# *E-Z EXCAVATING LLC.*

***1520 MAPLE AVE EAST***
***MORA MN. 55051***
***Ph. 320-241-7036***


# *DESIGN*
# *HOLDING TANK*

**LOCATION: D1 POW WOW GROUNDS**

**OWNER: MILLE LACS BAND OF OJIBWE**

**SYSTEM TYPE: HOLDING TANKS AND RV DUMP**

**DESIGN FLOW: SHOWER HOUSE** @ 1500 GPD
RV DUMP SITE @ 750 GPD

**HOLDING TANKS:** 2- 2500 GAL. SHOWER HOUSE
1- 2500 GAL. RV DUMP

**ALARM: ELECTRIC** 2- SJE RHOMBUS TANL ALERT XT EZ MODEL # 1036592

***KEVIN HERWIG*** **M.P.C.A. 1472**

# ***CONSTRUCTION NOTES***

**PRODUCT BRAND & MODEL LISTED IN DESIGN MUST BE USED. (BROWN PRECAST TANKS –2 SEPTIC 2500 GAL. HOLDING WITH ALARM IN SECOND TANK**

**RV DUMP TANK 2500 GAL. WITH ALARM**

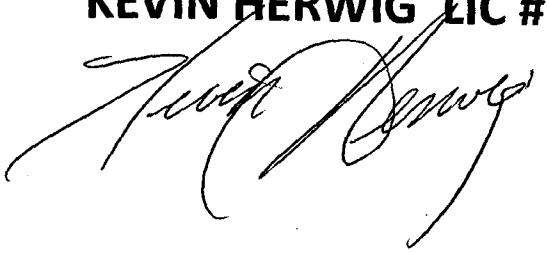
**ALARMS SJE RHOMBUS TANK ALERT XT EZ # 1036592**

**RV DUMP PAD IS A CONCRETE POURED IN PLACE 6'X10' 6 INCH THICK WITH A 2 INCH HIGH CURB FOR CONTAINMENT**

**RV DUMP STATION COVER OPW MODEL # 269-0085**

**ALL PRODUCTS AND CONSTRUCTION PRACTICES ARE TO MEET M.P.C.A. 7080 RULE AND MILLE LACS BAND SPECIFICATIONS FOR SEWAGE SYSTEMS**

**KEVIN HERWIG LIC # 1472**



2011 purple code

# Holding tank Design

www.SepticResource.com (vers 19.2)

**Property Owner:** MILLE LACS BAND OF OJIBWE **Date:** 3/26/2021

**Site Address:** D1 POW WOW GROUNDS **PID:**

**Comments:** SHOWER HOUSE NO WASTE

instructions: [ ] = site specific input [ ] = adjust if desired [ ] = self-calculated (DO NOT ADJUST)

1) [ ] Type [ II ] Other Establishment System

2) [ 1500 ] GPD design flow

[ No ] Lift station to holding tank (lift basket < 100 gal treat as sewer line, > 100 gal treat as tank)

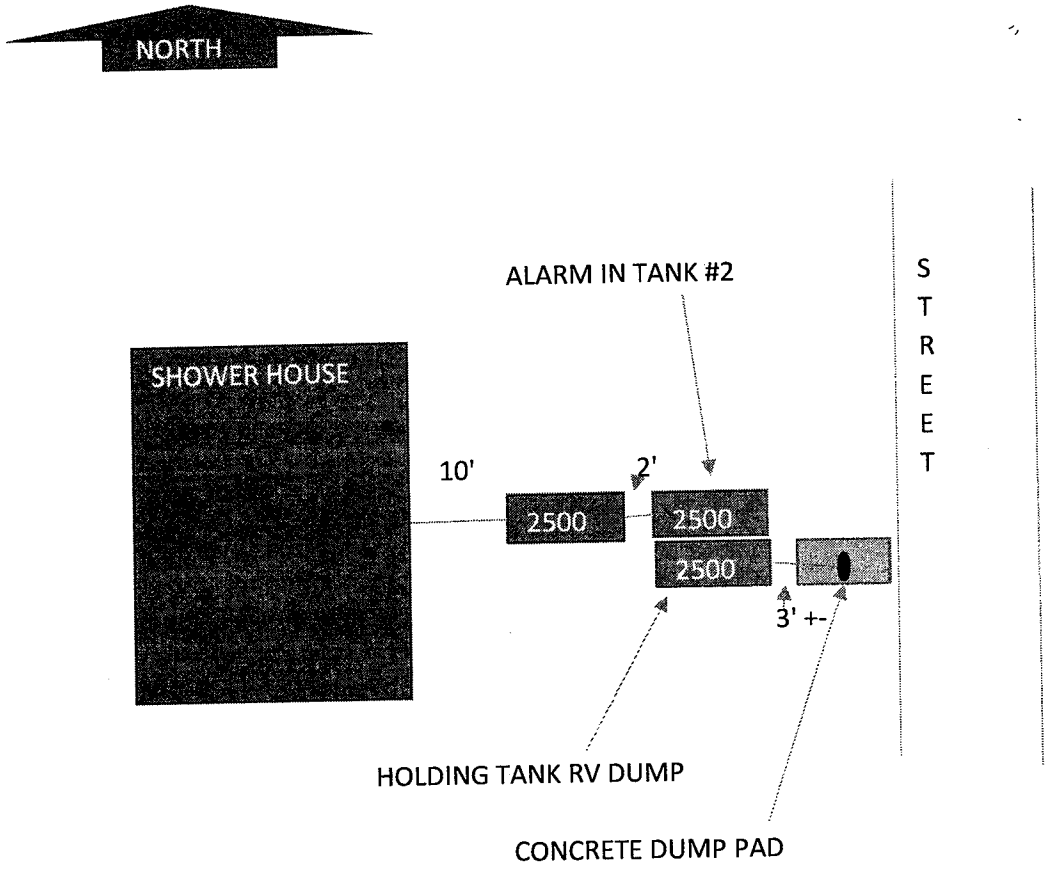
3) [ 5000 ] Gallon Holding tank (minimum) at [ ] gpi

4) [ 32 ] inches from bottom of tank to "Hi Level" float (75% full when alarm activates) 2ND TANK

5) [ 1250 ] gallons reserve capacity (after High Level Alarm is activated)

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

| Designer Signature | Company | License# | Date |
|---|---|---|---|
| | E-Z EXCAVATING LLC | 1472 | 3/26/2021 |

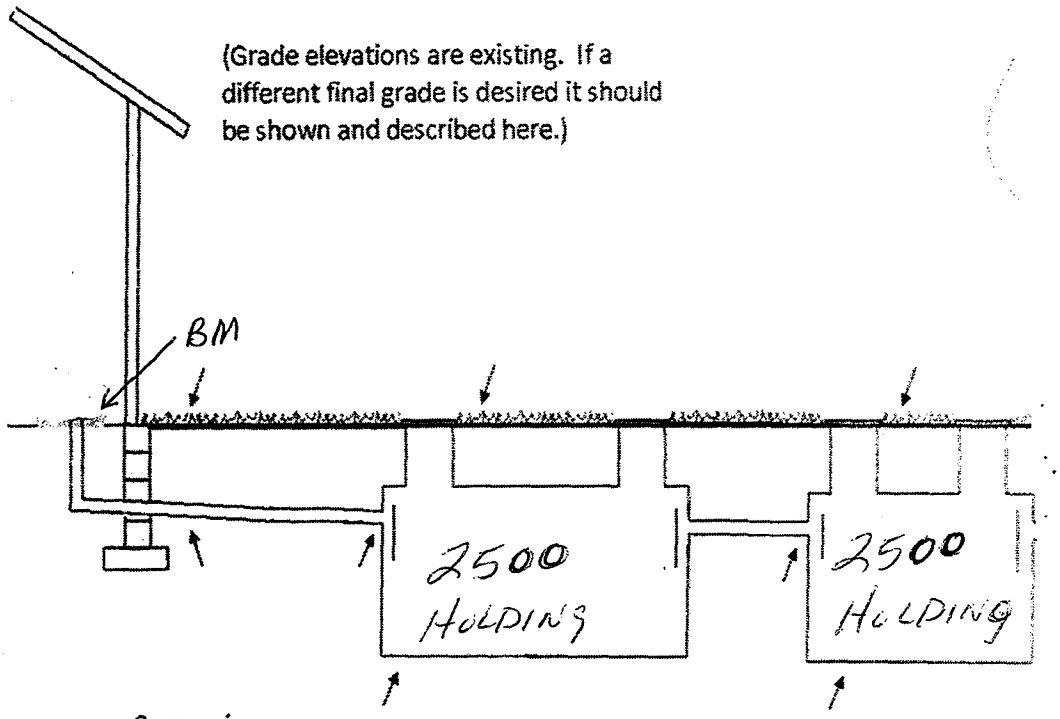

NORTH
ALARM IN TANK #2
S
T
R
E
E
T
SHOWER HOUSE
10'
2'
2500
2500
2500
3' +-
HOLDING TANK RV DUMP
CONCRETE DUMP PAD

# SHOWER HOUSE HOLDING TANKS

## System Elevations

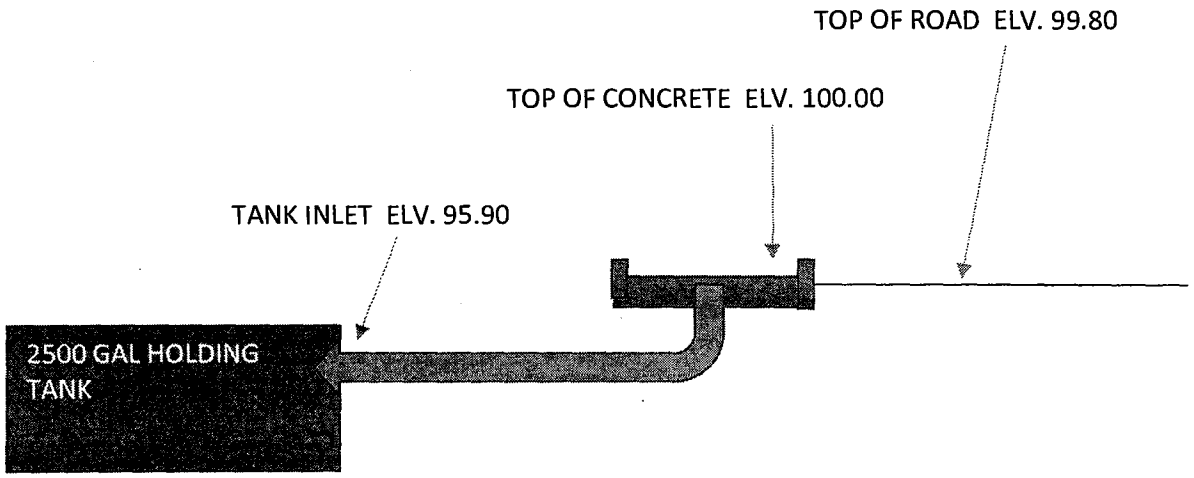
100.00 benchmark TOP OF FLOOR

(Grade elevations are existing. If a different final grade is desired it should be shown and described here.)

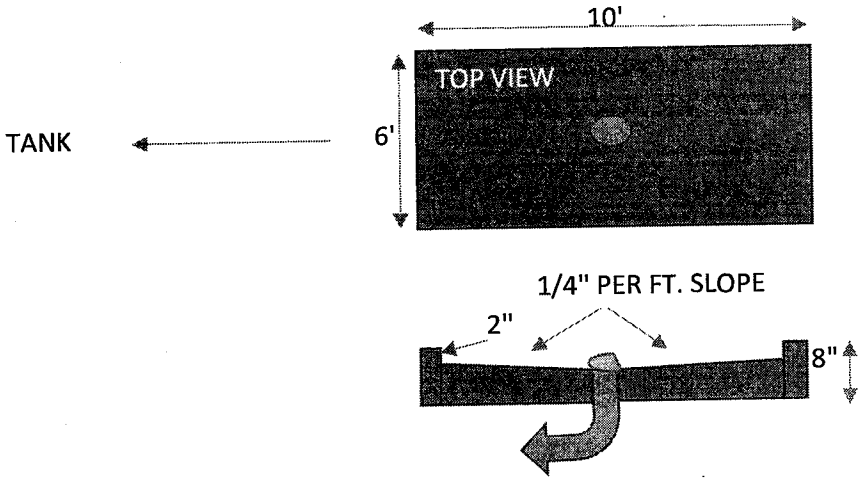



| Sewer pipe exiting house | Septic Tank | Septic Tank |
|---|---|---|
| 99.45 Grade | 99.42 Grade | 99.17 Grade |
| 96.95 Pipe | 96.40 inlet | 95.90 inlet |
| | _____ Tank bottom | _____ Tank bottom |

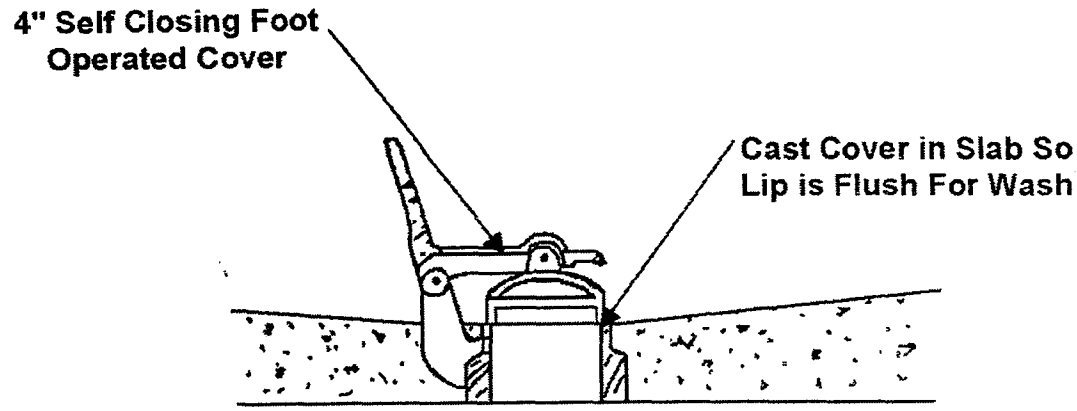
RV DUMP ELEVATIONS



DUMP STATION PAD DETAIL



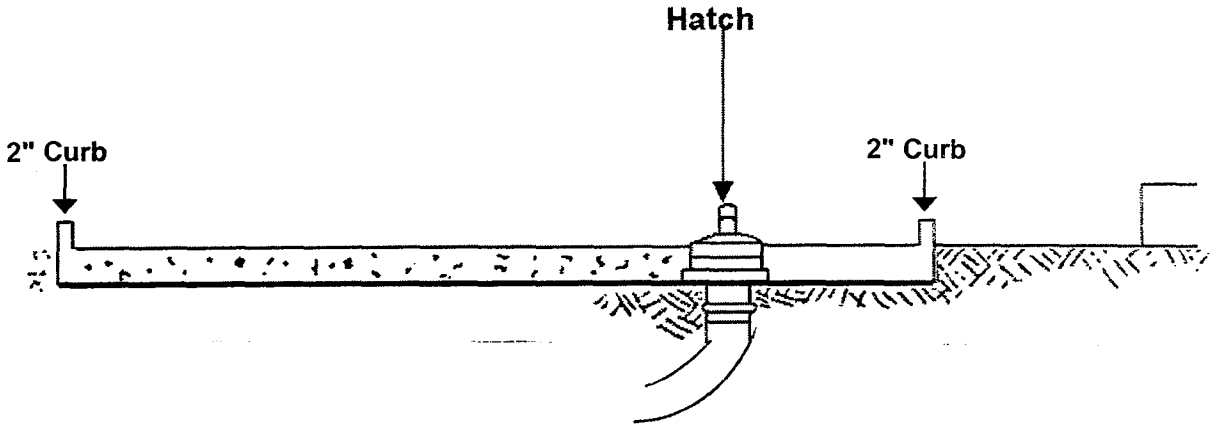
# A-4




## Detail 2

No Scale

* SLOPE CONCRETE 1/4" PER FOOT IN ALL DIRECTIONS TO DRAIN



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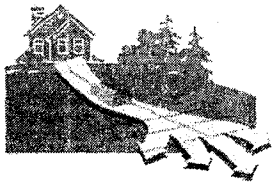

# Septic System Management Plan for Holding Tank Systems

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: MILLE LACS BAND OF OJIBWE

Property Address: D1 POW WOW GROUNDS Property ID:

System Designer: E-Z EXCAVATING LLC License #: 1472

System Installer: License #:

Service Provider/Maintainer: MILLE BAND Phone:

Permitting Authority: MILLE BAND OF OJIBWE DNR Phone:

Permit #: Date Inspected:

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

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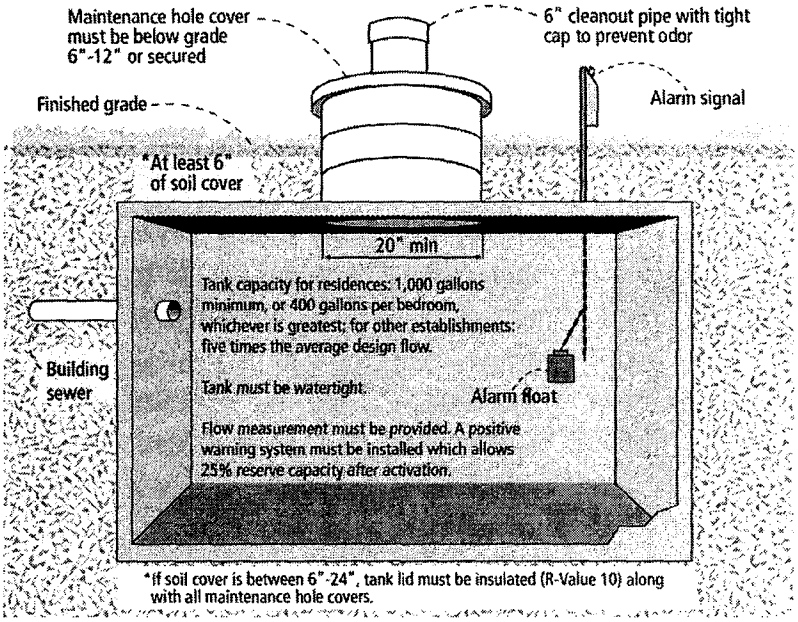
*Septic System Management Plan*
*For Holding Tank Systems*

## Your Holding Tank




| Dwelling Type | Well Construction |
|---|---|
| Number of bedrooms: 15 CAMP SITES | Well depth (ft): NA |
| System capacity/ design flow (gpd): 1500 | ❑ Cased well Casing depth: _____ |
| Anticipated average daily flow (gpd): 1500 | ❑ Other (specify): _____ |
| Comments_____ | Distance from septic (ft):_____ |
| In-home business? ___ What type? _____ | Is the well on the design drawing? ◯ Y ◯ N |
| Number of occupants _____ | |

| Holding Tank | |
|---|---|
| ◯ One tank: *Tank volume:* _____ *gallons* | ❑ Flow measurement device: WATER METER |
| ◉ Two tanks: *Tank volume:* 2500 *gallons* | ❑ Location: 2ND TANK |
| ❑ Tank is constructed of CONCRETE | ❑ Alarm ✓ visual ✓ audible |
| | ❑ Reserve %: 25 |

❑ Service contract held by: MILLE LACS BAND OF OJIBWE

❑ Service contract is attached to this management plan

## Homeowner Management Tasks

These op*eration and maintenance a*ctivities 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 EVENT days

*Local Government*: check every _____ days

My tank needs to be emptied every WHEN NEEDED days

**Seasonally**

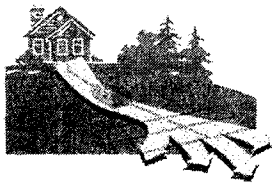
- ☐ *Monitor alarm daily – make sure the alarm has not signaled.* Alarms signal when your holding tank is nearly full; contact your maintainer.
- ☐ *Measure* and note your average daily water usage on page 5. Conserving water saves you money!
- ☐ *Leaks.* Check (listen, look) for leaks in toilets and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

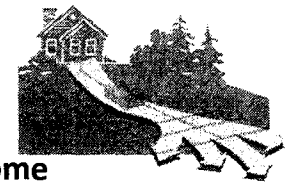
- ❑ *Maintenance hole lid.* A riser is recommended if the lid is not accessible from the ground surface. Insulate the riser cover for frost protection.
- ❑ *Liquid level.* Check to make sure the tank is not leaking.
- ❑ *Inspection pipes.* Replace damaged caps.
- ❑ *Alarm.* Verify that the alarm works 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:**

_____

_____

_____



## Water-Use Appliances and Equipment in the Home

| Appliance | Impacts on Holding Tank | Management Tips |
|---|---|---|
| Garbage disposal | • Uses water and increases pumping frequency and expense. | • Use of a garbage disposal is not recommended.<br>• Minimize garbage disposal use. Compost instead. |
| Washing machine | • Uses water and increases pumping frequency and expense. | • Choose a front-loader or water-saving top-loader, these units use less water than older models.<br>• Wash only full loads.<br>• Do laundry off site. |
| Dishwasher | • Uses water and increases pumping frequency and expense. | • Wash only full loads. |
| Large bathtub (whirlpool) | • Uses water and increases pumping frequency and expense. | • Take short showers to conserve water. |
| **Clear Water Uses** | **Impacts on Holding Tank** | **Management Tips** |
| High-efficiency furnace | • Drip may result in frozen pipes during cold weather. | • Re-route water into a sump pump or directly out of the house. Do not route furnace recharge to your holding tank. |
| Water softener<br>Iron filter<br>Reverse osmosis | • Uses water and increases pumping frequency and expense. | • These sources produce water that is not sewage and should not go into your holding tank.<br>• Reroute water from these sources to another outlet, such as a dry well, drain tile or old drainfield.<br>• When replacing, consider using a demand-based recharge vs. a time-based recharge.<br>• Check valves to ensure proper operation; have unit serviced per manufacturer directions |
| Surface drainage<br>Footing drains | • Uses water and increases pumping frequency and expense. | |

## 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 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Check daily for a period of time and weekly once average use is determined:*** | | | | | | | | | | |
| Water usage rate (gallons per day) | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Leaks: check for plumbing leaks | | | | | | | | | | |
| ***Annually:*** | | | | | | | | | | |
| Establish and maintain contract for holding tank pumping services | | | | | | | | | | |
| Water use appliances – review use | | | | | | | | | | |

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*Septic System Management Plan*
*For Holding Tank Systems*

| Water Meter Reading and Tank Evacuation Schedule | | | |
|---|---|---|---|
| **Date** | **Water Meter Reading (in gallons)** | **Tank Contents Removed?** | **Total Gallons Removed** |
| | | | |
| | | | |
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Notes:

Mitigation/corrective action plan: HAVE PUMPED BEFORE EVERY EVENT

PUMP ANYTIME ALARM IS NOTED

*"As the owner of this SSTS, I understand it is my responsibility to praperly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in this Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions.*

Property Owner Signature: Date

Management Plan Prepared By: KEVIN NHERWIG Certification # 3658

Permitting Authority: MILLE BAND OF OJIBWE DNR