



# Preliminary Evaluation Worksheet



New  
THIS IS PROPOSED HOLDING TANKS

v 04.01.2021

## 1. Contact Information

Property Owner/Client:  Date Completed:

Site Address:  Project ID:

Email:  Phone:

Mailing Address:  Alt Phone:

Legal Description:

Parcel ID:  SEC:  TWP:  RNG:

## 2. Flow and General System Information

### A. Client-Provided Information

Project Type:  New Construction  Replacement  Expansion  Repair

Project Use:  Residential  Other Establishment:

Residential use: # Bedrooms:  Dwelling Sq. ft.:  Unfinished Sq. Ft.:

# Adults:  # Children:  # Teenagers:

In-home business (Y/N):  If yes, describe:

Water-using devices: (check all that apply)

<input type="checkbox"/> Garbage Disposal/Grinder	<input type="checkbox"/> Dishwasher	<input type="checkbox"/> Hot Tub*
<input type="checkbox"/> Sewage pump in basement	<input type="checkbox"/> Water Softener*	<input type="checkbox"/> Sump Pump*
<input type="checkbox"/> Large Bathtub >40 gallons	<input type="checkbox"/> Iron Filter*	<input type="checkbox"/> Self-Cleaning Humidifier*
<input type="checkbox"/> Clothes Washing Machine	<input type="checkbox"/> High Eff. Furnace*	<input type="checkbox"/> Other: <input type="text"/>

\* Clear water source - should not go into system

Additional current or future uses:

Anticipated non-domestic waste:

The above is complete & accurate:   
Client signature & date

### B. Designer-determined flow information

Attach additional information as necessary.

Design Flow:  GPD Anticipated Waste Type:

BOD:  mg/L TSS  mg/L Oil & Grease  mg/L

## 3. Preliminary Site Information

### A. Water Supply Wells

#	Description	Mn. ID#	Well Depth (ft.)	Casing Depth (ft.)	Confining Layer	STA Setback	Source
1	NEIGHBORS WELL						HOMEOWNER
2	ARTISIAN WELL						
3	50' SETBACK TO TANK						
4							

Additional Well Information:



# Preliminary Evaluation Worksheet

Site within 200' of noncommunity transient well (Y/N)  Yes, source:

Site within a drinking water supply management area (Y/N)  Yes, source:

Site in Well Head Protection inner wellhead management zone (Y/N)  Yes, source:

Buried water supply pipes within 50 ft of proposed system (Y/N)

**B. Site located in a shoreland district/area?**  Yes, name:

Elevation of ordinary high water level:  ft. Source:

Classification:  Tank Setback:  ft. STA Setbk:  ft.

**C. Site located in a floodplain?**  Yes, Type(s):

Floodplain designation/elevation (10 Year):  ft. Source:

Floodplain designation/elevation (100 Year):  ft. Source:

**D. Property Line Id / Source:**  Owner  Survey  County GIS  Plat Map  Other:

**E. ID distance of relevant setbacks on map:**  Water  Easements  Well(s)  
 Building(s)  Property Lines  OHWL  Other:

**4. Preliminary Soil Profile Information From Web Soil Survey (attach map & description)**

Map Units:  Slope Range:  %

List landforms:

Landform position(s):

Parent materials:

Depth to Bedrock/Restrictive Feature:  in Depth to Watertable:  in

Map Unit Ratings

Septic Tank Absorption Field- At-grade:

Septic Tank Absorption Field- Mound:

Septic Tank Absorption Field- Trench:

**5. Local Government Unit Information**

Name of LGU:

LGU Contact:

LGU-specific setbacks:

LGU-specific design requirements:

LGU-specific installation requirements:

Notes:



<b>Property ID (PIN):</b>	52-1-038100
<b>Tax District:</b>	49-27 UNORG
<b>Taxpayer Name:</b>	HLIDEK, GINA K
<b>Taxpayer Address:</b>	44622 US HWY 169
<b>Taxpayer Address 2:</b>	PALISADE MN 56469
<b>Taxpayer Address 3:</b>	
<b>Taxpayer Address 4:</b>	
<b>Owner Name:</b>	HLIDEK, GINA K
<b>Owner Address:</b>	44622 US HWY 169
<b>Owner Address 2:</b>	PALISADE MN 56469
<b>Owner Address 3:</b>	
<b>Owner Address 4:</b>	
<b>Township:</b>	49.0
<b>Range:</b>	27
<b>Section:</b>	13
<b>Physical House Number:</b>	49390
<b>Physical Address:</b>	49390 405TH PL
<b>Physical City:</b>	PALISADE MN
<b>Physical Zip:</b>	56469
<b>Subdivision Name:</b>	EVERGREEN BEACH
<b>Lake ID:</b>	1014700
<b>Lake Name:</b>	ESQUAGAMAH LAKE
<b>Brief Legal:</b>	LOT 2
<b>Deeded Acres:</b>	0.0
<b>School District:</b>	1
<b>School District Name:</b>	AITKIN
<b>Commissioner District:</b>	5
<b>Class Code:</b>	151

## Aitkin County, Minnesota

### 1353B—Cutaway loamy fine sand, 1 to 6 percent slopes

#### Map Unit Setting

*National map unit symbol:* gjd4  
*Elevation:* 980 to 1,310 feet  
*Mean annual precipitation:* 20 to 27 inches  
*Mean annual air temperature:* 37 to 41 degrees F  
*Frost-free period:* 95 to 105 days  
*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Cutaway and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Cutaway

##### Setting

*Landform:* Moraines  
*Landform position (two-dimensional):* Summit, backslope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy outwash over loamy till

##### Typical profile

*A - 0 to 2 inches:* loamy fine sand  
*E, Bw, E' - 2 to 26 inches:* loamy sand  
*2E/B, 2B/E - 26 to 49 inches:* loam  
*2C - 49 to 60 inches:* loam

##### Properties and qualities

*Slope:* 1 to 6 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 2.00 in/hr)  
*Depth to water table:* About 41 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 20 percent  
*Available water supply, 0 to 60 inches:* Moderate (about 7.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* B  
*Forage suitability group:* Sloping Upland, Acid (G088XN006MN)

**1. PROJECT INFORMATION** v 04.01.2021

Property Owner/Client:  Project ID:   
Site Address:  Date:   
Email Address:  Phone:

**2. DESIGN FLOW & WASTE STRENGTH** *Attach data / estimate basis for Other Establishments*

Design Flow:  GPD Anticipated Waste Type:   
BOD:  mg/L TSS:  mg/L Oil & Grease:  mg/L  
Treatment Level:  *Select Treatment Level C for residential septic tank effluent*

**3. HOLDING TANK SIZING**

Minimum Capacity: Residential = 400 gal/bedroom, Other Establishment = Design Flow x 5.0, Minimum size 1000 gallons

Code Minimum Holding Tank Capacity:  Gallons in  Tanks or Compartments

Recommended Holding Tank Capacity:  Gallons in  Tanks or Compartments

Type of High Level Alarm:  (Set @ 75% tank capacity)

Comments:

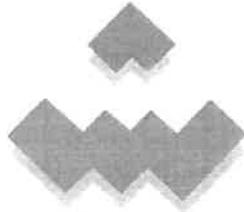
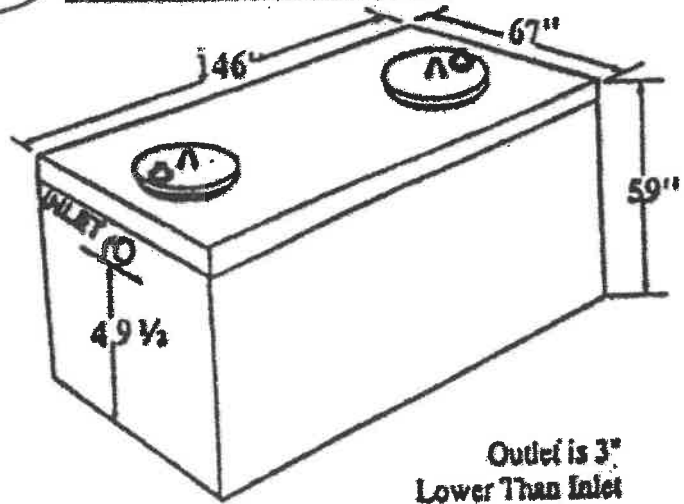
**10. Comments/Special Design Considerations:**

DUE TO LOT SIZE AND THE NEIGHBORS WELL LOCATION - A HOLDING TANK IS THE ONLY SEPTIC THIS SEASONAL CABIN CAN HAVE AT THIS TIME. *2 - 1500 G tanks*

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

(Designer)  (Signature)  (License #)  (Date)

② **1500 Gallon Tank**



**W.W.Thompson**  
**CONCRETE PRODUCTS**

Quality & Service Since 1909

**Brainerd Location:**

W.W. Thompson Concrete Products

P.O. Box 87

702 Industrial Park Road SW

Brainerd, MN 56401

*(Located at the intersection of*

*Industrial Park and Business 371 South)*

LAKE ESQUAGAMAH

143' FROM LAKE TO CLOSEST TANK

PROPOSED WELL

NORTH

PORCH

20'

20 x 24' EXISTING CABIN

24 X 42' PROPOSED ADDITION

50' SETBACK TO TANK

PROPERTY LINE

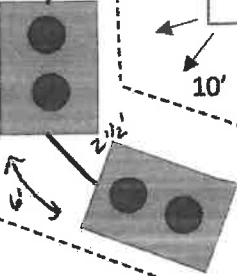
10'

NOT TO SCALE

10'

17'

10'



2- 1500 GALLON HOLDING TANKS

60'

18'

50' SETBACK

ALL SETBACKS MARKED OUT

NEIGHBORS WELL



\* Underground electrical line to be marked.

49390 - 405th place



## Septic System Management Plan for Holding Tank Systems

The goal of a septic system is to protect human health and the environment by properly treating wastewater before returning it to the environment. Your holding tank system is designed to store your used water before it is recycled back into our lakes, streams and groundwater.

This **management plan** will identify the operation and maintenance activities necessary to ensure compliance with applicable rules and regulations. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic maintainer. However, it is **YOUR** responsibility to make sure all tasks get accomplished in a timely manner.

The University of Minnesota's *Septic System Owner's Guide* contains additional tips and recommendations designed to extend the effective life of your system and save you money over time.

***Proper septic system design, installation, operation and maintenance means safe and clean water!***

Property Owner: **GERARD STELLMACH**

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Property Address: **49390 405TH PLACE PALISADE** Property ID: **521038100**

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System Designer: **JC DESIGN JANET COON** License #: **1688**

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System Installer: License #:

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Service Provider/Maintainer: **TIMBER LAKES SEPTIC** Phone: **218-927-6175**

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Permitting Authority: Phone:

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Permit #: Date Inspected:

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Keep this Management Plan with your Septic System Owner's Guide. The Septic System Owner's Guide includes a folder to hold maintenance records including pumping, inspection and evaluation reports. Ask your septic professional to also:

- Attach permit information, designer drawings and as-builts of your system, if they are available.
- Keep copies of all pumping records and other maintenance and repair invoices with this document.
- Review this document with your maintenance professional at each visit; discuss any changes in product use, activities, or water-use appliances.

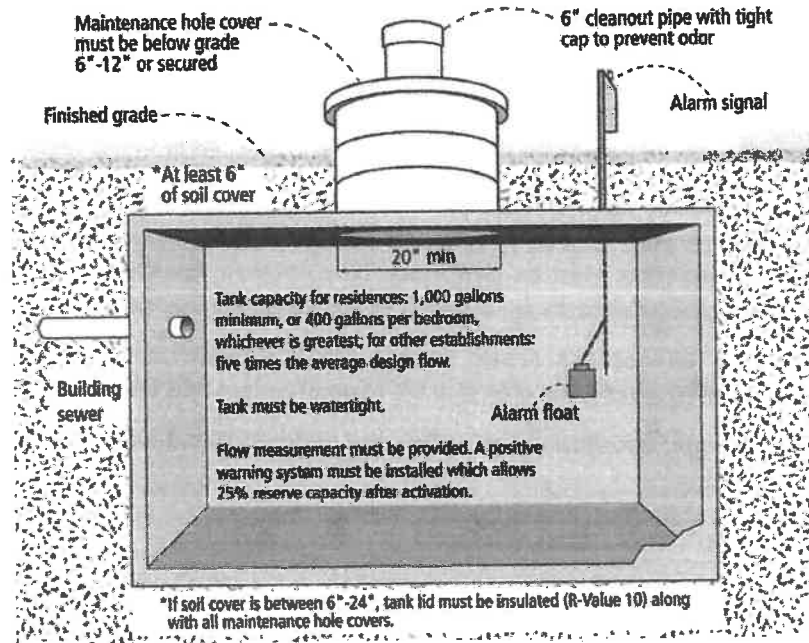
For a copy of the *Septic System Owner's Guide*, call 1-800-876-8636 or go to <http://shop.extension.umn.edu/>

<http://septic.umn.edu>





Your Holding Tank



Dwelling Type	Well Construction
Number of bedrooms: <u>2</u>	Well depth (ft): <u>NEIGHBORS WELL</u>
System capacity/ design flow (gpd): <u>180</u>	<input type="checkbox"/> Cased well Casing depth: _____
Anticipated average daily flow (gpd): <u>50</u>	<input checked="" type="checkbox"/> Other (specify): <u>ARTISIAN</u>
Comments <u>HOLDING TANK ONLY</u>	Distance from septic (ft): <u>60'</u>
In-home business? <input type="checkbox"/> What type? <u>N/A</u>	Is the well on the design drawing? <input checked="" type="radio"/> Y <input type="radio"/> N
Number of occupants <u>2</u>	

Holding Tank	
<input type="radio"/> One tank: Tank volume: <u>200</u> gallons	<input type="checkbox"/> Flow measurement device: _____
<input checked="" type="radio"/> Two tanks: Tank volume: <u>1500</u> gallons	<input type="checkbox"/> Location: _____
<input type="checkbox"/> Tank is constructed of <u>PRECAST</u>	<input type="checkbox"/> Alarm <input checked="" type="checkbox"/> visual <input type="checkbox"/> audible
	<input type="checkbox"/> Reserve %: <u>1125</u> 75%
<input type="checkbox"/> Service contract held by: <u>TIMBER LAKES SEPTIC</u>	
<input checked="" type="checkbox"/> Service contract is attached to this management plan	



## Homeowner Management Tasks

These *operation and maintenance* activities are your responsibility. Use the chart on page 6 to track your activities.

Identify the service intervals recommended by your system designer and your local government. The tank assessment for your system will be the **shortest interval of these three intervals**. Your pumper/maintainer will determine if your tank needs to be pumped.

Tank capacity ÷ (# of occupants X 50 Gallons/day) = # of days between cleaning

OR

Within 24 hours of alarm signal

*System Designer:* check every \_\_\_\_\_ days

*Local Government:* check every \_\_\_\_\_ days

My tank needs to be emptied  
every \_\_\_\_\_ days

### Seasonally

- Monitor alarm daily – make sure the alarm has not signaled.* Alarms signal when your holding tank is nearly full; contact your maintainer.
- Measure* and note your average daily water usage on page 5. Conserving water saves you money!
- Leaks.* Check (listen, look) for leaks in toilets and dripping faucets. Repair leaks promptly.

### Annually

- Establish a contract for tank cleaning services with a state licensed maintenance business.
- Caps.* Make sure that all caps and lids are intact and in place. Inspect for damaged caps at least every fall. Fix or replace damaged caps before winter to help prevent freezing issues.
- Water conditioning devices.* See Page 5 for a list of devices. When possible, discharge clear water sources to another location. Program the recharge frequency based on *water demand (gallons)* rather than *time (days)*. Recharging too frequently will result in increased pumping costs.
- Review your water usage rate.* Review the Water Use Appliance chart on Page 5. Discuss any major changes with your pumper/maintainer.

### During each visit by a pumper/maintainer

- Ask if your pumper/maintainer is licensed in Minnesota.
- Make sure that your pumper/maintainer has clear access to the holding tank and completely empties the tank
- Ask your pumper/maintainer to accomplish the tasks listed on the Professional Tasks on Page 4.



## Professional Management Tasks

*These are the operation and maintenance activities that a pumper/maintainer performs to help ensure long-term performance of your system. Professionals should refer to the O/M Manual for detailed checklists for tanks, pumps, alarms and other components. Call 800-322-8642 for more details.*

- Written record provided to homeowner after each visit.

### Plumbing/Source of Wastewater

- Review the Water Use Appliance Chart on Page 5 with homeowner. Discuss any changes in water use and the impact those changes may have on the frequency of maintenance.
- Review and document water usage rates with homeowner.

### Holding Tanks

- Maintenance hole lid.* A riser is recommended if the lid is not accessible from the ground surface. Insulate the riser cover for frost protection.
- Liquid level.* Check to make sure the tank is not leaking.
- Inspection pipes.* Replace damaged caps.
- Alarm.* Verify that the alarm works and that there is at least 25% reserve capacity.
- End of year seasonal property pumping.* Remind homeowner of most frequent causes of tank and building sewer freeze-ups. Ensure that there are no "micro-sources" of water such as a high efficiency furnace or other dripping devices. Determine a logical winter water use plan that will not result in need for emergency visit(s).

**All other components – inspect as listed here:**

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**Water-Use Appliances and Equipment in the Home**

Appliance	Impacts on Holding Tank	Management Tips
Garbage disposal	<ul style="list-style-type: none"> <li>• Uses water and increases pumping frequency and expense.</li> </ul>	<ul style="list-style-type: none"> <li>• Use of a garbage disposal is not recommended.</li> <li>• Minimize garbage disposal use. Compost instead.</li> </ul>
Washing machine	<ul style="list-style-type: none"> <li>• Uses water and increases pumping frequency and expense.</li> </ul>	<ul style="list-style-type: none"> <li>• Choose a front-loader or water-saving top-loader, these units use less water than older models.</li> <li>• Wash only full loads.</li> <li>• Do laundry off site.</li> </ul>
Dishwasher	<ul style="list-style-type: none"> <li>• Uses water and increases pumping frequency and expense.</li> </ul>	<ul style="list-style-type: none"> <li>• Wash only full loads.</li> </ul>
Large bathtub (whirlpool)	<ul style="list-style-type: none"> <li>• Uses water and increases pumping frequency and expense.</li> </ul>	<ul style="list-style-type: none"> <li>• Take short showers to conserve water.</li> </ul>
Clear Water Uses	Impacts on Holding Tank	Management Tips
High-efficiency furnace	<ul style="list-style-type: none"> <li>• Drip may result in frozen pipes during cold weather.</li> </ul>	<ul style="list-style-type: none"> <li>• Re-route water into a sump pump or directly out of the house. Do not route furnace recharge to your holding tank.</li> </ul>
Water softener Iron filter Reverse osmosis	<ul style="list-style-type: none"> <li>• Uses water and increases pumping frequency and expense.</li> </ul>	<ul style="list-style-type: none"> <li>• These sources produce water that is not sewage and should not go into your holding tank.</li> <li>• Reroute water from these sources to another outlet, such as a dry well, drain tile or old drainfield.</li> </ul>
Surface drainage Footing drains	<ul style="list-style-type: none"> <li>• Uses water and increases pumping frequency and expense.</li> </ul>	<ul style="list-style-type: none"> <li>• When replacing, consider using a demand-based recharge vs. a time-based recharge.</li> <li>• Check valves to ensure proper operation; have unit serviced per manufacturer directions</li> </ul>

**Maintenance Log**

Track maintenance activities here for easy reference. See list of management tasks on pages 3 and 4.

Activity	Date accomplished/measured water usage									
<b>Check daily for a period of time and weekly once average use is determined:</b>										
Water usage rate (gallons per day)										
Leaks: check for plumbing leaks										
<b>Annually:</b>										
Establish and maintain contract for holding tank pumping services										
Water use appliances -- review use										

