STODDARD COUNTY SEWER CO., INC. WASTEWATER SYSTEM

PRELIMINARY ENGINEERING REPORT

Prepared For:

MISSOURI PUBLIC SERVICE COMMISSION
JEFFERSON CITY, MISSOURI
June 30, 2008

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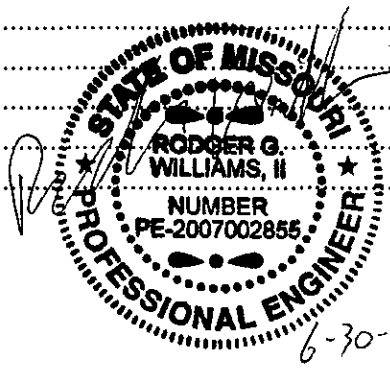

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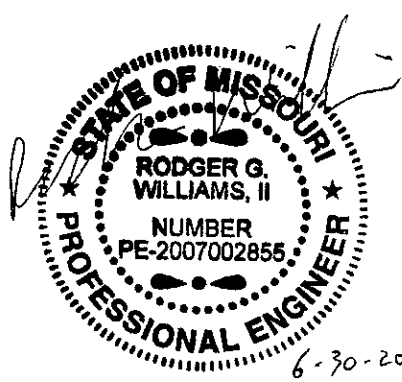

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1. BACKGROUND INFORMATION

1.1. Location

The wastewater treatment plant (WWTP) that is the subject of this report is located just southwest of the City of Dexter in the central portion of Stoddard County, approximately 36 miles east of Poplar Bluff as shown on Figure 1, Vicinity Map, located at the end of this report. U.S. Highway 60 and State Highways 25 and 114 are the major transportation routes for the area. The surrounding community has a significant presence in farming production and has several service and manufacturing operations. Many residents work in agriculture related businesses or in the nearby cities of Poplar Bluff and Sikeston.

1.2. Climate

Stoddard County's climate is typical of the southeast Missouri Region, long hot and humid summers and relatively mild winters with a few hard freezes are very common. Average daily temperatures range from 94 degrees (maximum) to 19 degrees (minimum). For the region, the average yearly precipitation is 46.2 inches.

1.3. Topography and Drainage

Terrain near the WWTP can be characterized as hilly as can be seen on Figure 2 labeled Topographic Map, located at the end of this report. Elevations near the WWTP range from 395 feet above mean sea level (MSL) near the Cane Creek tributary to approximately 550 feet above MSL on the hills east of the plant. Runoff water runs from the high ground in the area east of the WWTP toward the west where the creek is located.

There are quite a few drainage channels in and around the area that ultimately spill into Cane Creek which runs through the area in a northwest to southeast orientation. In addition, as is illustrated in the attached topographic map, there are many ponds in the area which receive water during storm events from the hilly terrain which surrounds them.

1.4. Soils and Groundwater

The majority of the soils in and around the WWTP area, according to the United States Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS), are classified as Falaya Silt Loams, which have a moderately high capacity to transmit water. The capacity of the most limiting soil layer to transmit water has a range from 0.20 to 0.57 inches per hour. The water table in this area is relatively shallow, varying from a depth of about 12 to 24 inches.

1.5. Population and Economic Factors

To provide a sense of the population and economic factors in the surrounding area, this report will focus on the population in the City of Dexter. The estimated present population of Dexter, according to current trends, is approximately 7,805. The population of the City has experienced decreases in the past while the county in which it is situated has seen a steady growth over time. An explanation of the decrease in population in 1990's is due to the closure of several manufacturing companies in the area during that period. The historical and projected populations of the City of Dexter and Stoddard County are illustrated in the following table:

TABLE 1.5 – PROJECTED POPULATION

	City of Dexter		Stoddard County	
Year	Population	Percent Change	Population	Percent Change
1990	7,842	NA	28,895	NA
2000	7,356	-6.2%	29,705	+2.8%
2006*	7,652	+4.0%	29,754	+0.2%

* Estimated Population

Source: U.S. Department of Commerce, Bureau of Census.

According to the 2000 U.S. Census, The median income for a household in the City was $23,116, and the median income for a family was $32,175. Males had a median income of $26,724 versus $17,409 for females. The per capita income for the City was $15,034. Approximately 14.8% of families and 18.3% of individuals in the population were below the poverty line.

1.6. History of the Existing Treatment Plant

The Stoddard County Sewer Company (SCSC) WWTP that is the subject of this report has a very long history of being unable to comply with its mandated requirements. The SCSC WWTP was originally owned and operated by Mr. Carl Bien until he passed away. A review of the WWTP records confirmed that on December 22, 1978 a Missouri Department of Natural Resources (MDNR) construction permit was issued. This permit included the installation and construction of 5,300 feet of gravity sewer line, 15 manholes, 12,000 feet of 2 inch pressure sewer line with 33 cleanouts, a duplex pump station with 1,000 feet of 4 inch force main, 20 grinder pump units, and one interim 25,000 gallon per day (gpd) extended aeration WWTP. The system was not built according to this permit. An example of this fact is the size of the existing force main which is 3 inches in diameter rather than 4 inches.

According to MDNR records, on January 2, 1985, MDNR received a preliminary engineering report for the Grant II apartment complex. On April 28, 1985, MDNR indicated to Mr. Bien that the WWTP did have the capacity to take on wastewater from the Grant II, currently named Westbridge Apartments, a 40 unit apartment complex. In June of that year the engineering report was received which lead to a construction permit being issued for the Grant II extension in September. Much of the construction work was done by Mr. Bien. An inspection conducted by the Public Service Commission on January 27, 2005 verified that there are actually 57 units at the Grant II apartment complex.

Ever since January of 1987, the WWTP has experienced problems with the quality of its effluent. MDNR inspectors have noted that the aeration units at times were inoperable, causing dangerous septic conditions in the stream. Additionally, the requirement of discharge monitoring reports has not been met. This was a violation of their National Pollution Discharge Elimination System (NPDES) permit number MO-0096881 which expired November 20, 1985. In October of 1987, a stream survey was conducted. According to MDNR, extensive algae mats on the stream substrate indicated that the WWTP effluent was a likely nutrient source which is harmful for aquatic life in the stream.

In June of 1988, MDNR denied the Missouri State Operation Permit renewal request and issued an abatement order. Mr. Bien, in accordance with MDNR requirements, obtained the services of a certified operator and an engineer to re-evaluate the WWTP and design necessary upgrades. Mr. Bien's intentions were to expand the 25,000 gpd WWTP. Mr. Bien applied for a construction permit to expand the WWTP to 75,000 gpd by August of 1990. MDNR completed the engineering review, but the construction permit was never issued. When the Missouri State Operating Permit was renewed, MDNR mistakenly modified the permit by increasing the design capacity of the old WWTP to 75,000 gpd, the design flow of the proposed WWTP. The plant upgrade was never constructed.

Violations related to effluent Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) continued to be a problem over the years. Chronic poor performance and non-submittal of monitoring reports resulted in SCSC being placed on the annual noncompliance list in 1997. In June of 1998, septic conditions in the plant were again documented by MDNR. An inspection in late July of 1998 revealed that the plant was again without a certified operator, was poorly operated, and was over its design capabilities. In addition, monitoring reports were not being submitted and operational control testing was not being performed.

Compliance issues continued at the MDNR regional office level and eventually caused SCSC to be referred to MDNR's enforcement section in May of 1999. MDNR enforcement section personnel found Mr. Bien uncooperative concerning compliance issues and by October of 1999, the enforcement section referred SCSC to the Attorney General's Office (AGO) for formal legal action to compel compliance.

On May 17, 2000, MDNR received documentation of Mr. Bien's death. Due to continued poor operation and water quality issues, the AGO decided to proceed with litigation. Since Mr. Bien died without a will or a personal representative named in the corporation, SCSC and other holdings were given to the Stoddard County Public Administrator. It was around this time that Mr. Roger Owens, the WWTP's current licensed operator, came forward to assist in the system's operation.

Mr. Owens expressed an interest in purchasing the wastewater treatment system if a sewer rate increase approval could be obtained from the Missouri Public Service Commission (MPSC). According to Mr. Owens, the SCSC cannot sustain itself without the rate increase. Further complicating matters is the fact that a Sikeston, Missouri businessman, Mr. Ray Clinton holds a note in excess of $100,000 against the wastewater treatment system. When the probate judge of Stoddard County made the final settlement and order of distribution, 100% of the shares of the SCSC, Inc. were distributed to Mrs. Carl (Ruth) Bien, wife of the late Mr. Bien.

The MDNR Southeast Regional Office (SERO), on May 27, 2004, received a complaint of sewage bypassing from a lift station near Westbridge Apartments, formerly known as Grant II Apartments, and flowing into a nearby-unnamed tributary. The single pump that served the station failed and a back-up pump was not available. The lack of a proper continuing authority further complicated the problem. SERO requested the aid of the AGO to help resolve the situation. SERO confirmed that the bypass was eventually stopped on July 6, 2004. But the repairs that were made are only temporary. During the time it took to stop the bypass, untreated wastewater flowed from a manhole and into the unnamed tributary at an approximate rate of 10,000 gallons per day. A loan of approximately $17,000 was made to the SCSC by The Maco Company, a property management firm, to take care of pump problems over the last two to three years. The repairs helped by replacing a pump at the lift station near the Westbridge apartments to stop a major sewage bypass which had been occuring.

2. DESCRIPTION OF EXISTING TREATMENT FACILITY

A schematic of the existing SCSC WWTP, labeled Figure 3 can be found at the end of this report. It shows the wastewater's flow path as it travels through the WWTP, which in its current configuration is known as an extended air type of system. The SCSC's Missouri State Operating Permit for the design flow of 25,000 gpd, which was mistakenly issued March 3, 1995 with a design flow 75,000 gpd, expired on June 15, 1999. The fact is that the current system only has a design capacity of 25,000 gpd. The following paragraphs describe the general condition of the existing treatment facility.

2.1. Aeration Basins and Blower System

Wastewater arrives at the treatment plant by means of a gravity sewer line and is put through a pump station that delivers it into the plant's primary aeration basin at an elevation of 407.3 feet above MSL. An aeration basin is a secondary (biological) stage of wastewater treatment. The only primary treatment the influent wastewater receives is from the submerged bar screen through which it passes when first entering the treatment plant. The bar screen is composed of ½ inch bars spaced 1 inch apart center to center. The treatment plant comes equipped with two aeration basins, a primary and a secondary. The concrete basins have 1 foot thick walls. The primary aeration basin is 10 feet wide, 25 feet long, and 10 feet deep while the secondary aeration basin is 12 feet wide, 10 feet long, and 10 feet deep. The treatment plant has two 4" diameter aeration blowers, but only one is powered by a replacement motor that is being maintained by the plant's current operator. The blower system and controls are housed inside a small building only a few feet from the aeration basins. According to plant records, air filter maintenance occurs every 30 – 60 days. The inside of the building is in disarray and in need of repairs to the walls damaged by recent heavy rain and high wind events. Only one of two existing blowers is currently in use and there is no back up blower in case it fails. A major concern for the blower system is the fact that there is air loss occurring. Air that should be getting added to the aeration basin is being unused and released adjacent to the blower building. According to the plant operator the air release is being performed to regulate aeration in the aeration basin. There is a third inlet that would allow for the installation of an additional blower, but it is not in use. The treatment plant's aeration is delivered from the 4 inch blower pipe into a set of five 1 inch ductile iron pipes that are submerged into the bottom of the primary aeration basin. After being aerated in the primary aeration basin for an amount of time determined by the flow of the wastewater, the wastewater is allowed to transfer to the second aeration basin by means of a 4 inch PVC pipe. Inside the second aeration basin, wastewater is allowed additional contact time and is further aerated by two 1 inch ductile iron pipes which further reduce BOD, an MDNR effluent parameter. Activated sludge is allowed to flow from the bottom of the system's clarifier's into the aeration basins which improves the efficiency of BOD reduction. The second aeration basin features a second inlet into the system with the same submerged bar screen as in the first basin; however this second inlet is not used. A series of pipes allow the wastewater in the second aeration basin to move to the next process in the treatment process. Around the aeration basins there is a wooden fence to assist in preventing accidents. As can be seen in the photos provided in Appendix B at the end of this report the piping in this system is extremely old and worn. The walkway above the basins is severely rusted as is the majority of the piping in and around the system. The walkway could be scraped and painted and the aeration piping system would need to be replaced if the system is renovated.

2.2. Clarifiers

The next stage in the treatment process is accomplished with two rectangular clarifiers. Each clarifier is 5 ½ feet wide, 10 feet long, and have a depth of 10 feet. The clarifiers are used in-series in the treatment process so that the detention time of each clarifier, which is based on the wastewater flow, is added to its adjacent clarifier for maximum TSS and BOD reduction. The piping system inside each clarifier allows for the movement of sludge that settles at their bases. From the first clarifier sludge moves into either the

secondary aeration basin or the waste sludge basin depending on the sludge level in the secondary aeration basin. The second clarifier allows sludge to not only travel to the secondary aeration basin but also to the primary aeration basin. Each clarifier is also equipped with a skimming pipe that allows aerated wastewater to be delivered to each clarifier directly from the primary aeration basin. Weirs in both clarifiers skim off the clarified liquid as it moves toward the effluent pipe which sits at an elevation of 406.0 feet above MSL. The photos in Appendix B show the rusting of the valve controls and metallic weirs that allow treated water to skim off the surface of the clarifiers. The clarifiers are in deplorable condition and need to be replaced.

2.3. Sludge Holding Basin

To accommodate excess sludge build up in the WWTP the plant also employs the use of a waste sludge basin. The rectangular sludge holding tank has an inside length of 12 feet, width of 6 feet, and a depth of 10 feet. With these dimensions the sludge tank has a storage capacity of approximately 5,373 gallons. The sludge holding tank does not include a decanting system and so dewatering of the sludge is impossible. The sludge holding tank has no outlet. According to the WWTP operator, the sludge in the sludge holding tank is periodically pumped out by a contractor that most likely disposes of the sludge at a landfill. The WWTP has a secondary sludge container at its disposal in case sludge buildup in the holding basin is too great; it is a cylindrical container that can be towed. According to the last issued permit, the system produces 13.5 dry tons of sludge per year. The sludge holding basin is also in very poor condition; the piping in and out of the basin is severely worn and needs replacement.

2.4. Outfall Stream

The outfall stream for the SCSC WWTP is an unnamed tributary to Cane Creek. The treated effluent leaves the plant through Outfall #001, a 10 inch polyvinyl chloride (PVC) pipe. The exact location of the outfall is the SE ¼, NW ¼, Section 32, Township 25 North, and Range 10 East in Stoddard County. Effluent travels from Cane Creek to Dudley Main Ditch and then to the Saint Francis River. The description given to the receiving stream and basin is as follows: Unnamed Tributary to Cane Creek, Otter Slough (St. Francis River Basin) (08020203-16-02) (U). The effluent leaving the WWTP is extremely cloudy and there appears to be sludge build up near the effluent pipe. The effluent pipe is missing a flap valve and there is some trash build up near the mouth of the pipe.

3. DESCRIPTION OF COLLECTION SYSTEM AND LIFT STATIONS

A schematic of the existing SCSC collection system, which shows the location of the system's two lift stations, is labeled Figure 4 and can be found at the end of this report. It shows the wastewater's flow path as it travels through the system's PVC force main. The following paragraphs describe the general condition of the existing collection system and lift stations.

3.1. Collection System

According to the system's records, the SCSC collection system consists of approximately 5,300 feet of gravity sewer line, 15 manholes, 12,000 feet of 2 inch pressure sewer line with 33 cleanouts, a duplex pump station with 1,000 feet of 3 inch PVC force main, and 20 grinder pump units. The system also includes 8 inch gravity sewer lines that lead to the treatment plant. The majority of the system was installed around 1980. MDNR inspections indicate that the general condition of the collection system is good. The fact that PVC piping was used instead of vitrified clay pipe (VCP) means that the collection system may very well still have many years of serviceability ahead of it. PVC has a very long service life. Manholes and manhole access locations appear to be in good general condition, although some of the manholes have been found to be in areas that flood quite easily during rainfall. In the past, MDNR inspectors have suggested that manholes in area that flood be sealed shut or bolted down to prevent wash outs during rain events. Also of great concern is the fact that many of the clean outs throughout the collection system that have been damaged by juveniles in the area. As stated by the treatment system's operator there isn't any money to make the necessary clean out repairs. The plant's current operator has relayed a few concerns regarding the dumping of waste from surrounding septic systems into the collection system. A review of testing results from the independent lab that provides SCSC's testing data supports the idea that some outside source could possibly be forcing an extremely high peak BOD loading on the system. According to the plant operator, the local police have made it a priority to keep a watch out for any activity that would be a contributing factor of this concern. In the past there were also concerns over whether or not the high BOD and TSS readings obtained in the WWTP were the results of contamination from nearby methamphetamine laboratories dumping waste products into the collection system. A thorough investigation was completed around the year 2000 and no evidence was found to support the idea that a "meth lab" was responsible for the effluent conditions at the WWTP. Factors related to the collection system aren't responsible for the high BOD and TSS levels experienced in the WWTP. The high levels in the plant are due to the fact that the plant size is too small for the number of people it currently serves.

3.2. Lift Stations

The system includes a duplex 80 gallons per minute (gpm) pumping station operating at 104 feet of total dynamic head (TDH) at the southern most location of the system near the intersection of two-mile road and Henry Street. The lift station at the Westbridge Apartments, formerly known as Grant II Apartments, has a history of failing. The lift station was designed to accommodate two pumps so that if one were to fail, the other would operate until repairs could be made on the primary pump. The lift station at the Westbridge Apartments has recently had repairs made as part of their efforts to correct the bypass problem that produced many local complaints. Both lift stations for this system have 4 foot diameter manholes. The pumps are 2 – 5 horsepower Hydromatic pumps. The wet well capacity of each lift station is approximately 1,366 gallons. The lift station controls are equipped with their own warning devices and cut-off switches in the event that a failure should occur. At the time of this report SCSC has no spare pumps for the two lift stations in the system. It is extremely important that the southernmost wet well have one spare pump on standby in case it should break down. The lift station at Westbridge Apartments should have two working pumps but only has one at this time. A new second pump should be installed and one more should be placed on standby should a failure occur at the lift station. The overall condition of the

lift stations is good. Despite the fact that the overall condition of each lift station is good, they aren't without their problems. The southernmost lift station appears to have a leak where wastewater is somehow leaking into a nearby grassy area. The lift station is extremely close to a nearby agricultural operation where at the time of our inspection the crops had been freshly planted. The puddle of wastewater that seemed to have leaked from the lift station was approximately ten to fifteen feet away from the crop area; so should a large scale break in the line occur there could be a large mess for the land owner to have to worry about. This could lead to the owner of the wastewater collection system having to compensate the land owner for any damages and expenses related to a cleanup. The actual danger of such an incident is relatively low since the surrounding terrain and topography is accommodating for downhill flow in a north to south orientation which would lead any leakage away from the crops and allow it to enter a Cane Creek tributary. As part of any remediation efforts for the collection system and lift stations, which again are generally in good condition, there should be a thorough inspection of both lift stations to ensure there is no danger of leaks or breaks in their piping systems.

4. DESCRIPTION OF PROBLEM

4.1. BOD and TSS Reduction

As previously stated, the SCSC WWTP has been out of compliance for a very long time. The parameters that the plant has failed to meet on a consistent basis are those related to the levels of BOD and TSS in the plant's effluent which is discharged into Cane Creek. Appendix D – Measurement and Violations Reports attached at the end of this report outlines the effluent BOD history for the WWTP for the past three years. According to the testing documentation, during the 33 month period between May of 2005 and January of 2008, the WWTP was above maximum allowable BOD and TSS levels for 22 months, 67% of the time. According to the treatment plant's last operating permit issued March 3, 1995 and expired June 15, 1999, the maximum permitted BOD levels were 45 mg/L as a weekly average and 30 mg/L as a monthly average. There was no daily maximum on the permit but the effluent BOD reading cannot be very much higher than the weekly average. The observed maximum level during the 2005 to 2008 time period for BOD was 203 mg/L and 272 mg/L for TSS. This probably indicates that the system is drastically overloaded and undersized. In addition, as discussed in the history of the WWTP section at the beginning of this report, SCSC has been in non-compliance with its Missouri State Operating Permit since before May 2005, violating its permit as early as 1987. The visible results of the lack of BOD and TSS reduction include but aren't limited to sludge accumulation in the creek, excessive algae growth near the treatment plant's effluent pipe and in the creek bed, and severe discoloration of the creek water. The BOD that is being released into Cane Creek is harmful to not only the immediate discharge area but also the area downstream of the WWTP. Since the harmful organic material that is meant to be neutralized through the system's aeration process is being released into Cane Creek, dissolved oxygen in the creek is being depleted. The reduction in dissolved oxygen removal creates a very harmful situation for any aquatic life that calls Cane Creek their home. Without the normal levels of oxygen in the creek there undoubtedly has been a severe stunting in the growth of plant and aquatic life in the creek. Not only do the microorganisms consume oxygen but they also cause life threatening diseases in humans. Unsuspecting children that decide to play near Cane Creek downstream of the WWTP are in danger due to the existing treatment system. It's imperative that SCSC take action to comply with MDNR permitting requirements.

4.2. Flow Capacity

As evidenced in the correspondence among the several parties that have an interest in the SCSC WWTP, there has been a bit of confusion about what the actual flow capacity is for the plant. As previously stated, the design flow capacity of the plant is 25,000 gpd and has been since 1978. The plant remains very much in its original configuration. There is no evidence of any upgrades and adjustments that would have raised the maximum flow capacity of the plant. This can be said confidently since during our inspections of the WWTP there were no additional apparatuses in the plant that seemed to be newly installed. As previously mentioned in the history of WWTP section of this report, in 1985, the treatment plant was deemed by MDNR to be capable of treating wastewater from a 40-unit apartment complex. This decision was due to a careful review of the effluent BOD and TSS readings from the plant which indicated at the time that the treatment plant was easily meeting its prescribed effluent limitations and would have the capacity to take on more BOD reduction responsibility. The construction of the apartment complex produced a total of 57 apartments instead of 40. According to SCSC's last issued permit their design population equivalent was equal to 750 people. According to the Rules of Department of Natural Resources Division 20 – Clean Water Commission Chapter 8 – Design Guides CSR 20-8.020 Design of Small Sewage Works the most conservative estimate for the wastewater flow production per person connected to a WWTP is 100 gallons per day. This translates to the fact that for the 750 people considered to be connected to the treatment plant the total design flow would be 750 times 100 which is equal to 75,000 gallons per day. According to our research and calculations, there are 109 residential homes and 67 apartments being served by the

existing wastewater collection system and extended aeration treatment plant. When accounting for the design guide value of 3.7 people per residence or apartment the current population served is closer to 652 people. Using the previously mentioned calculation method for determining design flow, the WWTP must be able to accommodate the existing flow of 65,200 gallons per day in wastewater influent. As was mentioned in the history of the plant section of this report, a set of engineering design plans were created to upgrade the WWTP to accommodate 75,000 gallons per day. These plans were never used for construction. The current treatment system is only capable of adequately removing BOD from a peak flow of 25,000 gallons per day but instead is consistently faced with flows reaching a maximum of 65,200 gallons per day. The estimated BOD loading from the existing population, utilizing the MDNR design guide value of 0.17 pounds of BOD per person is 110.84 pounds of BOD per day. The original BOD loading value, based on the original design population of 250, was 42.50 pounds per day. This problem requires immediate attention.

4.3. Infiltration and Inflow

Another problem currently faced by the SCSC WWTP is infiltration and inflow which is also referred to as "I & I". Unfortunately there are no flow meters installed at the treatment plant, so there is no data supporting the argument of this problem. Again, given the estimated population connected to the WWTP of 652, the design wastewater flow should be in the neighborhood of 65,200 gpd. After having worked on several I & I reports for the surrounding area we've seen systems as old as this one with peak flows that are over 12 times higher than the design flow due to inflow. This would make the goal of BOD reduction virtually impossible for the system to accomplish. Infiltration is groundwater that enters the system through defects in the collection system such as bad pipe joints, cracked or otherwise damaged pipes, and leaking manholes. Inflow is rainwater that enters the system through illegal connections such as roof drains, area drains, and abandoned lots. Infiltration typically lasts for prolonged periods when groundwater levels are high. Inflow is usually instantaneous, occurring at the same time as major rain events. The circumstances surrounding the WWTP, i.e. topography, system age, and poor maintenance, suggests that the collection system has some infiltration problems but the majority of the extraneous flow would be from inflow. This is a good situation for the collection system in that inflow is much easier to locate and correct than infiltration. SCSC should begin a program to locate and correct sources of inflow. One of the best methods is smoke testing where non toxic smoke is forced into the sewer lines between adjacent manholes. The area between the manholes is observed during the test. Smoke emanating from gutters, vacant lots, or other locations are marked and recorded. After accumulating data on the entire system, SCSC will need to follow up by making the necessary repairs. Homeowners will need to be forced to disconnect their gutters from the system or to plug drains in their yards. Open pipes on vacant lots will need to be plugged. SCSC may be able to get assistance with a smoke testing program by contacting Mike Hollis with the Missouri Rural Water Program at (573) 996-8874.

5. PROPOSED ALTERNATIVES

This section describes the available alternatives to address the problems identified in the previous section of this report. To allow the comparison of different alternatives in equivalent terms, a present worth analysis has been performed for each alternative. A summary of these calculations can be found in Table 6.1 under Section 6 – Recommended Alternative. Four alternatives were considered to alleviate the SCSC WWTP problems. These alternatives are: 1. Do Nothing, 2. Update the Existing System 3. Install a New System and 4. Transfer Westbridge Apartments to the District System. Each alternative is explained in the following paragraphs:

5.1. Alternative No. 1 – Do Nothing

A first alternative would be for SCSC to take no action whatsoever to correct the problems associated with its BOD and TSS effluent problems. The only advantage to this alternative is that SCSC will pay no costs for a construction project to correct the BOD and TSS effluent problems. This is not a practical option since there will be many negative consequences for inaction. The negative consequences include not only the possibility of thousands of dollars in fines from the State but also the possibility that lawsuits may arise from the health hazards posed by the effluent allowed to discharge into the creek. Without some kind of remediation of the problem many people may be forced from their homes due to the fact that there would be no sewer system to serve them. This is especially true for those living in the Westbridge Apartments since they don't have the opportunity to construct their own personal wastewater treatment system as do the surrounding home and land owners.

5.2. Alternative No. 2 – Update the Existing System

A second alternative for dealing with this problem is for SCSC to update the existing WWTP as was proposed around the year 1990. Most of the existing components of the system could still be used including the air blower system and controls. Flow meters will be added to the system so that motoring will be possible. A flow meter on the influent side as well as on the effluent side will be installed. The basins would be cleaned out and the aeration piping system would be thoroughly inspected to ensure they are in proper working order. The update would include replacing any of the piping in the treatment plant that is out of date or not working properly due to poor maintenance. The existing clarifiers in the system would be converted to aeration basins to provide additional BOD reduction capacity in the system. In essence the existing concrete basin structure would be used only for aeration. A second motor for the unused blower and a third aeration blower system would be added to the blower house. All blower piping connections would be repaired for leaking and failed connections. The blower motors will be repaired if needed and a spare motor for each blower will be kept readily available in the event a motor were to break down. To compensate for the fact that the clarifiers are converted to aeration basins, two new separate circular concrete clarifiers will be constructed adjacent to the existing basin. The two clarifiers will be identical to each other in dimension and will work in series or parallel with one another. Each circular clarifier will have an inside diameter of 12 feet and a total depth of 12 feet. The design depth of the clarifiers will be 10 feet with a freeboard of 2 feet. Each will have a BOD removal efficiency of 33% while their TSS removal efficiency will be even higher. To ensure proper disinfection, an ultraviolet lamp basin will be added at the end of the system. The ultraviolet system is considered a relatively inexpensive and safe option when compared to chlorination / dechlorination systems. With the one-two punch of a substantially larger aeration tank volume in combination with two new 10 feet deep clarifiers and an ultraviolet disinfection system, the BOD and TSS effluent for the design population of 652 will be far less than 10 mg/L per week if operated properly. This update will also include an update to the sludge holding tank so that dewatering is possible. Decanting pipes will be added so that the solids in the sludge tank will be able to dry more efficiently and then be disposed of using the existing methods.

The following is a cost estimate for the construction of the needed update to the existing WWTP. These numbers are based upon bids received for similar systems in the state of Missouri. The estimate shown on Table 5.2.2 includes operation and maintenance costs as well as a present worth value for the alternative.

TABLE 5.2.1 – ALTERNATIVE NO. 2 COST ESTIMATE

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Building and Lab Repairs	1	LS	$10,000.00	$10,000.00
2	Clean and Repair Aeration Basins	1	LS	$15,000.00	$15,000.00
3	Blower System Repairs	1	LS	$10,000.00	$10,000.00
4	Flow Meters	2	LS	$3,000.00	$6,000.00
5	New Air Blower	1	LS	$10,000.00	$10,000.00
6	Air Blower Motors	4	LS	$5,000.00	$20,000.00
7	Convert Clarifier to Aerated Basin	2	LS	$20,000.00	$40,000.00
8	Ultraviolet Disinfection Basin	1	LS	$10,000.00	$10,000.00
9	Ultraviolet Disinfection System	1	LS	$15,000.00	$15,000.00
10	Clarifiers	2	LS	$30,000.00	$60,000.00
11	Sludge Tank Update	1	LS	$15,000.00	$15,000.00
12	Miscellaneous	1	LS	$5,000.00	$5,000.00
Total Construction Estimate					$216,000.00
Contingency, 10%					$21,600.00
Engineering Design					$21,900.00
Engineering Inspection					$16,500.00
Surveying Fee					$5,000.00
Administration					$16,500.00
Total Project Estimate					$297,500.00

TABLE 5.2.2 – OPERATION & MAINTENANCE FOR ALTERNATIVE NO. 2

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Electricity	1	LS	$15,000.00	$15,000.00
2	Sludge Disposal	1	LS	$3,000.00	$3,000.00
3	Labor / Operator Cost	1	LS	$24,000.00	$24,000.00
4	Repair and Maintenance Materials	1	LS	$2,400.00	$2,400.00
5	Vegetation Maintenance	1	LS	$2,000.00	$2,000.00
6	Ultraviolet Lamps	1	LS	$500.00	$500.00
7	Office Rental	1	LS	$4,200.00	$4,200.00
8	Billing and phone costs	1	LS	$8,000.00	$8,000.00
9	Insurance Costs	1	LS	$1,100.00	$1,100.00
10	Misc.	1	LS	$1,500.00	$1,500.00
Total Annual O&M					$61,700.00
Present Worth of Annual Costs*					$838,500.00
Total Present Worth Estimate					$1,134,600.00
* PW Calculated Using A Life of 20 Years and an Interest Rate of 4%					

5.3. Alternative No. 3 – Install a New System

A third alternative would be remove the entire existing WWTP and replace it with a new one. All of the existing components of the current system, including the blower system, the aeration and clarifier basins, as well as the sludge tank would all be removed to make room for what's known as a 'package plant' treatment system. These plants are efficient mixed batch reactor treatment systems that also use aeration techniques to reduce BOD and TSS levels. Technology has certainly changed and the design of new package plants has come a long way since 1980. The new system would take up less space and be more efficient than if the existing system were to be renovated. The drawback to this option is the high cost of removing the existing system and replacing it with an entirely new system. The system would require a new building to house the new aeration pumping systems that would line the proposed tanks and control equipment. The system would include a new blower system, circular aeration basins 18 feet in diameter and 12 feet deep, circular clarifiers 12 feet in diameter and 12 feet deep. It would also include a porous sock filter system that would assist in BOD reduction. In addition, the new system would include sludge drying beds and well as a decanting sludge tank. An ultraviolet system would also be included for disinfection prior to effluent discharge. The following is a cost estimate for the construction of proposed package plant WWTP:

TABLE 5.3.1 – ALTERNATIVE NO. 3 COST ESTIMATE

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Remove Entire Existing System	1	LS	$50,000.00	$50,000.00
2	Flow Meters	2	LS	$3,000.00	$6,000.00
3	New Air Blower System	1	LS	$30,000.00	$30,000.00
4	Aerated Basins and Piping	2	LS	$40,000.00	$80,000.00
5	Ultraviolet Disinfection Basin	1	LS	$10,000.00	$10,000.00
6	Ultraviolet Disinfection System	1	LS	$15,000.00	$15,000.00
7	Clarifiers	2	LS	$30,000.00	$60,000.00
8	Sock Filters	1	LS	$15,000.00	$15,000.00
9	Sludge Tank	1	LS	$25,000.00	$25,000.00
10	Sludge Drying Bed	1	LS	$10,000.00	$10,000.00
11	Wood Frame Building	2	LS	$35,000.00	$70,000.00
12	Equipment Controls	1	LS	$20,000.00	$20,000.00
13	Miscellaneous	1	LS	$5,000.00	$5,000.00
Total Construction Estimate					$396,000.00
Contingency, 10%					$39,600.00
Engineering Design					$35,400.00
Engineering Inspection					$26,600.00
Surveying					$5,000.00
Administration					$21,900.00
Total Project Estimate					$524,500.00

TABLE 5.3.2 – OPERATION & MAINTENANCE FOR ALTERNATIVE NO. 3

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Electricity	1	LS	$15,000.00	$15,000.00
2	Sludge Disposal	1	LS	$3,000.00	$3,000.00
3	Labor / Operator Cost	1	LS	$24,000.00	$24,000.00
4	Repair and Maintenance Materials	1	LS	$2,400.00	$2,400.00
5	Vegetation Maintenance	1	LS	$2,000.00	$2,000.00
6	Ultraviolet Lamps	1	LS	$500.00	$500.00
7	Office Rental	1	LS	$4,200.00	$4,200.00
8	Billing and phone costs	1	LS	$8,000.00	$8,000.00
9	Insurance Costs	1	LS	$1,100.00	$1,100.00
10	Misc.	1	LS	$1,500.00	$1,500.00
Total Annual O&M					$61,700.00
Present Worth of Annual Costs*					$838,500.00
Total Present Worth Estimate					$1,363,000.00
* PW Calculated Using A Life of 20 Years and an Interest Rate of 4%					

5.4. Alternative No. 4 – Transfer Westbridge Apartments to the District System

A fourth alternative would be to transfer Westbridge Apartments to the District System to try and alleviate the loading issue on the existing SCSC WWTP. This would require an adjustment to the collection system adjacent to the apartment complex and the installation of a new force main that would lead to the district system which primarily serves the entire City of Dexter. As part of the adjustment to the existing collection system and lines that lead to the existing SCSC WWTP from the apartment complex would have to be disconnected and capped to avoid bypass issued which the apartment complex has seen in the past. The existing lift station at the apartment complex would be extremely valuable in this scenario and so the maintenance and availability of a spare pump would be a must. The following is a cost estimate for the construction of a collection system that will transfer Westbridge Apartments to the District System in Dexter:

TABLE 5.4.1 – ALTERNATIVE NO. 4 COST ESTIMATE

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Disconnect Apartments from System	1	LS	$15,000.00	$15,000.00
2	Connect To New Force Main	1	LS	$15,000.00	$15,000.00
3	4" PVC Sewer Force Main	6,000	FT	$20.00	$120,000.00
5	Miscellaneous	1	LS	$5,000.00	$5,000.00
Total Construction Estimate					$155,000.00
Contingency, 10%					$15,500.00
Engineering Design					$16,200.00
Engineering Inspection					$12,200.00
Surveying Fee					$5,000.00
Administration					$14,700.00
Total Project Estimate					$218,600.00

TABLE 5.4.2 – OPERATION & MAINTENANCE FOR ALTERNATIVE NO. 4

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Electricity	1	LS	$8,800.00	$8,800.00
2	Sludge Disposal	1	LS	$1,800.00	$1,800.00
3	Labor / Operator Cost	1	LS	$24,000.00	$24,000.00
4	Repair and Maintenance Materials	1	LS	$2,400.00	$2,400.00
5	Vegetation Maintenance	1	LS	$2,000.00	$2,000.00
6	Office Rental	1	LS	$4,200.00	$4,200.00
7	Billing and phone costs	1	LS	$8,000.00	$8,000.00
8	Insurance Costs	1	LS	$1,100.00	$1,100.00
9	Misc.	1	LS	$500.00	$500.00
Total Annual O&M					$52,800.00
Present Worth of Annual Costs*					$717,600.00
Total Present Worth Estimate					$936,200.00
* PW Calculated Using A Life of 20 Years and an Interest Rate of 4%					

6. RECOMMENDED ALTERNATIVE

Smith & Co. recommends that SCSC pursue Alternative No. 2; Update the Existing System, as the most practical solution. Unfortunately neither Alternative No. 1 nor Alternative No. 4 is a practical solution to the problems described in this report. This will be explained in the following section titled 'Justification for Chosen Alternative'. From the table below this alternative is not necessarily the most economical solution but it is the least expensive of the solutions that will actually fix the problem. It is also much quicker to construct than Alternatives No. 3 and No. 4 which involve extremely lengthy construction completion times. This alternative is relatively simple and will make the BOD and TSS effluent level problems of the WWTP a distant memory in the minds of all those concerned. The following is a present worth cost comparison of the four listed alternatives.

TABLE 6.1 – PRESENT WORTH COST COMPARISON

	Alternative	Project Cost	Annual O&M	Total Present Worth
1	Do Nothing	$0.00	$53,600	$728,400
2	Update the Existing System	$297,500	$61,700	$1,136,000
3	Install a New System	$524,500	$61,700	$1,363,000
4	Transfer Westbridge Apartments to District System	$218,600	$52,800	$936,200

Although alternative No. 4 appears attractive due to its lower project cost, it is not a practical option as will be discussed in the following section of this report. The comparison above shows that the recommended alternative, Alternative No. 2, has the lowest initial, annual, and present worth costs of the practical alternatives.

7. JUSTIFICATION FOR CHOSEN ALTERNATIVE

7.1. Justification for Alternative No. 2

Alternative No. 1, Do Nothing, is not a viable option since there will be many negative consequences for inaction including the likelihood of State fines for permit violations which could bankrupt SCSC rather quickly. Doing nothing will perpetuate all the problems associated with the WWTP effluent's unchecked BOD and TSS levels. In addition, resident in the area might be forced from their homes if action is not taken.

Alternative No. 2, Update the Existing System is the more cost effective of the two practical alternatives. Using the existing infrastructure to increase the system's ability to reduce BOD in wastewater will not only save money but it will also save construction time. The new system will have the capacity to allow for growth in the area with its well sized aeration basins and clarifiers.

Alternative No. 3, Install a New System, despite being an acceptable solution, would be very costly. The initial and present worth costs for this system are dramatically higher than all other alternatives, and for good reason. The entire system would be brand new and so worries about it malfunctioning or needing immediate repairs would be virtually non-existent. The new technology would also allow for significant growth in the area should it occur. A considerable down side to this alternative is the time of construction. Not only would a completely new system need to be constructed but the existing system would need to be completely removed.

Alternative No. 4, Transfer Westbridge Apartments to District System is a completely unfeasible solution. The reason for this is the impact that the residents have on the system. The population of the apartment complex only accounts for approximately 24,800 gallons per day of wastewater flow into the treatment system. As previously indicated, the wastewater flow at present date is closer to approximately 65,200 gallons per day. Removing the apartment complex and transferring them to an already burdened system would only alleviate the flow requirements on the system by 38% and still leaves approximately 40,400 gallons per day of wastewater that must be treated. Transferring the apartments only solves part of the problem and doesn't get to the root of the trouble which is the capacity of the existing WWTP.

7.2. Capital Costs

The estimated construction cost for the proposed project is presented in Table 5.2.1. The estimated total cost of the construction is $216,000. The total project cost is estimated to be $297,500, which includes a 10% contingency of $21,600, $21,900 in engineering fees, $16,500 in inspection fees, $5,000 in surveying fees, and $16,500 in administration fees.

The basic (design) engineering fee of $21,900 would pay for all costs normally associated with the design of the project *(including performing field work, preparing detailed engineering reports (if needed), plans/specifications and contract documents, working with any review and funding agencies, providing guidance through the bid letting and contract award, as well as providing general assistance to SCSC and its project administrator on matters associated with the project)*. Because of the technical nature of the work, construction inspection would be provided by the same firm that provides basic engineering. The construction inspection fee of $16,500 would pay for the professional and technical assistance needed during construction.

During the construction phase, the contractor will submit monthly pay requests through the engineer for review and recommendation for payment. The pay requests will be forwarded to the SCSC and the administrator for approval and preparation of grant reimbursement payments.

7.3. Operation and Maintenance Costs

Additional revenue for operation and maintenance of the proposed facilities will be necessary. It has been observed that an increase in revenue is being achieved by increasing the wastewater customer rates for the system. We recommend that SCSC re-evaluate the rate increase to determine if it is still sufficient with the information in this report in mind.

8. PROJECT FINANCING

Several different funding scenarios have been evaluated for the proposed alternative. Table 8.1 below summarizes some of the options that should be considered for this evaluation. Financing options include MDNR, SRF, CDBG Block Grant, and USDA-RD financing. The CDBG Block Grant financing option is presented in the following table:

TABLE 8.1 – ALTERNATIVE FINANCING SUMMARY FOR RECOMMENDED ALTERNATIVE

Total Project Cost:	$297,500
Funding:	
CDBG Grant	$297,500
Total	$297,500

It is recommended that all possible funding avenues be considered for the ultimate funding of this project to minimize the financial burden on the end users. A project administrator should be retained to help identify and apply for project funding.

8.1. Project Administration

Grants, if obtained, would be administered by the grant administration company SCSC selects.

9. ENVIRONMENTAL REVIEW

There will be minor, short-term environmental impacts associated with construction including increased traffic noise and dust. The following agencies will be contacted for environmental clearances:

TABLE 9.1 – ANTICIPATED ENVIRONMENTAL REQUIREMENTS

AGENCY	REQUIREMENTS
DNR Historic Preservation	No anticipated requirements
DNR Water Pollution Control Program	No anticipated requirements
DNR Geology & Land Survey	No anticipated requirements
U.S. Fish & Wildlife	No anticipated requirements
Department of Conservation	No anticipated requirements
A-95 Clearinghouse	No anticipated requirements
U.S. Corps of Engineers	No anticipated requirements

There are no anticipated changes to surface or groundwater quality as a result of this project.

10. SUMMARY/CONCLUSION

10.1. Problems and Causes

The problems faced by this wastewater treatment system are being experienced by numerous communities throughout the State. Changes in and enforcement of environmental regulations are placing a burden on many communities, many of which are small, like the area surrounding the SCSC WWTP and are not able to afford the costs of the needed improvements. The unfortunate circumstances surrounding the existing treatment system are not impossible to overcome as long as people responsible for the system take action such as being done by obtaining this report. The community will be taking a necessary and important step in meeting their requirements and protecting the environment by doing everything necessary to come into compliance with MDNR regulations.

10.2. Recommended Improvements

The update to the existing system would have a very dramatic effect upon BOD and TSS effluent levels. There will be no chlorine discharge residual since chlorine is not part of the design. The inactivation of bacteria by the ultraviolet disinfection system would be at least as good as it would be with chlorine. With the completion of this project SCSC will be in full compliance with MDNR permit limitations.

10.3. Maintenance

The proposed project should reduce the amount of time and capital expended upon everyday maintenance of the system since everything will be in working order. Scheduled maintenance for the system will include regular cleaning of the quartz tubes in which the UV lamps are housed and maintenance for the aeration blowers and motors.

APPENDIX A

FIGURES

FIGURE 1: VICINITY MAP

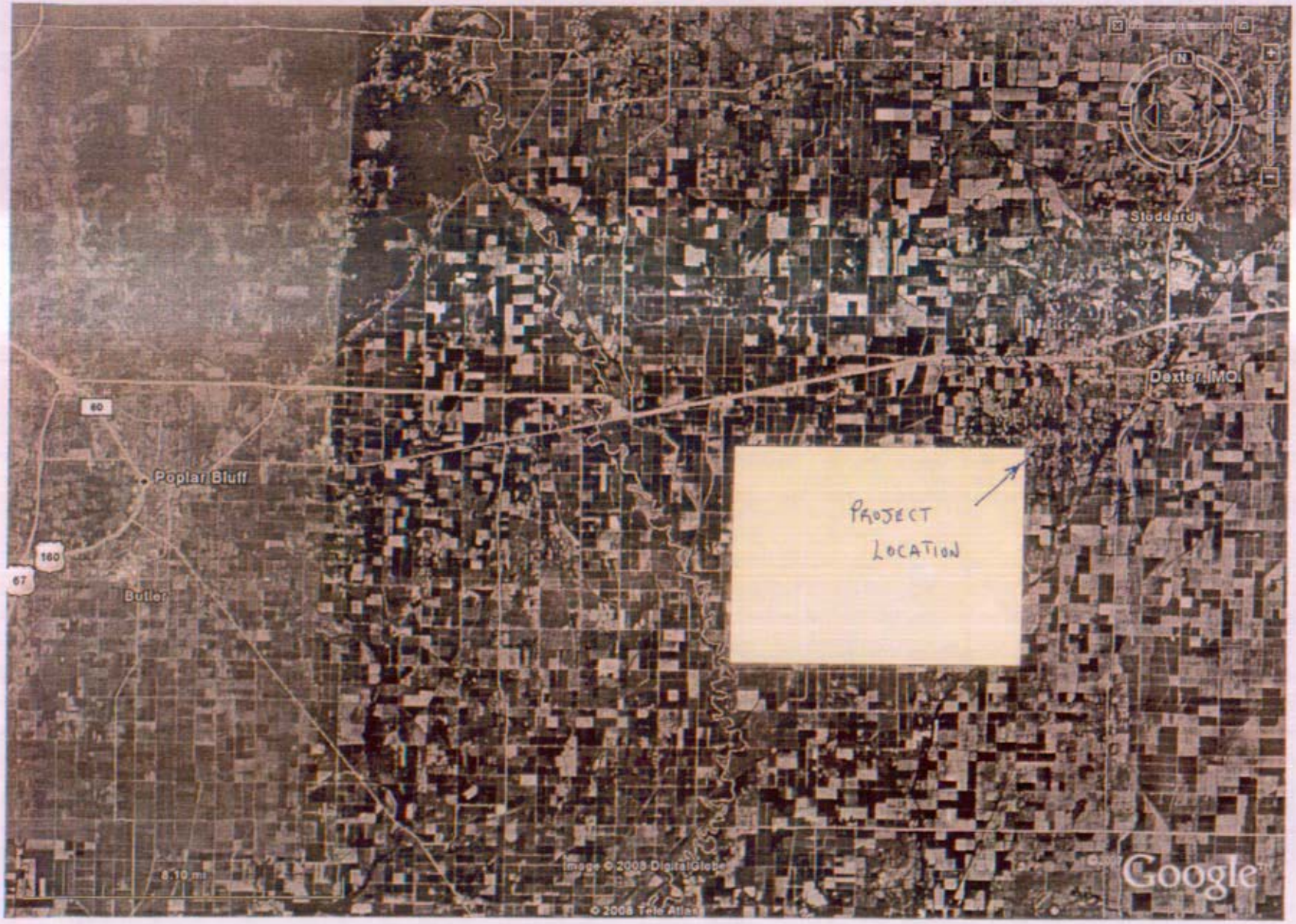


FIGURE 2: TOPOGRAPHIC MAP

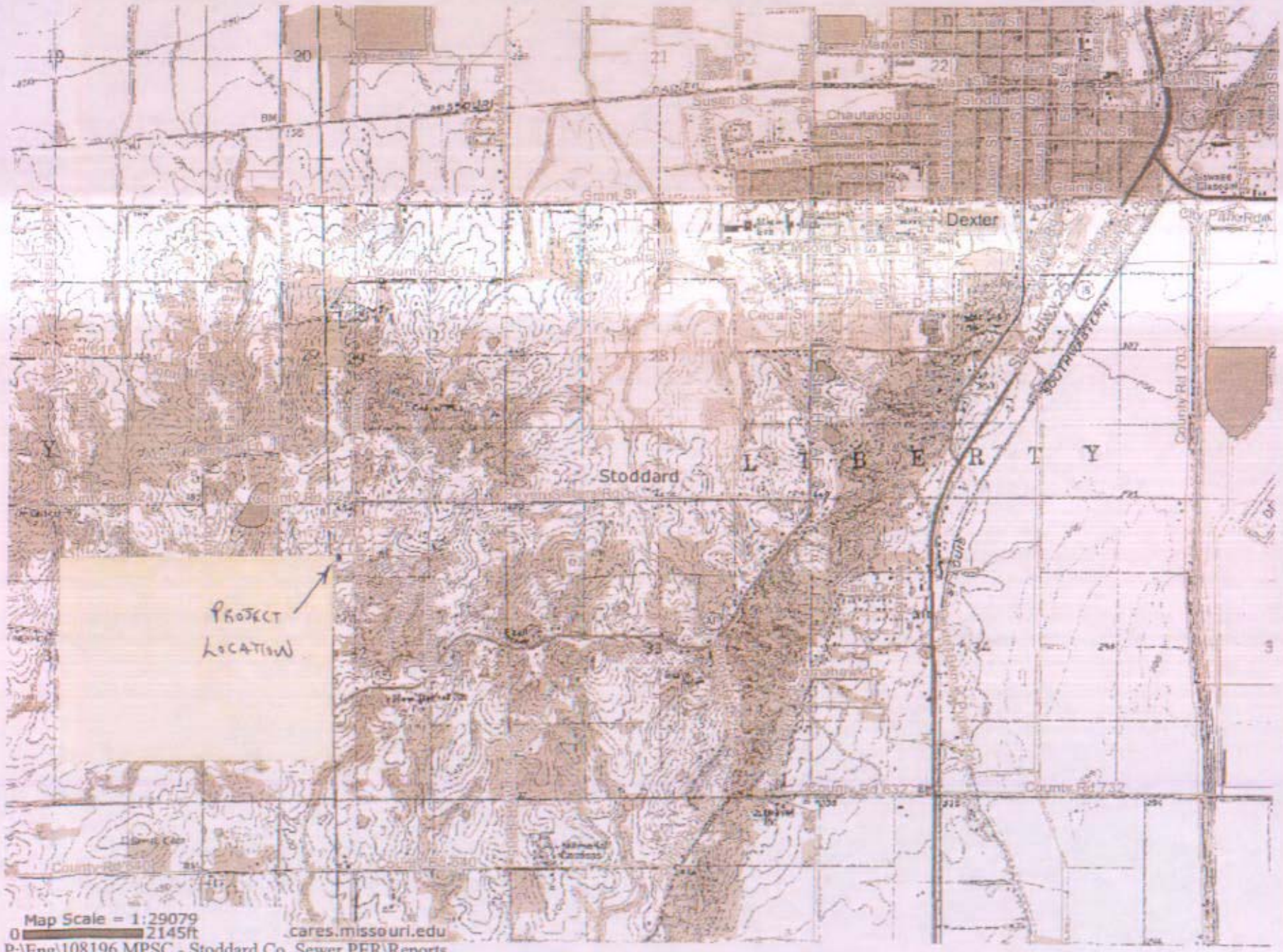
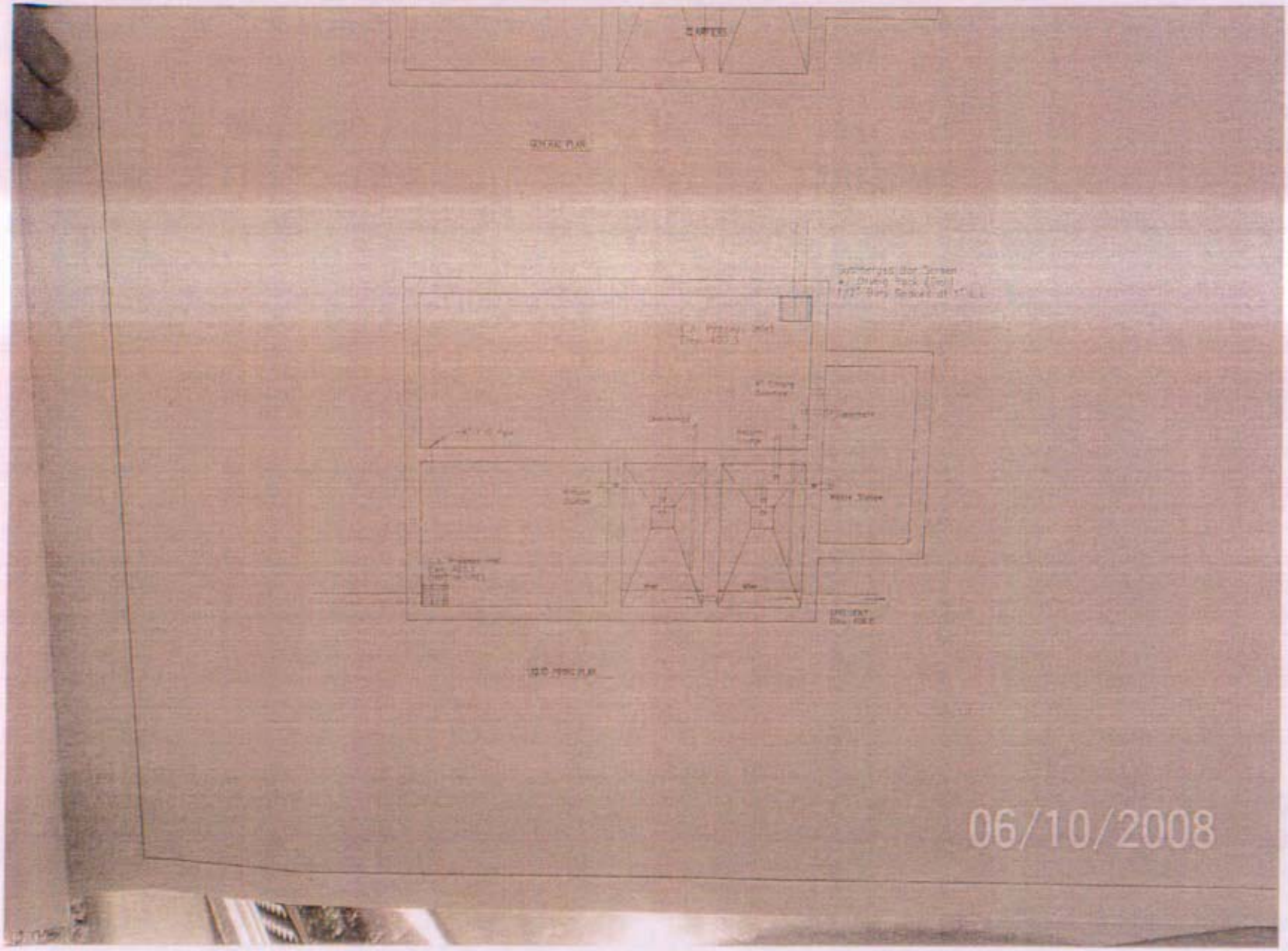
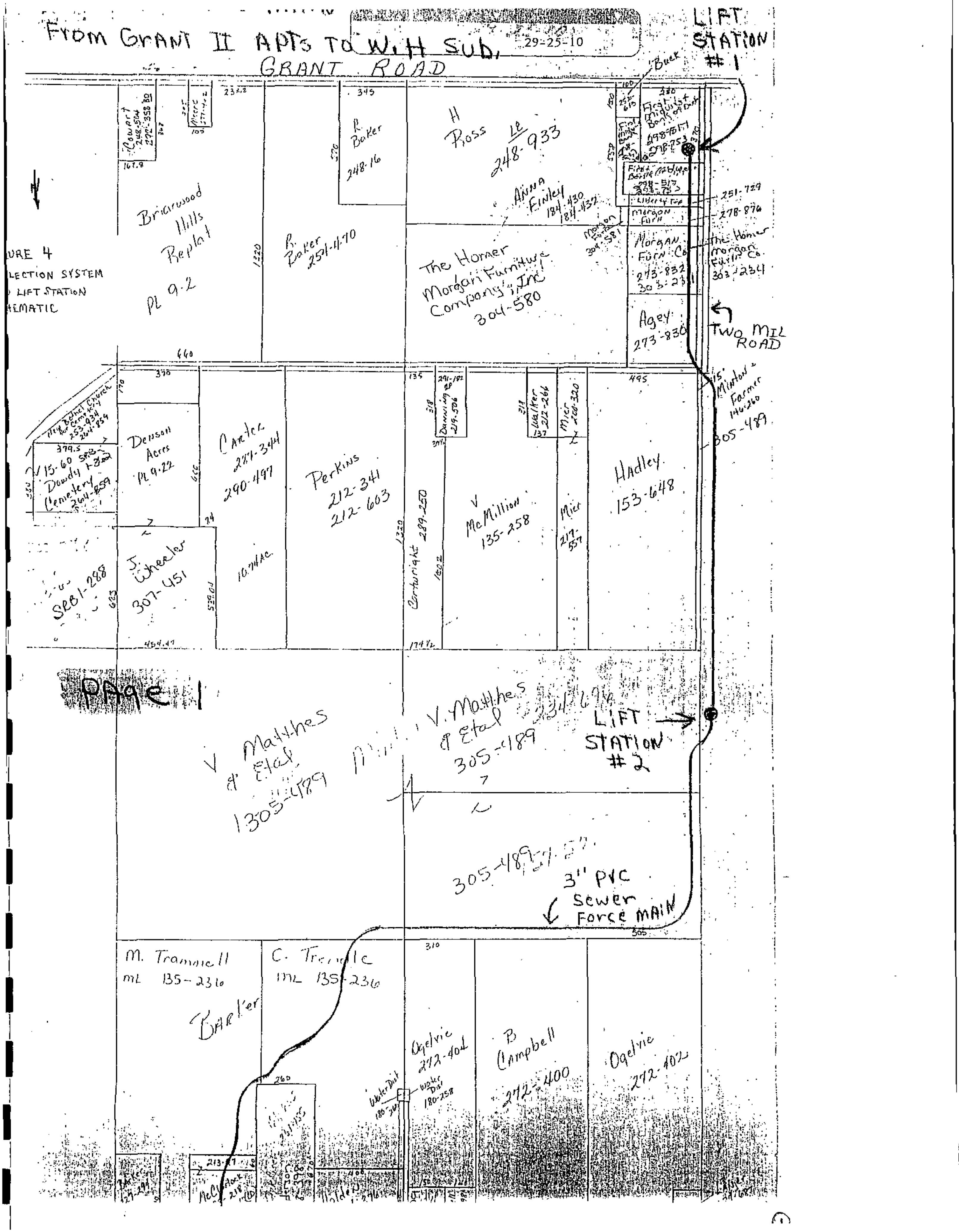


FIGURE 3: TREATMENT PLANT SCHEMATIC

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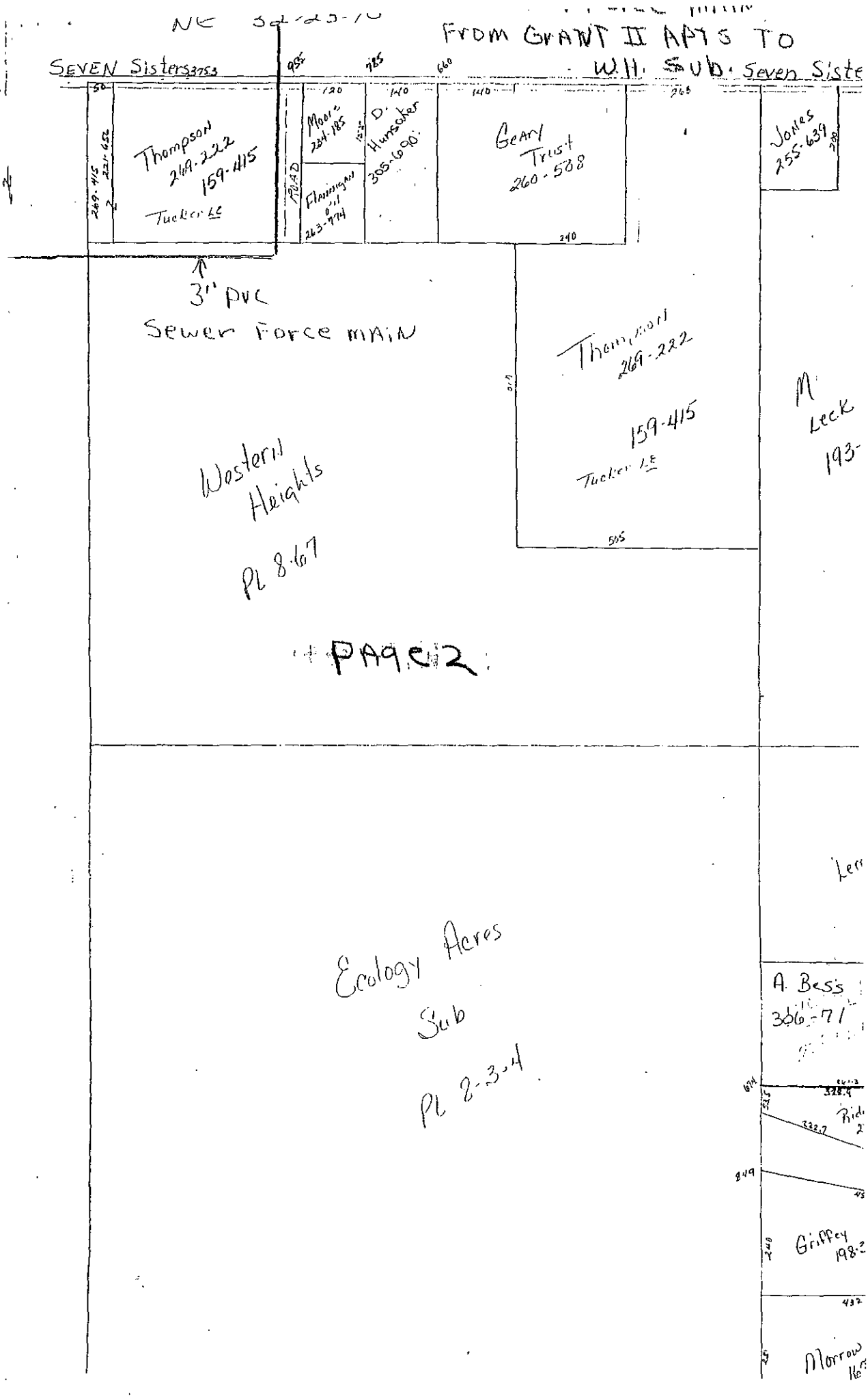
GRANT ROAD
Cowart 248-594
Briarwood Hills Replat PL 9-2
R. Baker 248-16
R. Baker 251-1170
H Ross LE 248-933
Anna Finley 184-430 184-432
The Homer Morgan Furniture Company, Inc 304-580
Morgan Furn. Co. 273-832 303-231
The Homer Morgan Furn. Co. 303-234
Agey 273-830
Two Mil Road
251-729
278-876
Liberty Tire
URE 4
LECTION SYSTEM
LIFT STATION
HEMATIC
Denson Acres PL 9-22
Carter 287-344 290-497
Perkins 212-341 212-603
V McMillion 135-258
Hadley 153-648
Mier 217-557
Walker 212-266
Dunning 219-506
Minton & Farmer 146-260
305-489
Cartwright 289-250
J. Wheeler 307-451
10.71 AC.
SR81-288
Dowdy Cemetery 264-859
PAGE 1
V Matthes & Etal 305-489
V. Matthes & Etal 305-489
LIFT STATION #2
3" PVC Sewer Force MAIN
M. Trammell ML 135-236
C. Trammell ML 135-236
Barker
Ogelvie 272-404
B Campbell 272-400
Ogelvie 272-402
Water Dist 180-258
McClintock
Holden


NE 32-23-1E
FROM GRANT II APTS TO
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120
140
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159.415
Tucker LE
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221.452
Moore
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Flemingan
263.974
D. Hunsaker
305.690
Geary
Trust
260-508
240
Jones
255.639
3" pvc
Sewer force main
Thompson
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159.415
Tucker LE
505
Western
Heights
PL 8.67
PAGE 2
Ecology Acres
Sub
PL 2-3-4
A. Bess
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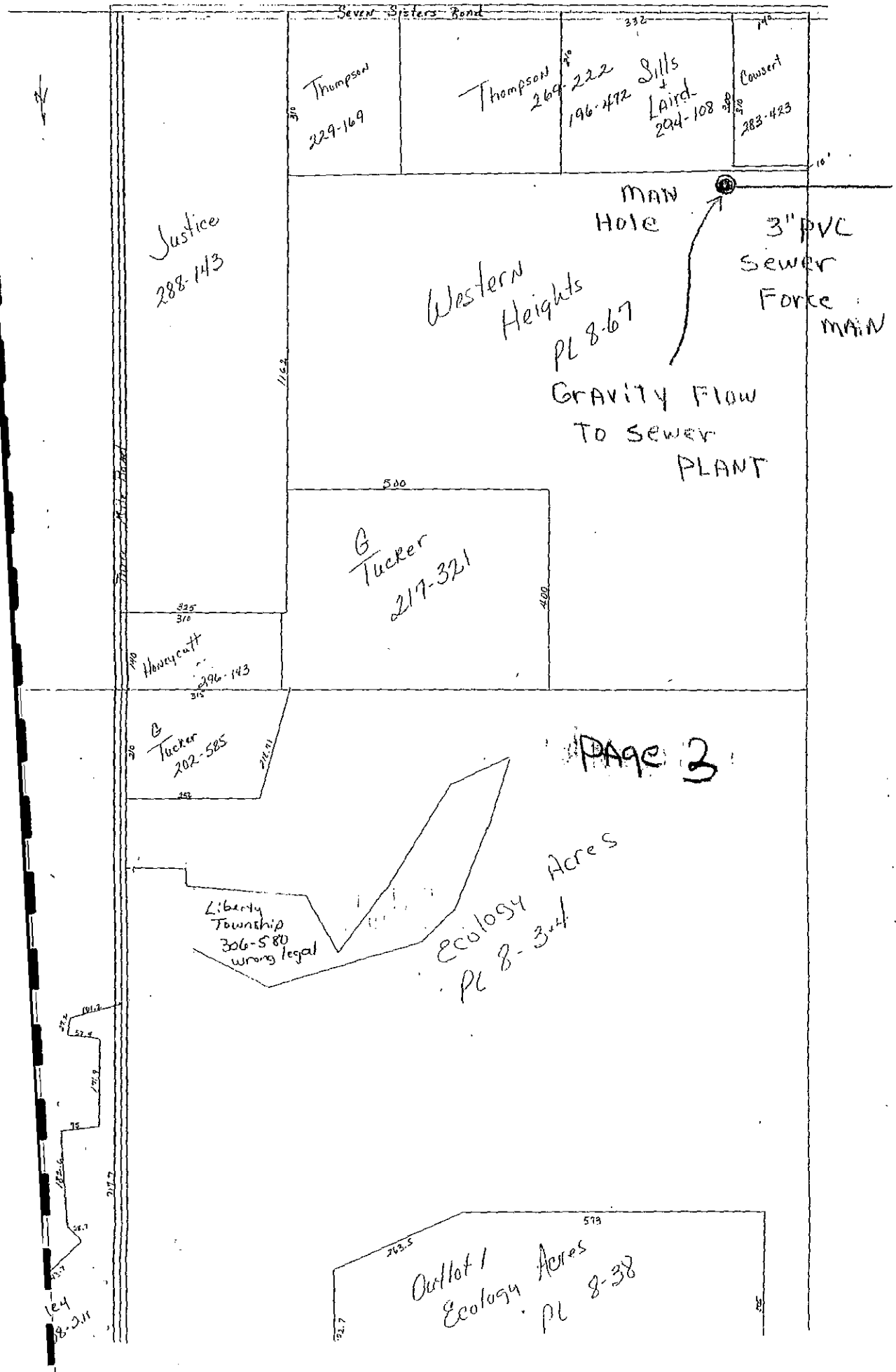
849
Griffey
198.2
432
Morrow

FROM GRANT II APTS TO W.H SUB.

NW 32-25-10



APPENDIX C

ESTIMATED QUANTITIES AND COSTS

Alternative 1 - Do Nothing, Construction Estimate

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Do Nothing	1	LS	$0.00	$0.00
Total Construction Estimate					$0.00
Engineering Design					$0.00
Engineering Inspection					$0.00
Administration					$0.00
Total Project Estimate					$0.00

Alternative 1 - Do Nothing, Annual Operation & Maintenance Estimate

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Electricity	1	LS	$9,600.00	$9,600.00
2	Sludge Disposal	1	LS	$1,800.00	$1,800.00
3	Labor / Operator Cost	1	LS	$24,000.00	$24,000.00
4	Repair and Maintenance Materials	1	LS	$2,400.00	$2,400.00
5	Vegetation Maintenance	1	LS	$2,000.00	$2,000.00
6	Office Rental	1	LS	$4,200.00	$4,200.00
7	Billing and phone costs	1	LS	$8,000.00	$8,000.00
8	Insurance Costs	1	LS	$1,100.00	$1,100.00
9	Misc.	1	LS	$500.00	$500.00
Total Annual O&M					$53,600.00
Present Worth of Annual Costs*					$728,400.00
Total Present Worth Estimate					$728,400.00
* PW Calculated Using A Life of 20 Years and an Interest Rate of 4%					

Alternative 2 - Update the Existing System

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Building and Lab Repairs	1	LS	$10,000.00	$10,000.00
2	Clean and Repair Aeration Basins	1	LS	$15,000.00	$15,000.00
3	Blower System Repairs	1	LS	$10,000.00	$10,000.00
4	Flow Meters	2	LS	$3,000.00	$6,000.00
5	New Air Blower	1	LS	$10,000.00	$10,000.00
6	Air Blower Motors	4	LS	$5,000.00	$20,000.00
7	Convert Clarifier to Aerated Basin	2	LS	$20,000.00	$40,000.00
8	Ultraviolet Disinfection Basin	1	LS	$10,000.00	$10,000.00
9	Ultraviolet Disinfection System	1	LS	$15,000.00	$15,000.00
10	Clarifiers	2	LS	$30,000.00	$60,000.00
11	Sludge Tank Update	1	LS	$15,000.00	$15,000.00
12	Miscellaneous	1	LS	$5,000.00	$5,000.00
Total Construction Estimate					$216,000.00
Contingency, 10%					$21,600.00
Engineering Design					$21,900.00
Engineering Inspection					$16,500.00
Surveying Fee					$5,000.00
Administration					$16,500.00
Total Project Estimate					$297,500.00

Alternative 2 - Update the Existing System, Annual Operation & Maintenance Estimate

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Electricity	1	LS	$15,000.00	$15,000.00
2	Sludge Disposal	1	LS	$3,000.00	$3,000.00
3	Labor / Operator Cost	1	LS	$24,000.00	$24,000.00
4	Repair and Maintenance Materials	1	LS	$2,400.00	$2,400.00
5	Vegetation Maintenance	1	LS	$2,000.00	$2,000.00
6	Ultraviolet Lamps	1	LS	$500.00	$500.00
7	Office Rental	1	LS	$4,200.00	$4,200.00
8	Billing and phone costs	1	LS	$8,000.00	$8,000.00
9	Insurance Costs	1	LS	$1,100.00	$1,100.00
10	Misc.	1	LS	$1,500.00	$1,500.00
Total Annual O&M					$61,700.00
Present Worth of Annual Costs*					$838,500.00
Total Present Worth Estimate					$1,136,000.00
* PW Calculated Using A Life of 20 Years and an Interest Rate of 4%					

Alternative 3 - Install a New System, Construction Estimate

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Remove Entire Existing System	1	LS	$50,000.00	$50,000.00
2	Flow Meters	2	LS	$3,000.00	$6,000.00
3	New Air Blower System	1	LS	$30,000.00	$30,000.00
4	Aerated Basins and Piping	2	LS	$40,000.00	$80,000.00
5	Ultraviolet Disinfection Basin	1	LS	$10,000.00	$10,000.00
6	Ultraviolet Disinfection System	1	LS	$15,000.00	$15,000.00
7	Clarifiers	2	LS	$30,000.00	$60,000.00
8	Sock Filters	1	LS	$15,000.00	$15,000.00
9	Sludge Tank	1	LS	$25,000.00	$25,000.00
10	Sludge Drying Bed	1	LS	$10,000.00	$10,000.00
11	Wood Frame Building	2	LS	$35,000.00	$70,000.00
12	Equipment Controls	1	LS	$20,000.00	$20,000.00
13	Miscellaneous	1	LS	$5,000.00	$5,000.00
Total Construction Estimate					$396,000.00
Contingency, 10%					$39,600.00
Engineering Design					$35,400.00
Engineering Inspection					$26,600.00
Surveying Fee					$5,000.00
Administration					$21,900.00
Total Project Estimate					$524,500.00

Alternative 3 - Install a New System, Annual Operation & Maintenance Estimate

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Electricity	1	LS	$15,000.00	$15,000.00
2	Sludge Disposal	1	LS	$3,000.00	$3,000.00
3	Labor / Operator Cost	1	LS	$24,000.00	$24,000.00
4	Repair and Maintenance Materials	1	LS	$2,400.00	$2,400.00
5	Vegetation Maintenance	1	LS	$2,000.00	$2,000.00
6	Ultraviolet Lamps	1	LS	$500.00	$500.00
7	Office Rental	1	LS	$4,200.00	$4,200.00
8	Billing and phone costs	1	LS	$8,000.00	$8,000.00
9	Insurance Costs	1	LS	$1,100.00	$1,100.00
10	Misc.	1	LS	$1,500.00	$1,500.00
Total Annual O&M					$61,700.00
Present Worth of Annual Costs*					$838,500.00
Total Present Worth Estimate					$1,363,000.00
* PW Calculated Using A Life of 20 Years and an Interest Rate of 4%					

Alternative 4 - Transfer Westbridge Apartments to the District System, Construction Estimate

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Disconnect Apartments from System	1	LS	$15,000.00	$15,000.00
2	Connect To New Force Main	1	LS	$15,000.00	$15,000.00
3	4" PVC Sewer Force Main	6,000	FT	$20.00	$120,000.00
4	Miscellaneous	1	LS	$5,000.00	$5,000.00
Total Construction Estimate					$155,000.00
Contingency, 10%					$15,500.00
Engineering Design					$16,200.00
Engineering Inspection					$12,200.00
Surveying Fee					$5,000.00
Administration					$14,700.00
Total Project Estimate					$218,600.00

Alternative 4 - Transfer Westbridge Apartments to the District System, Annual O & M Estimate

Item	Description	Quantity	Units	Unit Price	Subtotal
1	Electricity	1	LS	$8,800.00	$8,800.00
2	Sludge Disposal	1	LS	$1,800.00	$1,800.00
3	Labor / Operator Cost	1	LS	$24,000.00	$24,000.00
4	Repair and Maintenance Materials	1	LS	$2,400.00	$2,400.00
5	Vegetation Maintenance	1	LS	$2,000.00	$2,000.00
6	Office Rental	1	LS	$4,200.00	$4,200.00
7	Billing and phone costs	1	LS	$8,000.00	$8,000.00
8	Insurance Costs	1	LS	$1,100.00	$1,100.00
9	Misc.	1	LS	$500.00	$500.00
Total Annual O&M					$52,800.00
Present Worth of Annual Costs*					$717,600.00
Total Present Worth Estimate					$936,200.00
* PW Calculated Using A Life of 20 Years and an Interest Rate of 4%					

Cost Comparison for All Alternatives

	Alternative	Project Cost	Annual O&M	Total Present Worth
1	Do Nothing	$0.00	$53,600	$728,400
2	Update the Existing System	$297,500	$61,700	$1,136,000
3	Install a New System	$524,500	$61,700	$1,363,000
4	Transfer Westbridge Apartments to District System	$218,600	$52,800	$936,200

APPENDIX D

MEASUREMENT AND VIOLATIONS REPORTS

http://oaspub.epa.gov/enviro/pcs_det_reports.pcs_tst?npdesid=MO0096881&npvalue=1&npvalue=2&npvalue=3&npvalue=4&npvalue=5&rvalue=12&npvalue=6&npvalue=7&npvalue=8&npvalue=10&rvalue=1 Last updated on Thursday, June 5th, 2008.

Water Discharge Permits (PCS)

You are here: EPA Home Envirofacts PCS

Detailed Reports

PCS

Results are based on data extracted on APR-16-2008

Facility

FACILITY NAME (1) :	STODDARD CO SEWER, INC	**NPDES :**	MO0096881
FACILITY NAME (2) :		CANE CREEK	
STREET 1 :	PO BOX 302	**SIC CODE :**	4952 = SEWERAGE SYSTEMS
CITY :	DEXTER	**MAJOR / MINOR :**	
COUNTY NAME :	STODDARD	**TYPE OF OWNERSHIP :**	PRI = PRIVATE
STATE :	MO	**INDUSTRY CLASS :**	X
ZIP CODE :	63841	**ACTIVITY STATUS :**	A = Active
REGION :	07	**INACTIVE DATE :**	
LATITUDE :	+3646114		
LONGITUDE :	-09000035	**TYPE OF PERMIT ISSUED :**	S = STATE
LAT/LON CODE OF ACCURACY :	1 = NEAREST 10TH OF A SECOND	**PERMIT ISSUED DATE :**	03-MAR-1995
LAT/LON METHOD :		**PERMIT EXPIRED DATE :**	15-JUN-1999
LAT/LON SCALE :		**ORIGINAL PERMIT ISSUE DATE :**	21-NOV-1980
LAT/LON DATUM :			
LAT/LON DESCRIPTION :			
USGS HYDRO BASIN CODE :		**STREAM SEGMENT :**	
FLOW :	.075	**MILEAGE IND :**	
RECEIVING STREAM CLASS CODE :		**FEDERAL GRANT IND :**	
RECEIVING WATERS :		**FINAL LIMITS IND :**	F = FINAL
PRETREATMENT CODE :			
SLUDGE INDICATOR :		**SLUDGE CLASS FAC IND :**	
SLUDGE RELATED PERMIT NUM :		**ANNUAL DRY SLUDGE PROD :**	
MAILING NAME :	STODDARD CO SEWER, INC		
MAILING STREET (1) :	PO BOX 302	**MAILING STREET (2) :**	
MAILING CITY :	DEXTER	**MAILING STATE :**	MO
MAILING ZIP CODE :	63841		
SLUDGE COMMERCIAL HANDLER :			
SLUDGE HANDLER STREET (1) :		**SLUDGE HANDLER STREET (2) :**	
SLUDGE HANDLER CITY :		**SLUDGE HANDLER STATE :**	
SLUDGE HANDLER ZIP CODE :			
COGNIZANT OFFICIAL :		**COGNIZANT OFFICIAL TEL :**	

Permit Documents

FACILITY NAME (1) : STODDARD CO SEWER, INC **NPDES :** MO0096881
FACILITY NAME (2) : CANE CREEK

No Permit Documents Found.

Permit Tracking

FACILITY NAME (1) :	STODDARD CO SEWER, INC	**NPDES :**	MO0096881
FACILITY NAME (2) :	CANE CREEK	**PERMIT ISSUED BY :**	S = STATE
PERMIT ISSUED DATE :	03-MAR-1995	**ORIGINAL DATE OF ISSUE :**	21-NOV-1980
PERMIT EXPIRED DATE :	15-JUN-1999		

Permit Tracking Events:

EVENT CODE	EVENT DESCRIPTION	ACTUAL DATE
P5099	PERMIT EXPIRED	15-JUN-1999
P4099	PERMIT ISSUED	03-MAR-1995

Inspections

FACILITY NAME (1) : STODDARD CO SEWER, INC **NPDES :** MO0096881
FACILITY NAME (2) : CANE CREEK

INSPECTION TYPE	DATE OF INSPECTION	INSPECTION PERFORMED BY
C = COMPLIANCE EVAL (NON-SAMPLING)	13-MAY-2005	S = STATE

C = COMPLIANCE EVAL (NON-SAMPLING)	01-MAR-2000	S = STATE
C = COMPLIANCE EVAL (NON-SAMPLING)	24-JUL-1998	S = STATE
C = COMPLIANCE EVAL (NON-SAMPLING)	15-MAR-1994	S = STATE
C = COMPLIANCE EVAL (NON-SAMPLING)	01-MAY-1990	S = STATE
C = COMPLIANCE EVAL (NON-SAMPLING)	12-AUG-1988	S = STATE

Outfalls/Pipe Schedules

FACILITY NAME (1) :	STODDARD CO SEWER, INC	**NPDES :**	MO0096881
FACILITY NAME (2) :	CANE CREEK	**OUTFALL TYPE :**	
PIPE NUMBER :	FAC	**ACTIVITY STATUS:**	A = ACTIVE
REPORT DESIGNATOR :	A	**LATITUDE:**	+3646115
PIPE SET QUALIFIER :	9	**LONGITUDE :**	-09000038
INACTIVE DATE :		**LAT/LON ACCURACY :**	3 = NEAREST 10 SECONDS
INIT LIMITS START DATE :		**LAT/LON METHOD :**	5 = TOWNSHIP-SECTION-RANGE SYS CONV
INIT LIMITS END DATE :		**LAT/LON SCALE :**	3 = 24,000
INTERIM LIMITS START DATE :		**LAT/LON DATUM :**	2 = NAD83
INTERIM LIMITS END DATE :		**LAT/LON DESCRIPTION :**	01099
FINAL LIMITS START DATE :	03-JUL-1997	**USGS HYDRO BASIN CODE :**	08020203
FINAL LIMITS END DATE :	02-JUL-2002	**PIPE STREAM SEGMENT :**	
INIT SUBM. DATE(EPA) :		**RECEIVING STREAM CLASS CD :**	
SUBMISSION UNITS (EPA) :		**MILEAGE INDICATOR :**	
UNITS IN EPA SUBM. PERIOD :	0	**PIPE DESCRIPTION :**	PRIVATE SEWER CO/SUBDIVIS
INIT SUBM. DATE (STATE) :	28-APR-1995		
SUBMISSION UNITS (STATE) :	M = MONTHS		
UNITS IN STATE SUBM. PERIOD :	1		
INIT REPORTING DATE :	01-MAR-1995		
REPORTING UNITS :	M = MONTHS		
UNITS IN REPORTING PERIOD :	1		

Measurements and Violations

FACILITY NAME (1):	STODDARD CO SEWER, INC	**NPDES :**	MO0096881
FACILITY NAME (2):	CANE CREEK	**LIMIT TYPE :**	5 = FINAL
PIPE NUMBER :	FAC	**SEASON NUM :**	0
REPORT DESIGNATOR :	A	**PARAMETER CODE:**	00310 = BOD, 5-DAY (20 DEG. C)
PIPE SET QUALIFIER :	9	**MONITORING LOCATION :**	1 = EFFLUENT GROSS VALUE
MODIFICATION NUM :	0		

MONITORING PERIOD END DATE	DISCHARGE IND	QTY MAXIMUM	QTY AVERAGE	CONC MAXIMUM	CONC AVERAGE	CONC MINIMUM	RNC DETECTION CODE	RNC DETECTION DATE	RNC RESOLUTION CODE	RNC RESOLUTION DATE	MEASUREMEI VIOLATION CODE
31-JAN-2008				149	149						E90 = NUMER VIOLATION NUMERIC VIC
31-DEC-2007				138	138						E90 = NUMER VIOLATION NUMERIC VIC
30-NOV-2007				25.4	25.4						E00 = MEASUREMEI ONLY, NO VIOLATION N VIOL
31-OCT-2007				9.56	9.56						E00 = MEASUREMEI ONLY, NO VIOLATION N VIOL
30-SEP-2007				13.9	13.9						E00 = MEASUREMEI ONLY, NO VIOLATION N VIOL
31-AUG-2007				6.2	6.2						E00 = MEASUREMEI ONLY, NO VIOLATION N VIOL
31-JUL-2007				8.2	8.2						E00 = MEASUREMEI ONLY, NO VIOLATION N VIOL
30-JUN-2007				189	189						E90 = NUMER VIOLATION NUMERIC VIC

31-MAY-2007				58.4	58.4						E90 = NUMER VIOLATION NUMERIC VIC
30-APR-2007				146	146						E90 = NUMER VIOLATION NUMERIC VIC
31-MAR-2007				55.2	55.2						E90 = NUMER VIOLATION NUMERIC VIC
28-FEB-2007				23.8	23.8						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JAN-2007				112	112						E90 = NUMER VIOLATION NUMERIC VIC
31-DEC-2006				50.1	50.1						E90 = NUMER VIOLATION NUMERIC VIC
30-NOV-2006				8.59	8.59						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2006				40.4	40.4						E90 = NUMER VIOLATION NUMERIC VIC
31-AUG-2006				203	203						E90 = NUMER VIOLATION NUMERIC VIC
31-JUL-2006				187	187						E90 = NUMER VIOLATION NUMERIC VIC
30-JUN-2006				63	63						E90 = NUMER VIOLATION NUMERIC VIC
31-MAY-2006				84	84						E90 = NUMER VIOLATION NUMERIC VIC
30-APR-2006				97	97						E90 = NUMER VIOLATION NUMERIC VIC
31-MAR-2006				153	153						E90 = NUMER VIOLATION NUMERIC VIC
28-FEB-2006				35.3	35.3						E90 = NUMER VIOLATION NUMERIC VIC
31-JAN-2006				111	111		N = RPT-NONRECEIPT OF DMR/CS RPT	30-MAR-2006	2 = RE-BACK INTO COMPLIANCE	26-APR-2006	E90 = NUMER VIOLATION NUMERIC VIC
31-DEC-2005				23.3	23.3						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-NOV-2005				89.9	89.9						E90 = NUMER VIOLATION NUMERIC VIC
31-OCT-2005				64.1	64.1		N = RPT-NONRECEIPT OF DMR/CS RPT	30-DEC-2005	2 = RE-BACK INTO COMPLIANCE	05-JAN-2006	E90 = NUMER VIOLATION NUMERIC VIC
30-SEP-2005				54.5	54.5						E90 = NUMER VIOLATION NUMERIC VIC
31-AUG-2005				103	103						E90 = NUMER VIOLATION NUMERIC VIC
31-JUL-2005				54.5	54.5		N = RPT-NONRECEIPT OF DMR/CS RPT	30-SEP-2005	2 = RE-BACK INTO COMPLIANCE	19-OCT-2005	E90 = NUMER VIOLATION NUMERIC VIC
30-JUN-2005				163	163						E90 = NUMER VIOLATION NUMERIC VIC
31-MAY-2005				174	174		N = RPT-NONRECEIPT OF DMR/CS RPT	30-JUL-2005	2 = RE-BACK INTO COMPLIANCE	22-AUG-2005	E90 = NUMER VIOLATION NUMERIC VIC
31-MAY-1999				50	50						E90 = NUMER VIOLATION

											NUMERIC VIC
30-APR-1999				25	25						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-1998				50	50		N = RPT-NONRECEIPT OF DMR/CS RPT	30-JUL-1998	2 = RE-BACK INTO COMPLIANCE	03-JUN-1999	E90 = NUMER VIOLATION NUMERIC VIC

FACILITY NAME (1): STODDARD CO SEWER, INC **NPDES :** MO0096881
FACILITY NAME (2): CANE CREEK **LIMIT TYPE :** 5 = FINAL
PIPE NUMBER : FAC **SEASON NUM :** 0
REPORT DESIGNATOR : A **PARAMETER CODE:** 00400 = PH
PIPE SET QUALIFIER : 9 **MONITORING LOCATION :** 1 = EFFLUENT GROSS VALUE
MODIFICATION NUM : 0

MONITORING PERIOD END DATE	DISCHARGE IND	QTY MAXIMUM	QTY AVERAGE	CONC MAXIMUM	CONC AVERAGE	CONC MINIMUM	RNC DETECTION CODE	RNC DETECTION DATE	RNC RESOLUTION CODE	RNC RESOLUTION DATE	MEASUREMEI VIOLATION CODE
31-JAN-2008				7.63		7.63					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-DEC-2007				7.64		7.64					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-NOV-2007				7.48		7.48					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2007				7.54		7.54					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-SEP-2007				7.71		7.71					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-AUG-2007				7.6		7.6					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JUL-2007				7.652		7.62					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-JUN-2007				7.33		7.33					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-2007				7.38		7.38					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-APR-2007				7.27		7.27					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAR-2007				7.25		7.25					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
28-FEB-2007				6.85		6.85					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JAN-2007				7.23		7.23					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
											E00 =

31-DEC-2006				7.37		7.37					MEASUREMEN ONLY, NO VIOLATION N VIOL
30-NOV-2006				7.33		7.33					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2006				7.4		7.4					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-AUG-2006				7.66		7.66					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JUL-2006				7.53		7.53					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-JUN-2006				7.64		7.64					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-2006				7.43		7.43					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-APR-2006				7.3		7.3					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAR-2006				7.32		7.32					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
28-FEB-2006				7.35		7.35					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JAN-2006				7.36		7.36	N = RPT-NONRECEIPT OF DMR/CS RPT	30-MAR-2006	2 = RE-BACK INTO COMPLIANCE	26-APR-2006	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-DEC-2005				7.414		7.44					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-NOV-2005				7.57		7.57					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2005				7.53		7.53	N = RPT-NONRECEIPT OF DMR/CS RPT	30-DEC-2005	2 = RE-BACK INTO COMPLIANCE	05-JAN-2006	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-SEP-2005				7.38		7.38					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-AUG-2005				7.27		7.27					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JUL-2005				7.38		7.38	N = RPT-NONRECEIPT OF DMR/CS RPT	30-SEP-2005	2 = RE-BACK INTO COMPLIANCE	19-OCT-2005	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
											E00 = MEASUREMEN

30-JUN-2005				7.15		7.15					ONLY, NO VIOLATION N VIOL
31-MAY-2005				7.39		7.39	N = RPT-NONRECEIPT OF DMR/CS RPT	30-JUL-2005	2 = RE-BACK INTO COMPLIANCE	22-AUG-2005	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-1999				7.2		7.2					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-APR-1999				8.3		8.3					E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-1998				7.2		7.2	N = RPT-NONRECEIPT OF DMR/CS RPT	30-JUL-1998	2 = RE-BACK INTO COMPLIANCE	03-JUN-1999	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL

FACILITY NAME (1): STODDARD CO SEWER, INC **NPDES :** MO0096881
FACILITY NAME (2): CANE CREEK **LIMIT TYPE :** 5 = FINAL
PIPE NUMBER : FAC **SEASON NUM :** 0
REPORT DESIGNATOR : A **PARAMETER CODE:** 00530 = SOLIDS, TOTAL SUSPENDED
PIPE SET QUALIFIER : 9 **MONITORING LOCATION :** 1 = EFFLUENT GROSS VALUE
MODIFICATION NUM : 0

MONITORING PERIOD END DATE	DISCHARGE IND	QTY MAXIMUM	QTY AVERAGE	CONC MAXIMUM	CONC AVERAGE	CONC MINIMUM	RNC DETECTION CODE	RNC DETECTION DATE	RNC RESOLUTION CODE	RNC RESOLUTION DATE	MEASUREMEI VIOLATION CODE
31-JAN-2008				176	176						E90 = NUMER VIOLATION NUMERIC VIC
31-DEC-2007				54	54						E90 = NUMER VIOLATION NUMERIC VIC
30-NOV-2007				12	12						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2007				11	11						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-SEP-2007				9	9						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-AUG-2007				9	9						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JUL-2007				9	9						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-JUN-2007				272	272						E90 = NUMER VIOLATION NUMERIC VIC
31-MAY-2007				112	112						E90 = NUMER VIOLATION NUMERIC VIC
30-APR-2007				54	54						E90 = NUMER VIOLATION NUMERIC VIC
31-MAR-2007				75	75						E90 = NUMER VIOLATION NUMERIC VIC
28-FEB-2007				45	45						E90 = NUMER VIOLATION NUMERIC VIC
31-JAN-2007				45	45						E90 = NUMER VIOLATION NUMERIC VIC
31-DEC-2006				65	65						E90 = NUMER VIOLATION NUMERIC VIC

30-NOV-2006				6	6						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2006				98	98						E90 = NUMER VIOLATION NUMERIC VIC
31-AUG-2006				216	216						E90 = NUMER VIOLATION NUMERIC VIC
31-JUL-2006				150	150						E90 = NUMER VIOLATION NUMERIC VIC
30-JUN-2006				86	86						E90 = NUMER VIOLATION NUMERIC VIC
31-MAY-2006				112	112						E90 = NUMER VIOLATION NUMERIC VIC
30-APR-2006				64	64						E90 = NUMER VIOLATION NUMERIC VIC
31-MAR-2006				96	96						E90 = NUMER VIOLATION NUMERIC VIC
28-FEB-2006				23	23						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JAN-2006				17	17		N = RPT-NONRECEIPT OF DMR/CS RPT	30-MAR-2006	2 = RE-BACK INTO COMPLIANCE	26-APR-2006	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-DEC-2005				54	54						E90 = NUMER VIOLATION NUMERIC VIC
30-NOV-2005				164	164						E90 = NUMER VIOLATION NUMERIC VIC
31-OCT-2005				205	205		N = RPT-NONRECEIPT OF DMR/CS RPT	30-DEC-2005	2 = RE-BACK INTO COMPLIANCE	05-JAN-2006	E90 = NUMER VIOLATION NUMERIC VIC
30-SEP-2005				158	158						E90 = NUMER VIOLATION NUMERIC VIC
31-AUG-2005				218	218						E90 = NUMER VIOLATION NUMERIC VIC
31-JUL-2005				158	158		N = RPT-NONRECEIPT OF DMR/CS RPT	30-SEP-2005	2 = RE-BACK INTO COMPLIANCE	19-OCT-2005	E90 = NUMER VIOLATION NUMERIC VIC
30-JUN-2005				160	160						E90 = NUMER VIOLATION NUMERIC VIC
31-MAY-2005				108	108		N = RPT-NONRECEIPT OF DMR/CS RPT	30-JUL-2005	2 = RE-BACK INTO COMPLIANCE	22-AUG-2005	E90 = NUMER VIOLATION NUMERIC VIC
31-MAY-1999				56 7777	56						E90 = NUMER VIOLATION NUMERIC VIC
30-APR-1999				21	21						E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-1998				56 7777	56		N = RPT-NONRECEIPT OF DMR/CS RPT	30-JUL-1998	2 = RE-BACK INTO COMPLIANCE	03-JUN-1999	E90 = NUMER VIOLATION NUMERIC VIC

FACILITY NAME (1): STODDARD CO SEWER, INC **NPDES :** MO0096881
FACILITY NAME (2): CANE CREEK **LIMIT TYPE :** 5 = FINAL
PIPE NUMBER : FAC **SEASON NUM :** 0
REPORT DESIGNATOR : A **PARAMETER CODE:** 50050 = FLOW, IN CONDUIT OR THRU TREATMENT PLANT
PIPE SET QUALIFIER : 9 **MONITORING LOCATION :** 1 = EFFLUENT GROSS VALUE
MODIFICATION NUM : 0

MONITORING PERIOD END	DISCHARGE IND	QTY MAXIMUM	QTY AVERAGE	CONC MAXIMUM	CONC AVERAGE	CONC MINIMUM	RNC DETECTION	RNC DETECTION	RNC RESOLUTION	RNC RESOLUTION	MEASUREMEI VIOLATION

DATE							CODE	DATE	CODE	DATE	CODE
31-JAN-2008		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-DEC-2007		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-NOV-2007		.017	.017								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2007		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-SEP-2007		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-AUG-2007		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JUL-2007		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-JUN-2007		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-2007		.045	.045								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-APR-2007		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAR-2007		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
28-FEB-2007		.045	.045								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JAN-2007		.034	.034								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-DEC-2006		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-NOV-2006		.017	.017								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2006		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-AUG-2006		.017	.017								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL

31-JUL-2006		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-JUN-2006		.001	.001								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-2006		.034	.034								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-APR-2006		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAR-2006		.017	.017								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
28-FEB-2006		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JAN-2006		.034	.034				N = RPT-NONRECEIPT OF DMR/CS RPT	30-MAR-2006	2 = RE-BACK INTO COMPLIANCE	26-APR-2006	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-DEC-2005		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-NOV-2005		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-OCT-2005		.011	.011				N = RPT-NONRECEIPT OF DMR/CS RPT	30-DEC-2005	2 = RE-BACK INTO COMPLIANCE	05-JAN-2006	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-SEP-2005		.011	.011								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-AUG-2005		.017	.017								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-JUL-2005		.011	.011				N = RPT-NONRECEIPT OF DMR/CS RPT	30-SEP-2005	2 = RE-BACK INTO COMPLIANCE	19-OCT-2005	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-JUN-2005		.023	.023								E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
31-MAY-2005		.017	.017				N = RPT-NONRECEIPT OF DMR/CS RPT	30-JUL-2005	2 = RE-BACK INTO COMPLIANCE	22-AUG-2005	E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL
30-APR-1999											E00 = MEASUREMEN ONLY, NO VIOLATION N VIOL

Enforcement Actions

FACILITY NAME (1): STODDARD CO SEWER, INC **NPDES :** MO0096881

FACILITY NAME (2): CANE CREEK

ACTION	ACTION TYPE	ACTION DATE	STATUS	STATUS DATE	RESPONSE DUE DATE	DOCKET NUMBER	DATA SOURCE
69 = Other =XX4	S = STATE	01-JUN-1988	RE = RESOLVED	07-JUN-1988		M09688100000	

Evidentiary Hearings

FACILITY NAME (1) : STODDARD CO SEWER, INC **NPDES :** MO0096881
FACILITY NAME (2) : CANE CREEK

No PCS Evidentiary Hearing Information Found.

Pretreatment Inspections/Audits

FACILITY NAME (1) : STODDARD CO SEWER, INC **NPDES :** MO0096881
FACILITY NAME (2) : CANE CREEK

No PCS Pretreatment Inspections Found.