

# SludgeHammer IAPMO Site Evaluation Checklist for System

Rejuvenation of Existing Failed System 02/13/25

This **Indiana Site Evaluation Checklist for the SludgeHammer (SH) IAPMO installation** is used to assess the suitability of an existing soil absorption field (SAF) site for SH IAPMO remediation of a failed SAF due to bio-mat clogging. The information listed below is collected by an installer trained and certified by SH. This SH-certified installer/service provider gathers the below information from the local health department (LHD), homeowner, renter, septic tank pumper, etc. A record of the soil evaluation from an IRSS soil scientist or Elkhart County Health Department (when applicable) must be referenced to be sure the correct system specifications (system depth and drainage depth) were installed per code.

The assessment criteria at the end of the checklist determine the suitability of an SAF site for remediation. If the system passes this checklist, the Local County Health Department is charged with reviewing and issuing the permit for the SludgeHammer IAPMO system.

Date of Evaluation \_\_\_\_\_

Property Address \_\_\_\_\_ City \_\_\_\_\_

County \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Evaluators and other Persons Present: \_\_\_\_\_

System Evaluator Name: \_\_\_\_\_

Authorized Installer: \_\_\_\_\_ LHD: \_\_\_\_\_

Homeowner or Renter: \_\_\_\_\_ IRSS Registered Soil Scientist: \_\_\_\_\_

Septic Tank Pumper & Cleaner: \_\_\_\_\_ Other: \_\_\_\_\_

## Owner Information

Property Owner \_\_\_\_\_

If other than above:

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ ZIP \_\_\_\_\_

Home Phone \_\_\_\_\_ Cell Phone \_\_\_\_\_ Work Phone \_\_\_\_\_

Other Information \_\_\_\_\_

Any current pharmaceutical drugs being used? \_\_\_\_\_

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## Symptoms of Failure (when applicable)

Surfacing of effluent across entire SAF: \_\_\_\_; Surfacing of effluent in part of SAF: \_\_\_\_; Slow plumbing: \_\_\_\_

Detail how system failure is manifested: \_\_\_\_\_

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## System Information

Age of System \_\_\_\_\_ Permit Obtained (Y/N): \_\_\_\_\_ How many years has it been in failure? \_\_\_\_\_

If a permit was issued by the LHD:

Maximum depth of infiltrative surface on permit: \_\_\_\_\_ Minimum size of SAF on the Permit \_\_\_\_\_

Actual depth of infiltrative surface: \_\_\_\_\_ Actual size of SAF: \_\_\_\_\_ # of SAF Replacements on Property \_\_\_\_\_

Verify that Sump Pump, Foundation Drains, and Gutters are not Directed to the Septic System \_\_\_\_\_

Include a simple sketch of the system if it differs from the installation inspection or design drawing

## Site and Soil Evaluation

If a site and soil evaluation report for the system is not on file with the LHD, **a site and soil evaluation must be performed by an IRSS-registered soil scientist or by Elkhart County staff when applicable.**

From the original or new site and soil evaluation, the soil boring(s) with the most restrictive Conditions

(Not required if on file at the Health Department)

Soil Horizon Depth (inches)	Soil Load Rate (gpd/ft <sup>2</sup> )
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Most restrictive soil load rate 24" below 'actual depth of infiltrative surface' gpd/ft<sup>2</sup>

Depth to seasonal high water table \_\_\_\_\_

Is subsurface drain required by 410 IAC 6-8.3? (Y/N): \_\_\_\_

If 'yes,' depth of subsurface drain? \_\_\_\_\_

If 'yes,' is subsurface drain an 'Interceptor' \_\_\_\_ OR 'perimeter drain' \_\_\_\_?

If 'yes,' is the subsurface drain functioning? (Y/N) \_\_\_\_\_

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Is surface water diverted around SAF (Y/N)? \_\_\_\_\_

Attach a copy of the site and soil evaluation to this checklist

## Flow Estimate

# of Bedrooms and bedroom equivalents on Permit: \_\_\_\_\_

Actual # of Bedrooms and bedroom equivalents: \_\_\_\_\_

Size of SAF (required by 410 IAC 6-8.3): \_\_\_\_\_ # of Occupants: \_\_\_\_\_ Garbage Disposal (Y/N): \_\_\_\_\_

Laundry Machine Volume in gal. \_\_\_\_\_ # of Laundry Loads per week \_\_\_\_\_

(Pattern: S \_\_\_\_ M \_\_\_\_ Tu \_\_\_\_ W \_\_\_\_ Th \_\_\_\_ F \_\_\_\_ S \_\_\_\_)

## Water Softener:

Water Softener Working Properly? (Y/N)

If known - Vol. of Recharge \_\_\_\_\_

Average # of Recharges/Wk. \_\_\_\_\_ Average Vol. of Recharge/Day \_\_\_\_\_

Plumbing Fixtures Checked for Leaks \_\_\_\_\_ If yes, are Leaks Minor or Major? \_\_\_\_\_ Estimated duration of leaks \_\_\_\_\_

Estimated flow of water from the residence:<sup>1</sup> \_\_\_\_\_ gpd. Are there any recent increases in flow rates (operating a business from home, e.g. Salon, Bakery, Day Care, etc)? \_\_\_\_\_

<sup>1</sup> Flow estimate calculation: Occupancy x 69 gal/day = estimated actual flow. This value includes minor leaks and normal clothes wash usage. Adjust for major leaks, water softener, large saunas and other factors indicating excessive washer usage.

## Septic Tank

Tank Volume (if marked on tank or LHD inspection records) \_\_\_\_\_

# of Tank Compartments \_\_\_\_\_

If the volume of the tank is unknown:

Depth (invert of outlet to bottom) \_\_\_\_\_ Inside length \_\_\_\_\_ Inside width \_\_\_\_\_ Tank volume (calculated) \_\_\_\_\_

Gallons = Length ft. x Width ft. x Height ft. x 7.48

Tank leaks? (Y/N)<sup>2</sup>

<sup>2</sup> **The tank must be pumped and cleaned.** Conduct a visual inspection of the tank, tank seam, inlet and outlet pipe connections, risers and riser connections, and lid. Look for cracks and openings, and signs and sounds of water seepage. Root intrusion noted? Observe landscaping around the tank to determine if surface water flows toward or ponds over the tank.

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Effluent Filter Present (Y/N) \_\_\_\_\_ Type / MFG \_\_\_\_\_

How often have tanks been serviced? \_\_\_\_\_ Were records kept? \_\_\_\_\_

### Dose Tank

Dose tank (Y/N)      If yes:

Volume per Inch      Tank Volume \_\_\_\_\_      Are Controls Operating Properly? (Y/N) \_\_\_\_\_

Tank Leaks? (Y/N)<sup>3</sup>

<sup>3</sup> Conduct a visual inspection of the tank, tank seam, inlet and outlet pipe connections, risers and riser connections, and lid. Look for cracks and openings, and signs and sounds of water seepage. Observe landscaping around the tank to determine if surface water flows toward or ponds over the tank.

### Distribution Box

Does the system have a d-box? (Y/N)      If yes:

Expose and Inspect d-box condition (Good/Poor)

Watertight? (Y/N)

Is the D-Box level and provides equal flow between outlets? (Y/N): \_\_\_\_\_

D-Box inlet baffle? (Y/N) \_\_\_\_\_

Remedy or replace the distribution box if necessary

### Pressure Distribution (Pressure Trench or Mound System)

System has a Pressure Distribution network (Y/N) \_\_\_\_\_ If yes:

Design Flow Rate (see permit and approved plan and specifications) \_\_\_\_\_ gpm

Original design flow rate in GPM: \_\_\_\_\_

Calculate dose amount by measuring inches drop in pump chamber during pump runs x tank's gallons per inch = \_\_\_\_\_ Gallons Per Dose

Calculate GPM by taking dose volume/minutes run in tenths of a minute = \_\_\_\_\_ GPM

**Example: 150 gallon dose / 2.5 minutes (2 minutes, 30 seconds) = 60 GPM**

Does the above-calculated flow rate differ from the measured flow rate at the time of system start-up by less than  $\pm 10\%$ ? (Y/N)<sup>4</sup>

<sup>4</sup> If the flow rates vary by more than 10%, an engineering analysis of the system is necessary to determine the cause of these differences. Possible issues include unequal flow due to inadequate design,

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inadequate installation, or plugging of holes in the distribution laterals; or a replacement pump with a different pump curve.

### Soil Absorption Field

Type of SAF: Trench \_\_\_\_\_ Elevated Sand Mound \_\_\_\_\_  
At Grade \_\_\_\_\_ Presby \_\_\_\_\_ ATL \_\_\_\_\_ Eljen \_\_\_\_\_ Other (describe) \_\_\_\_\_

Trench Media Type (aggregate, synthetic aggregate, chamber, other - identify)

If Chambers, was a reduction taken at the time of installation? (Y?N) If yes, what percentage? \_\_\_\_\_

If manufactured media, the name of the manufacturer \_\_\_\_\_

Exterior Dimensions of the SAF area \_\_\_\_\_

For trench systems:

# of trenches \_\_\_\_\_ Trenches installed on contour (Y/N)? \_\_\_\_\_

Individual Trench Lengths \_\_\_\_\_ Total Trench Length \_\_\_\_\_

Trench Width \_\_\_\_\_ Total Bottom Area \_\_\_\_\_

Is a Minimum 12" of Cover Soil Present? \_\_\_\_\_ Is the cover crowned over absorption field? \_\_\_\_\_

Texture and Characteristics of Cover \_\_\_\_\_

Damage to the SAF area (e.g., vehicular traffic) (Y/N): \_\_\_\_\_ Other \_\_\_\_\_

Signs of Compaction in area of the absorption field? \_\_\_\_\_

Is the dispersal area preserved? \_\_\_\_\_

Other Comments:

Attach copies of all available septic permits obtained for this site, tank pumping and cleaning records, and site and soil evaluation reports.

**Site Plan (attach separate sheet if necessary)**

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## Existing System Remediation Verification

Y	N	POC*	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did the system perform properly for at least 2 years?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Was a permit obtained from the local health department (LHD)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If depth of the seasonal high water table, as indicated in the site and soil evaluation report, shows that a subsurface drain is necessary as required in 410 IAC 6-8.3, is a subsurface drain installed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If a subsurface drain is required by 410 IAC 6-8.3, the drain is installed deep enough to lower the seasonal high water table as required?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the septic tank, tank seam, inlet and outlet pipe connections, risers and riser connections, and lid watertight? (If not, check POC.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the landscaping around the septic tank divert surface water away from the tank? (If no, check POC.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the system has a dose tank, is the dose tank, tank seam, inlet and outlet pipe connections, risers and riser connections, and lid watertight? (If no, check POC.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the system has a dose tank, does the landscaping around the dose tank divert surface water away from the tank? (If no, check POC.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the system has a d-box, is the d-box in good condition? (If no, check POC.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the system has a d-box, is the flow between outlets equal? (If no, check POC.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the system has a pressure distribution network, does the present measured flow rate differ from the measured flow rate at the time of system start-up by less than $\pm 10\%$ ? (If no, check POC.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Based on 410 IAC 6-8.3, the site evaluation, and system information, any limiting soil layer: Is $\geq$ 30 inches below the infiltrative surface for gravity trench systems, or Is $>$ 24 inches below the infiltrative surface for flood dose systems.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is there 12" minimum of cover soil over the system per code?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the estimated actual flow volume less than or equal to the design flow?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is there an absence of system misuse indications based on inspection?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is there an absence of damage to the SAF area (e.g., vehicular traffic). (If no, check POC.)

\* POC: Possible Other Cause of Failure

## Technology Suitability Assessment for Remediation of Existing Systems

**If all are Yes, then:** This site is suitable for IAPMO installation.

**If any is No, then:** This site is **not** suitable for IAPMO installation. Remedy the issues and reevaluate.

**If any is POC (possible other cause of failure), then:** The 'other possible cause of failure' **must be corrected** and, after correction and if the system continues to show signs of failure, the site and system **must be re-evaluated** to determine if it is suitable for possible remediation.