

Septic Sense: Solutions for Rural Living

Final Project Report

Agreement: AIEES – 2330

Submitted by:

*Brian E. Ilnicki
Executive Director
Land Stewardship Centre of Canada*

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Executive Summary

The Septic Sense: Solutions for Rural Living program (Septic Sense) was initiated by Land Stewardship Centre (LSC) and the Alberta Onsite Wastewater Management Association (AOWMA) to develop, implement, test and evaluate a coordinated and collaborative septic system operation and maintenance workshop program for rural residential landowners in Alberta.

Rural residential landowners represent a growing proportion of the rural population and their actions have the potential to impact environmental resources on their property and on the larger landscape. These actions can contribute to adverse impacts on surface water and ground water quality and can have significant cumulative impacts on the local watershed. However, with adequate knowledge, resources and support, these landowners can make appropriate management decisions to mitigate any potential negative impacts on the environment.

Septic Sense was designed as a practical, needs-driven project that is guided by experts in septic management and watershed ecology and has three core objectives:

1. Awareness – help septic system owners recognize that management of private onsite wastewater systems is their responsibility, and the potential impacts of human activities on groundwater and the broader environment.
2. Knowledge – help septic system owners gain a basic understanding of groundwater science, how a septic system works, and how a septic system should be operated and maintained.
3. Practice Change – help septic system owners acquire the skills and motivation to adopt recommended septic system management practices.

Septic Sense was launched in the fall of 2016, following an initial 2015 pilot phase, with a target of delivering 20 workshops and engaging approximately 600 participants from across Alberta by March 31, 2017. The program was broadly promoted via LSC's website and social media outlets, and through direct outreach to rural municipalities.

Septic Sense host municipalities were provided with a supporting toolkit that included:

1. A Canada Post compliant postcard for marketing the workshop.
2. A templated and customizable advertisement for local newspapers.
3. A templated and customizable media release and program backgrounder.
4. A comprehensive host task list identifying key task requirements.
5. A templated participant tracking form.
6. A templated and customizable workshop agenda.
7. A participant workshop survey.
8. A host workshop and feedback survey.

Each registered participant (or one per household) was provided the following resources as an information package at each workshop:

1. A handout version of the Power Point presentation.
2. Septic system Do's and Don'ts and Frequently Asked Questions.

3. A fillable septic system maintenance records log sheet.
4. A Private Onsite Wastewater Treatment System Owner's Manual.
5. An AOWMA and LSC contact information card for future reference.
6. A plastic and re-sealable storage file for record-keeping and maintenance logs.

A total of 19 of a target 20 workshops were held between January 18/17 and March 30/17 with one cancellation owing to the inability to secure a venue by the host municipality. A total of 623 individuals participated in these workshops with at least 5 workshops having to cap total attendees due to lack of space. Although there was a broad range of participation, the majority of attendees categorized themselves as being 55 years or older and as either an acreage or rural residential property owner. The majority of survey respondents either 'strongly agreed' or 'agreed' that the Septic Sense workshop increased their understanding of proper sewage treatment and how a septic system works.

Some of the most common actions identified by participants included:

- Need for regular inspection.
- Check fixtures for water leaks.
- Install water efficient fixtures.
- Check the septic alarm.
- Ensure proper surface runoff.
- Inspect the soils treatment component.
- Keep records of septic system inspections and maintenance.
- Ensure that the septic tank is properly set back.
- Ensure that the soils treatment component is properly set back.
- Maintain a regular and appropriate schedule.
- Ensure manhole cover is securely closed.

The feedback received to date is overwhelmingly positive with strong municipal support for the continuation of the Septic Sense program. LSC staff have been tracking requests for future workshops (there are currently six on a waiting list) and we continue to receive inquiries from Summer Villages associated with lake communities about hosting workshops over the summer months. Several inquiries have also been received from other jurisdictions in Canada for either adoption of or modification to the current Septic Sense program to enable alignment with local and regional legislation. LSC staff continue to meet with local and provincial representatives associated with septic management to explore options for continuing the Septic Sense program model for delivery in 2017 -18 including the option of a fee-for-service workshop for municipalities who have expressed a willingness to pay for this service. Ultimately, however, the preferred model is to secure adequate resources in order to continue to offer the Septic Sense program in partnership with local hosts at minimal or zero cost.

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Introduction

The Septic Sense: Solutions for Rural Living program (Septic Sense) was a multi-agency initiative undertaken to develop, implement, test and evaluate a coordinated and collaborative septic system operation and maintenance workshop program for rural residential landowners in Alberta.

Septic Sense was initiated by Land Stewardship Centre (LSC) and the Alberta Onsite Wastewater Management Association (AOWMA). These organizations partnered with the Government of Alberta (GoA) Ministries of Municipal Affairs and Environment and Parks and with several municipal agencies to ensure the accuracy and reliability of program messages, to extend the reach of the program and to improve the capacity to deliver a workshop series.

The intent of the Septic Sense project was to raise awareness, increase knowledge and facilitate practice change among owners of private septic systems.

Septic Sense addresses *Theme 2: Healthy Aquatic Ecosystems* and *Theme 4: Water Quality Protection* of the Alberta Innovates – Energy and Environment Solutions Water Innovation Program.

Background

Rural residential landowners represent a growing proportion of the rural population. As such, the actions they take on the landscape have the potential to impact environmental resources on their property and on the larger landscape. The actions rural residential landowners take to operate and maintain their septic systems can contribute to adverse impacts on surface water and ground water quality. The potential cumulative impacts of this growing population, in concert with impacts from increased development, can be significant. However, with adequate knowledge, resources and support, these landowners can make appropriate management decisions to mitigate any potential negative impacts on the environment.

According to Alberta Municipal Affairs, the average person puts 340 litres of sewage through a private sewage system (septic system) every day. For a family of four living in a two-bedroom house, that amounts to 1,360 litres per day and just under half a million litres per year. The last Alberta census shows that rural residential landowners represent 14% of Alberta's population.

Owners of private sewage systems are responsible for ensuring their systems operate properly and safely. The decisions of those property owners about how to manage and maintain their septic systems have the potential to have a significant cumulative effect on the Alberta landscape. Historically, there have been limited resources and support directed specifically to educating property owners on how to properly manage these important systems.

To help address this knowledge gap, the Alberta Onsite Wastewater Management Association (AOWMA) has provided information and delivered septic system operation and maintenance workshops to landowners throughout Alberta for several years. But as a small organization, with limited human and financial resources, delivery of these workshops has been restricted. Several GoA Ministries have developed a variety of septic system information and fact sheets that are made available to landowners. Land Stewardship Centre's (LSC) Green Acreages Guide workbook includes an overview of septic system management. While all of these efforts are important, these organizations have typically engaged in their respective outreach and information resource development activities independently of each other's efforts.

Objectives

The Septic Sense project was conceived as a practical, needs-driven approach that is guided by experts in septic management and watershed ecology. Septic Sense draws on input from a multi-agency technical committee and is extensively supported by rural municipalities from across Alberta. The Septic Sense project objectives include:

1. **Awareness** – help septic system owners recognize that management of private onsite wastewater systems is their responsibility, and the potential impacts of human activities on groundwater and the broader environment.
2. **Knowledge** – help septic system owners gain a basic understanding of groundwater science, how a septic system works, and how a septic system should be operated and maintained.
3. **Practice Change** – help septic system owners acquire the skills and motivation to adopt recommended septic system management practices.

Implementation Approach

In order to achieve the project objectives, partners designed and pilot tested a coordinated approach to workshop delivery with several municipalities across Alberta in 2015. At the conclusion of the five pilot workshops, the content, material requirements, facilitation and technical support needs, implementation of a marketing plan and financial support requirements were refined, and a business case was developed to advance the program. This work was completed during the 2015 – 2016 calendar years and a launch of the Septic Sense program occurred in the fall of 2016.

LSC launched the Septic Sense program in the fall of 2016 with a target of delivering 20 workshops by March 31, 2017. The program was broadly promoted via LSC's website and social media outlets, and through direct outreach to rural Alberta municipalities.

The workshop delivery model consists of three core elements:

1. **Technical expertise:** The Septic Sense workshops were delivered by a representative of AOWMA who provides landowners with information related to appropriate septic system operation and maintenance, common problems and suggested best practices. This information, presented in a two hour interactive presentation, allowed landowners to identify actions that protect their system and groundwater resources. Each workshop was designed to allow for an extensive question and answer component which provided the opportunity for landowners to address specific issues or concerns.
2. **Local support:** Local municipalities were responsible for serving as workshop hosts and for organizing the workshops in their respective communities. This included advertising, taking participant registrations and securing a venue. They also ensured that participant and host workshop evaluations were completed and returned to LSC staff for final compilation.
3. **Administrative and outreach support:** LSC staff were responsible for the development and distribution of all information resources including; fact sheets, brochures and information booklets which serve as the core program references. LSC coordinated all program promotion, workshop bookings and logistical support for both the facilitators and host municipalities. Additionally, LSC staff actively promoted Septic Sense by attending various trade shows, workshops and targeted conferences in addition to direct mailing of the Septic Sense promotional postcard to all rural municipalities. Septic Sense has also been incorporated into LSC's website (<http://www.landstewardship.org/septic-sense/>) to enable people to learn about the program and access the program resources.

Workshop Schedule and Attendance

The Septic Sense program was launched in November 2016 and resulted in the following series of workshops.

Date	Workshop Host	Location	Attendance
January 18/17	Leduc County	New Sarepta Agriplex	34
January 19/17	Yellowhead County	Yellowhead County Office	16
January 25/17	Wetaskiwin County	Buck Lake	21
February 2/17	Lakeland Agriculture Research Association	Centennial Centre	23
February 7/17	Clearwater and Red Deer Counties	Hespero Hall	48
February 9/17	Lac Ste. Anne County	Gunn Community Hall	50
February 13/17	Leduc County	Telford Hall	42
February 15/17	MD of Greenview	Debolt Public Services Building	13
February 16/17	Westlock County	Glenreagh Community Hall	32
February 28,/17	Wheatland County	Administrative Office	18
March 1/17	Camrose County	Administrative Office	46
March 2/17	Athabasca County	Athabasca Agri-plex	20
March 15/17	Milk River Watershed Council of Canada	Heritage Hall	12
March 16/17	Parkland County	Carvel Hall	50
March 23/17	MD of Foothills	Priddis Valley Hall	52
March 27/17	Kneehill County	Three Hills Community Memorial Center	13
March 28/17	Clearwater and Mountain View Counties	James River Community Hall	49
March 29/17	MD of Foothills	Davisburg Community Association	54
March 30/17	Rocky View County	Airdrie Agriculture Centre	30
Total			623

Septic Sense Program Materials

In an effort to ensure consistency of message, delivery of accurate information and the ability of host municipalities to be able to market Septic Sense effectively, the following products were developed for distribution at targeted outreach events and/or provided to the host municipalities:

1. **Postcard** – Canada Post compliant and used by local municipalities to market their upcoming workshop(s).
2. **Advertisement** – A templated and customizable advertisement which host municipalities used to advertise their workshop(s) in the local newspaper.
3. **Media Release and Backgrounder** – A templated and customizable media release and program backgrounder that was used to help support local advertising and media inquiries.
4. **Host Task List** – A comprehensive task list identifying key tasks of the host which were required to be completed for; workshop promotion, workshop registration, venue preparation and workshop follow-up.
5. **Registration Form** – A templated tracking form of all registered attendees and associated contact information for follow-up.
6. **Agenda** – A templated and customizable workshop agenda for distribution either prior to (or day of) the workshop for attendees, which outlines key elements of the workshop.

Refer to [Appendix B](#) for examples of the above program marketing and host support materials.

The following products were developed in support of the workshop event and to provide the means to collect data from which the program can be evaluated:

1. **Participant Survey** – A participant survey was completed by workshop participants and collected by hosts following completion of the workshop. Results have been tabulated for final program evaluation.
2. **Host Survey** – A host feedback survey was completed by each host and forwarded to LSC staff immediately following the workshop. Results have been tabulated for final program evaluation.

Refer to [Appendix C](#) for examples of the above evaluation support materials.

The following resources were developed and distributed to all workshop participants:

1. **Presentation Notes** – A handout version of the Power Point presentation for future reference.
2. **Fact Sheet** – Septic system Do's and Don'ts and Frequently Asked Questions.
3. **Maintenance Log** – A fillable septic system records log sheet.
4. **Owner's Manual** – Private Onsite Wastewater Treatment System Owner's Manual.
5. **Contact Card** – AOWMA and LSC contact information for future reference requirements.
6. **Storage File** – Plastic and re-sealable storage file for record-keeping, maintenance logs, owner's manual, etc.

Refer to [Appendix D](#) for examples of the above workshop participant resources.

Host Evaluation Summary

A host survey was sent to and completed by each host and submitted to LSC staff following the workshop for inclusion in the final report. This survey was designed to gauge host feedback on:

- The coordination and planning of individual workshops.
- The quality and usefulness of the host resource materials package.
- The quality and thoroughness of the presentation.
- The quality and professionalism of the presenter.
- The interest of hosting a similar workshop in future years, and if so, how often.
- General workshop feedback.

Overall, the feedback from hosts was extremely positive with many commenting on the quality of workshop materials and the high level of content knowledge and professionalism of the content experts.

Hosts provided some suggestions in terms of content language clarification and presentation content. We did not receive any negative feedback from hosts and/or associated staff about the Septic Sense workshops. In every case, hosts expressed interest in hosting future workshops and, in some cases, offered to help subsidize the full or partial costs associated with delivering a workshop.

We received several suggestions to revise/update the presentation content from both the hosts as well as the content experts. These suggestions will be incorporated into the next version of the presentation and will be vetted by experts to ensure clarity and accuracy of content.

There was a suggestion that we develop a small scale 3-D model of some typical septic systems for participants to view during breaks. Overall, the print materials were well-received and other than making some minor changes to content to reflect presentation updates and increase font size, all of the original layout and designs will be used going forward.

Participant Evaluation Summary

At the end of each workshop, all workshop participants were asked to complete a participant survey. Completed surveys were collected by hosts and forwarded to LSC staff for final compilation. The purpose of the participant evaluation was to gauge participants' reaction to and learning from the workshops including their:

- Understanding the goals of proper sewage treatment.
- Understanding of how a septic system works.
- Understanding the importance of water efficiency and septic systems.
- Understanding proper use of and some common problems associated with septic systems.
- Understanding proper maintenance, operations and management of septic systems.

A total of 623 individuals participated in the 19 Septic Sense workshops. A total of 374 (or about 60%) completed participant evaluations were received. Of the 374 completed evaluations, we received permission from 178 individuals (approximately 48%) for LSC staff to conduct a follow-up interview with them to discuss what they have done and how they have been managing their septic system post-workshop.

There was a broad range of participants by age category, with the majority of participants being 55 years or older.

- 55+ years = 60%
- 45 – 54 years = 20%
- 30 – 44 years = 15%
- 18 – 29 years = 5%

The majority of workshop participants identified as acreage or rural residential property owners.

- 70% acreage or rural residential property owner
- 21% farmer or rancher
- 9% other

The majority of survey respondents either ‘strongly agreed’ or ‘agreed’ that the Septic Sense workshop increased their understanding of proper sewage treatment and how a septic system works.

In very few cases (less than 2% of total responses) individuals felt that there was not enough information regarding water efficiency and not enough examples of common problems associated with septic systems. This was an area that the hosts and presenters also identified as an area for improvement and the topic will be further explored in the development of future presentation content.

Some of the most common actions identified by participants as immediate next steps they will take relative to managing their septic system, included:

- Regularly inspect my septic tank and soils treatment component.
- Check fixtures for leaks (e.g. taps, toilets, etc.).
- Install water efficient fixtures (e.g. taps, toilets, etc.).
- Regularly check my septic alarm to ensure it is working properly.
- Ensure surface runoff (e.g. from downspouts) is directed away from the soils treatment component.
- Inspect the soils treatment component for soil compaction or the presence of deep rooted vegetation (e.g. large shrubs and trees).
- Keep records of septic system inspections and maintenance.
- Ensure that the septic tank is properly set back from property lines, buildings, water wells and surface water.
- Check to see that the soils treatment component is properly set back from property lines, buildings, septic tank, water wells and surface water.
- Maintain a regular and appropriate septic tank pumping and cleaning schedule.
- Ensure my septic system manhole cover is securely closed.

Summary and Next Steps

We launched the program with a goal of delivering 20 workshops to 600 participants (approximately 30 participants per event). A total of 19 Septic Sense workshops were completed place between January and March 2017 and participant numbers exceeded our original goal (total participants 623).

The feedback we received from hosts and participants alike was overwhelmingly positive. There is strong municipal support for the continuation of the Septic Sense program. LSC staff have been tracking requests for future workshops (there are currently six on a waiting list), and we continue to receive inquiries from Summer Villages associated with lake communities about hosting workshops over the summer months.

As a result of a Septic Sense presentation given at the AOWMA 2017 Conference, several inquiries were made regarding the expansion of Septic Sense into other provinces. LSC is currently working with the British Columbia equivalent of AOWMA to modify Septic Sense for implementation in that province over the coming year.

In its capacity as program coordinator, LSC continues to meet with representatives of the original Septic Sense Technical Committee (which includes individuals representing AOWMA, Alberta Municipal Affairs, Alberta Environment and Parks, Alberta Agriculture Forestry and Alberta Health Services) to review and discuss the outcomes of the project, and to explore opportunities to secure long-term, sustainable funding for the Septic Sense program.

Over a relatively short period of time, and with the support of key content and financial partners, we have been able to operationalize the concept and create a program that is meeting the needs of participants in an extremely cost-effective delivery model. In that time, Septic Sense has proven to be an extremely popular and valuable program for rural municipalities and owners of private septic systems. Careful planning and a collaborative approach to program delivery has greatly increased awareness of and support for the Septic Sense program, and the program partners are committed to finding ways to ensure its continuation.

Appendix B: Program Marketing and Host Support Materials

Postcard – Canada Post compliant and used by local municipalities to market their upcoming workshop(s) (front and back shown).



Advertisement – A templated and customizable advertisement which host municipalities used to advertise their workshop(s) in the local newspaper.



Media Release and Backgrounder – A templated and customizable media release and program backgrounder that was used to help support local advertising and media inquiries.



Host Task List – A comprehensive task list identifying key tasks of the host which were required to be completed for; workshop promotion, workshop registration, venue preparation and workshop follow-up.



Registration Form – A templated tracking form of all registered attendees and associated contact information for follow-up.



Septic Sense | Workshop Participant Registration Form

Instructions for Hosts

- Please collect complete participant information using the form below.
- Send a copy to the workshop coordinator at least **one week before the workshop**.
- Approximately one week before, send a reminder to all registered participants of upcoming workshop.

Workshop Information

Date	Location	Host Organization

Participant Information

Please bring workshop registration to 50 people and record all individuals who will be attending. See examples below in table. Use the checkbox column to record participant attendance on the day of the workshop.

Attended workshop?	#	Participant First Name	Participant Last Name	Phone	Email
<input checked="" type="checkbox"/>	1	John	Smith	903-840-2345	john@smith.com
<input type="checkbox"/>	2	Jane	Smith	903-840-2345	
<input checked="" type="checkbox"/>	3	David	Adams	903-840-2290	adam@adams.com
<input type="checkbox"/>	4				
<input type="checkbox"/>	5				
<input type="checkbox"/>	6				
<input type="checkbox"/>	7				
<input type="checkbox"/>	8				
<input type="checkbox"/>	9				
<input type="checkbox"/>	10				

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Agenda – A templated and customizable workshop agenda for distribution either prior to (or day of) the workshop for attendees, which outlines key elements of the workshop.



**Septic Sense: Solutions for Rural Living
Workshop Agenda**

Workshop Location: _____

Workshop Date: _____

Hosted by: _____

Presenters: _____

1. Welcome and Introduction

2. Presentation Sessions

- What is a septic system?
- How does a septic system work?
- Regulations

3. Break

4. Presentation Sessions (continued)

- Septic system design and installation
- Appropriate use of your septic system
- Maintaining your septic system
- Troubleshooting

5. Wrap Up and Closing Messages

Brought to you by:

 

Appendix C: Evaluation Support Materials

Participant Survey – A participant survey was completed by workshop participants and collected by hosts following completion of the workshop. Results have been tabulated for final program evaluation.

Septic Sense: Solutions for Rural Living
Workshop Participant Survey

Workshop Date: _____
Workshop Location: _____

Thank you for participating in the Septic Sense workshop. Please complete the following questions on both sides of this sheet and return the survey to the workshop facilitator leading the workshop.

- The workshop increased my understanding of the goals of proper septic treatment.
Strongly Disagree | Disagree | Agree | Strongly Agree
- The workshop increased my understanding of how my septic system works.
Strongly Disagree | Disagree | Agree | Strongly Agree
- The workshop increased my understanding of the importance of water efficiency with regards to my septic system.
Strongly Disagree | Disagree | Agree | Strongly Agree
- The workshop increased my understanding of the importance of proper use of my septic system (e.g. avoid using antibiotics and garbage, conserve water, do not pour solvents, fuels or other hazardous chemicals down the drain, only toilet tissue in the toilet, etc.)
Strongly Disagree | Disagree | Agree | Strongly Agree
- The workshop increased my understanding of common septic system leaks and possible solutions.
Strongly Disagree | Disagree | Agree | Strongly Agree
- The workshop increased my understanding of proper septic system maintenance and management practices (e.g. regular maintenance, pumping and appropriate treatment bed maintenance).
Strongly Disagree | Disagree | Agree | Strongly Agree
- This workshop provided me with information that will be helpful in maintaining and managing my septic system.
Strongly Disagree | Disagree | Agree | Strongly Agree

8. As a result of what I learned at this workshop, I will do the following with respect to my septic system (please check all that apply):

- Regularly inspect my septic tank and other treatment components.
- Check filters for holes (e.g. lawn, toilets, etc.).
- Install water efficient fixtures (e.g. shower, toilets, etc.).
- Regularly check my septic alarm to ensure it is working properly.
- Remove car floor mats (e.g. from driveway) to divert water from the septic treatment component.
- Inspect the septic treatment component for soil compaction or the presence of tree rooted vegetation (e.g. large shrubs and trees).
- Keep records of septic system inspections and expenditures.
- Check to see that my septic tank is properly vented from property line, building, water table and surface water.
- Check to see that the septic treatment component is properly vented from property line, building, water table and surface water.
- Monitor a regular and appropriate septic tank pumping and flushing schedule.
- Protect my septic system materials from secondary leaks.

9. What was the most important thing you learned at this workshop?

10. How would you improve the workshop?

11. Would you recommend this workshop to others? Yes No Don't know

12. What is your age? 18-24 | 25-34 | 35-44 | 45-54 | 55+

13. How many people are in your household? 1 | 2 | 3 | 4 | 5 | More than 5

14. Which of the following best describes your profession?

- Agricultural producer, farmer or rancher
- Manager, owner or self-employed
- Other (please specify): _____

Can we contact you again?
We would like to contact you approximately six months after the workshop to ask you some follow-up questions. If we can contact you, please provide the following information:
Name: _____
Phone number: _____
Best phone to call (24hr-48hr): Day | Evening | No preference

Host Survey – A host feedback survey was completed by each host and forwarded to LSC staff immediately following the workshop. Results have been tabulated for final program evaluation.

Land Stewardship Centre
Septic Sense – Workshop Host Questionnaire

Host: _____
Workshop Date: _____
Workshop Location: _____

- How was the coordination and planning process of your Septic Sense workshop? Was there anything that could have been done better?
- Were the host materials helpful to you? Did it match with organizing and promoting your workshop?
- What was the attendance like for your workshop?
- Did you receive any feedback about the workshop directly from participants? If so, can you please share this comment?
- Did the promotion and presentation during the workshop meet your expectations?
- Was there anything you think could be improved upon the next planning/coordination and the overall workshop?
- If resources for Septic Sense allowed in future years, would you have further interest? If so, what, usually, to attend or to use them?
- Please provide any additional feedback, suggestions or thoughts.

Appendix D: Workshop Participant Resources

Presentation Notes – A handout version of the Power Point presentation for future reference.

Septic Sense: Solutions for Rural Living 2017

Septic Sense
Solutions for Rural Living

Program Partners



Outline

- Introduction
- Why a septic system?
- How to choose a septic system
- How to install a septic system
- How to maintain a septic system

Septic Sense: Solutions for Rural Living 2017

Outline

- Regulations
- Design and installation
- Maintaining use of your septic system
- Maintaining your septic system
- Troubleshooting

Introduction

How to Find Your Septic System

- Look at your location on both a map and in the field
- Interview your neighbours
- Interview your local health department or public health unit
- Interview your local health department or public health unit

Septic Sense: Solutions for Rural Living 2017

What is a Septic System?

- Provide septic system
- Provide septic system for rural living
- How to choose a septic system
- How to install a septic system
- How to maintain a septic system

Goals of Septage Treatment

- The goal of a septic system is to treat and separate sewage and effluent to that the sewage is efficient
- How to choose a septic system
- How to install a septic system
- How to maintain a septic system

Did You Know?

- "Septic" is a form of "sanitation" and "Sense" will help you to maintain your septic system

Septic Sense: Solutions for Rural Living 2017

Did You Know?

- Look at your location on both a map and in the field
- Interview your neighbours
- Interview your local health department or public health unit
- Interview your local health department or public health unit

How Septic Systems Work

How Septic Systems Work



Septic Sense Solutions for Rural Living 2018

How Septic Tanks Work

- Solid settles out in storage tank
- Floats with scum layer to the liquid layer
- Liquids flow into the treatment tank

Initial Treatment Components

Septic tank



Initial Treatment Components

- Advanced treatment units (ATUs)
- Mechanical and chemical treatment units
- Aeration systems

Septic Sense Solutions for Rural Living 2018

Initial Treatment Components

- Aerobic treatment units



Examples of Package Plants

- MFT® treatment plant



Examples of Package Plants

- In-line package plant
- MFT® treatment plant
- MFT® treatment plant
- MFT® treatment plant
- MFT® treatment plant
- MFT® treatment plant



Septic Sense Solutions for Rural Living 2018

Examples of Package Plants

- MFT® treatment plant



Examples of Package Plants

- MFT® treatment plant



Final Treatment Components

- Advanced treatment units (ATUs)



Septic Sense Solutions for Rural Living 2018

Final Treatment Components

- Aeration



Final Treatment Components

- Aeration



Final Treatment Components

- Aeration



Septic Sense: Solutions for Rural Living 204

Important First Steps

- Call
- Professional
- Regulations



Soil Texture and Structure



Movement of Water to Soil

Water can infiltrate soil and soil structure can vary. The rate of infiltration is affected by soil texture, structure, and moisture content. The rate of infiltration is also affected by the amount of water in the soil. The rate of infiltration is also affected by the amount of water in the soil.

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Impacts on Groundwater

Water can infiltrate soil and soil structure can vary. The rate of infiltration is affected by soil texture, structure, and moisture content. The rate of infiltration is also affected by the amount of water in the soil. The rate of infiltration is also affected by the amount of water in the soil.

Regulations

Regulations

- Alberta Water Services Regulatory Board of Alberta (AWSRB)
- Alberta Health Services (AHS)
- Alberta Environment and Sustainable Development (AESA)
- Alberta Public Health Act

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Regulations

Alberta Water Services Regulatory Board of Alberta (AWSRB)

Regulations

Alberta Health Services (AHS)

Design and Installation

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Design and Installation

Water can infiltrate soil and soil structure can vary. The rate of infiltration is affected by soil texture, structure, and moisture content. The rate of infiltration is also affected by the amount of water in the soil. The rate of infiltration is also affected by the amount of water in the soil.

Design and Installation

Water can infiltrate soil and soil structure can vary. The rate of infiltration is affected by soil texture, structure, and moisture content. The rate of infiltration is also affected by the amount of water in the soil. The rate of infiltration is also affected by the amount of water in the soil.

Design and Installation

Water can infiltrate soil and soil structure can vary. The rate of infiltration is affected by soil texture, structure, and moisture content. The rate of infiltration is also affected by the amount of water in the soil. The rate of infiltration is also affected by the amount of water in the soil.

Septic Sense: Solutions for Rural Living 2018

Design and Installation

Working with a professional to determine the system and the location also addresses floor and other issues.

Design and Installation Checklist

Design and Installation Checklist

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Septic Sense: Solutions for Rural Living 2018

Design and Installation Checklist

Design and Installation Checklist

Using Your Septic System

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Using Your Septic System

Working with a professional to determine the system and the location also addresses floor and other issues.

Using Your Septic System

Using Your Septic System

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Using Your Septic System

Appropriate Use Checklist

Appropriate Use Checklist

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Appropriate Use Checklist



Maintaining Your Septic System



Maintaining Your Septic System

Why maintain your septic system?

- Prevents odors
- Prevents raw sewage leaks
- Prevents raw sewage from contaminating



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Maintaining Your Septic System

- Regularly
- Pumping out your septic tank every 3-5 years
- 1-2 times



Maintaining Your Septic System

- Not working
- Odorous
- Backing up
- Slowly draining
- Sewer gas in house
- Sewer water in yard
- Sewer water in driveway
- Sewer water in basement
- Sewer water in crawlspace
- Sewer water in attic
- Sewer water in laundry
- Sewer water in kitchen
- Sewer water in bathroom
- Sewer water in bedroom
- Sewer water in living room
- Sewer water in dining room
- Sewer water in entry
- Sewer water in garage
- Sewer water in driveway
- Sewer water in yard
- Sewer water in street
- Sewer water in water table
- Sewer water in groundwater
- Sewer water in surface water
- Sewer water in air
- Sewer water in soil
- Sewer water in plants
- Sewer water in animals
- Sewer water in insects
- Sewer water in birds
- Sewer water in fish
- Sewer water in shellfish
- Sewer water in mammals
- Sewer water in reptiles
- Sewer water in amphibians
- Sewer water in fungi
- Sewer water in bacteria
- Sewer water in viruses
- Sewer water in parasites
- Sewer water in protozoa
- Sewer water in helminths
- Sewer water in arthropods
- Sewer water in mollusks
- Sewer water in annelids
- Sewer water in nematodes
- Sewer water in rotifers
- Sewer water in ciliates
- Sewer water in flagellates
- Sewer water in dinoflagellates
- Sewer water in diatoms
- Sewer water in cyanobacteria
- Sewer water in green algae
- Sewer water in brown algae
- Sewer water in red algae
- Sewer water in blue-green algae
- Sewer water in diatoms
- Sewer water in radiolarians
- Sewer water in forams
- Sewer water in pollen
- Sewer water in spores
- Sewer water in seeds
- Sewer water in fruits
- Sewer water in vegetables
- Sewer water in grains
- Sewer water in legumes
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- Sewer water in leaves
- Sewer water in stems
- Sewer water in roots
- Sewer water in tubers
- Sewer water in bulbs
- Sewer water in rhizomes
- Sewer water in corms
- Sewer water in stolons
- Sewer water in runners
- Sewer water in suckers
- Sewer water in offsets
- Sewer water in cuttings
- Sewer water in grafts
- Sewer water in嫁
- Sewer water in scions
- Sewer water in buds
- Sewer water in eyes
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- Sewer water in corms
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Maintaining Your Septic System



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Maintaining Your Septic System

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- Pumping out your septic tank every 3-5 years
- 1-2 times



Maintaining Your Septic System



Maintenance Checklist



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Maintenance Checklist



Maintenance Checklist



Maintenance Checklist



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Troubleshooting Guide



Storage Back up in Building

- Check
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank



Storage Back up in Building

- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank



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Storage Back up in Building

- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank



Storage Back up in Building

- Storage tank
- Storage tank
- Storage tank
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- Storage tank
- Storage tank



Storage Surfacing in Yard

- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank



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Storage Surfacing in Yard

- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank



Storage Surfacing in Yard

- Storage tank
- Storage tank
- Storage tank
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- Storage tank
- Storage tank



Storage Odour - indoors

- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank
- Storage tank



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Storage Cabinet - Indoors

- Storage
- Heavy-duty steel construction
- Powder-coated finish
- Available in three sizes

Storage Cabinet - Indoors

- Storage
- Heavy-duty steel construction
- Powder-coated finish
- Available in three sizes

Storage Cabinet - Outdoors

- Storage
- Heavy-duty steel construction
- Powder-coated finish
- Available in three sizes

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System Alerts Activated

- Alerts
- Email alerts to cell phone or email
- Text alerts
- Audio alerts

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System Alerts Activated

- Alerts
- Email alerts to cell phone or email
- Text alerts
- Audio alerts

Questions?

We Need Your Feedback

How do you feel about the information provided in this document? Please provide your feedback to help us improve our services.

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For More Information

Visit our website at www.septic-sense.com or call 1-800-368-7273. We're here to help you with any questions you may have.

Contact Card – AOWMA and LSC contact information for future reference requirements.



Storage File – Plastic and re-sealable storage file for record-keeping, maintenance logs, owner’s manual, etc.

