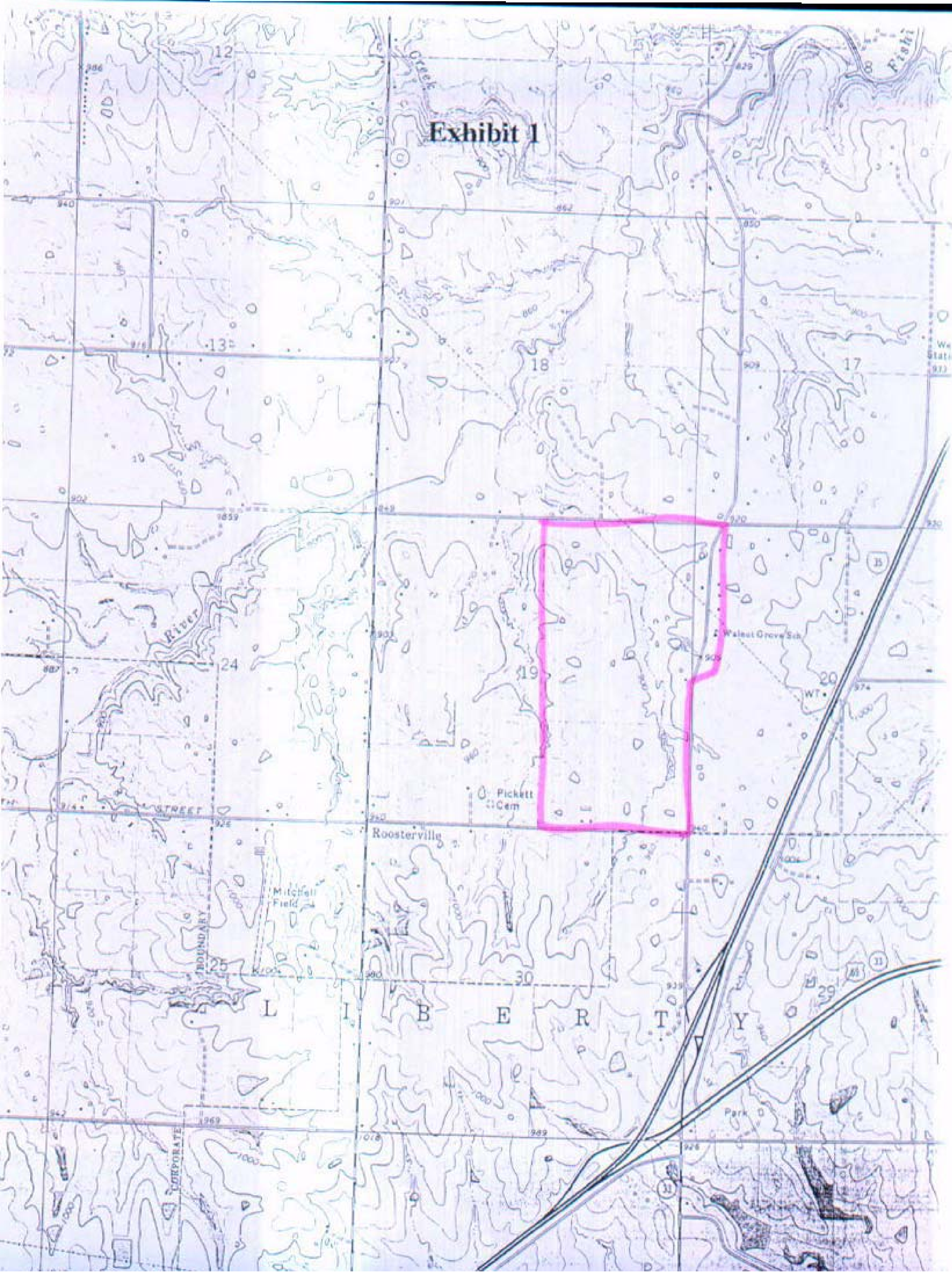
Exhibit 1



Creek
River
Fish
12
13
17
18
19
20
24
25
29
30
Walnut Grove Sch
WT
Pickett Cem
Roosterville
Mitchell Field
STREET
BOUNDARY
CORPORATE
L I B E R T Y
Park

Exhibit 2

LEGAL DESCRIPTION:
All that part of the East one half of Section 19 and a part of the Northwest Quarter of Section 20, both in Township 52, Range 31, Clay County, Missouri described as follows: Commencing at the Southeast corner of said Section 19; thence North 0 degrees, 01 minutes, 51 seconds West along the East line of said Section 19, also being the East line of SHAVERS HEAVEN CREST, a subdivision of land in Clay County, Missouri, a distance of 1814.97 feet to the Point of Beginning of the tract herein to be described; thence North 89 degrees, 41 minutes, 46 seconds West along the North line of said SHAVERS HEAVEN CREST and its Westerly prolongation thereof, a distance of 2624.80 feet to the West line of the Southeast Quarter of said Section 19; thence North 0 degrees, 25 minutes, 41 seconds East along said West line, a distance of 828.16 feet to the center of said Section 19; thence North 0 degrees, 24 minutes, 01 seconds East along the West line of the Northeast Quarter of said Section 19, a distance of 1493.20 feet; thence South 89 degrees, 37 minutes, 34 seconds East, a distance of 2858.21 feet to a point on the centerline of Lightburne–Plattsburg Road, (the following 5 courses are along said road centerline); thence South 2 degrees, 51 minutes, 39 seconds West, a distance 782.98 feet; thence Southwesterly along a curve to the right being tangent to the last described course, and having a radius of 1300.00 feet, an arc distance of 310.33 feet; thence South 16 degrees, 32 minutes, 18 seconds West, a distance of 339.19 feet; thence Southerly along a curve to the left being tangent to the last described course, and having a radius of 1510.00 feet, an arc distance of 436.87 feet; thence South 0 degrees, 01 minutes, 51 seconds East, a distance of 473.59 feet to the Point of Beginning. Said tract of land contains 145.84 Acres more or less.

Exhibit 3A

FEASIBILITY STUDY

For

WASTEWATER COLLECTION AND TREATMENT SYSTEM

at

PRIVATE GARDENS SUBDIVISION

CLAY COUNTY, MISSOURI

by

CENTRAL RIVERS WASTEWATER UTILITY, INC.
211 Platte Clay Way, Ste. D
P.O. Box 528
Kearney, MO 64060

Background

The rural areas of the rapidly developing Kansas City metropolitan region have been growing as more and more people find that the area offers many benefits and high quality of life. As this metropolitan area has developed and grown, wastewater treatment for these developments has become a primary concern. Due to soils that are not well suited for on-site wastewater disposal systems and higher density, central wastewater collection and treatment that is well operated and maintained has become a growing need. However, economic factors make a single large scale central collection and treatment facility in outlying subdivisions and communities impractical. Sound technological advances in how wastewater is collected and treated lead to a more practical approach. Cluster type treatment and collections systems, each serving a single subdivision or small group of subdivisions can be economically installed and economically maintained and can provide high quality wastewater treatment. Quality installation, operation and maintenance are essential for this type of system to consistently produce safe and effective wastewater treatment. Therefore, operation and maintenance should be handled by professionals that are well trained and have financial incentives to provide safe wastewater treatment facilities. The operation and maintenance authority should also be well regulated to ensure that the public good is served. A Missouri Public Service regulated private utility company is very well suited for this approach.

Central Rivers Wastewater Utility, Inc., upon final approval of its Tariff currently under review by the Missouri Public Service Commission, will maintain and operate central wastewater collection and treatment facilities in Ray County, Missouri (Case No. SA-98-530), Clay County, Missouri (Case No. SA-2000-105), Clay County, Missouri (Case No. SA-2000-248), Clay County, Missouri (Case No. SA-2001-304). Central Rivers Wastewater Utility, Inc. is also planning to provide wastewater treatment and collection system operation and maintenance for a new subdivision currently being developed in Clay County, Missouri. The new subdivision is known as Private Gardens Subdivision.

Purpose of serving Private Gardens Subdivision

Due to experience Central Rivers Wastewater Utility, Inc. is well suited to provide an operation and maintenance authority for this subdivision. The company can provide dependable wastewater collection and treatment service for this subdivision at a reasonable cost while at the same time provide a financial incentive to the owners of the company.

Financing

Costs to provide engineering documents necessary to obtain a Missouri Department of Natural Resources Construction will be paid by the subdivision developer. The developer has paid to install the collection system's main collection lines. The developer has also paid for initial costs for the installation of the wastewater treatment facility.

A contract between the subdivision developer and the utility in which the developer has agreed to fund the difference between revenue collected through rates and the required revenue has been signed and agreed upon by both parties. The developer has obtained an Irrevocable Letter of Credit from a reputable bank that the utility company will draw upon if the developer, for any reason, is unable or unwilling to pay the agreed upon difference. This agreement ensures that utility company will have sufficient revenue to operate the wastewater collection and treatment system in the initial stages of the development.

Plan

A map of the area is attached to the company's application. On the map is a layout of the collection system and treatment plant location. Wastewater from the homes will initially be collected in 1,500 gallon septic tanks located near the residence. The effluent will be screened and pumped into a force main that eventually will tie into the treatment facility. A second phase of the treatment plant is planned to be installed when sewage flows require. The treatment plant has been constructed to meet Department of Natural Resources administered regulations and will be expanded as necessary to continue to do so.

Customers

There are currently no customers within the proposed service area. The newly constructed homes will each have an individual 1,500 gallon watertight septic tank located near the residence but within an easement granted to the utility company. The subdivision plan is to have approximately 61 homes when completely developed. All of the customers will be single family residences. It is anticipated that at least 60% of the customers will be connected within 5 years.

System Construction

The collection system has been constructed and is existing. The recirculating sand filter has been constructed and is existing. Plans prepared by a professional engineer registered in the State of Missouri are on file at the Missouri Department of Natural Resources.

Operation

The management of the company will be furnished by the owner, Mr. Mark Geisinger. The company will contract with Utility Construction & Management, LLC for service calls and treatment plant operation and maintenance of this facility. Billing will be done on a contract basis.

The utility company will keep in stock a new pump and controls for the residential pumping installation as well as repairable parts. One pump of each make will be kept for each fifty customers it has on the force main sewer system. The company will inspect the customer's pumping facilities once per year to assure that they are functioning properly. All maintenance will be provided by the utility company. The company will also replace the customer's pump and controls, as well as repairable parts, when necessary as part of the rate structure provided the customer does not purposefully or willfully cause intentional harm to the system through negligence or sabotage.

Tariff and Rules

The company's Tariff will be amended to include a service area that includes this subdivision. The rules governing the customers' responsibilities and the company's responsibilities will be those filed with its Tariff and approved by the Missouri Public Service Commission.

The base single family wastewater rate will likely be $32.00/month. This rate is consistent with other similar wastewater collection and treatment facilities and reasonable for the area.

Conclusion

The proposed services by Central Rivers Wastewater Utility, Inc. for this proposed subdivision is feasible because the rates are within an acceptable range for this area and the style of homes to be constructed. The agreement between the developer and the company satisfies the financial obligation the company will need to remain viable until several customers are connected. By providing this service the developer is better able to market the lots in the subdivision and the County and subdivision are benefited by increased temporary and permanent jobs and better and safer overall living conditions for the residents.

Exhibit 3B

ENGINEERING REPORT

FOR

SANITARY SEWER SYSTEM

TO SERVE

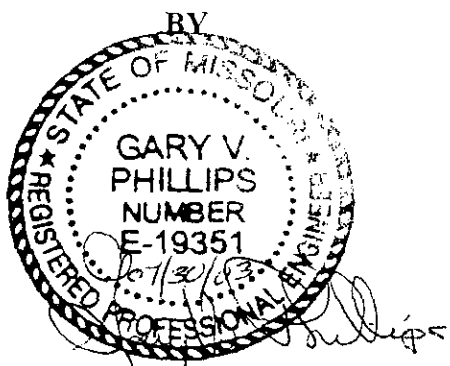
PRIVATE GARDENS SUBDIVISION

CLAY COUNTY, MISSOURI

FOR

CENTRAL RIVERS WASTEWATER UTILITY, INC.
P.O. BOX 528
211 PLATTE CLAY WAY
KEARNEY, MO 64060

BY



GARY V. PHILLIPS, PE
JUNE, 2003

WHITEHEAD CONSULTANTS, INC.
114 NORTH MAIN STREET
PO BOX 461
CLINTON, MISSOURI 64735
660 885 8311

LOCATION

Private Gardens is a proposed 65-lot residential subdivision development located on the West side of Interstate 35 and North of N.E. 112th Street in Clay County, Missouri.

EXISTING CONDITIONS

There are presently no central sewage treatment systems in the area. The closest treatment plant with collection lines is approximately 2 miles to the Northeast in Kearney. There does not appear to be any limiting conditions for the use of a recirculating sand filter sewage treatment system to serve the subdivision. There is no proposed future growth of the development.

PROPOSED IMPROVEMENTS

The recirculating sand filter system is designed to treat 65 lots with an expected density of 3.7 people per lot and 75 gallons of sewage per person per day. The proposed treatment system will be constructed in one phase.

Each lot will have a septic treatment effluent pump (STEP) in a septic tank that will pump to a 2" or 3" low pressure main. These tanks area also called interceptor tanks. The effluent from the residential home tanks is expected to be less than 150 mg/l BOD and less than 50 mg/l TSS. The effluent will be pumped from the individual septic tanks at not more than 5 gpm to the main. The septic tanks on the lots will be sized according to the number of bedrooms of the proposed house as shown on the detail sheet. The mains will carry the screened effluent to a minimum 18,037-gallon recirculation tank. The screened effluent will have no solids so manholes and clean-outs are not used.

The pretreated sewage in the recirculation tank will be filtered and pumped to the sand filter bed where it will be distributed and dosed on the filter media. The filtered effluent will flow out to a splitter valve that will discharge 20% and recirculate 80% back to the recirculation tank. The dosing pumps will be controlled by float switches and timers to ensure that the filter media is dosed adequately to maintain a biomat within the media. At times of low flow 100% of the effluent will be recirculated.

The operation and maintenance of the system will be provided by the continuing authority: Central Rivers Wastewater Utility, Inc. A sieve analysis of the proposed filter media will be sent with the application for operating permit.

CALCULATIONS

Design flow =65 lots x 75 gallons per day x 3.7 persons per lot = 18,037 gpd

Filter bed area = 18,037 gpd / 5 gallons per sq.ft. = 3,607 sq.ft. (minimum)

Using a filter area of 46' x 80' = 3,680 sq ft

Pump size needed = number of orifices x 0.43gpm = 22 orifices / line x 5 lines / zone x 0.43 gpm = 47.3 gpm minimum.

Total dynamic head per spread sheet = 56.7 ft

Calculation Chart and the pump curve for the pump selected is included with this report.

Detailed specifications for the STEP system components and sand filter are included with this report.

Each orifice will be limited to 1.50 gallons per dose. The time of dose will therefore be limited to 3.5 minutes at 0.43 gpm.

No. of pumps needed per dose = Total Q through the RSF / (1440 min per day x pump Q) = 18,037 gal per day x 5 cycles needed to pump all out at 4:1 ratio / (1440 x 48.5 gpm) = 1.29 > 1. Therefore, 2 pumps will need to run each cycle to meet the required dosage per cycle.

The daily run time (%) = daily Q x 5 / (2 pumps x 48.5 gpm x 1440 min per day) = 64.6 %

Time off = (3.5 / .646) – 3.5 min = 1.92 min.

Each cycle = 1.92 + 3.5 + 1.92 + 3.5 = 10.84 min. or 133 cycles per day.

Pumps 1 & 3 will operate for 3.5 minutes then shut down for 1.92 min. Pumps 2 & 4 will operate for 3.5 minutes then shut down for 1.92 minutes. This cycle will continue indefinitely.

The organic loading rate for a recirculating sand filter is determined by the formula: Rate = BOD / 0.01252 x 80% (for pretreatment in septic tanks) and
BOD = 65 lots x 3.7people x 0.17 pound per person = 40.88 lbs.
Rate = 40.88 x .80 / 0.01252 = 2612 sf < 3,680 sf designed

Peak Flow, Qp, is determined from the equation EDU / 2 + D and EDU is determined from the Qa, (average design flow in gpd) / Kp, (normal design Q per person) (50) x P, (normal design persons per home) (3) or EDU = Qa / (Kp x P) =

18,037 / (50 x 3) = 120.2 for 65 lots and Qp = (120.2 / 2) + D where D is accepted as 15 therefore: Qp = 60.12 + 15 = 75.12 gpm

The sand filter bed is designed to treat 5 gallons per square foot per day of domestic sewage based on the fact that there is no stronger waste entering the system and there will be a 4:1 recirculation ratio. The orifices are 1/8" diameter allowing 0.43 gpm dose at 5 ft of pressure head. The orifices are spaced 2 feet apart and the laterals are 2 feet apart. The pressure will be set to deliver 5 feet of head at the last orifice.

The filter bed is 46 feet deep and 80 feet wide creating 3,680 sf of area. At 5 gallons per square foot the bed can treat 18,400 gpd. The design Q is 18,037 gpd. The pressure in the main is computed using a C = 150 and the friction head formula: Hf = [(4.727 x L) / D to the 4.87 power] x [(Q / C)] to the 1.85 power.

The maximum pressure head in the main will be near station 34+00 where the lowest main elevation is 884. The high point in the line is at elevation 939 at station 16+50. The treatment facility is at elevation 875 at station 0+00. The total dynamic head in the main at station 34+00 is the summation of the static head and friction head at peak flow. The static head is 939 –884 = 55 ft. The friction head formula was given earlier and the peak flow is computed by using 33 lots that will be connected to the main between station 16+50 and 34+00. Then EDU = (33 x 3.7x 75) / (50 x 3) = 61.05. Qp = EDU / 2 + 15 = 45.52 gpm. Hf = [(4.727 x 1750 ft) / (2" / 12"/ft) to the 4.87 power] x {[(45.52 gpm x .002228 cfs / gpm)] / 150} to the 1.85 power = 69.63 ft. The TDH = 55 + 69.63 = 124.6 ft.

The lowest effluent pump on any lot will be 20 feet below the main and no more than 200 feet distance from the main. The effluent pumps to be used in all of the tanks are rated at 5 gpm at 175 ft head. Each pump assembly will have a ¼" orifice flow controller to limit the flow from 5 to 10 gallons per minute. The highest expected head on an effluent pump will be at the lowest lot at station 34+00 where the pump will be no more than 20 feet below the main and 200 feet distance away from it. The friction head for 5 gpm in a 1" diameter service line 200 feet long is 3.91 ft. The total head the pump will be pumping against is 124.6 + 20 + 3.91 = 148.51 ft., which is well below the pump rating. By using the same size pumps in all of the effluent pump tanks, a large inventory of pumps will not need to be carried by the utility company.

General Specifications

A. Onsite Interceptor Tanks

1. General:

a. The manufacturer shall provide the structural design and certification to the engineer for review. The design shall be in accordance with accepted engineering practice. Precast concrete or fiberglass tanks shall have been designed by a registered engineer and approved by state or local regulatory agencies, or authorities. To achieve effective performance and minimize pumpout occurrences, residential interceptor tanks shall have a nominal liquid capacity of 1000 gallons for up to 2 bedrooms, 1500 gallons for 3 bedrooms, 2000 gallons for 4 bedrooms, and for more than 4 bedrooms the sizing shall be determined based on an occupancy assessment and shall be in accord with Figure 1.

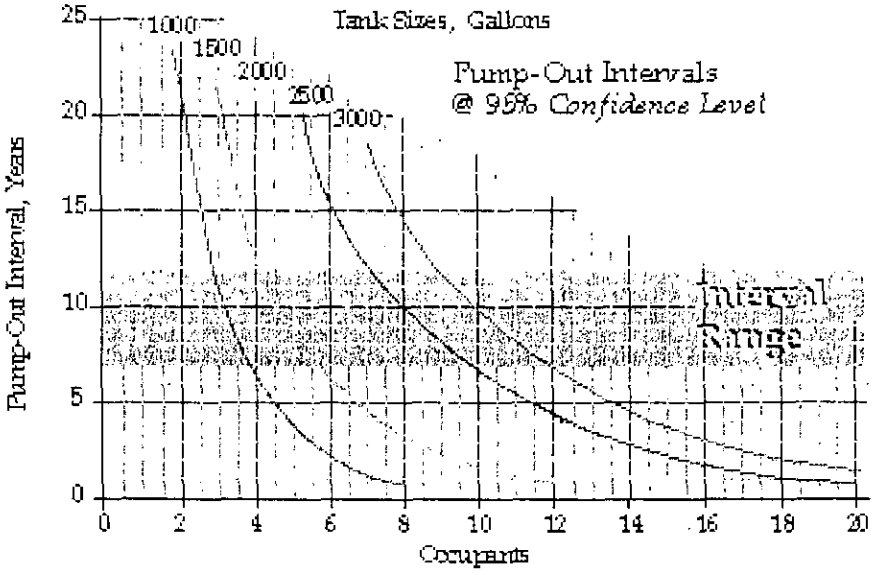


Figure 1 Pump Out Intervals

The primary sewage effluent is "**Residential Strength Wastewater**" from a septic tank which does not exceed the following parameters: Biochemical Oxygen Demand (BOD) of 300 mg/L; Total Suspended Solids (TSS) of 150 mg/L; Total Kjeldahl Nitrogen (TKN) of 150 mg/L; and Oil & Grease of 25 mg/L. Other contaminants may also be present in the wastewater, however, they shall not exceed the concentrations or quantities normally found in residential sewage. Typical screened residential septic tank effluent constituents are:

Averages: BOD = 130mg/L, TSS = 40mg/L, O&G = 20mg/L
Peak: BOD = 200mg/L, TSS = 60mg/L, O&G = 25mg/L

Average flow (Q_a) are based on typical weekly discharges. Wastewater flows for single-family dwellings typically range from *40 to 60 gallons per capita per day (gpcd)*; **50 gpcd** is a commonly used design parameter and is the value used in calculations herein. The number of individuals (capita) is assumed to average three per dwelling. Typical occupancies and flow relationships are shown in Table 1:

Table 1: Bedroom, Occupancies, and Flow Relationships

Bedrooms	Q_p[a] *gpd/DU*	**Occu.**[b] *capita*	Q_c *gpcd*	Q_a *gpd/DU*
1	200	2	55	110
2	300	3	50	150
3	375	4	50	200
4	450	5	45	225

a) Peak day bedroom flows are based on typical administrative rules.

b) Occupancy is based on typical usage of two occupants for the first bedroom and one occupant per additional bedroom.

b. Loading Criteria:
   - There shall be 130 pcf for minimum weight of saturated backfill, or 100 pcf for unsaturated backfill, (400 psf minimum).
   - Minimum lateral loading shall be 62.4 pcf. Lateral loading shall be determined from ground surface.
   - The tank shall also support a concentrated wheel load of 2500 lbs.

c. Tanks requiring deep burial or subject to truck or heavy traffic loading require special consideration. (A minimum soil cover of 12 inches shall be used, unless specified otherwise by manufacturer.)

d. *All tanks shall be structurally sound and watertight and* shall be guaranteed in writing by the tank manufacturer for a period of two years from the date of final acceptance. Manufacturer's signed guarantee shall accompany bids. The tank guarantee/warranty shall be furnished at the time of submittal. Tank warranty shall not be limited liability to replacement cost of the tanks. The septic tank shall be capable of withstanding long-term hydrostatic loading, in addition to the soil loading, due to a water table maintained at ground surface.

e. Tanks shall be manufactured and furnished with access openings 18 inches in diameter and of the configuration shown on the standard drawings. Modification of completed tanks will not be permitted.

f. Inlet plumbing shall include an inlet tee which penetrates 18 inches into the liquid from the inlet flow line. The inlet plumbing shall allow for natural ventilation back through the building sewer and vent stack.

g. Tanks shall be capable of successfully withstanding an above-ground static hydraulic test and shall be individually tested.

h. All tanks shall be installed in strict accordance with the manufacturer's recommended installation instructions.

2. Concrete:

a. Walls, bottom and top of reinforced concrete tanks shall be designed across the shortest dimension using one-way slab analysis. Stresses in each face of monolithically constructed tanks may be determined by analyzing the tank cross-section as a continuous fixed frame.

b. The walls and bottom slab shall be poured monolithically; alternatively, water stops may be provided.

c. Reinforcing steel shall be ASTM A-615 Grade 60, fy=60,000 psi. Details and placement shall be in accordance with ACI 315 and ACI 318.

d. Concrete shall be ready-mix with cement conforming to ASTM CI50, Type II. It shall have a cement content of not less than six (6) sacks per cubic yard and maximum aggregate size of 3/4 inch. Water/cement ratio shall be kept low (0.35±), and concrete shall achieve a minimum compressive strength of 4000 psi in 28 days. The Contractor shall submit a concrete mix design to the Engineer for review and approval. Three (3) concrete sample cylinders shall be taken and tested for each tank manufactured until the manufacturer and Engineer are satisfied that the minimum compression strength is being obtained. To ensure compliance, the manufacturer shall then make and set three (3) sample cylinders for a minimum of 20% of the remaining tanks at the discretion of the Engineer. If the minimum compressive strength is not being obtained, the manufacturer shall be required to make and test sample cylinders for each tank manufactured. Calcium chloride will not be allowed in the mix design. The cost of testing cylinders shall be the tank manufacturer's responsibility. The tank manufacturer may supply a Swiss hammer for compressive testing in the field in lieu of sample cylinders.

e. Tanks may be protected by applying a heavy cement-base waterproof coating (Thoroseal or equal), on both inside and outside surfaces, in compliance with Council of American Building Officials (CABO) report #NRB-168; 6181, however the tank should be watertight without the addition of seal coatings.

f. Form release used on tank molds shall be Nox-Crete or equal. Diesel or other petroleum products are not acceptable.

g. Tanks shall not be moved from the manufacturing site to the job site until the tank has cured for seven (7) days or has reached two-thirds of the design strength.

h. Tanks shall be manufactured and furnished with access openings of the size and configuration to accommodate individual packaged pump systems. For 24 inch diameter access risers, the tank manufacturer shall cast in place a flanged tank adapter to facilitate the bonding of a 24 inch diameter access riser. The flanged tank adapter shall be made

of 1/4" thick ABS and shall have an outside diameter of 27 inches and an inside diameter of 22 3/4 inches. The flanged adapter shall be Orenco Systems®, Inc. Model PRTA24 or engineer approved equal. The adapter must have an overall height of no less than 3 inches to allow $1^{1}/_{2}$" exposed for sufficient bonding area once the adapter is installed in the tank. For 21 inch and 30 inch diameter access risers, a grooved tank adapter plate may be installed in the tank. The grooved tank adapter plate shall be manufactured of fiberglass or ABS and shall have grooves to accommodate either a 21 inch or 30 inch diameter access riser.

i. The septic tank and the top slab shall be sealed with a preformed flexible plastic gasket. The flexible plastic gasket shall be equal to the flexible butyl resin sealant congeal CS-102 or CS-202 as manufactured by Concrete Sealants, Inc. of New Carlisle, Ohio, and shall conform to federal specification SS-S-00210(2iOA) and AASHTO M-198.

j. In order to demonstrate watertightness, tanks shall be tested twice prior to acceptance. Inlets to the septic tank will be watertight pipe seal Ty Seal or equal as approved by the Engineer. Each tank shall be tested at the factory, prior to shipping, by filling with water to the soffit and letting stand. After 24 hours, the tank shall be refilled to the soffit and the exfiltration rate shall be determined by measuring the water loss during the next two (2) hours. Any leakage shall be cause for rejection. After installation is completed, each tank shall be filled with water to a point two inches into the access riser and retested as previously described (the field test period may be reduced to not less than two (2) hours). Backfill of a depth equal to the water height in the riser must be in place over the tank to prevent damage due to hydrostatic uplift. No tank will be accepted if there is any leakage over the two (2) hour period.

3. Fiberglass:

a. Method of Calculations:

1) Fiberglass tanks shall be analyzed using finite element analysis for buried structures.

2) Calculations shall address the following:

- strength with a minimum safety factor of 2.5
- buckling with a minimum safety factor of 2.5
- deflection of 5% of the tank diameter, based on service load (including long-term deflection lag)
- buoyancy

3) Performance testing

b. In lieu of calculations for fiberglass tanks, the supplier may elect for in-situ performance testing.

c. In-situ testing of each tank model shall include use of strain gauge and deflection gauge. The tank will be subjected to external forces equal to twice the actual load.

d. Maximum initial deflection based on test loading shall not exceed 2% of the tank diameter.

e. Performance testing will be evaluated by a Registered Professional Engineer (P.E.). The Engineer will have the sole responsibility to determine the maximum external loading on any of the tank models.

f. The tank shall be constructed with a glass fiber and resin content specified by the manufacturer and with no exposed glass fibers. The manufacturer shall supply to the engineer, without charge, satisfactory evidence of testing by an approved laboratory showing compliance with IAPMO IGC 3-74, excepting as herein modified. Any metal part shall be 300 series stainless steel.

g. Inspections may be made by the engineer in the supplier's yard, within the plant, upon delivery and again after installation. The minimum wall thickness shall be 1/4 inch. If the wall thickness is suspected to be less than 1/4 inch or if delamination is suspected within any portion of the tank, the engineer may drill a 1/4 inch diameter hole through the tank wall for inspection purposes. If the required minimum 1/4 inch thickness is not found, repair if feasible shall be the responsibility of the contractor. If repair is judged not feasible, the tank shall be rejected. If twenty percent or more of the tanks are rejected for any of the aforementioned reasons, each tank under this bid will become suspect of substandard quality and subject to rejection by the engineer. If the required minimum 1/4 inch thickness is found and no delamination is present, the repair of the inspection holes shall be the responsibility of the engineer.

h. The engineer shall specify the minimum weight of each tank model that will be allowed. The manufacturer will permanently mark the weight of each tank on the top near the access hole.

i. The minimum tank weight shall be specified below by the manufacturer's engineer: (i.e., 350 lbs for 1000 gallon tanks ...400 lbs for 1500 gallon tanks ±)

j. Holes specified for the tank shall be provided by the manufacturer. Resin shall be properly applied to all cut or ground edges so that no glass fibers are exposed and all voids are filled.

k. Dual Tite or Ty-Seal neoprene gaskets, or approved equal, shall be used at the inlet to join the tank wall and the inlet piping. ABS or Schedule 40 PVC pipe and fittings shall be used at the inlets.

l. Inlet plumbing shall include an inlet tee which penetrates 18 inches into the liquid from the inlet flow line. The inlet plumbing shall allow for natural ventilation back through the building sewer and vent stack.

m. Water testing shall be performed on each tank and shall be witnessed by the engineer. Every tank shall be assembled by the manufacturer and filled with water to the brim of the access opening for a minimum of two (2) hours. The tank shall show no leakage from section seams, pin-holes or other imperfections. Any leakage is cause for rejection.

n. When leakage occurs, if the tank is not rejected by the engineer, an additional water test shall be made on the tank after repairs have been completed, upon request by the engineer. The manufacturer shall be

responsible for making all corrective measures in production or assembly necessary to ensure a completely watertight tank.

o. After installation of tank with riser is completed, each tank shall be filled with water to a point two inches into the access riser and the water loss measured after a two-hour period. Every tank test shall be witnessed by the engineer. Any leakage shall be cause for rejection. Backfill of a depth equal to the water height in the riser must be in place over the tank to prevent damage due to hydrostatic uplift.

p. Each tank shall be marked in the upper most surface over the outlet and include a permit number, weight of tank, type of tank, and date of manufacture.

q. Installation shall be in accordance with the manufacturer's recommendations, or as shown on the Contract Plans, whichever is more stringent; no variations.

B. Risers & Lids:

1 Risers:

shall be required for access to internal vaults and access into the septic tanks for septage pumping. All risers shall be constructed watertight. The risers shall be attached to the tanks such that a watertight seal is provided. Risers shall extend three inches (3") above original grade to allow for settlement and to ensure a positive drainage away from the access. Risers for inspection ports shall be a minimum of 21 inches in nominal diameter. Risers containing pumping assemblies or electrical splice boxes shall be a minimum of 24 inches in diameter and shall be of sufficient diameter to allow removal of internal vaults without removing splice boxes, etc. Risers shall be a minimum of 30 inches in nominal diameter when the bury depth is 36 inches or greater. All other risers shall be a minimum of 24 inches in nominal diameter and shall vary in height depending on the depth of bury on the various tanks. Adhesive required to adhere the PVC or fiberglass risers to either fiberglass or ABS tank adapter shall be either a two-part epoxy, model MA 320 or equal, or a single component adhesive model ADH100 or equal.

2 Inlet Risers:

(required only on 2-compartment tanks and tanks with greater than 1500-gallon capacity) shall be ribbed PVC as manufactured by Orenco Systems®, Inc. or engineer approved equal. The material shall be PVC as per ASTM D-1784 and tested in accordance with AASHTO M304M-89. Risers shall extend to two inches above the ground surface to allow for settlement and shall have a minimum nominal diameter of 21 inches.

3 Outlet Risers:

shall be ribbed PVC as manufactured by Orenco Systems®, Inc. or engineer approved equal. The material shall be PVC as per ASTM D-1784 and tested in accordance with AASHTO M304M-89. Risers shall be at least 12 inches high, shall have a minimum nominal diameter of 24 inches for simplex

pumping applications, or 30 inches when used in a duplex pumping application and shall be factory-equipped with the following:

a. Electrical and Discharge Grommets: when applicable, Neoprene grommets shall be installed by the manufacturer for discharge piping, vent piping, and/or the electrical conduit to assure a watertight seal. The grommet material must be EPDM synthetic rubber in accordance with MIL-STD-417, 60 durometer. The grommets shall be installed at the factory by the manufacturer of the access risers.

b. Adhesive: When bonding to concrete or fiberglass grooves, a two-part epoxy, one pint required per 21 inch or 24 inch diameter riser and one quart required for 30 inch diameter riser, model ADHP10 or ADHQ10, or equal shall be used. When bonding to a flanged riser tank adapter,either a two-part epoxy, model MA 320 or equal, or a single component adhesive model ADH100 or equal shall be used.

4 Lids:

a. One shall be furnished with each access riser. Lids shall be Orenco Systems®, Inc. Model FL21g, FL24g, or FL30g or engineer approved equal, as appropriate, fiberglass with green non-skid finish, and provided with urethane gasket, stainless steel bolts, and wrench. The riser and lid combination shall be able to support a 2500 lb. wheel load. (Note: this is not to imply that PVC risers are intended for traffic areas.)

b. Traffic bearing lid: The traffic bearing lid shall be a cast iron frame and cover, part number 6024, 3060, 4036, as manufactured by Sather Manufacturing Co., Inc., or equal, which will fit over a standard lid. The cover shall have the word SEWER cast into it and both frame and cover shall meet requirements of Section 9-05.15(1).

5 Insulation (*if required*):

rigid closed-cell foam insulation of 2" or 4" thickness shall be mechanically attached to the underside of the lid. All fasteners shall be made of corrosion resistant stainless steel. The insulation shall have an R value of no less than 10 per 2" increment.

6 Riser Installation:

shall be accomplished according to the manufacturer's instructions.

C. STEG Gravity Assemblies:

1 Outlet Risers:

shall be ribbed PVC as manufactured by Orenco Systems®, Inc. or engineer approved equal. The material shall be PVC as per ASTM D-1784 and tested in accordance with AASHTO M304M-89. Risers shall extend to three (3) inches above the ground surface to allow for settlement and shall have a minimum nominal diameter of 24 inches. When bonding to a flanged riser

tank adapter,either a two-part epoxy, model MA 320 or equal, or a single component adhesive model ADH100 or equal shall be used.

2 Lids:

one shall be furnished with each riser. Lids shall be Orenco Systems®, Inc. Model FL24g or engineer approved equal, fiberglass with green non-skid finish, and provided with urethane gasket, stainless steel bolts, and wrench. The riser and lid combination shall be able to support a 2500 lb. wheel load. (Note: this is not to imply that PVC risers are intended for traffic areas.)

3 Riser Installation:

shall be accomplished according to the manufacturer's instructions.

4 Effluent Filter:

all filter systems shall be supplied by a reputable manufacturer with at least five years of experience in supplying equipment for effluent sewers. Gravity system tanks for single-family dwellings of less than four bedrooms shall be equipped with an Orenco Systems®, Inc. Model FT0444-36 Biotube® Effluent Filter or engineer approved equal, installed in conformance with the engineer's plans. The filter shall have an effective screen area of no less than 5.3 square feet and a flow area of no less than 1.5 square feet. For single-family dwellings of three bedrooms or larger, the tanks shall be a minimum of 1500 gallons and equipped with an Orenco Systems®, Inc. Model FT0854-36 Biotube® Effluent Filter or engineer approved equal, installed in conformance with the engineer's plans. The filter shall have an effective screen area of no less than 16.8 square feet and a flow area of no less than 5.1 square feet. (Note: Commercial and multiple-user tanks require larger Effluent Filters, the sizes of which must be individually determined and spelled out in the specifications.) The Effluent Filter shall consist of an 8 inch diameter, 54 inch deep PVC vault with eight (8) 1-1/8 inch diameter holes evenly spaced around the perimeter, located appropriately to allow for maximum sludge and scum accumulation before requiring pumping (approximately 70% of minimum liquid level). Housed inside the PVC vault shall be 1/8 inch mesh polypropylene tubes with a solid base to prevent solids from entering through the bottom during ebullition. The 4 inch direct coupled outlet shall contain two 1/2 inch diameter flow modulating orifices and one 1/2 inch diameter vent hole. The lateral from the tank to the collection line shall be laid to a uniform grade with no high points. Commercial applications should be sized according to the document Biotube® Effluent Filter Sizing.

D. STEP Pumping Assemblies for Single-Family Dwellings:

All pumping systems shall be supplied by a reputable manufacturer with at least five years of experience in supplying equipment for effluent sewers. References must be available on request from the engineer. Systems shall be Orenco Systems®, Inc. High-Head Pumping Assemblies or engineer approved equal, composed of:

1 **Risers & Lids:**

Same as B, 2 through 5, above.

2 **Screened Pump Vault:**

Orenco Systems®, Inc. Model PVU57-1819, (exterior flow inducer) Biotube® Pump Vault or engineer approved equal, installed in conformance with the engineer's plans. The filter shall have a minimum effective screen area of no less than 16.8 square feet. (Note: Commercial and multiple-user tanks may require a larger or duplex Biotube® Pump Vault, the sizes of which must be individually determined and spelled out in the specifications.) The Biotube® Pump Vault shall consist of a 12 inch diameter, 57 inch deep PVC vault with eight (8) 1-1/8 inch diameter holes evenly spaced around the perimeter, located appropriately to allow for maximum sludge and scum accumulation before requiring pumping (approximately 70% of minimum liquid level). Housed inside the PVC vault shall be the Biotube® assembly consisting of 1/8 inch mesh polypropylene tubes. Attached to the vault is a 4 inch diameter flow inducer to accept the high-head effluent pump.

3 **Discharge Hose and Valve Assembly:**

Orenco Systems®, Inc. Model HV100BAS, 1 inch diameter, 150 psi PVC ball valve, PVC flex hose with working pressure rating of 100 psi, Schedule 40 PVC pipe, and a 12 inch length of PVC flex hose with fittings to be installed outside the riser. When pumping downhill, include anti-siphon assembly (Model HVAS100). Six gpm flow controller (Model FC) are available if necessary.

4 **Float Switch Assembly:**

Orenco Systems®, Inc. Model MFAYGE with three switch floats mounted on a PVC stem attached to the filter cartridge. The floats must be adjustable and must be removable without removing the pump vault. The high and low level alarms and on-off function shall be preset as shown in the engineer's plans. Each switch float shall be secured with a nylon strain relief bushing. The floats shall be UL- or CSA-listed and shall be rated for 5.0A @ 120VAC.

5 **High-Head Effluent Pump:**

Must be approved for use in pump vault as described in D2. Orenco Systems®, Inc. Model P100511, 1/2 Hp, 115VAC, single phase, 60Hz, two-wire motor, with 10 foot long extra heavy duty (SO) electrical cord with ground. Pump shall be capable of providing a flow rate of 5 gpm against a head of 175 feet or 10 gpm against a head of 60 feet. When used in conjunction with a flow controller, the pump shall be capable of providing 5 gpm against a head of 160 feet. Pump shall be UL and/or CSA listed as an effluent pump. Pump shall be provided with a non-prorated five year warranty.

6 **Electrical Splice Box:**

Orenco Systems®, Inc. Model SB4, UL approved for wet locations, equipped with four electrical cord grips and a 3/4 inch outlet fitting. Also included shall be UL listed butt splice connectors.

7 **Controls and Alarms:**

shall be listed per UL 508. Panels shall be repairable in the field without the use of soldering irons or substantial disassembly. Panel shall be Orenco Systems®, Inc. Model S1ROETMCT control panel meeting the following:

a. Redundant-Off Relay to provide a secondary off and sound an alarm on low water condition. Rated at 7.5 amps at 120VAC, automatic resetting, double pole.
b. Audible Alarm: Panel mount with a minimum of 80 db sound pressure at 24 inches. Warble tone.
c. Visual Alarm: NEMA 4-rated, 7/8-inch diameter, oiltight, with push-to-silence feature, automatic resetting.
d. Audio-Alarm Silence Relay: 115VAC, automatic resetting, with DIN rail mount socket base.
e. Toggle Switch: 20 amp motor rated, single-pole, double-throw with three positions: manual (MAN), (OFF) and automatic (AUTO).
f. Controls Circuit Breaker: Rated for 10 amps, OFF/ON switch, DIN rail mounting with thermal magnetic tripping characteristics.
g. Current-Limiting Circuit Breaker: Rated for 20 amps, OFF/ON switch, DIN rail mounting with thermal magnetic tripping characteristics.
h. Enclosure: NEMA 4X-rated, constructed of UV resistant fiberglass with stainless steel hinges, screws and padlockable latch. Measures 10 inches high X 8 inches wide X 5-1/8 inches deep.
i. Alarm Circuit: Wired separately from the pump circuit so that, if the pump's internal overload switch or current-limiting circuit breaker is tripped, the alarm system remains functional.
j. Motor Start Contactor: 120VAC, rated for 24 FLA,1 hp, single-phase, 60 Hz, rated at 1.25 million cycles at FLA, 2.5 million cycles at 1/2 FLA.
k. Elapsed Time Meter: 120VAC, 7-digit, non-resettable. Limit of 99,999 hours, accurate to 0.01 hours. Base mount.
l. Event Counter: 120VAC, 6-digit, non-resettable. Base mount.

8 **Installation:**

All pumping system components shall be installed in accordance with the manufacturer's recommendations, the engineer's plans, and all state and local regulations.

9 **Location:**

The pump control panel shall be mounted on a post or exterior wall nearest the tank and pump. If mounting to an exterior wall, the method should include

sound deadening insulation or mounted on a garage or outbuilding where the sound of the motor contactor engaging will not be noticed *(post and panel mounting assemblies are available).* The control panel shall be located within 50 feet and in sight of the pump motor or shall be provided with a lockable disconnect switch. The panel, when possible, should be mounted in the shade and protected from the weather. The panel should be located at a convenient height (usually about five feet above the ground) and where it will be accessible for maintenance.

E. STEP Pumping Assemblies for Duplex Commercial or Multiple-User Tanks: (NOT USED IN THIS PROJECT)

All pumping systems shall be supplied by a reputable manufacturer with at least five years of experience in supplying equipment for effluent sewers. References must be available on request from the engineer. Systems shall be Orenco Systems®, Inc. High-Head Pumping Assemblies or engineer approved equal, composed of:

1 Risers & Lids:

Same as B, 2 through 5, above.

2 Screened Pump Vault:

Orenco Systems®, Inc. Model SVT1560-18EFiFi, Biotube® Pump Vault or engineer approved equal, installed in conformance with the engineer's plans. The filter shall have a minimum effective screen area of no less than 27 square feet. The Biotube® Pump Vault shall consist of a 15 inch diameter, 60 inch deep PVC vault with eight (8) 1-1/8 inch diameter holes evenly spaced around the perimeter, located appropriately to allow for maximum sludge and scum accumulation before requiring pumping (approximately 70% of minimum liquid level). Housed inside the PVC vault shall be the Biotube® assembly consisting of 1/8 inch mesh polypropylene tubes. Attached to the vault are two 4 inch diameter flow inducers to accept the high-head effluent pumps.

3 Discharge Hose and Valve Assemblies:

Orenco Systems®, Inc. Model HV100BX, 1 inch diameter, 150 psi PVC ball valve, PVC flex hose with working pressure rating of 100 psi, Schedule 40 PVC pipe, and a 12 inch length of PVC flex hose with fittings to be installed outside the riser. When pumping downhill, include anti-siphon assembly (Model HVAS100).

4 Float Switch Assembly:

Orenco Systems®, Inc. Model MF3ER, or MF3AT for CID1 with three switch floats mounted on a PVC stem attached to the filter cartridge. The floats must be adjustable and must be removable without removing the pump vault. The high and low level alarms and on-off function shall be preset as shown in the engineer's plans. Each switch float shall be secured with a nylon strain relief bushing. The floats shall be UL- or CSA-listed and shall be rated for 5.0A @ 120VAC.

5 High-Head Effluent Pumps:

Orenco Systems®, Inc. Model P200511, 1/2 Hp, 115VAC, single phase, 60Hz, two-wire motor, with 10 foot long extra heavy duty (SO) electrical cord with ground. Pump shall be capable of providing a flow rate of 20 gpm against a head of 105 feet. Pump shall be UL and/or CSA listed as an effluent pump. Pump shall be provided with a nonprorated five year warranty.

6 Electrical Splice Boxes:

Orenco Systems®, Inc. Models SB4 and SB2(or SBX-D for CID1), UL approved for wet locations, equipped with two or four electrical cord grips respectively and a 3/4 inch outlet fitting. Also included shall be UL listed butt splice connectors.

7 Controls and Alarms:

shall be listed per UL 508 or UL 913 for CID1. Panels shall be repairable in the field without the use of soldering irons or substantial disassembly. Panel shall be Orenco Systems®, Inc. Model DAX1ROETMCT control panel meeting the following:

a. Redundant-Off Relay to provide a secondary off and sound an alarm on low water condition. Rated at 7.5 amps at 120VAC, automatic resetting, three pole.

b. Audible Alarm: Panel mount with a minimum of 80 db sound pressure at 24 inches. Warble tone.

c. Visual Alarm: NEMA 4-rated, 7/8-inch diameter, oiltight, with push-to-silence feature, automatic resetting.

d. Audio-Alarm Silence Relay: 115VAC, automatic resetting, with DIN rail mount socket base.

e. Toggle Switch: 20 amp motor rated, single-pole, double-throw with three positions: manual (MAN), (OFF) and automatic (AUTO)

f. Controls Circuit Breaker: Rated for 10 amps, OFF/ON switch, DIN rail mounting with thermal magnetic tripping characteristics.

g. Current-Limiting Circuit Breaker: Rated for 20 amps, OFF/ON switch, DIN rail mounting with thermal magnetic tripping characteristics.

h. Enclosure: NEMA 4X-rated, constructed of UV resistant fiberglass with stainless steel hinges, screws and padlockable latch. Measures 14 inches high X 12 inches wide X 6-3/8 inches deep.

i. Alarm Circuit: Wired separately from the pump circuit so that, if the pump's internal overload switch or current-limiting circuit breaker is tripped, the alarm system remains functional.

j. Motor Start Contactor: 120VAC, rated for 24 FLA,1 hp, single-phase, 60 Hz, rated at 1.25 million cycles at FLA, 2.5 million cycles at 1/2 FLA.

k. Elapsed Time Meters: 120VAC, 7-digit, non-resettable. Limit of 99,999 hours, accurate to 0.01 hours. Base mount.

l. Event Counters: 120VAC, 6-digit, non-resettable. Base mount.

m. Intrinsically Safe Relay: Intrinsically Safe Panels are UL 913 listed. The secondary circuit limits the current to 2.3 mA at 11 VAC.

8 **Installation:** All pumping system components shall be installed in accordance with the manufacturer's recommendations, the engineer's plans, and all state and local regulations.

9 **Location:** The pump control panel shall be mounted on a post or exterior wall nearest the tank and pump. If mounting to an exterior wall, the method should include sound deadening insulation or mounted on a garage or outbuilding where the sound of the motor contactor engaging will not be noticed. The control panel shall be located within 50 feet and in sight of the pump motor or shall be provided with a lockable disconnect switch. The panel, when possible, should be mounted in the shade and protected from the weather. The panel should be located at a convenient height (usually about five feet above the ground) and where it will be accessible for maintenance.

F. Tools for Septage Measurement

1 **Scum Measuring Utility Gauge (SMUG)** - Contractor shall provide a minimum of one scum measuring utility gauge per 100 units. The gauge shall consist of a minimum 3/8 inch diameter stainless steel rod with an incremental scale for measuring scum levels. The rod shall be bent at a 90 degree angle at the base to aid in identifying "by feeling" the scum. The gauge shall be Orenco Systems®, Inc. Model SMUG or engineer approved equal.

2 **Sludge Measuring Optical Gauge (SMOG)** - Contractor shall provide a minimum of one sludge measuring optical gauge per 100 units. The body shall consist of 3/4 inch diameter schedule 80 PVC with an incremental scale. The electronics shall consist of a 9 volt high intensity LED lamp encased in epoxy resin, a photosensor, and a 9 volt battery for power. The gauge shall be Orenco Systems®, Inc. Model SMOG or engineer approved equal.

CAUTION: To avoid accidents and limit liability, districts should issue frequent reminders to their constituents that:

1 Open manholes are potentially hazardous, so it is essential that the lids be bolted securely at all times.

2 The atmosphere in interceptor tanks can be dangerous, so maintenance should be performed only by trained personnel.

3 Control/alarm panels should be mounted out of the reach of small children and must be kept locked.

Exhibit 3C

Central Rivers Wastewater Utility Rate Structure for:

Private Gardens Subdivision *5 year build out (100%)*

Based on Serving *61* *residences*

Rate Base: Customer base use 61 residences (equivalent)

$ 12,000 Rate Base [1] $300.00 rate base/customer

100.00% equity [2] and 0.00% debt [2]

EXPENSE ITEM				AMOUNT/MONTH	NOTES
					See Attached Sheets
The following values are for buildout at 90 homes. These are Pro-Forma estimates only.					
ITEM	TYPE OF SERVICE	ESTIMATED COST/HOUR	ESTIMATED AVERAGE HOURS	ESTIMATED MONTHLY COST	Yearly Hours
Billing:	CLERICAL	$25.00	4.6	$115.00	55.2
Paper cost	SUPPLIES	#N/A		$10.00	
Postage	POSTAGE	#N/A		$23.00	
Filling/Miscellaneous					
Office	CLERICAL	$25.00	1.5	$37.50	18
Telephone/Customers	CLERICAL	$25.00	1.5	$37.50	18
Telephone/Other	CLERICAL	$25.00	1.5	$37.50	18
Operator-time	OPERATOR	$40.00	16.2	$648.00	194.4
Lab Services	REGULATORY	#N/A		$40.00	
Treatment Plant:		#N/A			
routine maintenance	OPERATOR	$40.00	0	$40.00	
electricity	SUPPLIES	#N/A		$35.00	
equipment	SUPPLIES	#N/A		$34.00	
chemicals	SUPPLIES	#N/A		$10.00	
water	SUPPLIES	#N/A		$15.00	
Office:					
Telephone	OFFICE EQUIPMENT	#N/A		$15.00	
copies	SUPPLIES	#N/A		$9.00	
Rent	RENT	#N/A		$37.00	
electricity & water	UTILITIES	#N/A		$15.00	
Service Area					
Management	MANAGEMENT	$50.00	1.8	$91.50	21.6
Insurance	INSURANCE	#N/A		$75.00	
Legal Services	LEGAL	$100.00	1.2	$120.00	10.32
Accounting	ACOUNTING	$100.00	1.2	$120.00	10.32
Other Professional					
Service	OTHER SERVICES	$50.00	1.2	$60.00	10.32
Sludge Removal	MAINTENANCE	#N/A		$45.00	
Collection System Repair	MAINTENANCE	#N/A		$154.00	
Emergency Repair	REPAIR	#N/A		$154.00	
Depreciation	DEPRECIATION	$12,000.00	4.00%	$40.00	4% per year
Income Tax	TAXES				
PSC Assessment	REGULATORY				
		Operations Cost:		$2,018.00	
		Operations Cost:	per Customer/Month	$33.08	
		Proforma Rate for 80% build-out		$32.00	

NOTE: costs are not linear (i.e. 80% * cost at 100% participation is not correct) and may be slightly different than detailed itemized costs. See detailed spreadsheet for cost breakdown.

Note:
Due to the anticipated rapid development of this subdivision and the anticipated granting of nearby certificated areas, a proforma rate of $32.00/month/customer is being submitted even though calculated expenses indicate a higher rate. The Company's belief is that a $32.00/month /customer rate for this particular subdivision due to its location and specific features will ultimately prove to be an acceptable rate for the Company and for the citizens of this subdivision in general.

Exhibit 3D

			Billing Costs					
Number of Customers	Owner Equity Paid to the Developer Upon Customer Hook-up to System	Return on Investment	Billing (Clerical Time)	Billing (Paper)	Billing (Postage)	Filling/Misc. Office	Telephone Calls Customers (Clerical Hours)	Telephone Calls Others (Clerical Time)
1	$500.00	$5.00	$50.00	$0.50	$1.05	$50.00	$12.50	$25.00
2	$1,000.00	$10.00	$50.00	$0.50	$1.75	$50.00	$12.50	$25.00
3	$1,500.00	$15.00	$50.00	$0.50	$2.10	$50.00	$12.50	$25.00
4	$2,000.00	$20.00	$50.00	$0.50	$2.45	$50.00	$12.50	$25.00
5	$2,500.00	$25.00	$50.00	$0.63	$2.80	$50.00	$12.50	$25.00
6	$3,000.00	$30.00	$50.00	$0.75	$3.15	$50.00	$12.50	$25.00
7	$3,500.00	$35.00	$50.00	$0.88	$3.50	$50.00	$12.50	$25.00
8	$4,000.00	$40.00	$50.00	$1.00	$3.85	$50.00	$12.50	$25.00
9	$4,500.00	$45.00	$50.00	$1.13	$4.20	$50.00	$12.50	$25.00
10	$5,000.00	$50.00	$50.00	$1.25	$4.55	$50.00	$12.50	$25.00
11	$5,500.00	$55.00	$50.00	$1.38	$4.90	$50.00	$12.50	$25.00
12	$6,000.00	$60.00	$50.00	$1.50	$5.25	$50.00	$12.50	$25.00
13	$6,500.00	$65.00	$50.00	$1.63	$5.60	$50.00	$12.50	$25.00
14	$7,000.00	$70.00	$50.00	$1.75	$5.95	$50.00	$12.50	$25.00
15	$7,500.00	$75.00	$50.00	$1.88	$6.30	$50.00	$12.50	$25.00
16	$8,000.00	$80.00	$50.00	$2.00	$6.68	$50.00	$12.50	$25.00
17	$8,500.00	$85.00	$50.00	$2.13	$7.00	$50.00	$12.50	$25.00
18	$9,000.00	$90.00	$50.00	$2.25	$7.35	$50.00	$12.50	$25.00
19	$9,500.00	$95.00	$50.00	$2.38	$7.70	$50.00	$12.50	$25.00
20	$10,000.00	$100.00	$50.00	$2.50	$8.05	$50.00	$12.50	$25.00
21	$10,500.00	$105.00	$50.00	$2.63	$8.40	$50.00	$12.50	$25.00
22	$11,000.00	$110.00	$50.00	$2.75	$8.75	$50.00	$12.50	$25.00
23	$11,500.00	$115.00	$50.00	$2.88	$9.10	$50.00	$12.50	$25.00
24	$12,000.00	$120.00	$50.00	$3.00	$9.45	$50.00	$12.50	$25.00
25	$12,500.00	$125.00	$50.00	$3.13	$9.80	$50.00	$12.50	$25.00
26	$13,000.00	$130.00	$52.00	$3.25	$10.15	$50.00	$12.50	$25.00
27	$13,500.00	$135.00	$54.00	$3.38	$10.50	$50.00	$12.50	$25.00
28	$14,000.00	$140.00	$56.00	$3.50	$10.85	$50.00	$12.50	$25.00
29	$14,500.00	$145.00	$58.00	$3.63	$11.20	$50.00	$12.50	$25.00
30	$15,000.00	$150.00	$60.00	$3.75	$11.55	$50.00	$12.50	$25.00
31	$15,500.00	$155.00	$62.00	$3.88	$11.90	$50.00	$12.50	$25.00
32	$16,000.00	$160.00	$64.00	$4.00	$12.25	$50.00	$12.50	$25.00
33	$16,500.00	$165.00	$66.00	$4.13	$12.60	$50.00	$12.50	$25.00
34	$17,000.00	$170.00	$68.00	$4.25	$12.95	$50.00	$12.50	$25.00
35	$17,500.00	$175.00	$70.00	$4.38	$13.30	$50.00	$12.50	$25.00
36	$18,000.00	$180.00	$72.00	$4.50	$13.65	$50.00	$12.50	$25.00
37	$18,500.00	$185.00	$74.00	$4.63	$14.00	$50.00	$12.50	$25.00
38	$19,000.00	$190.00	$76.00	$4.75	$14.35	$50.00	$12.50	$25.00
39	$19,500.00	$195.00	$78.00	$4.88	$14.70	$50.00	$12.50	$25.00
40	$20,000.00	$200.00	$80.00	$5.00	$15.05	$50.00	$12.50	$25.00
41	$20,500.00	$205.00	$82.00	$5.13	$15.40	$50.00	$12.50	$25.00
42	$21,000.00	$210.00	$84.00	$5.25	$15.75	$50.00	$12.81	$25.00
43	$21,500.00	$215.00	$86.00	$5.38	$16.10	$50.00	$13.13	$25.00
44	$22,000.00	$220.00	$88.00	$5.50	$16.45	$50.00	$13.44	$25.00
45	$22,500.00	$225.00	$90.00	$5.63	$16.80	$50.00	$13.75	$25.00
46	$23,000.00	$230.00	$92.00	$5.75	$17.15	$50.00	$14.06	$25.00
47	$23,500.00	$235.00	$94.00	$5.88	$17.50	$50.00	$14.38	$25.00
48	$24,000.00	$240.00	$96.00	$6.00	$17.85	$50.00	$14.69	$25.00
49	$24,500.00	$245.00	$98.00	$6.13	$18.20	$50.00	$15.00	$25.00
50	$25,000.00	$250.00	$100.00	$6.25	$18.55	$50.00	$15.31	$25.00
51	$25,500.00	$255.00	$102.00	$6.38	$18.90	$50.00	$15.63	$25.00
52	$26,000.00	$260.00	$104.00	$6.50	$19.25	$51.00	$15.94	$25.00
53	$26,500.00	$265.00	$106.00	$6.63	$19.60	$52.00	$16.25	$25.00
54	$27,000.00	$270.00	$108.00	$6.75	$19.95	$53.00	$16.56	$25.00
55	$27,500.00	$275.00	$110.00	$6.88	$20.30	$54.00	$16.88	$25.00
56	$28,000.00	$280.00	$112.00	$7.00	$20.65	$55.00	$17.19	$25.00
57	$28,500.00	$285.00	$114.00	$7.13	$21.00	$56.00	$17.50	$25.00
58	$29,000.00	$290.00	$116.00	$7.25	$21.35	$57.00	$17.81	$25.00
59	$29,500.00	$295.00	$118.00	$7.38	$21.70	$58.00	$18.13	$25.00
60	$30,000.00	$300.00	$120.00	$7.50	$22.05	$59.00	$18.44	$25.00
61	$30,500.00	$305.00	$122.00	$7.63	$22.40	$60.00	$18.75	$25.00

Treatment Plant Operational Hours, Testing, Equipment & Supplies						Office Equipment & Supplies		
Operator Time (Treatment Plant Operation)	Lab Services	Treatment Plant Routine Maintenance (Hours and Parts)	Treatment Plant Electricity	Treatment Plant Chemicals (Chlorine)	Treatment Plant Water	Office Equipment & Supplies (Telephone)	Office Equipment & Supplies (Copies)	Office Equipment & Supplies (Rent)
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.00	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.00	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.00	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.00	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.00	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.00	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.00	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.12	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.26	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.40	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.54	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.68	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.82	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$1.96	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$2.10	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$2.24	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$2.38	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$2.52	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$2.66	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$2.80	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$2.94	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$3.08	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$3.22	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$3.36	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$3.50	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$3.64	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$3.78	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$3.92	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$4.06	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$4.20	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$4.34	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$4.48	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$4.62	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$4.76	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$4.90	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$5.04	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$5.18	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$5.32	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$5.46	$30.00
$360.00	$40.00	$40.00	$31.00	$10.00	$10.00	$12.00	$5.60	$30.00
$360.00	$40.00	$40.00	$62.00	$10.25	$10.00	$12.00	$5.74	$30.00
$360.00	$40.00	$40.00	$62.00	$10.50	$10.00	$12.00	$5.88	$30.00
$360.00	$40.00	$40.00	$62.00	$10.75	$10.00	$12.00	$6.02	$30.00
$360.00	$40.00	$40.00	$62.00	$11.00	$10.00	$12.00	$6.16	$30.00
$360.00	$40.00	$40.00	$62.00	$11.25	$10.00	$12.00	$6.30	$30.00
$360.00	$40.00	$40.00	$62.00	$11.50	$10.00	$12.00	$6.44	$30.00
$367.19	$40.00	$40.00	$62.00	$11.75	$10.00	$12.00	$6.58	$30.00
$375.00	$40.00	$40.00	$62.00	$12.00	$10.00	$12.00	$6.72	$30.00
$382.81	$40.00	$40.00	$62.00	$12.25	$10.00	$12.00	$6.86	$30.00
$390.63	$40.00	$40.00	$62.00	$12.50	$10.00	$12.00	$7.00	$30.00
$398.44	$40.00	$40.00	$62.00	$12.75	$10.00	$12.00	$7.14	$30.00
$406.25	$40.00	$40.00	$62.00	$13.00	$10.00	$12.00	$7.28	$30.00
$414.06	$40.00	$40.00	$62.00	$13.25	$10.00	$12.00	$7.42	$30.00
$421.88	$40.00	$40.00	$62.00	$13.50	$10.00	$12.00	$7.56	$30.00
$429.69	$40.00	$40.00	$62.00	$13.75	$10.00	$12.00	$7.70	$30.00
$437.50	$40.00	$40.00	$62.00	$14.00	$10.00	$12.00	$7.84	$30.00
$445.31	$40.00	$40.00	$62.00	$14.25	$10.00	$12.00	$7.98	$30.00
$453.13	$40.00	$40.00	$62.00	$14.50	$10.00	$12.00	$8.12	$30.00
$460.94	$40.00	$40.00	$62.00	$14.75	$10.00	$12.00	$8.26	$30.00
$468.75	$40.00	$40.00	$62.00	$15.00	$10.00	$12.00	$8.40	$30.00
$476.56	$40.00	$40.00	$62.00	$15.25	$10.00	$12.00	$8.54	$30.00

	Professional Services and Responsibilities				STEP Unit & Collection System Maintenance		
Office Equipment & Supplies (Electricity & Water)	Insurance (Liability)	Legal Services	Accounting	Other Professional Services	Sludge Removal from Septic Tanks	Routine & Emergency STEP Unit Maintenance	Collection System Routine maintenance and Emergency Repair
$10.00	$50.00	$50.00	$100.00	$25.00	$0.93	$5.83	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$1.85	$11.67	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$2.78	$17.50	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$3.70	$23.33	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$4.63	$29.17	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$5.56	$35.00	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$6.48	$40.93	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$7.41	$46.67	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$8.33	$52.50	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$9.26	$58.33	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$10.19	$64.17	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$11.11	$70.00	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$12.04	$75.83	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$12.96	$81.67	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$13.89	$87.50	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$14.81	$93.33	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$15.74	$99.17	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$16.67	$105.00	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$17.59	$110.83	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$18.52	$116.67	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$19.44	$122.50	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$20.37	$128.33	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$21.30	$134.17	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$22.22	$140.00	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$23.15	$145.83	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$24.07	$151.67	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$25.00	$157.50	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$25.93	$163.33	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$26.78	$169.17	$17.08
$10.00	$50.00	$50.00	$100.00	$25.00	$27.78	$175.00	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$28.70	$180.83	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$29.63	$186.67	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$30.56	$192.50	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$31.48	$198.33	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$32.41	$204.17	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$33.33	$210.00	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$34.26	$215.83	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$35.19	$221.67	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$36.11	$227.50	$34.17
$10.00	$50.00	$50.00	$100.00	$25.00	$37.04	$233.33	$34.17
$10.00	$50.00	$51.25	$100.00	$25.63	$37.96	$239.17	$34.17
$10.00	$50.00	$52.50	$100.00	$26.25	$38.89	$245.00	$34.17
$10.00	$50.00	$53.75	$100.00	$26.88	$39.81	$250.83	$34.17
$10.00	$50.00	$55.00	$100.00	$27.50	$40.74	$256.67	$34.17
$10.00	$50.00	$56.25	$100.00	$28.13	$41.67	$262.50	$34.17
$10.00	$50.00	$57.50	$100.00	$28.75	$42.59	$268.33	$34.17
$10.00	$50.00	$58.75	$100.00	$29.38	$43.52	$274.17	$34.17
$10.00	$50.00	$60.00	$100.00	$30.00	$44.44	$280.00	$34.17
$10.00	$50.00	$61.25	$100.00	$30.63	$45.37	$285.83	$34.17
$10.00	$50.00	$62.50	$100.00	$31.25	$46.30	$291.67	$34.17
$10.00	$50.00	$63.75	$100.00	$31.88	$47.22	$297.50	$34.17
$10.00	$50.00	$65.00	$100.00	$32.50	$48.15	$303.33	$34.17
$10.00	$50.00	$66.25	$100.00	$33.13	$49.07	$309.17	$34.17
$10.00	$50.00	$67.50	$100.00	$33.75	$50.00	$315.00	$34.17
$10.00	$50.00	$68.75	$100.00	$34.38	$50.93	$320.83	$34.17
$10.00	$50.00	$70.00	$100.00	$35.00	$51.85	$326.67	$34.17
$10.00	$50.00	$71.25	$100.00	$35.63	$52.78	$332.50	$34.17
$10.00	$50.00	$72.50	$100.00	$36.25	$53.70	$338.33	$34.17
$10.00	$50.00	$73.75	$100.00	$36.88	$54.63	$344.17	$34.17
$10.00	$50.00	$75.00	$100.00	$37.50	$55.56	$350.00	$51.25
$10.00	$50.00	$76.25	$100.00	$38.13	$56.48	$355.83	$51.25

Management	Depreciation	Income Tax	Assessment				
General Services Area Management	Treatment Plant Depreciation (Replacement of Plant Based on 25 Year Life	Income Tax	PSC Assessment @ 8.44% of Total Expenditures	Cost of Operation of Wastewater Collection and Treatment System/Month	Cost per Month per EDU	Number of Customers	Rate/Month/ Customer Estimate
$150.00	$133.33	$0.08	$8.55	$1,223.85	$1,223.85	1	$32.00
$150.00	$133.33	$0.15	$8.60	$1,231.43	$615.72	2	$32.00
$150.00	$133.33	$0.23	$8.65	$1,238.67	$412.89	3	$32.00
$150.00	$133.33	$0.30	$8.70	$1,245.90	$311.48	4	$32.00
$150.00	$133.33	$0.38	$8.75	$1,253.26	$250.65	5	$32.00
$150.00	$133.33	$0.45	$8.80	$1,260.62	$210.10	6	$32.00
$150.00	$133.33	$0.53	$8.85	$1,267.98	$181.14	7	$32.00
$150.00	$133.33	$0.60	$8.90	$1,275.46	$159.43	8	$32.00
$150.00	$133.33	$0.68	$8.96	$1,282.94	$142.55	9	$32.00
$150.00	$133.33	$0.75	$9.01	$1,290.70	$129.05	10	$32.00
$150.00	$133.33	$0.83	$9.06	$1,297.97	$118.00	11	$32.00
$150.00	$133.33	$0.90	$9.11	$1,305.47	$108.79	12	$32.00
$150.00	$133.33	$0.98	$9.16	$1,312.97	$101.00	13	$32.00
$150.00	$133.33	$1.05	$9.22	$1,320.47	$94.32	14	$32.00
$150.00	$133.33	$1.13	$9.27	$1,327.97	$88.53	15	$32.00
$150.00	$133.33	$1.20	$9.32	$1,335.47	$83.47	16	$32.00
$150.00	$133.33	$1.28	$9.37	$1,342.97	$79.00	17	$32.00
$150.00	$133.33	$1.35	$9.42	$1,350.48	$75.03	18	$32.00
$150.00	$133.33	$1.43	$9.47	$1,357.98	$71.47	19	$32.00
$150.00	$133.33	$1.50	$9.53	$1,365.48	$68.27	20	$32.00
$150.00	$133.33	$1.58	$9.58	$1,372.98	$65.38	21	$32.00
$150.00	$133.33	$1.65	$9.63	$1,380.48	$62.75	22	$32.00
$150.00	$133.33	$1.73	$9.68	$1,387.98	$60.35	23	$32.00
$150.00	$133.33	$1.80	$9.73	$1,395.48	$58.15	24	$32.00
$150.00	$133.33	$1.88	$9.79	$1,402.95	$56.15	25	$32.00
$150.00	$133.33	$1.95	$9.85	$1,412.50	$54.33	26	$32.00
$150.00	$133.33	$2.03	$9.92	$1,422.01	$52.67	27	$32.00
$150.00	$133.33	$2.10	$9.98	$1,431.53	$51.13	28	$32.00
$150.00	$133.33	$2.18	$10.05	$1,441.04	$49.69	29	$32.00
$150.00	$133.33	$2.25	$10.24	$1,467.76	$48.93	30	$32.00
$150.00	$133.33	$2.33	$10.30	$1,477.28	$47.65	31	$32.00
$150.00	$133.33	$2.40	$10.37	$1,483.79	$46.46	32	$32.00
$150.00	$133.33	$2.48	$10.43	$1,496.31	$45.34	33	$32.00
$150.00	$133.33	$2.55	$10.50	$1,505.82	$44.29	34	$32.00
$150.00	$133.33	$2.63	$10.57	$1,515.34	$43.30	35	$32.00
$150.00	$133.33	$2.70	$10.63	$1,524.85	$42.36	36	$32.00
$150.00	$133.33	$2.78	$10.70	$1,534.37	$41.47	37	$32.00
$150.00	$133.33	$2.85	$10.83	$1,543.88	$40.63	38	$32.00
$150.00	$133.33	$2.93	$10.89	$1,553.40	$39.83	39	$32.00
$150.00	$133.33	$3.00	$11.20	$1,562.92	$39.07	40	$32.00
$150.00	$133.33	$3.08	$11.28	$1,606.10	$39.17	41	$32.00
$150.00	$133.33	$3.15	$11.36	$1,618.07	$38.53	42	$32.00
$150.00	$133.33	$3.23	$11.45	$1,630.04	$37.91	43	$32.00
$150.00	$133.33	$3.30	$11.53	$1,642.01	$37.32	44	$32.00
$150.00	$133.33	$3.38	$11.61	$1,653.98	$36.76	45	$32.00
$150.00	$133.33	$3.45	$11.70	$1,665.95	$36.22	46	$32.00
$150.00	$133.33	$3.53	$11.80	$1,685.16	$35.85	47	$32.00
$150.00	$133.33	$3.60	$12.02	$1,705.00	$35.52	48	$32.00
$150.00	$133.33	$3.68	$12.16	$1,724.83	$35.20	49	$32.00
$150.00	$133.33	$3.75	$12.30	$1,744.67	$34.89	50	$32.00
$150.00	$133.33	$3.83	$12.45	$1,765.52	$34.62	51	$32.00
$150.00	$133.33	$3.90	$12.59	$1,786.36	$34.35	52	$32.00
$150.00	$133.33	$3.98	$12.74	$1,807.20	$34.10	53	$32.00
$150.00	$133.33	$4.05	$12.88	$1,828.05	$33.85	54	$32.00
$150.00	$133.33	$4.13	$13.03	$1,848.89	$33.62	55	$32.00
$150.00	$133.33	$4.20	$13.17	$1,869.74	$33.39	56	$32.00
$150.00	$133.33	$4.28	$13.32	$1,890.58	$33.17	57	$32.00
$150.00	$133.33	$4.35	$13.46	$1,911.43	$32.96	58	$32.00
$150.00	$133.33	$4.43	$13.73	$1,932.27	$32.84	59	$32.00
$150.00	$133.33	$4.50	$13.87	$1,970.32	$32.75	60	$32.00
$150.00	$133.33	$4.58	$14.02	$1,991.16	$32.64	61	$32.00