

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: _____

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/ft²)

Most restrictive soil load rate 24" below 'actual depth of infiltrative surface' _____ gpd/ft²

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:¹ _____ gpd. Are there any recent increases in flow rates (operating a business from home, e.g. Salon, Bakery, Day Care, etc)? _____

¹ 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)²

² **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)³

³ 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)⁴

⁴ 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 <i>410 IAC 6-8.3</i> , is a subsurface drain installed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If a subsurface drain is required by <i>410 IAC 6-8.3</i> , 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 <i>410 IAC 6-8.3</i> , the site evaluation, and system information, any limiting soil layer: Is \geq to 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.