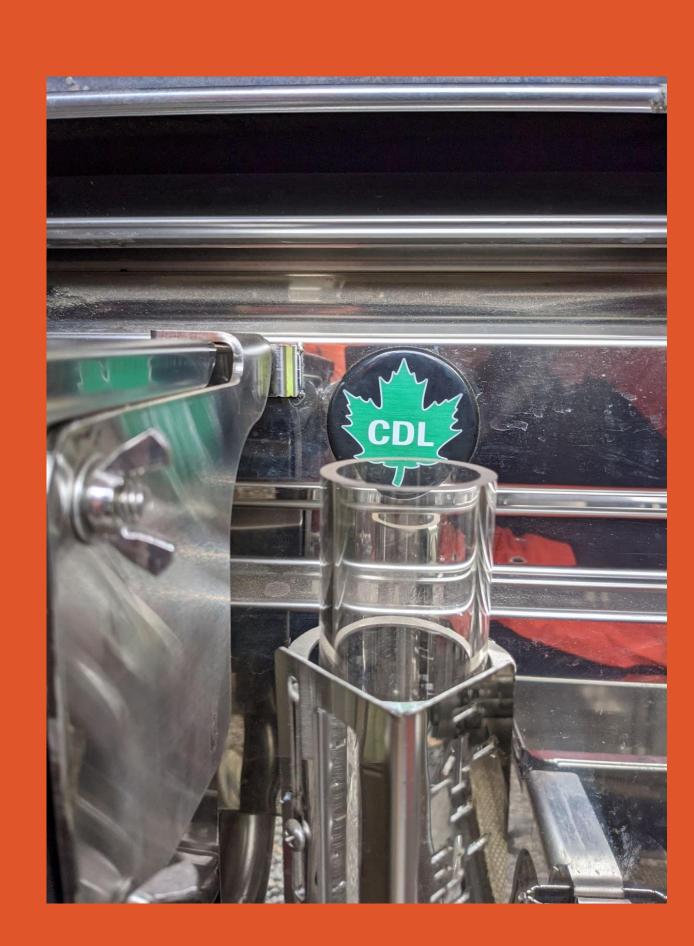
DEVELOPMENT

- Initially, the team's project scope was limited to finding a waste management service to accept the used HDPE tubing or an alternate use.
- However, the team discovered opportunities for project growth and a long-term solution.
- All waste management service providers and alternate users required information about the quantity, regularity and quality of the tubing – unavailable information.
- The team developed a database to collect data concerning quantity, regularity and quality of waste.
- The team developed and optimized a tubing preparation process that can adapt to the services' requirements.
- The team compiled a list of waste management service providers that may be available to recycle tubing.

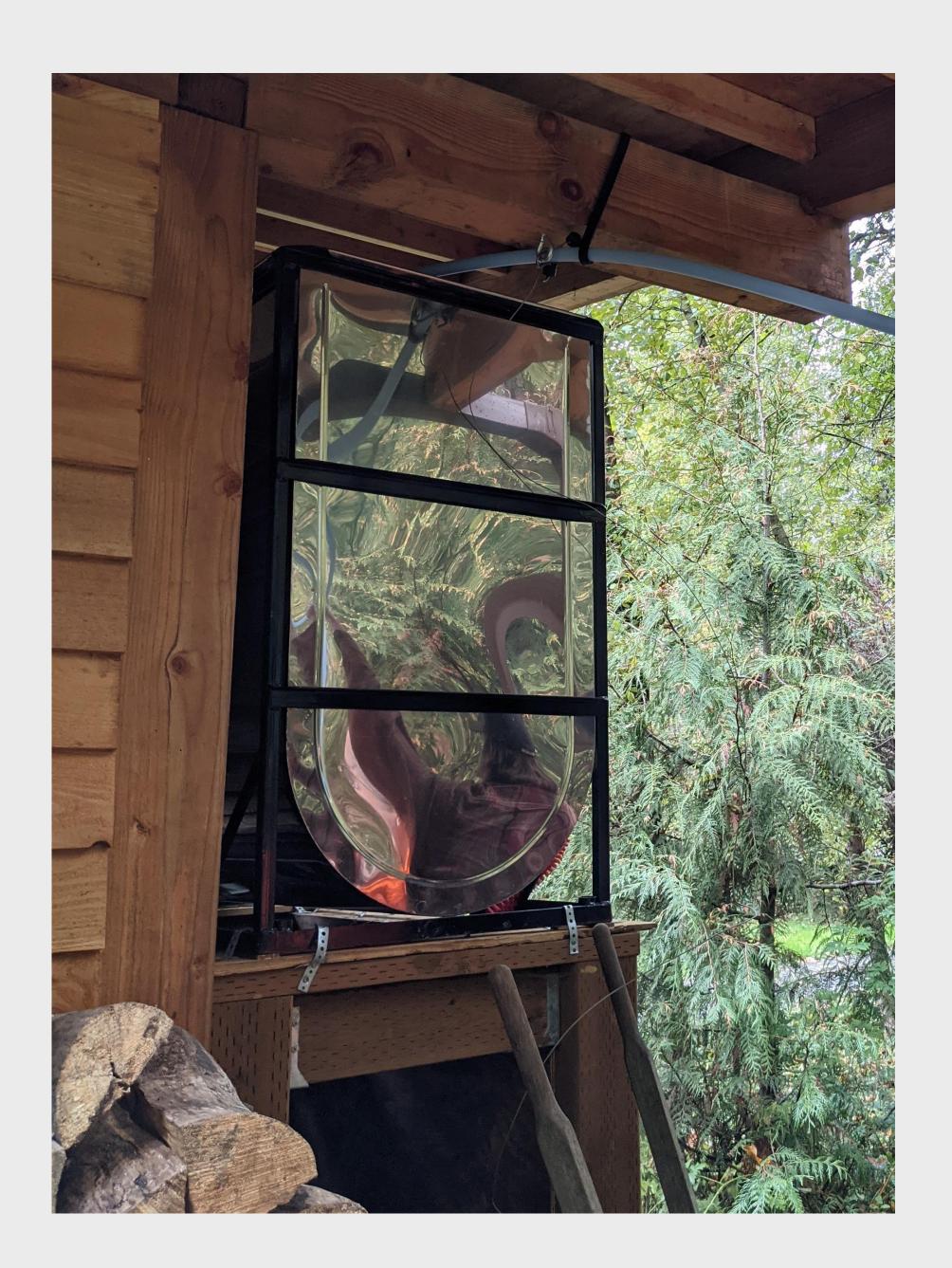




MAPLE TAPPING: WASTE SOLUTIONS

Finding recycling options and designing alternative uses for the HDPE Vacuum Tubing Waste from Bigleaf Maple Tree tapping.







FUTURE OPPORTUNITIES

- Creation of a network between local farmers and agricultural industries to reuse tubing in other suitable areas, such as drip irrigation or cable protection. A website, forum, or group could facilitate networking.
- Using the tubing to create mats or other plastic goods. The tubes could be weaved into goods or melted down.
- Database sophistication. The database is a solid, quality tool, however there is always room for improvement and added features.
- Customization and further optimization of preparation process. Current preparation process is purposefully adaptable, sugarmakers may be interested in having a custom preparation process.

FINAL SOLUTION

- The database was created through a serious of steps. First the team created an ER Schema, translated it to a EER Schema and used that schema to build the database.
- The database collects information concerning quantity, regularity, and quality of tubing waste. It then provides a waste management service provider's contact to the user.
- The tube preparation process was developed and optimized through research and experimentation. The critical details are tube length and cleaning solution. Through experimentation, the team concluded that a water & hydrogen peroxide mixture effectively removes debris from tubes.
- The team gathered a list of waste service provider's who would be able to recycling the tubing in the future.

