

**CAYUGA COUNTY HEALTH & HUMAN SERVICES  
ENVIRONMENTAL DIVISION  
WASTEWATER TREATMENT SYSTEM  
INSPECTION PROTOCOL**

This document provides a protocol for conducting wastewater treatment system inspections. This protocol is to provide a minimum procedure for compliance with the inspection requirements of the Cayuga County Sanitary Code effective August 9, 1994. Inspections will consist of three primary parts: 1. property and system information, 2. an owner interview and 3. inspection of the site. The Cayuga County Wastewater Treatment System Inspection Form must be used for recording all information.

**1. PROPERTY & SYSTEM INFORMATION**

- 1.1 Review available records from the Cayuga County Health & Human Services Environmental Division. This may include documentation of the date the system was installed or repaired, approved plans, previous inspection reports, etc. The inspector must enter this information in the appropriate items on the inspection form. Also, when the inspector calls to request available information, the Health Department can tell the inspector whether a property transfer inspection is required at this property.
- 1.2 If the records are insufficient, the property and system information will need to be obtained from the owner interview.
- 1.3 The information to be provided on the assessment form should be considered the minimum required information. The inspector must make every effort to complete as much information on the form as possible to accurately describe the site and system. Professional judgment must be used to provide additional information beyond that requested to ensure the site assessment is valid and useful.
- 1.4 Multiple dwellings with multiple systems will require separate reports for each dwelling. The inspector must inquire if other structures on the property have a septic system.

**2. OWNER INTERVIEW**

- 2.1 Ask the owner if they need a routine or property transfer inspection. If the owner has purchased the home since the last inspection, they may need a property transfer inspection. Call the Health Department if there is any question.
- 2.2 Notify the owner if a failed system is discovered, the Health & Human Services – Environmental Division will be informed by the inspector within one business day of the inspection. A failure occurs if the evidence of dye or wastewater effluent is observed.

- 2.3 Ask "Owner Interview" questions and enter the information on the assessment form.
- 2.4 Again, the listed questions should be considered a minimum. The inspector must use professional judgment in evaluating the responses from the owner. If the owner's responses are vague or inadequate, the inspector should ask additional questions to ensure clear and truthful answers.
- 2.5 Make every effort to determine if a drainage pipe is public or private. It may be necessary to contact the Town or Village. (The question regarding whether a drainage pipe is public or private is only of concern for properties fronting Owasco Lake & Little Sodus Bay due to the drainage pipe testing requirements at those locations).
- 2.6 The questions regarding water supply are intended to determine if the well may run out of water during the dye test.

### **3. INSPECTION**

One of two types of inspections is to be conducted: Routine or Property Transfer/Refinance. These procedures are recommended guidelines and should be considered minimum. Professional judgment must be exercised in conducting these inspections. Some items may require a more thorough inspection and investigation than indicated by these procedures. Winter inspections shall be performed only after the inspector evaluates the conditions of the site and makes a determination based upon his/her professional judgment that the test will be a valid test.

Note: The Environmental Division does not require a refinance inspection; however, if the lending institution requires an inspection, the Division requires that the inspection be performed by a certified county inspector following this protocol.

#### **INSPECTION TYPES**

- 3.0.1 Routine – conducted every two, three, five or seven years according to the schedule established by Cayuga County Sanitary Code.
- 3.0.2 Property Transfer/Refinance – conducted when a property is transferred as described in the Cayuga County Sanitary Code. Inspection should be performed prior to any recent pumping of septic tank. (See also section 3.3.3.3 for related information).

Assessments will include: 1. inspection of the interior plumbing, 2. inspection of the wastewater treatment system, 3. dye testing, 4. drainage pipe discharge testing (only for properties bordering the M.H.W.M. of Owasco Lake or Little Sodus Bay).

- 3.0.3 Indicate on the assessment form the type of inspection conducted by checking the appropriate box.
- 3.0.4 Differences between information provided by the owner in the interview, Division records, and information obtained from the inspection should be noted on the assessment form, page 5.

### **3.1 Interior Plumbing**

- 3.1.1 Inspection of the interior plumbing should be conducted for both Sanitary Code and Property Transfer inspections.
- 3.1.2 Check all plumbing discharges from the house; look in the cellar, on the first floor, second floor, crawl space, etc. for fixture discharges. Ensure they all lead to the main plumbing discharge to the system. If the inspector is unable to check the plumbing, it should be noted on page 5 of the assessment form.
- 3.1.3 Look for separate systems for the kitchen, second bathroom, etc.
- 3.1.4 Run water from as many fixtures as possible and listen to the discharge of water into the system being checked.
- 3.1.5 Indicate on the inspection form if all wastewater discharges to one septic system or multiple septic systems. If there are multiple systems, please note in space provided for question #29 or in the comment section.
- 3.1.6 Look for any discharges of storm water to the septic system (e.g. footing drains, sump pumps, roof downspouts, etc.).
- 3.1.7 Check in the basement or crawl space for evidence of wastewater having backed up into the building at any time.
- 3.1.8 If needed to clarify the interior plumbing, provide a simple sketch or brief comment on the inspection form.

### **3.2 Wastewater Treatment System**

- 3.2.1 Confirm the septic tank location (as best as possible). Look for depression in ground, vegetation difference (sparse or missing vegetation), smell for odors, etc..
- 3.2.2 Confirm the distribution box location (as best as possible).
- 3.2.3 Confirm the absorption area location (as best as possible). Look for depressions in ground, vegetation differences (lush growth, vivid color), etc.

- 3.2.3.1 Look for evidence of failures (odors, seepage, discharge from a sand filter, saturated soils, lush vegetation, etc.).
- 3.2.3.2 Is the area adequately drained? Can runoff enter the system either by surface or subsurface flow? Are there upland areas where rainfall can flow into the absorption area? Can flooding or high water affect the absorption area (i.e. lake shore, low lying areas?)
- 3.2.3.3 Inspect areas adjacent to the absorption area for the evidence of failures or outbreaks, including but not limited to road ditches, wet areas, springs, creeks, ponds. Are areas with excessive or tall vegetation evident?
- 3.2.3.4 Confirm any evidence of direct discharge from the system to surface waters, such as a lake, creek, spring, road ditches, etc..
- 3.2.3.5 Inspect unimproved or undeveloped areas on the property or on adjacent property for evidence of overflow piping (cheater pipes) or direct discharge from the system. Certain conditions may require the inspection of storm drainage pipes or ditches along roadways some distance from the system being inspected.
- 3.2.3.6 Look for any evidence of shallow bedrock (outcrops, ditches, creek beds, etc.) and any evidence of discharge from the system to bedrock.
- 3.2.3.7 Check for pumps or dosing siphons. Check if there is an alarm. Check for any overflows (via piping or on the ground surface). Check if pump appears to operate properly.
- 3.2.3.8 Document any drainage piping on the property including the sizes, lengths, inlet and outlet locations and other data on the inspection form sketch. Confirm if testing of the drainage piping discharge is required, as described in these procedures. Inspect this piping prior to dye testing. Confirm any evidence of discharge from the septic system to this drainage piping.
- 3.2.3.9 If system has holding tank, if possible, lift cover off tank to determine depth of liquid in tank and record.

Comment on the level and frequency of pumping the holding tank.

3.2.4 Provide comments and a sketch of the site and system on the comment page and sketch sheet provided with the inspection form. Include all pertinent data and information.

3.2.4.1 Locate the septic tank, distribution box, pumps or dosing siphons and absorption area with respect to dwellings, buildings, property lines, watercourses, well(s), and other important items on the property and adjacent properties.

3.2.4.2 Locate the presence of any drainage pipes on the sketch.

3.2.4.3 Document separation distances from system components, as indicated in Appendix 75-A of the State Health Law.

3.2.4.4 Note any suspected failure area(s) on the sketch.

3.2.4.5 Note any drainage or topography problems, which may affect the system. Indicate direction of slope on sketch using arrows. Indicate "North" on sketch.

3.2.5 Answer the "General Information" questions on the inspection form.

3.2.6 The inspectors are encouraged to take photographs.

### **3.3 Dye Testing**

3.3.1 A dye test shall be performed as part of either the Routine or Property Transfer/Refinance inspection procedures.

3.3.2 In the event that adjacent systems have been inspected recently, the site should be evaluated for any evidence of dye from these adjacent systems before entering dye into the system that is being inspected.

3.3.3 Flow Volume and Rate.  
The inspector will need to inform the owner concerning the volume of water required and the rate of flow for the dye test. Verify with the system owner that the water supply is adequate for the required flow volume. The rate of flow shall not exceed 5 gals/minute.

3.3.3.1 **Routine Inspection** – For a residence, a volume of 20 gallons per bedroom, up to a **maximum** total of 100 gallons, shall be entered into the system within a 2-hour period for the dye test. If the home is seasonal, the dye test shall be performed during periods of maximum occupancy that is typical for that household. Explain these periods. For holding tank systems, only minimum flows will be required to assure flow of dye to holding tank. If the holding tank system has a separate gray water system, the flow volume into the gray water system will be only one half of the required amount.

3.3.3.2 **Property Transfer / Refinance Inspection**

**Occupied Property** A property that has been occupied and system used for the past 15 consecutive days. **A property used only on weekends/holidays is not considered occupied.**

Flow volume for an occupied property shall be 75 gallons per bedroom, or a **minimum of 150 gallons** and shall be entered into the system within a 3 hour period for the dye test. For holding tank systems, only minimum flows will be required to assure flow of dye to holding tank. If the holding tank system has a separate gray water system, the flow volume into the gray water system will be only one half of the required amount.

**Unoccupied Property** A property that is not occupied as defined above. Seasonal properties not occupied and used for the past 15 consecutive days will require a three-day test.

Flow volume for an unoccupied property shall be 150 gallons per bedroom. This volume of water shall be entered into the system within a 6-hour period each day for 3 consecutive days. For holding tank systems, only minimum flow shall be entered for a 1-day period to assure flow of dye to holding tank. If the holding tank system has a separate gray water system, the flow volume into the gray water system will be only one half of the required amount for 3 consecutive days.

3.3.3.3 Pumping of septic tanks shall not be performed prior to Property Transfer/Refinance Inspection. If the pumping has been completed and the property is

occupied, the inspector must wait 30 days from the date of pumping prior to conducting the dye test. If the property is unoccupied, the inspector must ensure the tank is refilled prior to the performance of the three-day dye test.

- 3.3.3.4 Assessments for unoccupied properties will be accepted by the Environmental Division, but there is no valid test known for an unoccupied home. It is in the best interest of the owner to have the inspection conducted while the property is occupied.
- 3.3.3.5 The Environmental Division shall consider assessments valid for a period of 12 months.
- 3.3.3.6 If the property has separate (dual) systems, split the required flow volume proportionally between the systems.
- 3.3.3.7 When conducting inspections on commercial and other non-residential property, refer to the State DEC Standards and your own professional judgment for determination of flow volume.
- 3.3.4 Run water from as many fixtures as necessary to confirm discharge to the system as determined by best professional judgment and indicate on the inspection form which fixtures were turned on.
- 3.3.5 Introduce dye into the system through one or more fixtures. If there is doubt concerning connection of a fixture(s) or a separate dwelling to the system, use a separate color dye for these fixtures. Indicate on the inspection form into which fixtures dye was introduced.
- 3.3.6 Use a fluorescent dye. Use a minimum of 1 fluid ounce if liquid powder dye is used. Use a minimum of 0.5 of an ounce if concentrated dry powder dye is used. The inspector should be proficient in using the dye to ensure the fixtures or building is not stained.
- 3.3.7 Document the time of dye introduction, time of flow and flow volume on the inspection form.
- 3.3.8 Inspect the absorption area and any lakes, road ditches, springs, ponds, creeks, drainage piping outlets and unimproved or undeveloped areas on the property, etc. as described in the system inspection procedures to determine any evidence of dye or wastewater.

- 3.3.9 Re-inspect the site if necessary to find any evidence of dye or wastewater. Professional judgment should be used in determining when to re-inspect the site. The duration of time will depend on the nature of any suspected failure and the time of year. It may take as much as a week for the dye to appear. Multiple re-inspections may be needed if warranted by the weather, the system or the site. If system is a holding tank a re-inspection is required.
- 3.3.10 Ensure any evidence of dye is not from a recent inspection of an adjacent or neighboring property.
- 3.3.11 Document on the inspection form any evidence of dye from the initial inspection or re-visit.
- 3.3.12 Show the system owner evidence of dye or wastewater.

#### **3.4 Drainage Pipe Discharge Testing**

- 3.4.1 *This testing is required only for properties bordering the mean high water mark of Owasco Lake and Little Sodus Bay, as described in the Cayuga County Sanitary Code.*
- 3.4.2 This testing is required as part of either the Sanitary Code or Property Transfer inspections.
- 3.4.3 All drainage piping on the property should be documented with the sizes, lengths, inlet and outlet locations and other data noted on the inspection form sketch.
- 3.4.4 The discharge from all private drainage piping must be sampled and tested for fecal coliform. Each drainage pipe must be sampled and tested separately.
- 3.4.5 The inspector must obtain the sample bottle(s), take the sample(s) and submit the sample(s) to the lab. Sampling procedures as described by the laboratory must be followed. The inspector should be familiar with normal protocol for preservation and storage of coliform samples. The samples must be kept below 10 degrees C. and processed by the lab within 6 hours of sample collection. The inspector will need to keep the samples on ice and time the inspection so that the sample is delivered to the lab within 6 hours.
- 3.4.6 The fecal coliform test must be performed by a NYS Department of Health certified laboratory. The results of the test should be noted on the lab report and Chain of Custody documentation attached to the inspection report. In no circumstance will the owner be allowed to take or submit samples. (A current list of

NYSDOH certified labs can be obtained from the Environmental Health office).

- 3.4.7 If a result of greater than 200 fecal coliform colonies/100ml is obtained, re-sampling should be conducted and documented on the inspection form.

### 3.5 Lake elevation Determination

- 3.5.1 For those properties bordering the mean high water mark of Owasco Lake, Little Sodus Bay, Cross Lake, Cayuga Lake and Skaneateles Lake, inspectors shall determine the Lake elevation for the date of inspection by calling one of the following telephone numbers:

Owasco Lake	Auburn Filtration Plant	315-253-8754
Little Sodus Bay	Army Corp of Engineers	716-879-4199 716-879-4333
Cross Lake and Cayuga Lake	NYS Thruway (ask for USGS Datum)	315-438-2304
Skaneateles Lake	City of Syracuse Water Dept.	315-685-6486

- 3.5.2 The location of the Owasco Lake Mean High Water Mark shall be determined by subtracting the current day elevation from 717.13 and then sighting this height difference in elevation onto the shore or retaining wall from the edge of the lake level for that day.
- 3.5.3 The location of the Little Sodus Bay Mean High Water Mark shall be determined by subtracting the current day elevation from 248.20 and follow the same procedure as stated above.
- 3.5.4 The location of the Cross Lake Mean High Water Mark shall be determined by subtracting the current day elevation from 376.13 and follow the same procedure as stated above.
- 3.5.5 The location of the Cayuga Lake Mean High Water Mark shall be determined by subtracting the current day elevation from 383.05 and follow the same procedure as stated above.
- 3.5.6 The location of the Skaneateles Lake Mean High Water Mark shall be determined by subtracting the current day elevation from 863.27 and follow the same procedure as stated above.
- 3.5.7 All distances from the absorption area to the lake or bay will be referenced to the Mean High Water Mark for the property and **not** the edge of the lake level for that day.

### **3.6 System Failure**

- 3.6.1 After completion of the inspection, the inspector must make a determination, using his professional judgment, if the wastewater treatment system is in failure as described under Article 5 Section II, part 14 of the Cayuga County Sanitary Code.
- 3.6.2 If the system is a sand filter with a discharge pipe and there is evidence of any flow from the pipe, the system is in failure.
- 3.6.3 The inspector must report a failure of the system within one (1) business day of the inspection. A failure is defined as evidence of dye and/or wastewater on the ground surface or in a watercourse.**

### **3.7 System Site Plan Sketch**

- 3.7.1 A system site plan sketch shall be prepared on graph paper provided by the Environmental Division, drawn to indicated scale with a sharp pointed pencil or pen and straight edge or ruler. The sketch shall show property lines, buildings, other structures, roads, driveways, septic tank(s), distribution box(s), pump basin(s), leaching device(s), drainage pipes (both private and public), wells, ditches, streams, lake elevation for day of inspection, Mean High Water Mark and other pertinent physical features. Include all dimensions where possible. Indicate direction of all slopes and which way is "North".

## **4. INSPECTOR INFORMATION AND VERIFICATION**

- 4.1 At the end of the inspection form, the inspector shall provide any additional information necessary for the Environmental Division to evaluate the inspection. This includes general comments, problems found, conflicts in information between the records, the owner, and/or the inspection. Provide the name and signature of the inspector. A disclaimer statement is provided to indicate the inspection provides no warranty of the operation of the wastewater treatment system.
- 4.2 The inspector may utilize an assistant, but the certified inspector must personally conduct the inspection. The inspector cannot simply oversee an inspection conducted by an assistant.
- 4.3 An inspector shall not inspect the wastewater treatment systems serving property that he/she owns or is owned by spouse, parents, siblings or children.
- 4.4 Inspectors who work for interested third parties in regards to property

transfers shall not conduct inspections on properties in which they or their employers have an interest in the transaction.

- 4.5 All **inspection reports must be submitted** to the Cayuga County Health Department – Environmental Division **within 30 business days** of the indicated date of inspection. An original report must be submitted, not copies of the Inspection Report.
- 4.6 Inspectors shall not claim, verbally or by any action, that a routine or property transfer inspection verifies the construction or repair of a wastewater treatment system.
- 4.7 **Any violation of these requirements herein is subject to enforcement provisions set forth in the New York State Public Health Law and may be grounds for revocation of the inspector’s certification.**

## 5. VARIANCE

- 5.1 A variance request may be submitted to the Variance Committee for any item in the Inspection Protocol in accordance with Section VIII of the Cayuga County Sanitary Code.