

**SHETEK LUTHERAN MINISTRIES
14 KEELEY ISLAND DRIVE
SLAYTON MN 56172**

ENVIRONMENTAL EDUCATION DIRECTOR/NATURALIST

OVERVIEW OF POSITION

To be responsible for the direction and management of the Shetek Lutheran Ministries Environmental Education (EE) Program known as the Shetek Environmental Learning Center (SELC).

RESPONSIBLE TO

The Executive Director and/or Program Director of Shetek Lutheran Ministries (SLM).

RESPONSIBILITIES

1. Coordinate public school, private school, and organization sponsored environmental education field trips, as well as public programs, by:
 - a. Assessing and creating field trip curriculum and educational activities based on: season and Director schedule; particular Director expertise; current events; local knowledge; educator feedback; and available teaching resources in the EE building and office.
 - b. Creating digital and paper marketing resources designed to communicate EE field trip offerings at SLM.
 - c. Advertising current field trip offerings via Facebook (both SLM and SELC Facebook pages), Instagram, and Mail Chimp in coordination with Program and Executive Directors
 - d. Connecting with current educators using past field trip contact lists, principal contacts, local education workshop opportunities, professional connections (SWWC, etc.), and networking
 - e. Participating in community and statewide environmental events
 - f. Organizing pre-field trip planning sessions with teachers in person, over Zoom, or via email
 - g. Coordinating the cleaning and use of facilities with the Retreat Host/Maintenance Director/Retreat Coordinator
 - h. Coordinating meals and mealtimes with the Food Service Director, as needed
 - i. Leading interpretive classes and presentations/programs for each field trip
 - j. Clearing all EE materials from jointly used camp spaces and coordinate with Maintenance and other staff for facility cleaning following field trips, as needed
 - k. Providing leadership in risk management before, during and after classes (i.e. respond to emergencies, administer first aid, complete incident reports,

discuss personal safety)

- l. Invoicing participating groups and thanking them for their participation
 - m. Improving the program based on evaluation forms and general response
 - n. Coordinate with Elizabeth Hoff, our Retreat Coordinator, to continue to develop the Shetek Lutheran Ministries Hiking Club.
2. Publicize the Shetek Environmental Learning Center by:
 1. Developing and distributing flyers/brochures, information letters, and descriptive program options for teachers and groups via social media, website, Mail Chimp, and paper resources
 2. Making contacts with schools and community organizations in an effort to communicate about the type of field trips and programs which are available
 3. Arrange for news coverage by local media of special events such as Sugarbush
 3. Develop summer program curriculum and staff training materials by:
 - a. Designing multi-generational EE curriculum and lessons to be executed daily during a variety of Environmental Education times in the general camp schedule
 - b. Training summer staff to assist daily EE lessons and activities in coordination with Program Director.
 - c. Designing and implementing environmental stewardship activities as part of the summer camp daily routine in coordination with Executive Director (i.e. gardens, birdfeeders, worm bins, composting, trail development, clean ups, etc.)
 - d. Coordinating with any involved Shetek staff, such as Food Service Director, Retreat Coordinator, and Program Director in the case of specially scheduled summer EE field trips and events
 4. Develop appropriate resources and caring for equipment for environmental education activities by:
 1. Developing environmental education and outdoor recreation programs for in person or online education opportunities
 2. Writing and gathering curriculum and other activity plans
 3. Purchasing and maintaining needed inventory of equipment and resources
 4. Supervising, recruiting and training volunteers and additional staff, as needed
 5. Studying the variety of habitats including the natural and cultural resources of Shetek's 27 acres for interpretation
 6. Caring for any Environmental Education animals
 7. Caring for and helping to maintain the EE building (Seattle) and relaying

- concerns/issues to Maintenance Director and/or Executive Director
8. Coordinating with other Shetek Lutheran Ministries staff by attending staff meetings and trainings as offered
 9. Maintaining and caring for the snowshoes and cross country ski inventories and other equipment used for EE programs.
5. Developing and integrating environmental stewardship opportunities into the ministry of Shetek by:
 1. Developing camp-wide environmental interpretation and stewardship initiatives and programs, such as energy awareness signage, water conservation resources, flora/fauna identification stands, etc. in coordination with Executive Director
 2. Providing environmental events and programs as requested by retreat groups and other entities in coordination with Retreat Coordinator and other relevant staff members
 3. Working to learn about, preserve and protect the many natural and cultural resources of Shetek in accordance with relevant educational trainings and state/federal laws
 4. Developing programs, goals, and budget for the Shetek Environmental Learning Center to support and further broaden the ministry opportunities at Shetek in consultation with the Executive Director
 6. Continuing, and further developing, the tap1947 Shetek Maple Syrup program, if possible. See addendum.
 7. Being willing to assist in other tasks related to the ongoing operation of the Shetek Environmental Education program and Shetek Lutheran Ministries, as determined by the Executive Director.

Addendum for the tap 1947 Shetek Maple Syrup program.

1. Background Information: The tap1947 Shetek Maple Syrup program is a hallmark endeavor almost 40 years in existence. Tapping trees began at camp in the early 1990's as a demonstration and spring environmental

education initiative. It has since grown into a staple educational program, and a significant community building opportunity. Over the years the amount of syrup Shetek staff has produced, as well as the amount of education provided to the community, has continued to grow. It is now to the point of Shetek Lutheran Ministries being recognized at the state level as a working maple farm, with our syrup winning several key awards based on clarity, viscosity, color, and taste. Our community has been positively impacted by this program, as individuals and families are trained in making maple syrup themselves, as well as providing a means of outdoor recreation for our camp friends in the spring. SLM is visited daily during "Sugarbush" by people curious to learn more about our process, which has helped to build relationships between camp and new guests. We have also built new relationships with volunteers eager to help with the process of making syrup.

2. **Equipment:** Shetek Lutheran Ministries has a vast inventory of maple syrup production materials. The equipment used to boil off maple syrup has been proudly designed and manufactured by our former EE director and her husband. Using as many recycled components as possible, Katie and Charlie Chapman built two wood-burning evaporators and pans capable of producing (together) over 30+ gallons of syrup per season. In addition to the evaporators, SLM has in our inventory over 100 5-gallon buckets and lids for sap, tubing, spiles, educational materials, evaporating pans and prewarmers, plastic pallets for wood and a surface for the evaporators, candy thermometers, hydrometers, filtering and bottling equipment, a 275 gallon bulk tank for sap storage, and more. Care, maintenance and use for these items is the responsibility of the EE director.
3. **Time/work commitment:** Making syrup is a seasonal process, most often taking place in the spring between the months of February and April. Lasting just 6-8 weeks, from taps in to taps out, syruping season is busy and fun. It is also an extensive amount of hard physical labor, and time spent outside of normal working hours at camp in order to be successful.
 - i. There is no set season for making syrup. Generally syrup makers pay attention to temperatures - we recognize the rule of 40/20/2, where temperatures during the day are around 40, the temperatures during the night are around 20, for about two weeks prior to tapping trees. Paying attention to the weather forecasts is particularly important, as well as networking with other producers to gauge the first "taps in" day. Every year is different. This time prior to tapping trees is used for getting the evaporators out of storage and placing them by the Dining Hall, sanitizing all collection buckets, washing all pans and prewarmers, ordering bottles and spiles if needed, etc.
 - ii. Once the trees are tapped (meaning, each desired maple tree at

camp has had at least one hole drilled in and a spile placed inside with a tube connecting the tree to a bucket for sap collection), sap collection begins. This requires vigilant attention to the buckets so that sap does not overflow and go to waste. Each tree, depending on temperatures and species, can release up to 5 gallons of sap daily. Count on emptying all buckets at least once daily for sap collection. Each bucket weighs 30-40lbs when filled with sap. They need to be hauled to a main collection point, such as the bulk tank or placing buckets inside the outdoor storage cooler. SLM has utility carts that can be used, but it is often too muddy and snowy to drive them between the trees off-road. Several volunteers have helped with this in the past by bringing side-by-sides with trailers to haul sap!

- iii. Each evaporator needs about 50-100 gallons of sap to start the boil off process. This is to ensure that the syrup is not scorched due to low volume in the evaporation pans. Sap only stays fresh under the best of conditions for up to 5 days, and then bacteria in the sap begin to break down the sugars, leading to fermentation. A "boil-off" happens when there is enough sap collected (and running) and the evaporation process begins. The evaporators are fueled by wood and auxiliary fans help to drive the heat up inside each firewood chamber. Temperatures inside can reach over 1000F. Boiling off is a long process of getting the evaporators burning, filling the evaporating pans and prewarmers with cold sap from storage, and then constantly adding sap to the prewarmers thereafter until all the collected sap is boiled off and the syrup is ready to be filtered and brought inside to bottle and label. This means repeated lifting of 30-40lb buckets from the ground almost overhead in order to fill the prewarmers as needed. The syrup needs to be tested for viscosity as it gets closer to finishing - if it gets too thick, or is boiled too long, it will scorch rapidly. Once the syrup is finished it needs to be filtered before bringing inside for a final filter before bottling - this is accomplished by lifting and tipping the heavy syrup pans over the evaporators to empty them into the 15 gallon finishing pots. When almost full of syrup, these pots can be over 100lbs. It takes a team effort to get all of the syrup from outside by the evaporators to inside the camp kitchen. Multiple boil-offs can happen in one season, with the average being four, and often last well over a 24-48 hour period with the evaporators running day and night. At least one person must be attending to the evaporators at all times, whether to add firewood to keep the fires going, or add sap as needed to the prewarmer.
- iv. Once the syrup is inside, it is ready to be filtered one more time for

bottling. The syrup needs to be tested for viscosity and boiled longer on the stove if it isn't to the desired thickness - this is imperative for safe syrup storage. Once the syrup is filtered, measured and accurately thick, the bottling process begins. Bottles are heated and sanitized in the ovens - they are placed in hotel pans and lifted in and out of the ovens, with each pan weighing over 30lbs. The bottles are filled one at a time from the large 15-gallon finishing pot, with vigilance needed for correct temperatures. The syrup bottles are placed on the kitchen counters to cool, and once cooled and sealed, can be packed into cases of 12 bottles each. These will need to be carried to a designated storage space.

- v. This process is repeated for as many boil-offs as can happen during the Sugarbush season. Once the season is over, clean-up work including emptying and putting away the evaporators, washing pots and pans, washing all buckets and lids, etc. is done.
- vi. Field trips often happen during the Sugarbush season. Because it is nearly impossible to conduct an educational field trip and run the evaporators simultaneously, it is advisable to have volunteers come to help make syrup while the field trip is in session.