

I am Howard Wilcox, fourth generation to operate our family business.

The fifth generation, my children Craig and Christina operate the business with me.

I have three grandsons who are sixth generation that work in the family business also. My grandson Austin is here with me today.

Here is our story.....

Our oldest documentation of our business dates back to 1879 when my great grandfather sold broilers and eggs to the Equinox Hotel in Manchester.

Our family came to VT in the early 1800's and moved to the current property in Manchester in 1902. Back in those days my grandfather traded lamb to Burr and Burton Academy for my family's education.

In 1928 my father and his brother would soon be graduating from school and they needed to expand the family business to support their growing family, so they expanded operations into ice cream production.

We are the oldest manufacturer of ice cream in the state of VT.

When my family began making ice cream in 1928,

This is 90 Years ago... ice was hauled from Equinox Pond, and ice and salt were used to make five gallon batches in a small batch ice cream maker.

Due to the lack of refrigeration at that time it was common for my father and grandfather to deliver ice cream to the hostess just as she needed to serve it.

My father bought the first continuous ice cream making freezer in the state in 1948.

It was an ice cream making machine that grew manufacturing ice cream from small five gallon batches to 80 gallons per hour.

We made ice cream in the same facility from the early 1930's to 2001 when a fire destroyed our operation. We were not insured properly.

My daughter and I spent the next 15 years traveling to make our ice cream at various available ice cream facilities that had time available for us to produce.

Wilcox Ice Cream has always been made my Wilcox family members. Today we still hand package all our products. We manufacture our ice cream at 150 gallons per hour... which is filling a pint in three seconds.

Our ice cream mix is made to our recipe by St. Albans Creamery in St. Albans, VT and transported to our plant for production.

Wilcox Ice Cream is made from VT milk, in VT, by Vermonter's

We have on hand an average of 25 flavors in Wilcox Ice Cream at a time. A driving force of Wilcox Ice Cream are limited batch flavors. Our customers are accustomed to asking us what the special flavors of the week are before they place their order.

Over the last 15 years we largely expanded our company into a specialty foods wholesaler of hundreds of products including desserts, cookies, pastries, bagels, pizza... and the list goes on.

We are the frozen UPS of Vermont

We also distribute many frozen products for other Vermont business.

Our delivery trucks do what we call "driving green" where instead of using other methods of shipping products to us our drivers pick up products that we sell along their distribution routes.

Today our company has 15 Employees, six of which are family members.

During ice cream production there are three generations of Wilcox's working together to make our ice cream.

The New Building.....

Our goal of rebuilding after our fire became possible in 2015 when we acquired an existing 12,000 square foot industrial building in East Arlington, VT.

We received a 16,000 grant from the Working Enterprise Land Grant that we used as part of a down payment on our project funding.

And so embarked a huge undertaking by my family.

We began designing how this new building would be set up for operations and determined what the best way to accomplish our new ice cream manufacturing plant and distribution center.

We began by investigating how to process our waste water as our town does NOT have any municipal septic system. The existing septic system in the building was only suitable for the existing bathrooms.

We were fortunate to be able to speak with the Hornstra Dairy family in Massachusetts who have a bark-bed filtration system for their onsite processing of dairy waste.

We hired an engineer to design the beginning of an onsite treatment system for our waste water. We had a 5,000 gallon tank built for us and buried outside our building.

Inside our building we put in a trench drain in the center of the production room which is graduated and flows outside through pipes that lead to the 5,000 gallon tank. We have set up the tank with an above ground pump station. Water and dairy waste flow to the trench drain from the graduated floor.

We had washable walls put in our production room after another layer of insulation was added to the building. We used Extruteck walls which were very easy to install and did not require a layer of sheetrock behind it.

We manufacture on a continuous ice cream making machine. What that means is that as long as the flavoring tank is feeding mix to the machine that we do not shut down all day. We graduate from one flavor to the next. Flavor runs are set up by strength of flavor and color.

When we transition from one flavor to the next there is combined ice cream with two flavors in it. This we call process waste. It cannot be sold.

We capture this product and take it to my brother's farm where his pigs are very happy to eat this treat. Of process waste...

Ice cream waste has BOD's in it. Biological Oxygen Demand. This is how fast the waste water is broken down.

By capturing our process waste and sending it to a farm we greatly reduce our BOD level in our waste water. The product that ends up going to the 5,000 gallon tank is largely water from clean up.

Our ice cream plant equipment is all broken down and hand washed and sanitized with each production. We do not have a clean in place system. Hand washing uses a lot less waste water than a CIP system.

Our waste water is currently pumped by a septic company but we are looking to source someone who could benefit from the waste water with BOD's in it. It is our understanding that adding waste water with BOD's in it would speed up a digesters process.

We also can continue to pursue a creative onsite processing system like bark-bed filtration or by some other creative measure of using holding tanks to settle off the concentrated waste.

First we wish to exhaust the avenue of the wash water being useful for someone else.

In the design of renovations for the rest of our building all possible efficiencies were explored.

The design of the floor below our freezer rooms was very important.

Frost will continue to drive its way down through the floor over time. Then the floor can heave. This would be very costly to fix. So we began by removing 4,000 square feet of concrete from the existing building. We dug down under the concrete  $1\frac{1}{2}$  feet down.

We worked with Chris Callahan from UVM Extension service to design an air system to be able to move air through an elaborate PVC piping system if the temperature of the earth gets too cold. There are three probes 1.5 feet down that take the temperature of the earth. If it gets too cold fans located in PVC piping in our building kick on and bring ambient air through the PVC pipes to actually warm the earth below the freezer floor.

Extensive insulation was installed in the floor. The new insulated walls for the blast and storage room freezers were then installed with the bottom of the freezer wall panels being below floor level. A new concrete floor was then poured inside the freezer walls.

The main portion of the building was not as high as we had hoped for height in our new freezers. Normally freezer ceiling panels would be installed hanging from the roof of the building. Since we were renovating an existing building we investigated the construction of the building and determined that this would be too much load to put on the existing building.

So once the ceiling panels were installed with rods that temporarily attached them from the existing building roof the ceiling then they became supported by beams and columns installed inside the freezer.

We worked with Efficiency VT to choose an efficient refrigeration system to power our ice cream blast room and storage/picking freezer room. We designed a 650 square foot blast freezer room that can take 10,000 pounds of ice cream from soft serve temperature to negative 25 degrees in 12 hours.

Our products once frozen in the blast freezer move to the storage and picking freezer for product selection. Our refrigeration system was designed with two compressors instead of one in each room so if anything happens to one refrigeration unit the second can take care of it.

We chose a HOT GAS DEFROST system of defrosting our refrigeration equipment. The system we have defrosts the refrigeration units in 7 to 10 minutes. This is a much faster and more efficient process than electric defrost.

Consequently, with the defrost process happening so fast it does not raise the temperature in our freezers and compromise the product. This process is also much more efficient from an electrical perspective.

We were fortunate enough that the building we purchased had three phase, 440 electricity and also 240 transformers. This made installation of all pieces of equipment needed very easy.

We also worked with Efficiency VT to choose highly efficient lighting in our plant and freezers.

In our ice cream plant we purchased an ice cream machine that is air cooled instead of water cooled. We feel this is more efficient. We have an air circulation system that continues to move air to keep our facility dry and free from moisture.

The move to this new building has given us huge room for expansion and growth with largely improved efficiencies in electricity, production, travel, labor, and product storage. We have grown from 9 to 15 employees.

We have begun co-packing for other companies like Buzz Bar from California, an alcohol infused ice cream novelty that they ship all over the country. We acquired a federal liquor license to manufacture this product.

We have worked with the University of VT to develop a private label ice cream made for them from the milk on the UVM dairy farm. The students have the opportunity to see a value added product from beginning with milk and ending with the ice cream they eat everyday at school and in their own dairy bar.

I made ice cream at the University of VT in the 1960's, then purchased equipment from the university that did not burn in our fire. The ingredient feeder that I used in college is in use today in our new plant. The new dairy bar at UVM is on the same property that the dairy bar was when I went to school there.

Our packing is very simple and is in recyclable plastic. We are currently working on rebranding our product line.

Today we are seeing that consumer preferences are going back to supporting local and knowing where their food comes from and how it is made.

For 90 years we have remained committed to providing a delicious ice cream treat that you can feel good about. We are .... Wilcox Ice Cream....Vermont's Original Ice Cream

We welcome any questions from you via email or phone wilcoxicecream@gmail.com 802-375-1133 East Arlington, VT