

Gilleland Creek Plan

On-site Sewage Facility Management Measure — Key Elements

Introduction

This document describes the key elements involved with the implementation of the management measure developed by the On-site Sewage Facility Work Group¹ to address potential bacteria loading in the Gilleland Creek Watershed. This following measure is one of the management measures proposed for the Gilleland Creek Plan:

- **Identify, prioritize, inspect, and bring into compliance malfunctioning on-site sewage facilities (OSSFs) in the Gilleland Creek Watershed**

These key elements for the OSSFs will be incorporated into the implementation strategy for the Gilleland Creek Plan which will include all of management measures to address bacteria loading in the Gilleland Creek Watershed.

The critical areas for the implementation of the On-site Sewage Facility Management Measure are the areas within the 100-year FEMA floodplain of Gilleland Creek and its tributaries, which includes Elm Creek, Decker Creek and Harris Branch. The watershed originates at Hillside Springs northwest of Pflugerville and drains to the southeast to its confluence with the Colorado River upstream of Webberville (Segment 1428).

An adaptive management strategy will be used to adjust the plan as needed since its initial implementation will demonstrate which management measures prove most effective given site-specific watershed conditions. The Texas Commission on Environmental Quality (TCEQ) will assess Gilleland Creek every 2 years as part of updating the Texas Water Quality Inventory and 303(d) List. As potential changes are made to the Texas Surface Water Quality Standards criteria for contact recreation and changes in the creek's water quality are observed, modifications to this plan will be made. This adaptive management strategy allows for stakeholders to learn and adapt the plan as progress is made. The ultimate goal is for Gilleland Creek's four assessment units to have sufficiently low E. coli loading that it can be useable for contact recreation.

Key Element #1

This element identifies the causes of the impairment, in this case the sources of bacteria that need to be controlled by the TMDL and plan.

Because no specific sources of the impairment were isolated during the Gilleland Creek TMDL monitoring period, this key element summarizes the results of the study in both dry and wet weather conditions to support the broad ranging approach developed for the Gilleland Creek Plan.

¹ Work Group members include representatives from the City of Austin, Travis County, LCRA, and TCEQ.

Sampling for the Gilleland Creek TMDL occurred between October 2005 and March 2006 and the results of this sampling during dry weather conditions in this period showed that the geometric mean concentration of *E. coli* exceeded the stream criterion (126 #/100 milliliter) at six out of the 10 sampling locations. The average of the exceedance (>126) was 38.5. Also, some dry weather samples exceeded the single sample criterion of 394 #/100ml. During these conditions, effluent from the wastewater treatment facilities makes up the majority (approximately 83 percent) of flow in Gilleland Creek.

In wet weather conditions, *E. coli* concentrations in all samples taken at the 10 sampling locations exceeded the geometric mean criterion. Using load duration curve analysis, LCRA staff determined that during high flow conditions (greater than 45 f³/second) and moderate flow conditions (between 16.5 f³/second and 45 f³/second), the water quality in the creek exceeded both the geometric mean and the single sample criterion. This analysis from the load duration curve showed that in order for the creek to meet the maximum allowable load of bacteria in high and moderate flow conditions, that reductions of 93 percent and 82 percent, respectively, are required. The majority of the *E.coli* bacteria loading to the watershed occurred during moderate to high flow (stormflow) conditions, which is indicative of nonpoint sources of bacteria.

This plan targets both point sources and nonpoint sources of bacteria contamination. The On-site Sewage Facility's Management Measure will reduce the contribution of malfunctioning OSSFs on in-stream concentrations.

Key Element #2

This element describes the on-site sewage facility management measure that will be implemented to limit bacteria loads to the Gilleland Creek Watershed.

The On-site Sewage Facility Work Group was created as a subcommittee to the Wastewater Facility Work Group to develop the measure to protect the Gilleland Creek Watershed from malfunctioning OSSFs. Work Group members included stakeholders representing the government jurisdictions that have the authority to review, permit, and inspect OSSFs

The following is a detailed description of the management measure to identify the location of the systems in the watershed, prioritize those systems that would have the most impact on water quality, and inspect those systems with the highest priority.

Identify Systems

Using available OSSF geocoded information, Travis County and City of Austin will identify OSSF facilities that need to be inspected. To identify OSSFs that are not currently permitted or mapped, Travis County and City of Austin will check and cross check available databases such as water-only utility records. Aerial views of the watershed may also be consulted to search for OSSFs that are not in a current database.

Travis County, a TCEQ authorized agent, has identified approximately 2,000 OSSFs within the Gilleland Creek Watershed that are within their jurisdiction. Sixty of these

systems are in the effective FEMA floodplain, making them a high priority for inspection. The City of Austin, also a TCEQ authorized agent, has identified approximately 45 OSSFs that are in the Gilleland Creek Watershed.

Prioritize for inspection

The On-site Sewage Facility Work Group developed a prioritization process to identify those systems that are more likely to malfunction and a priority for inspection. The prioritization process identifies older, illegal systems such as cesspools as a higher priority and newer aerobic systems that require that a maintenance contract as a lower priority. The process includes such factors as:

- Age of the system (if unknown, systems receive a higher priority)
- Whether a maintenance contract is in effect and enforced (if no maintenance contract is in place, receive a higher priority)
- Proximity to Gilleland Creek or its tributaries (if within 200 feet receive a higher priority)
- Flood zones (if located in zones A, AE or AO, receive a higher priority)
- Tract size (if less than 1/2 acre receive a higher priority)
- Whether the system is a commercial OSSF system (if a commercial system receives a higher priority than domestic systems)
- Soils in the area (if types Ib or IV receive higher priority)
- Whether a public water supply exists (if on public water supply, supply receives a higher priority due to a likely higher household water use)

See the Attachment I for the prioritization process spreadsheet.

Inspection process

The authorized agents, Travis County and the City of Austin, will notify OSSF owners to inform them of an upcoming inspection. They will use a common inspection form to ensure collection of consistent information. See Attachment 2 for the common inspection form.

During inspections, staff will walk the on-site systems' disposal areas to look for obvious signs of system malfunction. Portable global positioning systems (GPS) will be used to obtain the geographic coordinates for the inspected OSSFs that can be used in future databases or mapping.

Facilities that are malfunctioning and could be a potential source of bacteria contamination to Gilleland Creek will be handled in accordance with the authority of the authorized agent. Enforcement is based on the severity of the system malfunction. Those systems that present an immediate risk to human health or safety, such as surfacing untreated wastewater, must be corrected by the OSSF owner within 24 hours. The

immediate response on the part of the owner may include pumping out the OSSF while a long-term solution to the problem is developed. Lower risk violations such as a technical violation of the permit do not require an immediate response by the owner.

If a violation is found, the authorized agent will mail a “Notice of Violation” to the OSSF owner. Voluntary compliance is sought from the OSSF owner. If the OSSF owner does not voluntarily comply, the authorized agent then works with the owner to determine how to repair the system to achieve compliance. If needed, a second notice is mailed to the OSSF owner. Lastly, the county attorney’s office is brought in to contact the OSSF owner so that compliance can be achieved. The situation is verified to have been corrected through a follow up inspection by the authorized agent. Lastly, for those OSSFs that are not repairable due to site conditions, Travis County or the City of Austin will evaluate whether these systems can be connected into a central sewer system.

Mapping of information

GPS information collected during the inspection process will be mapped for future reference. In addition to mapping the location of all systems, an overlay will be developed identifying those holding certificates of convenience and necessity for water and wastewater service in the Gilleland Creek Watershed.

Key Element #3

This element estimates the potential bacteria load reductions that can be reduced with this management measure implemented in the Gilleland Creek Watershed.

This element estimates the potential bacteria load reductions that can be achieved by identifying, prioritizing, inspecting, and bringing into compliance OSSFs in the Gilleland Creek Watershed. The *E. coli* loading from malfunctioning OSSFs is estimated by using the following equation from U.S Environmental Protection Agency’s (EPA) 2001 *Protocol for Developing Pathogen TMDLs*.

$$\frac{\# \text{ counts}}{\text{day}} = (\# \text{ fail systems}) \times \frac{10^6 \text{ counts}}{100 \text{ ml}} \times 0.8 \times 0.125\% \times \frac{70 \text{ gallons}}{\text{person day}} \times \frac{\# \text{ persons}}{\text{household}} \times \frac{3785.2 \text{ ml}}{\text{gallon}}$$

Inputs and assumptions associated with this equation include:

- a. Total number of on-site sewage facility systems is 2045
- b. An 8 percent failure rate for OSSFs based on an EPA 2001 *Protocol for Developing Pathogen TMDLs* document. It is assumed that 164 failing OSSFs are found in the watershed.
- c. Fecal coliform concentration in OSSF effluent was estimated to be 10⁶/100 milliliters of effluent (Metcalf and Eddy, 1991, Canter and Knox, 1985, Cogger and Carlile, 1984). In general, *E. coli* concentrations are approximately 80 percent of fecal coliform concentrations. An *E. coli* concentration of 1000 colony forming

units (CFU/100) milliliter is assumed because some treatment level is expected from even malfunctioning OSSFs.

- d. 2.42 persons/household determined from 2000 U.S. census
- e. That all OSSF malfunctions impact Gilleland Creek though there is some treatment from even malfunctioning systems.

Given the assumptions and considerations shown above, the *E. coli* loading to Gilleland Creek from malfunctioning OSSFs would be 1.05×10^{11} counts/day. This loading value represents a 0.40 percent of the high flow load allocation as determined by the TMDL. The 1.05×10^{11} counts/day also represents 0.77 percent of moderate flow load allocation as determined by the TMDL.

If 25 percent of known on-site systems are inspected each year between 2010 and 2013 and malfunctioning systems are repaired or replaced, the expected load reduction of 2.62×10^{10} counts/day is possible each year. The location of the system and its proximity to the creek, as well as, the severity of the malfunction could result in a greater or lesser bacteria load to the water body than what is assumed in the above calculation.

Key Element #4

This element identifies technical and financial assistance and the authorities needed to implement this management measure the OSSF Management Measure for the plan.

In September 2008, House Bill 2482 was passed to allow all single-family homeowners to maintain their own OSSF system without training, unless they live in an area where the authorized agent's order prohibits the practice. In counties with a population of 40,000 or more, homeowners who elect to maintain their own system may lose that right if they violate the rules. The passage of the bill has implications to financial and technical aspects of this watershed plan. Travis County is considering and may require OSSF owners to attend training and to become certified in the maintenance of their OSSF system.

1. Technical assistance for education and training – Two workshops to educate OSSF owners will be led by LCRA in cooperation with Travis County and City of Austin. The goals of the workshops are to inform OSSF owners as to general use of the system, proper maintenance of their OSSF and how to identify when the system is malfunctioning. Local newspapers and Texas AgriLife would be used to advertise the workshop and the benefits of attending.
2. Financial assistance for education and training – Travis County and City of Austin will work with other stakeholders to provide press releases advertising the OSSF owner workshop.
3. Financial assistance for inspections – The inspection of these prioritized systems would be performed as a routine duty by Travis County and City of Austin staff. No additional financial outlay of resources is expected to be required to perform inspections of the OSSFs located within the Gilleland Creek Watershed. It is

envisioned that inspection of systems will be done a few systems at a time as time permits for Travis County and City of Austin OSSF staff.

4. Financial assistance for OSSF repair or replacement – Limited funds are available from two sources to help the OSSF owner to make repairs or replace a malfunctioning OSSF.
 - a. For financial assistance of malfunctioning OSSFs, the Austin Area Urban League Group (emergency home repair program) has a contract with the City of Austin Neighborhood Housing and Community Development. This venue may be a source of funding for affected OSSF owners. In order to receive grant funds, the applicant must be the owner of a house inside the City of Austin's limited ETJ and has the income of:
 - Less than \$39,850 for a one-person family
 - Less than \$45,500 for a two-person family
 - Less than \$51,200 for a three-person family
 - Less than \$56,900 for a four-person family
 - b. The Texas Department of Agriculture also has some funds available through the Office of Rural Community Assistance that may be of assistance. OSSF owners that live in certain rural areas of Travis County and meet income and age criteria may also be eligible for financial assistance to repair or replace a malfunctioning OSSF.

The TCEQ Supplemental Environmental Project Program is a potential funding source for the authorized agents to provide grants to OSSF owners to make necessary repairs.

Key Element #5

This element describes the education component to enhance the public understanding of the Gilleland Creek Plan and to encourage their participation.

For this management measure, the Education and Outreach Work Group identified and prioritized education activities and programs that would enhance those impacted most from this management measure – on-site system facility owners. The following is a summary of their recommendations.

Workshop for OSSF owners

Travis County and City of Austin will cooperate with stakeholders to plan and conduct two workshops to educate OSSF owners about the need to maintain their system.

Watershed workshop and tour

The Texas State University Texas Stream Team Stream Team² will host a watershed workshop and tour to enhance the public and stakeholder understanding of the watershed, to build support for accomplishing the Gilleland Creek Watershed Plan and to increase the public's knowledge of pollutant reduction activities. The watershed tour will include stops at flood control ponds retrofitted with automated controls, a wastewater treatment facility, natural features, an agricultural best management practice, and a water quality monitoring demonstration.

Distribution of educational material

Three existing LCRA educational booklets are available for distribution by Travis County and City of Austin. The City of Austin will distribute the booklet twice with monthly bills. Travis County will mail the booklet to OSSF owners with their permits or as a separate, direct mail out. The material includes, but is not limited to, the following:

- *How to Take Care of Your Domestic Septic Tank System, LCRA, 2003*
- *Commercial OSSF Care Manual, LCRA, 2004*
- *Understanding and Caring for Your Domestic Aerobic Treatment System, LCRA, 2007*

Web sites

The web site for the Consortium of Institutes for Decentralized Wastewater Treatment, a group of educational institutions cooperating on decentralized wastewater training and research efforts, contains useful information such as "*Homeowner's Guide to Evaluating Service Contracts*" and many operational checklists for the OSSF professional and owner. (See <<http://as01.ucis.dal.ca/cidwt/files/O&M2.htm>>).

LCRA's website also contains useful information for the OSSF owner. (see <www.lcra.org/water/quality/oss/faq_septic.html>).

Links to these web sites will be posted on both the LCRA and TCEQ Gilleland Creek TMDL project web sites.

Key Element #6

This element is a schedule with milestones for implementing this management measure.

Travis County, which has jurisdiction over approximately 2,000 of the known OSSFs in the Gilleland Creek Watershed, has agreed to inspect known systems by the year 2014. The City of Austin, another OSSF authorized agent, has also agreed to inspect the known OSSFs in their jurisdiction by 2014.

² Texas Stream Team, formerly, the Texas Watch Program, is a statewide water-quality monitoring network of concerned volunteers, partners, and institutions.

Table 1. Milestones for Implementation of the OSSF Management Measure

2010	Travis County and City of Austin will evaluate available data and develop a prioritized list of OSSFs to inspect. Prioritization of OSSFs will be accomplished via a spreadsheet. Travis County and City of Austin will inspect 10 percent of the highest priority OSSFs.
2011	Travis County and City of Austin will inspect 15 percent of the highest priority OSSFs. Identified malfunctioning OSSFs are to be repaired or replaced.
2012	Travis County and City of Austin will inspect the next 25 percent of priority OSSFs. Identified malfunctioning OSSFs are to be repaired or replaced.
2013	Travis County and City of Austin will inspect the next 25 percent of priority OSSFs. Identified malfunctioning OSSFs are to be repaired or replaced.
2014	Travis County and City of Austin will inspect the final 25 percent of the priority OSSFs. Identified malfunctioning OSSFs are to be repaired or replaced.

The authorized agent for Manor and Pflugerville is TCEQ. OSSFs within Round Rock's authorized jurisdiction are not located within the Gilleland Creek Watershed. See Key Element #10.

Key Element #7

This element highlights the interim, measurable milestones for the measure that will be used to determine its ongoing progress and effectiveness.

When an authorized agent (Travis County or the City of Austin) conducts an inspection of an OSSF and malfunctions are identified, a Notice of Violation is issued to the system owner. When the malfunction is corrected, the system is verified to have been corrected via a follow up inspection by the authorized agent.

2010: Travis County and the City of Austin will develop a prioritized list for the purpose of inspections of the known OSSFs in the watershed. The milestone is to inspect 10 percent of the OSSFs in 2010. Travis County and City of Austin will report the number of inspected OSSFs.

2011: Travis County and the City of Austin will provide a status report to the stakeholders through the LCRA Clean Rivers Program Steering Committee meeting demonstrating that the prioritization and inspection of the systems has begun. The milestone is to inspect 15 percent of the OSSFs in 2011. The report will include the number of inspections completed, and the number of malfunctioning systems identified, and the number repaired or replaced.

2012: Travis County and the City of Austin will receive response letters from failing system owners that the OSSF situation has been corrected. The annual goal is to inspect 25 percent of the known systems in the watershed in 2012.

2013: Travis County and the City of Austin will receive response letters from failing system owners that the OSSF situation has been corrected. The annual goal is to inspect 25 percent of the known systems in the watershed in 2013.

2014: Travis County and the City of Austin will receive response letters from failing system owners that the OSSF situation has been corrected. The annual goal is to inspect 25 percent of the known systems in the watershed in 2014.

The authorized agent for Manor and Pflugerville is TCEQ. OSSFs within Round Rock's authorized jurisdiction are not located within the Gilleland Creek Watershed. See Key Element #10

Key Element #8

This element defines the indicators that will be used to document improvements in water quality due to implementation of this management measure.

The indicator used to document water quality improvements is the following: A reduction in *E. coli* concentrations in the four Gilleland Creek assessment units.

Key Element #9

This element describes the monitoring component of the plan to determine the attainment of the water quality standards throughout the watershed.

The following summary describes routine water-quality monitoring activities for each of the four assessment units in the Gilleland Creek Watershed. The LCRA currently monitors in Assessment Unit 1 and 2 and proposes to begin monitoring in Assessment Unit 3. The TCEQ currently monitors in Assessment Unit 4. The purpose of this monitoring is to ensure that enough *E.coli* data is collected in each of the four assessment units to determine water quality standards attainment throughout the watershed.

Beginning with the 2010 assessment, TCEQ will require 10 sample results over a 7-year period to do a full assessment. If 10 samples are not available, TCEQ will use 10 years to obtain the minimum (10) number of samples. With less than 10 sample results, TCEQ can only identify a water body as a concern and not impaired.

Also included in this element is a summary of the City of Austin's monitoring activities and the Colorado River Watch Network (volunteer water-quality monitoring) program. An attached map illustrates these monitoring programs in the watershed.

Assessment Unit 1 (AU 1): From the Colorado River upstream to Taylor Lane

Site 17257, Gilleland Creek at FM 969 is downstream of Webberville Road/FM 969, east of Austin. It will be monitored on a bimonthly basis (six times per year). This is a current and historical site monitored by LCRA and will provide quality assured data for **AU 1**. This site has already compiled enough data for determination of standards attainment.

Assessment Unit 2 (AU 2): From Taylor Lane upstream to Old Highway 20.

Site 12235, Gilleland Creek at FM 973 south of the city of Manor will be monitored on a bimonthly basis (six times per year). This is a current and historical site monitored by LCRA, and will provide quality assured data for **AU 2**. There should be enough data for standards attainment determination for the 2010 assessment.

Assessment Unit 3 (AU 3): From Old Highway 20 to Cameron Road.

Site 12236, Gilleland Creek at US 290 north of Manor has been monitored historically and will potentially be continued by LCRA bimonthly (six times per year) starting in TCEQ's FY 2010. This site should provide quality assured data for **AU 3**. Monitoring at this site should produce enough data to determine standards attainment by the 2014 assessment.

Assessment Unit 4 (AU 4): From Cameron Road to the spring source.

Site 20474, Gilleland Creek at Northeast Metropolitan Park, southeast of Pflugerville (at the low water crossing 1.559 km north, 302 meters west to the intersection of Killingsworth Lane and Cameron Road) is a newly established site which TCEQ began monitoring in 2009. It will be monitored quarterly (four times per year). It will provide quality assured data for **AU 4** and should provide enough data to determine standards attainment by the 2014 assessment.

Other sources of data that may or may not be used in the assessment of Gilleland Creek for 305b/303d purposes include: water quality monitoring by City of Austin and monitoring conducted by Colorado River Watch Network volunteers. The City of Austin may submit monitoring results under the quality assurance of the LCRA Clean Rivers Programs Quality Assurance Project Plan. The City of Austin will discuss this possibility with the LCRA at the 2009 Clean Rivers Program Coordinated Monitoring Meeting. At present, Austin's *E.coli* data at an in-house, non-NELAC approved lab and therefore can not be used for assessment purposes but will be used by the City to calculate their Environmental Integrity Index, which is a tool developed to monitor and assess the ecological integrity of Austin watersheds. Water chemistry data is collected quarterly and biological and habitat surveys are conducted once per year in the summer.

Certified Colorado River Watch Network (CRWN) volunteer water quality monitors will submit to LCRA a minimum of six data points per year from the following sites: Gilleland Creek at Edgemere, Gilleland Creek below Bohl Park (12239), Gilleland Creek at Picadilly Lane (18763), Gilleland Creek at lower end of Gilleland Park at Railroad, and Gilleland Creek at Grand Avenue Parkway. CRWN data is not TCEQ quality assured and will not be used for assessment purposes. Since CRWN volunteer monitoring data provides more frequently collected data from more locations, it might be able to find problem areas that can be addressed by professional monitoring data collection efforts.

Key Element #10

This element provides the following list of entities responsible for implementing the On-site Sewage Facility Management Measure.

Travis County- is a TCEQ authorized agent for regulation of OSSFs.

- Prioritize the OSSFs that are located in the Gilleland Creek Watershed to identify those that are most likely to malfunction
- Notify OSSF owners that an inspection of their system will be performed.
- Inspect the OSSFs that have been prioritized
- Obtain GPS coordinates of systems that have been inspected.
- Notify the owner of any corrective action that is required to correct a system that is failing or needs to be repaired or replaced.
- Offer the landowner options that may be available to help fund major repairs
- Provide status reports to the responsible stakeholder entity.
- Provide educational material to OSSF owners.
- Identify those OSSFs that can be connected to a centralized wastewater treatment facility

City of Austin- is a TCEQ authorized agent for regulation of OSSFs.

- Prioritize the OSSFs that are located in the Gilleland Creek Watershed to identify those that are most likely to malfunction
- Notify OSSF owners that an inspection of their system will be performed.
- Inspect the OSSFs that have been prioritized
- Obtain GPS coordinates of systems that have been inspected.
- Notify the owner of any corrective action that is required to correct a system that is failing or needs to be repaired or replaced
- Offer the landowner options that may be available to help fund major repairs
- Provide status reports to the responsible stakeholder entity
- Provide educational material to OSSF owners
- Identify those OSSFs that may be connected to a centralized wastewater treatment facility

Cities of Manor and Pflugerville –The technical work group identified the portions of the cities of Manor and Pflugerville in the Gilleland Creek Watershed as missing pieces

Gilleland Creek On-site Sewage Facility Work Group
September 4, 2009

to the management measure. TCEQ staff offered to identify the authorized agent for these two cities. Once the authorized agent(s) are identified, they need to be contacted and brought into the process and included in the plan.

LCRA – will provide OSSF training to system owners in conjunction with Travis County and the City of Austin

Attachment I On-site Sewage Facility Prioritization Process

Date of evaluation:

Address:

Jurisdiction:

Age of system (in years) if unknown, enter 50

Maintenance contract in effect? (if yes enter 0, if no enter 50)

Property proximity to Gilleland Creek or tributary (in feet from centerline) _____ (with in 200 feet enter 100, 200feet to 300feet enter 50, more than 300 feet enter 0)

Flood Zone _____ (if A, AE, or AO enter 50, if X enter 0)

Tract size ____ acres (if less than 1/2 acre enter 50, between 1/2 and 1 acre enter 25, between 1 and 2 acres enter 10, greater than 2 acres enter 0)

Commercial system? If Yes enter 30, if No enter 0

Soils in which the system is located (for Type Ib or IV enter 10, for types II or III enter 0, if unknown enter 10)

Public water supply? If Yes enter 10, If No enter 0

0

Inspection Form

Date of inspection: _____ **Inspector/Agency:** _____

Address of property: _____

File/Unique Number: _____ **System Rank:** _____

Longitude: _____ **Latitude:** _____

Center of drainfield

Property in use?	Yes	Circle One No
Type of use: Residential Commercial: _____		
<small>Circle One</small>	<small>If commercial indicate type of use</small>	

Is surface water effectively diverted away from system and components?	Yes	Circle One No
Are system components free from settling or erosion?	Yes	No
Are system components properly covered/capped?	Yes	No
Comments: _____		

Is system free from encroachments?	Yes	Circle One No
If No, Type of encroachment? Paving Decks Easements Sprinkler Systems		
Livestock Pets Vehicular Traffic Other: _____		

Type of vegetation over drainfield? _____			
Condition of vegetation over drainfield?	Poor	Uneven	Excessive Circle One

Odor within 10-feet of perimeter of the system?	Yes	Circle One No
Source and description of odor: _____		
Mosquitoes or flies present?	Yes	No
Surfacing effluent?	Yes	No
Soil over drainfield saturated (no effluent surfacing)?	Yes	No

Comments:

