Gary Riddle

Units installed: 3500 Myers centrifugal grinder pumps

Installation start date: 1980's; AMGP upgrades began in 1998

Total E/One units: **700+**

Lavergne standardized on EONE for all new construction 1998.

East Cedar Creek MUD, TX

Telephone: (903) 887-7200

Contact:

Units installed: 3000+ Myers centrifugal grinder pumps

Installation start date: 1980's; AMGP upgrades began in 1999

Total E/One units: **600+**

In 1999, East Cedar Creek standardized on E/One for all new construction.

Luttrell, TN

Telephone: (865) 992-0870

Contact: Phil Routh

Units installed: 1000 Myers centrifugal grinder pumps

Installation start date: Late 1980's; AMGP upgrades began in 1999

Total E/One units: **200**

Luttrell standardized on E/One 1999 and received a grant to complete a major retrofit 2003.

Belle Meade, TN

Telephone: (615) 297-6041

Contact: Larry Smith

Units installed: 1000+ Myers

Installation start date: Late 1980's; AMGP upgrades began in 1999

Total E/One units: **150+**

Belle Meade standardized on EONE for all construction in 1999.

Tullahoma, TN

Telephone: (931) 455-4515

Contact: Scott Young

Units installed: 1000 Hydromatic and Myers centrifugal grinder pumps

Installation start date: Late 1980's; AMGP upgrades began in 1998

Total E/One units: **600**

Tullahoma standardized on E/One 1999.

Craig, MO

Telephone:

Contact:

Units installed: 100 Myers centrifugal grinder pumps

Installation start date: Early 1990's; AMGP upgrades installed in 2000

Total E/One units: **100**

For more information, contact Walt Erndt, (518) 346-6161 Ext. 3212

Deficient Sites

Holiday Shores, IL

Tel: (618) 656-4933
Contact: Mike Smith,
Superintendent



During the first two years of operation, this project experienced a relay failure rate of approximately 10 percent per year (E/One was then using mechanical relays). Although typical in the industry, this rate is considered extremely high by E/One's standards. These were all 120-volt cores and E/One had never experienced this situation in 240-volt units.

Neither Holiday Shores nor E/One could identify the cause of these failures. E/One placed chart recorders in stations throughout the system to see if irregularities in the starting and running voltage were to blame. Based on the findings of these chart readings and input from electrical engineers in E/One's instruments division, it was determined that the relays should be replaced with a heavy duty contactor. At E/One's sole expense, every relay was replaced and an additional two-year warranty was extended to the sanitary district. The system is now operating up to E/One's standards.

This new, improved relay has been incorporated into the design of the GP 2010 operating system.

Engineering References

Davy Engineering

La Crosse, WI

Tel: (608) 782-3130

Contact person: Jim Liss

Davy Engineering has been specifying E/One grinder pumps for more than 15 years. These projects have varied in size from 10 stations to several hundred.

Strand Associates

Madison, WI

Tel: (608) 782-4843

Contact person: Paul Dreis

E/One has supplied nearly 1,000 grinder pump stations to projects engineered by Strand Associates. Strand has been specifying E/One for more than 10 years.

Kenvirons

425 Versailles Rd

Frankfort, KY 40601

Tel: (502) 695-4357

Contact person: Doug Griffin, P.E.

Summit Engineering

120 Prosperous Place

Suite 101

Lexington, KY 40509

Tel: (859) 264-9860

Contact person: Kevin Howard

Hartman & Associates

201 East Pine Street
Suite 1000
Orlando, FL 32801
Tel: (407) 839-3955
Contact person: Kerry Wulff

Kennedy Jenks

530 South 336th
Federal Way, WA 98003
Tel: (206) 874-0555
Contact person: Keith Parker

Schaumburg & Polk

8865 College St
Beaumont, TX 77707
Tel: (409) 866-0341
Contact person: Travis Williams

Molzen Corbin & Associates

2710 Miles Road Southeast
Albuquerque, NM 87106
Tel: (505) 242-5700
Contact person: Doug Albin

Tetra Tech, Inc.

123 Brighton Lake Rd.
Brighton, MI 48116
Tel: (810) 220-2112
Contact person: Jeff Markstrom

One of the major design firms in Michigan, McNamee, Porter, and Seeley has broad experience in the design, installation supervision and operation and maintenance of grinder pump stations. The firm has designed systems using E/One components for the Michigan communities of Winans Lake, Lake Chemung, Thompson Lake, Portage and Base lakes, Tri Lakes, Clark Lake, Strawberry Lake, Multi Lakes and Hartland.

Capital Consultants

820 N. Washington

Lansing, MI 48906

Tel: (517) 371-1200

Contact person: Ken Coulston

Capital Consultants specified E/One grinder pumps for a 690-station low pressure sewer system it designed for Clark Township on Lake Huron in 1991.

Jones Edmunds Engineers

1100 Cesary Blvd.

Jacksonville, FL 32211

Tel: (904) 744-5401

Contact person: Claude Tankersley

JEA had specified E/One for a 770 unit septic tank replacement in Gulf Coast Florida that was installed in 1997.

Jordan Jones & Goulding

231 Sherway Rd.

Knoxville, TN 37922

Tel: (865) 966-1000

Contact person: Rick Kirby

Municipal References

Oakland County, MI

Oakland County Drain Commission

Tel: (810) 858-1089

Contact: Russell Bratton

The Oakland County DPW provides installation inspection and operational services for numerous low pressure sewer grinder pump stations throughout the county. The commission is responsible for current installations in Franklin Village and Orchard Lake and is looking at the potential of having several thousand E/One stations under its jurisdiction within the next five years.

Lake Tapawingo, MO

Tel: (816) 229-3722

Contact: Harry Henderson, Superintendent

Before Lake Tapawingo began using E/One pumps, it suffered from the expensive problems typical to all centrifugal pumps: grease buildup on floats, jammed and worn grinders, worn-out motors and major corrosion problems with galvanized guide rails, valves and exposed hardware.

Additionally, Tapawingo's low pressure sewer system reused part of the old gravity main as a building sewer. This resulted in major I&I problems during rainfalls, as all the pumps would try to run at once and every high water alarm would operate.

To correct these problems, Tapawingo voted to repair I&I problems and replace the centrifugal pumps with the E/One AMGP grinder pump. They have also standardized on the E/One 2000 Series for all new construction.

Bonner Springs, KS

Tel: (913) 422-7242

Contact person: Gary Saunders or Jim Morasch

Bonner Springs has been using E/One grinder pumps for almost 20 years. Over the years, they had allowed centrifugal pumps to be installed. But because of the significantly higher operating and maintenance costs of the centrifugal pumps, Bonner Springs has been standardized on E/One for several years.

Lake Waubensee, KS

Tel: (913) 449-7271

Contact person: Dave Niedfeldt

Waubensee has had 220 Barnes centrifugal pumps in an LPSS that is more than five years old. The municipality has experienced problems with jamming, basin flooding and major problems with the seal failure sensor. Barnes had to replace all the sensors and extend the warranty on them for five years. Waubensee has also had to replace approximately half of the discharge nipples,

which shear off when stations settle. The sewer board has recently approved using the E/One AMGP in place of the Barnes pumps.

Santa Fe, NM

Tel: (505) 474-0623

Contact person: Jennifer Nelson

The city of Santa Fe has, in the past several years, realized the benefits of LPSS in place of conventional gravity. Because of the dramatic static conditions that exist in the hills surrounding the city, the cost of gravity and lift stations was proving to be economically prohibitive for new development. Santa Fe has been recommending E/One pressure sewer systems to both engineers and developers. There are now several on-going new developments that the city required the use of E/One pressure sewers

City of Parkville, MO

Tel: (816) 891-0003

Contact person: Al Kennedy

Riss Lake is an upper bracket development that is an exclusive E/One system. There are presently 300+ homes, with total build-out of 1500 homes. The city is the operating authority. E/One also has another new subdivision, River Chase, as well as a small industrial complex in Parkville.

Baldwin Lake, MI

City of Greenville

Tel: (616) 754-5645

Contact person: Tom Ledger

Greenville is responsible for the operation and maintenance of the low pressure sewer system at Baldwin Lake. The project was designed and bid with both STEP and grinder pump alternatives. The E/One grinder pump station was the lowest-cost bid. The first 80 stations were installed in 1987; today, approximately 100 stations are online.

Indian Lake, OH

Indian Lake W.P.C. District

Tel: (937) 843-3328

Contact person: Garis Pugh

Indian Lake is a resort community development in Logan County, Ohio. The low pressure system includes 164 E/One grinder pump stations installed in 1992.

Contractor References

Dunigan Bros.

911 E. South Street

Jackson, MI 49203

Tel: (517) 787-3023

Contact person: Joe Dunigan

Dunigan Brothers installed the 650-station Clark Lake project in Jackson County, Michigan. The contractor used both auger and backhoe techniques to install the stations. Much of the installation work was done during winter months in frozen ground, and high ground water conditions were a major factor. Dunigan Brothers used a dry concrete mix to provide ballast on most of the stations.

Santa Fe Corporation

121 S. Barnard

Howell, MI 48843

Tel: (517) 548-3410

Contact person: Joe Lupton

The Santa Fe Corporation installed a 40-station system in Genoa Township, Michigan, and a 350-station system in Bay Port, Michigan. The Bay Port project was complicated because of extensive rock. Ballasting was done using poured concrete from balloon-tired mix truck.

Reynolds, Inc.

4520 North State Rd 37 South

Orleans, IN 47452

Tel: (812) 865-3232

Contact person: Patrick Stalker

Reynolds, Inc. first installed an E/One system in 2000 at Big Monon Bay, IN. Twin Lakes Sewer District was happy enough with their work to have them install the second phase of the system. Reynolds, Inc. has also installed systems by other manufacturers.

DN Higgins

3390 Travis Point Rd

Ann Arbor, MI 48108

Tel: (734) 996-8480

Contact person:

DN Higgins

2887 Tamiami Trail East Suite 1

Naples, FL 34112

Tel: (239) 774-3130

Contact person: Charlie McCleaf

DN Higgins has installed E/One systems in both Florida and Michigan.

Infrasource

4033 East Morgan Rd
PO Box 970200
Ypsilanti, MI 48197
Tel: (734) 434-2000
Contact person: Russ Doersch

R.A. Scott Construction

2509 Bellevue Ave
Daytona Beach, FL 32114
Tel: (386) 238-1234
Contact person: Mark Scott

Allen Douglas Construction

1228 South Main St
Belen, NM 87002
Tel: (505) 864-4196
Contact person: Newt

Allco, Inc.

6720 College St
Beaumont, TX 77707
Tel: (409) 860-4459
Contact person: Gene Allen

Ellingson Companies

56113 State Highway 56
West Concord, MN 55985
Tel: (507) 527-2294
Contact person: Jeremy Ellingson

QCD Pipe Line

Perris Ca.
Tel: (951) 906-8563
Contact Person: Kelly Wood
Project Name: Ontario mini mall.

Metro Builders

Newport Beach Ca.
Tel: 949 515-4350
Contact Person: Richard Quattrocchi
Project Name: Crystal Cove Newport Beach Ca