

***SEPTAGE RECEIVING  
OPERATING PLAN***

***FOR THE***

***CASS COUNTY BOARD OF PUBLIC WORKS***

***LAKES AREA SEWER AUTHORITY  
WASTEWATER TREATMENT PLANT***

**November, 2010**

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***Lakes Area Sewer Authority Wastewater Treatment Plant  
Cass County Board of Public Works  
Septage Receiving Operating Plan***

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Purpose

This plan has been developed in accordance with the regulatory requirements of Part 117, Septage Waste Servicers, of the Natural Resources and Environmental Protection Act, PA 451 of 1994 and pursuant to the requirements of Section 324.11715b of Part 117. The Lakes Area Sewer Authority (LASA) Wastewater Treatment Plant (WWTP) will start accepting domestic septage. The acceptance of septage will provide a valuable service to the greater Cass County and Van Buren County areas by promoting an environmentally safe method for the treatment and disposal of trucked waste and septage tank waste.

Location

The proposed Septage Receiving Facility is located within the limits of the LASA WWTP at 53550 Hemlock Lake Road, Marcellus, Michigan, 46067. See Exhibit A for a vicinity map indicating the location of the facility. The WWTP office phone number is (269) 646-9861. The Plant Superintendent and Operator is Mr. Jack Niemi of Infrastructure Alternatives, Inc. The LASA contracts with Infrastructure Alternatives, Inc. (IAI) for operation of its collection and treatment systems.

Background

The LASA WWTP design capacity (permitted) and raw sewage loadings (anticipated maximum and average day flows) are shown in the following table:

Item	Plant Design	Anticipated Sewage Loadings – Maximum Day	Anticipated Sewage Loadings – Average Day
Flow	0.250 MGD – NPDES, 0.313 MGD – Maximum Day	0.205 MGD (100 GPCD)	0.144 MGD (70 GPCD)
CBOD <sub>5</sub>	521.6 lbs/day (250 mg/L)	341.9 lbs/day (200 mg/L)	240.2 lbs/day (200 mg/L)
TSS	625.9 lbs/day (300 mg/L)	427.4 lbs/day (250 mg/L)	300.2 lbs/day (250 mg/L)

The LASA WWTP is an extended aeration treatment process plant using Schreiber Water equipment and controls to provide biological nutrient removal in one of two separate 0.250 MGD treatment basins. Each basin consists of a concentric aeration basin and clarifier unit. Under normal operations, the second redundant basin is capable of being converted into an aerobic digester (aeration conversion), to which septage discharges may be routed (in lieu of discharging to the headworks channel, for which capabilities also exist), and gravity thickener (clarifier conversion). Other processes and abilities at the facility include fine screening at the headworks channel, tertiary treatment/filtration, chemical feed equipment, ultraviolet disinfection, post aeration (cascade and mixer), sludge dewatering, aerated sludge storage/tankage, and laboratory services. A holding tank and pump, additional screening equipment, controls, fence operators, and surveillance equipment were also added as part of the septage receiving station construction. The LASA WWTP is regulated by the MDNRE under NPDES permit MI0058623.

Septage Receiving Station Location and Description

The septage receiving station will be accessed by passing through the gate on the entry drive for the LASA WWTP at 53550 Hemlock Lake Road. The gate is equipped with a numerical keypad, the password for which will be changed by the Plant Operator from time to time and provided to the haulers

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as needed. Surveillance equipment will monitor and track each vehicle and truck entering the facility. Once a truck passes through the gate, it will continue straight forward and merge/pull-off onto the trapezoidal drive area located south of the entry drive and in front of the Septage Receiving Building. There the driver will see the receiving port and control panel for the receiving equipment and park his truck accordingly to unload. The receiving equipment consists of a rock trap, automatic flow control valve, flow meter and fine screen. The equipment was designed so a grinder unit, auto sampler and/or pH probe can be added at a later point in time. A drawing of the screening equipment is included as Exhibit B. The fine screen will convey and dewater the screenings into a receptacle for disposal at a landfill. Each hauler will be issued an individual card to activate this equipment by use of a card reader located on the exterior of the Septage Receiving Building. The equipment will then track each truck load and volume discharged from which billings will be generated. The screened septage is then discharged to the Septage Holding Tank, with a capacity of 23,500 gallons, before being discharged to the treatment basins at a controlled rate. The WWTP facility from the entrance gate to the septage receiving area will be under video surveillance and recorded at all times. A map showing the overall layout of the WWTP is attached as Exhibit C.

After each discharge, the hauler is required to empty the contents of the rock trap into the provided dumpster and report to the operator any incidental spills within the containment area during the discharge process. Incidental spillage shall be cleaned and hosed down by the hauler.

***Septage Receiving and Treatment Process***

The LASA WWTP will have a 400+/- gallon per minute (gpm) maximum unloading rate with a design capacity of 10,000 gallons per day assuming the above stated Maximum Day Anticipated Sewage Loadings/Flows for the current service area. Raw sewage flows below the anticipated flows and loadings will result in additional available capacity for septage, to be evaluated and determined by the Plant Operator on a daily basis. The capacity for domestic septage was figured anticipating 6,500 mg/L CBOD<sub>5</sub> and 13,000 mg/L TSS. The LASA WWTP septage receiving station does not place the initial loading of the septage into the treatment process via the headworks screen. Instead, the septage will normally be mixed with the waste activated sludge from the clarifiers. This mixture of waste sludge and septage is aerated in one of the two Schreiber GR basins that are designated as the digester until stabilized. From the digester (converted aeration basin), the mixed sludge will then be transferred to the concentric clarifier that will act as a gravity thickener. The decant from the clarifier is taken back to the head of the treatment process. The aerated mixture of waste sludge and septage solids will be drawn from the clarifier hopper and pumped to an aerated sludge storage tank or directly to the dewatering unit. The ultimate disposal of the mixture of waste sludge from the treatment process and septage solids, whether passing through the sludge storage tank or directly to the dewatering unit, will be by landfill disposal. The Operator will annually review the cost and environmental considerations between landfill disposal and land application, which may result in a change from the initial landfill disposal to land application at some future date. The facility has been designed to permit either option.

***Septage Receiving Hours of Operation***

The operating hours for the receiving station will be 24 hours per day and 7 days a week for those haulers with an approved Discharge Authorization Permit and issuance of the proper gate access password and key card for operation of the receiving equipment. Each hauler will be required to fill out a credit application for proper billing and prepayment, if desired, and provide proof of proper insurance and provide a performance bond, if required by LASA, to obtain a Discharge Authorization Permit. Upon completion and approval of this process, the hauler will be issued a gate access password to enter the

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WWTP facility and a swipe card to operate the receiving equipment. Haulers that do not go through this process will only have access to the receiving station during normal business hours of Monday through Friday, 8:00 am to 4:00 pm, with no holiday dumping service. Individual dumping of recreational vehicle holding tanks will only be allowed during normal business hours.

***Septage Accepted***

Septage and hauled waste can be a high variety of materials, which may include grit, organics, suspended solids, and grease. The LASA WWTP Septage Receiving Station will accept the following: (a) domestic septage pumped from home septic tanks, recreational vehicles (RV's), cesspools, portable toilets, type II marine sanitation devices, or similar storage; (b) domestic treatment plant septage; (c) sanitary sewer cleanout septage.

Recreational Vehicle (RV) holding tanks, directly from the RV, will be accepted during normal WWTP operating hours of Monday through Friday, 8:00 am to 4:00 pm, with no holiday dumping service.

***Sampling***

The sampling of domestic septage will be on a random basis. The LASA and WWTP Operator reserve the right to sample any and all domestic septage discharged to the LASA WWTP. If the waste appears to be other than domestic septage, in the opinion of the plant Operator, the hauler will be instructed to immediately leave the site and will not be allowed to discharge.

***Regulatory Structure***

Septage haulers are regulated by the Septage Receiving Station Ordinance. The LASA and member municipalities (Marcellus and Volinia Townships, Cass County and Porter Township, Van Buren County) have made the proposed Ordinance available for review during normal business hours at the LASA WWTP and have posted the proposed Ordinance on the Wightman & Associates, Inc. web site at [www.wightman-assoc.com/lasa.html](http://www.wightman-assoc.com/lasa.html).

***Fee Structure***

The fee structure will be set from time to time by the LASA. The basis for the fee structure will be as follows:

- 1) Individual Recreation Vehicles will pay a per time dump fee comparable to the local campground dumping station. The charge will be \$10.00 per dump.
- 2) Haulers of domestic septage as described above will pay a per gallon charge based on annual OM&R (operation, maintenance and replacement) cost analyses determining the Septage Receiving Station contribution thereto. This will include evaluating the costs of the Septage Receiving Station components, a portion of the treatment facility that is handling the solid's disposal, aeration cost requirements due to the additional biological loadings from the septage, and the processing of supernatant from the solids handling. In addition, the rates are structured to include debt repayment for the construction costs associated with the Septage Receiving Station. The rate will be set at \$0.07 per gallon. A discount will be given for pre paying based on the following chart:

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Prepay Gallons	Prepay Rate
100,000	\$0.069
250,000	\$0.068
500,000	\$0.067
750,000	\$0.066
1,000,000	\$0.065

The LASA and Operator reserve the right to change any and all fees for the septage receiving facility, with any increase in rates to be posted a minimum of 30 days prior to increase.

Service Area

The service area for the LASA WWTP Septage Receiving Station will cover a 25 mile geographic area as shown on the attached Exhibit D. The service area includes a majority of Cass and Van Buren Counties and portions of Kalamazoo, St. Joseph, and Berrien Counties.

Hauler Registration

All haulers must register with the LASA WWTP prior to discharge. In addition to registration, the hauler will need to pick a four (4) digit PIN number (for Discharge Authorization Permit holders) that is unique to the hauler and receive training on the discharge facilities (all haulers). The hauler will also need to supply billing address and information requested.

Discharge Verification

The hauler must fill out for each load the provided “Hauled Waste Tracking and Discharge Ticket” (see Exhibit E). The required information shall include identification of the hauling company, truck and driver I.D., origin of septage discharge, including name, address and volume of septage of each location pumped into the truck load, and time and date the septage tank(s) were pumped out. The driver will need

to sign the certification on the ticket attesting to the information contained thereon and certifying the following statement:

“I hereby certify that the waste hauled is from the above locations in the stated quantity and is residential domestic waste only, unless noted, and agree to abide by the conditions of discharge as outlined in the LASA Septage Receiving Operating Plan.”

Hauler Responsibility

The hauler is responsible for leaving the discharge site as clean as or cleaner than they found it. The hauler shall not operate any of the equipment at the WWTP except as trained and instructed to do.

Discontinuance of Service

If the WWTP is unable to treat the volume of trucked waste for any reason, the LASA reserves the right to temporarily limit or discontinue trucked waste discharge at any time. Haulers are responsible for the lawful and environmentally safe disposal of their waste. The LASA reserves the right to discontinue any

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discharge that does not meet this Operating Plan or overwhelms the aeration, solids, or odor control systems.

***State Business License***

Commercial septage haulers wishing to dispose of their septage waste at the LASA WWTP must have a valid State issued business license to remove and transport septage.

***Discharge Authorization Permit***

Commercial septage haulers wishing to dispose of their waste at the LASA WWTP on a 24 hour per day-7 day per week basis must have a valid LASA issued Discharge Authorization Permit. In addition to giving the owner or operator of a hauler's business permission to discharge septage, the permit provides the standards and conditions under which that permission is given. An application for a permit may be obtained by contacting the LASA WWTP at (269) 646-9861. A permit will not be issued to a commercial septage hauler if the hauler does not have an appropriate State license(s) for hauling septage. The Discharge Authorization Permit shall be in effect for the period of time specified by the LASA WWTP except where that permit has been revoked or voided, or where suspended by order of the plant operator for due cause. Discharge Authorization Permits shall be voided upon transfer of business ownership. A Discharge Authorization Permit issued to a septage hauler is void upon the issuance of a new Discharge Authorization Permit to that hauler. A Discharge Authorization Permit will not be issued to a hauler who has had their permit cancelled due to non compliance with the Septage Receiving Operating Plan for a period of one (1) year.

***Cancellation***

Failure to comply with any requirements of the Septage Receiving Operating Plan shall be grounds for immediate cancellation of the Discharge Authorization Permit.

***Security***

All haulers are subject to video surveillance at the unloading station. The surveillance is to record improper disposal procedures by any hauler. The LASA WWTP may suspend waste deliveries based on Federal Department of Homeland Defense national threat level notifications or require picture identification prior to authorization to discharge.

***Right of Refusal***

The LASA WWTP may at its discretion refuse any septage waste deliveries that, in its opinion, could negatively impact the operation of the WWTP.

***Septage Volume***

The LASA WWTP will accept up to 10,000 gallons per day total combined acceptable septage waste from all authorized and registered haulers. A single delivery shall not exceed 5,000 gallons. The septage hauler shall discharge at a rate not greater than 400 gallons per minute.

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***Outstanding Invoices***

No septage waste will be accepted from septage haulers having outstanding invoices over 30 days. Service may resume once the hauler has demonstrated that all current invoices have been paid.

***Plan Revisions***

The LASA WWTP reserves the right to revise this document at any time. Revisions will be posted at the WWTP and provided to septage haulers holding a valid Discharge Authorization Permit by email.

***Termination of Service***

The LASA WWTP reserves the right to discontinue accepting septage waste at any time. The LASA WWTP will provide septage haulers holding valid Discharge Authorization Permits with at least 45 days advance notice of the termination.

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*Septage Receiving Operating Plan Approval Process*

**Public Notice** – Marcellus News – November 18, 2010  
Courier Leader – November 19, 2010

**Posting** – Lakes Area Sewer Authority Wastewater Treatment Plant and Wightman & Associates, Inc. Website ([www.wightman-assoc.com/lasa.html](http://www.wightman-assoc.com/lasa.html)) – November 18, through December 19, 2010

**Notifications** – November 18, 2010  
Berrien County  
Berrien County Health Department  
Bainbridge Township, Berrien County  
Berrien Township, Berrien County  
Niles Charter Township, Berrien County  
Watervliet Charter Township, Berrien County

Cass County  
Van Buren/Cass County District Health Department  
Village of Cassopolis, Cass County  
City of Dowagiac, Cass County  
Village of Edwardsburg, Cass County  
Village of Marcellus, Cass County  
Village of Vandalia, Cass County  
Calvin Township, Cass County  
Howard Township, Cass County  
Jefferson Township, Cass County  
Lagrange Township, Cass County  
Marcellus Township, Cass County  
Mason Township, Cass County  
Milton Township, Cass County  
Newberg Township, Cass County  
Ontwa Township, Cass County  
Penn Township, Cass County  
Pokagon Township, Cass County  
Porter Township, Cass County  
Silver Creek Township, Cass County  
Volinia Township, Cass County  
Wayne Township, Cass County

Kalamazoo County  
Kalamazoo County Health Department  
City of Kalamazoo, Kalamazoo County  
City of Parchment, Kalamazoo County  
City of Portage, Kalamazoo County  
Village of Schoolcraft, Kalamazoo County  
Village of Vicksburg, Kalamazoo County  
Alamo Township, Kalamazoo County  
Brady Township, Kalamazoo County

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*Wightman & Associates, Inc.*

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Climax Township, Kalamazoo County  
Comstock Charter Township, Kalamazoo County  
Cooper Township, Kalamazoo County  
Kalamazoo Charter Township, Kalamazoo County  
Oshtemo Charter Township, Kalamazoo County  
Pavilion Township, Kalamazoo County  
Prairie Ronde Township, Kalamazoo County  
Schoolcraft Township, Kalamazoo County  
Texas Charter Township, Kalamazoo County  
Wakeshma Township, Kalamazoo County

Van Buren County  
Village of Decatur, Van Buren County  
Village of Gobles, Van Buren County  
City of Hartford, Van Buren County  
Village of Lawrence, Van Buren County  
Village of Lawton, Van Buren County  
Village of Mattawan, Van Buren County  
Village of Paw Paw, Van Buren County  
Almena Township, Van Buren County  
Antwerp Township, Van Buren County  
Arlington Township, Van Buren County  
Bangor Township, Van Buren County  
Bloomingdale Township, Van Buren County  
Decatur Township, Van Buren County  
Hamilton Township, Van Buren County  
Hartford Township, Van Buren County  
Keeler Township, Van Buren County  
Lawrence Township, Van Buren County  
Paw Paw Township, Van Buren County  
Pine Grove Township, Van Buren County  
Porter Township, Van Buren County  
Waverly Township, Van Buren County

**Submittal to County Health Departments – November 18, 2010**

**Approval by Cass County Board of Public Works – December 15, 2010**

**Approval by Lakes Area Sewer Authority – December 20, 2010**

**Sent to MDNRE for Approval – December 21, 2010**

**Anticipated Approval from MDNRE and Begin Accepting Septage – January 28, 2011**