While much of the pollution in the Sugar Creek watershed is attributed to agriculture, a leading contributor of non point-source pollution, industry also plays a role as a generator of point-source pollution — which is regulated through National Pollutant Discharge Elimination System (NDPES) permits by the Ohio EPA. Recently, Ohio EPA established a new policy, Total Maximum Daily Loads or TMDL, to set maximum watershed loading limits for both non point-source and point-source pollution. This policy, Moore said, will have an impact on economic activities within the watershed, especially for industries.

In order to comply with the new regulations and promote economic development at the same time, the Sugar Creek project has helped Winesburg-based Alpine Cheese draft a nutrient-trading permit to lower phosphorus pollution stemming from its operation. The pending permit — only the second one in Ohio, but the "first that specifically tells how to get the job done," according to Moore — will make it possible for Alpine to expand its plant for increased production of Jarlsberg, a specialty cheese for which the manufacturer has the exclusive U.S. contract from Norway's TINE Dairy. The phosphorus TMDL set for Sugar Creek is one milligram of phosphorus per liter of water. Under the permit, Alpine Cheese will be allowed 10 mg/liter or a maximum of 1.7 kg/day; in exchange, the plant will pay local farmers, the Holmes County SWCD and OARDC approximately $800,000 over five years to implement conservation measures that will further reduce phosphorus levels. Lance Williams, an assistant professor with the School of Natural Resources, is monitoring habitat changes to see the effect of reduced phosphorus levels on aquatic life such as fish and salamanders.

"We thought that complying with the TMDL would be cost prohibitive for our operation because of the high cost of the filtering system needed to accomplish such requirement," said Robert Ramseyer, president of Alpine Cheese. "So we said, 'Let's see if EPA would be willing to negotiate a permit through which we could work with local people to reduce phosphorus content in the stream.' And that's what we have done. This has allowed us to become an even greater market for milk from local producers, and we are also putting money into the community. It's a win-win situation for everybody."

To be phased in between 2005 and 2006, the expansion will create 12 new jobs and allow the plant to process approximately 900,000 pounds of milk per day — 250,000 pounds more per day than in 2004. One-hundred percent of this milk will be Ohio-produced Grade A Class III milk, valued at $14-15/cwt to the producer. This increase in local milk usage amounts to $36,000 per day or the equivalent production of 126 small dairy farms each with 40 cows. Production of Jarlsberg will increase by 100 percent to 50,000 pounds per day, each pound with a retail value of $6-10.

Soybean farmers in the area may also reap benefits through the Japan Consumer Cooperative Soybean Marketing, an initiative of the Sugar Creek project. The initiative has helped producers achieve a per bushel price increase of $2 for organic and low-input tofu soybeans. The first 730-bushel shipment is expected to be made to Nagoya, Japan, this year.

“The collaboration between OARDC, the citizens and all the different community organizations involved in Sugar Creek is what has set this project in motion,” said Rachel Webb, Sugar Creek watershed coordinator with the Wayne County SWCD. “Being a small local agency limits the amount of work we can do, so having OARDC getting grants and doing a phenomenal amount of research has been a great help. We have been able to bring environmental and economical sustainability together in the watershed, and we will continue listening to what the community needs and wants.”

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